



Indira Gandhi National Open University
School of Continuing Education

**Livelihood Security of Female Headed Rural Households in Raya Alamata
Woreda, Southern Tigray, Ethiopia**

**Partial Fulfillment of the Requirements for the Masters Degree in Rural
Development**

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DECLARATION

I hereby Declare that the dissertation entitled **LIVELIHOOD SECURITY OF FEMALE HEADED RURAL HOUSEHOLDS IN RAYA ALAMATA WOREDA, SOUTHERN TIGRAY, ETHIOPIA** submitted by me for the partial fulfillment of the M.A. in Rural Development to Indira Gandhi National Open University, (IGNOU) New Delhi is my own original work and has not been submitted earlier to IGNOU or to any other institution for the fulfillment of the requirement for any course of study. I also declare that no chapter of this manuscript in whole or in part is lifted and incorporated in this report from any earlier work done by me or others.

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Acknowledgment

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Acronyms

AfDB: African Development Bank

CBOs: Community Based Organizations

CSA: Central Statistical Authority

DCSI: Dedit Credit and Saving Institution

DfID: Department for International Development

DPRD: Development Planning and Research Department

FAD: Food Availability Decline

FAO: Food and Agriculture Organization

FHHs: Female Headed Households

FTC: Farmers Training Center

GAD: Gender and Development

IFAD: International Fund for Agricultural Development

IIRR: International Institute of Rural Reconstruction

ILO: International Labour Organization

MOFED: Ministry of Finance and Economic Development

REST: Relief Society of Tigray

SIDA: Swedish International Development Cooperation Agency

SNNP: Southern Nation, Nationalities and People

SPSS: Statistical Package for Social Science

UNDP: United Nations Development Program

USAID: United States Agency for International Development

WB: World Bank

WFP: World Food Program

WID: Women in Development

WOARD: *Woreda* Office of Agriculture and Rural Development

Abstract

The aim of this study was to assess the livelihood condition of rural female headed households in Alamata Woreda of Southern Tigray. The particular interest of the study includes assessing resource availability by female headed households and to what extent they are vulnerable to a variety of shocks. The study also attempted to explore livelihood strategies, household coping mechanisms as well as strategies adopted by government and non-governmental development actors in the area.

In order to identify the possible impact of gender on the livelihood condition of rural households, a comparative analysis which considers both female headed and male headed households was conducted. For the purpose of theoretical guidance, the sustainable livelihood approach and the gender empowerment theory were considered as basic frameworks.

The study employed a household survey in order to collect information on important aspects of the topic such as household socio-demographic characteristics, access to different types of livelihood resources, households' food security situation, as well as coping mechanisms adopted by the households. Moreover, Focus-group discussions in each of the selected Kebeles and interviews with some key informants (like Woreda and Kebele officials, experts working in the Woreda Office of Agriculture and Rural Development, and development agents in each Kebele) were conducted.

Information gathered by the focus-group discussions and in-depth interview was analysed qualitatively where as that of household survey data were coded and entered into computer for statistical analysis using Statistical Package for Social Sciences (SPSS).The study findings indicate that there was significant difference between female headed and male headed households in terms of their access to various household assets and options of livelihood diversification. In many of the livelihood capitals such as the natural capital, financial capital and human capital, male headed households were found to be in a better position than female headed households. Consequently, female headed households were more vulnerable to various types of livelihood crises with weak resilience capacity than that of male headed households.

Key words: *Female headed, male headed, household, livelihood, Alamata, Kebele*

Chapter One: Introduction

1.1. Study Background

Poverty in developing countries is predominantly a rural phenomenon. According to Khan (2001) causes of rural poverty are complex, diverse and multi-dimensional. Absence of broad economic stability, competitive markets and public investment in physical and social infrastructure has been the major causes of rural poverty in developing countries. Other aspects such as culture, climate, gender, markets and public policy are some of the factors likely to cause rural poverty. In both developed and developing countries women represent the majority of the poor which is estimated to constitute about 70 percent of the world's poor (Chant, 2010). A report by the International Fund for Agricultural Development (IFAD, 2010) indicated that women in rural areas of developing countries were among the poorest and most vulnerable sections of the society. Historically, the trend of poverty in the world showed that there is gender based difference in terms of the proportion of the poor when women take the lion share of it (Narasaiah 2004; Kabeer, 2003).

Existing literature has pointed out that Female Headed Households (FHHs) in developing countries tend to be poorer than the male, and are in situations where general insecurity and vulnerability prevail. Female heads in developing economies face a triple misfortune; difficulties in generating income, difficulties in child-rearing and vulnerability to economic, political, social and environmental crises. Research in Sub-Saharan Africa has revealed that women are more likely to live in poverty than men. Increasing social problems of the female heads have become an ever-present reality to the public and private welfare organizations (Chiripanhura, 2010). Varley (1996) argues that female headed households have come to occupy a special place in the gender and development literature partly because of the view that female headed households are recent peculiarity caused by both social and economic factors. In spite of the growth in the numbers and the enormous responsibilities placed on FHHs, they lack access to sufficient resources to effectively nurture their families and manage households (IFAD 2010). It makes it

hard for many FHHs to survive economically and enjoy a decent standard of living. This makes FHHs with a single source of income, with no other support for sustenance, economically vulnerable.

In spite of some improvements in the last decade, literatures indicate that the intensity and severity of rural poverty and food insecurity in Ethiopia is still rampant. Many of the available studies focus on food security of households as indicators of poverty levels and the overall standard of living rather. Monitoring and Evaluation report by Food Security Coordination Bureau (2009) of Ethiopia under the Ministry of Agriculture pointed out that every year millions of rural households in Ethiopia suffer from chronic food insecurity, affecting as much as 45% of the population, making them to be dependent on food aids and emergency reliefs. Similarly, recent study by World Bank (WB) (2009) confirmed that rural food insecurity was pervasive, and the situation gets worsened over time and exacerbated by natural factors such as repeated droughts and the subsequent decline in agricultural products as well as man-made causes such as the escalation of food prices.

Ethiopia is the second most populous country in sub-Saharan Africa. The majority of people in Ethiopia are living in rural areas where the incidence and severity of poverty is higher than urban areas (DPRD & MOFED 2008). In the country, rural poverty and vulnerability to risks of food insecurity are highly influenced by gender (World Bank, 2008). Women are disproportionately prone to and affected by poverty and livelihood insecurity. Women as household heads are often trapped with problems of achieving economic responsibilities and domestic chores by their own simultaneously.

A number of studies (Muluneh, 2001; AfDB, 2004; Lingam, 2006) have found out that there are several reasons of why female-headed households are more susceptible to poverty. Among others, such households have less direct access to land, are more labor deficient and thus more reliant on hired labor for farming which is expensive. However, in the development debates, it has been disputed that female-headed households can necessarily be signified with poverty and the blame being put on the socio-cultural, economic, and even political shackles that jeopardized women's potential and capabilities for self-support and developments. A World Bank report

(2008) articulated that female-headed households are not necessarily poorer than other households nor are poorer than women in the male-headed households. However, this report also reminded it seems that female-headed households are more susceptible to shocks, stress and risks of insecurity with significant fluctuations in their wellbeing. According to this report, the gendered division of labor leaves these households lag behind, with fewer livelihood options, particularly in rural areas where they usually rely on socially unacceptable occupations as they cannot make a living in agriculture.

The efforts exerted in the last two decades to reform the laws of the country to eliminate discrimination based on sex have started giving fruit. While there is a need to celebrate the gains of the new political and legal status of women in the country in general and women in the region in particular, one also need to be aware that legal changes are not enough to enable women to enjoy full human rights in their everyday lives. There are still tensions and contradictions between laws and the practices. A number of women are still affected by customary laws and practices which have for so long perpetuated their oppression.

Tigray region is one of the most poverty stricken regions in Ethiopia. Similar to the other parts of Ethiopia, rural poverty and vulnerability is deep-rooted, multidimensional and widespread. The largest segment of the Tigrayan population subsists on agriculture and agricultural production. As the region has been hit by frequent droughts, wars and famine, the agricultural production and productivity is meager, short of supporting the livelihood security of households. As Frankenberger, *et.al* (2007) stated large numbers of the Tigray highlanders are sedentary agriculturalists practicing crop cultivation for household subsistence supplemented by animal husbandry. However, their agricultural production and productivity has remained very low mainly due to small landholdings (average 0.5 ha. per household), the use of traditional farming systems, land degradation and low soil fertility; recurrent drought; prevalence of pests, etc. Given variations across regions and communities about these livelihood challenges, this research, therefore, aims at assessment of the livelihood situation of female headed rural households in Alamata *Woreda*, Southern Tigray.

1.2. Statement of the Problem

Ethiopia is one of the poorest countries in the world, and ensuring the livelihood security of its citizens remains a big challenge ahead. So far the mainstay of Ethiopian economy is dependent on agriculture and agricultural production. Ethiopian agriculture remained largely rain-fed, subsistence-oriented and hence highly vulnerable to droughts and famines. It suffers from traditional farming systems and low modern technological inputs. The country has been suffering from severe poverty, hunger and droughts. In terms of extent and distribution, poverty is more widespread and severe in rural areas.

Studies revealed that in Ethiopia rural poverty and vulnerability to risks of insecurity are highly influenced by gender (World Bank, 2008). Women are disproportionately prone to and affected by poverty and livelihood insecurity. At household level, there exists wide gap in susceptibility to livelihood insecurity and risks of shock absorption among female-headed households than male-headed households (Lingam, 2006). Discussions on women and poverty, captures the frequently mentioned dictum of “feminization of poverty” which implies that women are the poorest of the poor. Habitually, feminization of poverty is referred with the female-headed households as the poorest of the poor. A number of studies (AfDB, 2004; IFAD, 2010,) have found out several reasons of why female-headed households are more susceptible to poverty. Among others, such households have less direct access to land, are more labor deficient and thus more reliant on hired labor for farming which is expensive.

In most part of Northern region of Ethiopia, the issues of poverty, hunger and livelihood insecurity remain as a serious challenge. Historically, this region was exposed to prolonged drought, environmental degradation and deforestation, internal/civil wars and more recently border conflict with neighboring Eritria. These have contributed to the prevalence of considerable number of female headed households compared to other parts of Ethiopia. Data from CSA (2007) indicated that women constitute nearly 52 percent of the population and from this over 30 percent of the populations are estimated to be female-headed households. Women in the region, as is the case in most developing countries, are the worst victims of poverty.

Households, especially those that are headed by women, are believed to lack the basic assets that could help them survive through harsh living situations.

According to World Bank (2008), the higher incidence of female headed households in the Region is due to the loss of male partner during the civil war and the Ethio-Eritrean conflict, traditionally high age gap between wives and husbands that led to the early death of males and subsequent widows, as well as the migration of males without legal divorce in de facto means female led family. In addition, the impact of HIV/AIDS to increasing female-headed households should be understood.

The role of women in ensuring socio-economic development is vital. Women play important roles as producers of food, managers of natural resources, income earners, and caretakers of household food security. Giving women access to productive resources could contribute to boost in agricultural productivity, improvements in child nutrition and health and societal welfare. In reality, however, there are gender gaps in access to and control over resources due to political, legal, cultural or religious factors. These factors disfavor women and/or girls and make women to constitute the major proportion of the poor. Women empowerment is, therefore, fundamental to eradicate poverty and to improve the social wellbeing of any society. In recognition of this fact, the Ethiopian government has given due consideration to women, where priority has been given to gender related development interventions. Despite the focuses given and efforts applied for, women are still in a relatively poor socioeconomic situation. Thus, the question of how to make development interventions, managed individually or in collective action, gender responsive and relevant is still a pressing question.

The problem of women in developing countries call urgently for new forms of analysis and for an approach that moves beyond utilitarian economics to identify a number of distinct components of a human being's quality of life, including life expectancy, maternal mortality, access to education, access to employment, and the meaningful exercise of political rights. Even when a nation seems to be doing well in terms of GNP per capital, its people may be doing poorly in one or more of these areas. This is especially likely to be the case for women, who

have been treated unequally in many traditional societies and who nowhere enjoy an average quality of life equal to that of men.

So far, there is no a such specific study on the livelihood condition of female headed households in the rural areas of Alamata *Woreda*. The above facts as well as personal observations have instigated the researcher to deal with the issue of female headed households (FHH) and their livelihood security. The researcher strongly believe that studying the livelihood status of female-headed households is vital to effectively achieve the development goals of reducing extreme poverty, hunger and the livelihood security of households in the study area. It is indicated that for Ethiopia, promoting gender equality is not only in the best interest of the society at large, but also fundamental to ensuring the human and democratic rights of women (MoFED, 2004). As a guiding strategic plan, the currently launched GTP II also reaffirms these facts by stipulating eradicating extreme poverty and hunger, and ensuring the food security of households as a priority agenda.

1.3. Objectives of the Study

General Objective:

Generally, this research proposal aims at assessing the livelihood security of female headed households in rural areas of Alamata *Woreda* of Tigray regional state.

Specific Objectives:

In line with the stated general objective, this proposal intends to specifically address the following specific objectives.

1. To assess livelihood assets of rural female headed households in the study area.
2. To identify the livelihood strategies of female rural households in the study area
3. To explore the livelihood vulnerability of rural female households.
4. To assess formal strategies and interventions done with especial consideration of female headed households

1.4. Conceptual Framework of the Study

In order to conduct well guided scientific research and for systematic understanding of what is being studied, considering relevant theories and conceptual frameworks is paramount (Creswell: 2009). This is due to the fact that theories offer systematic guidance and broader explanations to social phenomena. A relevant theoretical framework for a particular study connects the researcher to existing knowledge about the issue at hand and helps in the choice of appropriate research methods. Moreover, a theoretical framework specifies which key variables influence a phenomenon of interest and highlights the need to examine how those key variables might differ and under what circumstances. This study was guided by a combination of two theoretical perspectives which enabled to see the problem of Female Headed Households in its wider and in-depth situations. These theories are the Sustainable livelihood approach and the empowerment approach which are discussed in detail in the next chapter as compared to other related theories.

1.5. Significant of the Study

Different research works are required to put end to the problem of livelihood insecurity in Ethiopia in a sustainable manner. Scientific research works that would create awareness, increase agricultural production and enhance faire distribution of livelihood resources at grassroots level are key instruments to alleviate the problem. It is therefore critical that a study like this one unearths all the prevalent factors that continue to make the life of many rural based female-heads in the study area challenging. In connection to this, at national level the Government of Ethiopia in collaboration with other stakeholders is working to address the problem of livelihood vulnerability among rural households.

Hence, the output of this research can contribute to the endeavors by creating awareness at grassroots level. This study more importantly focuses on the livelihood condition of female headed households in rural communities which paid attention to the possible impact of gender and other attributing factors for livelihood vulnerability of such kinds of households. Moreover, the study is also believed to further enrich knowledge on correlates of rural livelihoods through livelihoods perspective, which would be indispensable for policy makers, development practitioners and future researchers.

1.6. Chapterization

The entire report is organized in five chapters keeping logical coherence of ideas and following standard research report writing. The first chapter deals with the introduction and the general background of the study. In this chapter, the statement of the problem justifying the need to conduct the study and the main objectives are indicated. Chapter two of the report is devoted to a vast review of related literature. In the theoretical review of this chapter, basic concepts related to livelihood security and various theoretical frameworks are reviewed. Moreover, review of empirical research finding is also made in this chapter in order to gather relevant information and share methodological experiences from the work of others. Description of the study area and methods of the study are altogether dealt in chapter three. Chapter four is about the data presentation and discussion where the data collected in various ways from various sources is organized, analyzed and interpreted. In chapter five, the last chapter of the report, some concluding remarks and recommendations are stated based on the finding of the study.

1.7. Limitation of the study

For the study of livelihood condition of rural female headed households in Alamata Rural *Woreda*, only two *Kebeles* from the total of 15 *Kebeles* were selected in consultation with office of rural *Woreda* administration. It could have been better if more number of *Kebeles* for the study were selected in order to increase representation of possible variation across *Kebeles* regarding factors related to livelihood insecurity. However, it was not possible to add more *Kebeles* in the study due to resources constraints such as time and finance.

Chapter Two: Theoretical and Empirical Reviews

2.1. Basic Concepts and Definitions

2.1.1. Defining Livelihood

With different meanings in different contexts, the concept of livelihood is commonly used in various poverty as well as development discourses. However, the most cited definition of livelihood is the one given by Chambers & Conway (1992) stated 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) that together determine the living gained by the individual or household (cited by Ellis, 2000:15).

2.1.2 Livelihood Security and Food Security

Owing to the historical occurrence of repeated droughts and famine since the 1970s, the problems of food and livelihood insecurity have been a subject of continuous discussions for scholars, policy makers and the government. There is conceptual distinction between food security and livelihood security.

Livelihood Security

The notion of livelihood security is a very broad concept that goes beyond food security. Generally speaking the concept includes basic human needs such as food, shelter, basic social services such as education, health, water and sanitation. The availability of adequate food reserves, supply and cash income, social services, peace and stability are essential elements to meet people's livelihood security. Food security is one component of livelihood security that focuses on food; the former is a much broader concept embracing the overall means of survival. While food security emphasize on food availability, consumption pattern and individual's access to it, livelihood security embraces the overall standard of living.

Livelihood security depends on the ability of a household to attain the basic needs to make its means of living. It entails possession of variety types of assets and household's ability to sustain these over time. The varieties of capital asset categories (natural, physical, human, financial and social capital) identified in the above definition of a livelihood are vital to the attainment of livelihood security of rural households.

Food Security

The concept originated only in the mid-1970s, during the discussions of international food problems at a time of global food crisis (FAO, 2003). Initial concerns in the 1970s focused on the global, regional and national food supply (Webb & Braun, 1994).

In 1986, the highly influential World Bank report, "Poverty and Hunger", focused on the temporal dynamics of food insecurity. It introduced the widely accepted distinction between chronic food insecurity and transitory food insecurity. This concept of food security was further elaborated in terms of "access of all people at all times to enough food for an active and healthy life" (FAO, 2003). By the mid-1990s, the definition was broadened to incorporate food safety and also nutritional balance, reflecting concerns about food composition and minor nutrient requirements for an active and healthy life. Food preferences, socially or culturally determined, also became parts of the consideration (FAO: 2003). The 1996 world food summit adopted a still more complex definition:

...food security, at the individual, household, national, regional and global levels, is achieved when all people at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life" (FAO, 2003; Lee, 2002).

This definition was again refined in the report on the State of Food Insecurity, 2001:

food security is a situation that exists when all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life (FAO, 2003).

From the above definitions offered at different times in the past, we can see a process of redirecting the discussion of food security away from the macro level towards the household, and

still further towards the individual levels (Thomson & Metz, 1998, USAID, 1995). While the focus on the disaggregated has now become common, the various definitions of food security still differ. However, the following definition offered by a special committee of the United Nations seems reasonably comprehensive,

A household is food secure when it has access to the food needed for a healthy life for all its members (adequate in terms of quality, quantity, and culturally acceptable), and when it is not at undue risk of losing such access” (USAID, 2008).

Furthermore, when there is problem of poverty and hunger within a given community, it acts selectively and affects different strata of the population by different degrees since they are at different level of vulnerabilities. In contrast to food security, food insecurity is defined as a situation in which individuals of a society have neither the physical nor the economic access to the nourishment they need (FAO, 2003).

2.1.3. Livelihood Sustainability

A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain its capabilities and assets both now and in the future, while not undermining the natural resource base (Serrat, 2008). This includes the use of coping mechanisms which are short term reversible responses and /or through a long term adaptation of alternative livelihood strategies. Accordingly, the concept of sustainability implies the present and the future situations of livelihoods in line with the ability of the livelihood system and natural resources on which it depends to maintain or enhance productivity over time (Neefjes, 2000).

2.1.4. Livelihood Diversification

The tendency for rural households to engage in multiple occupations or involvement in diversified income portfolio is often regarded as better strategy to sustained livelihood security. According to Ellis (2001):

Rural livelihood diversification is defined as the process by which rural households construct an increasingly diverse portfolio of activities and assets in order to survive and to improve their standard of living.

Areas of diversification for rural households can be on-farm (engagement in variety of agricultural activities such as crop farming, livestock production or animal husbandry), and off-farm activities (such as wage or salaried work, petty trading, remittance). A household that is more diversified is more secured, better-off, and more resilient to risks and shocks than a less diversified one.

Thus, it is extremely vital to assess and analyze the level of livelihood diversification and the alternative dimensions of income sources in order to determine the risk absorption and resilience of households. There are fundamental factors determining the nature of diversification that rural households adopt. The economic status of households and gender are among these factors significantly influencing choice of relevant options of livelihoods by individual households. For example, those households with better economic status tend to diversify their livelihood in the form of non-farm business activities like trade and marketing. On the other hand, those poor households most often diversify in the form of casual wage work (Elis and Edward, 2004).

2.1.5. Female Headed Households

In a literature, the term female headed household is defined in different ways attributing to various factors. According to Muthwa (1994), “A female head is a woman who legally becomes the head of the household when there is no permanent male partner, due to death, desertion, divorce, separation or single motherhood”. It may also generally refer to situations where an adult woman (usually with children) resides without a male partner (or, in some cases, another adult male such as a father or brother) (Chant, 1997). In addition to children, female headed households may consist of other members, like grandparents, in the form of extended family. On the other hand, they may also refer to these lone female households who never been married.

In order to have comprehensive and holistic assessment, all the aforementioned dimensions of the concept of female headed households were considered for the purpose of this study. From the

above mentioned factors, divorce is the major attributing one for the poverty of female headed households. This is due to the fact that the amount of income declines after divorce as a result of the loss of another income which most often has devastating impact on the entire income of the household. Moreover, if there are children at the time of divorce that will be more problematic for the mother as in the majority of cases she will be continuing taking care of the children. In such cases, men most often do not support their divorced spouses and children or if they do that is far from adequate.

Accordingly, increase in divorce rate in a given society means increasing the number of female headed households as most often divorced women remained unmarried for long after divorce. In such cases, divorced women with children have the sole responsibility of caring their children without remarrying to another husband.

2.1.6. Feminization of Poverty

The concept of “feminization of poverty” refers to the situation of high prevalence of poverty among women as compared to men. Therefore, feminization of poverty may be used in different contexts to mean different situation of women. It may have at least three contextual meanings. First it may refer to the fact that women have a higher incidence of poverty than men. Secondly, it may be used to describe that women’s poverty is more severe than that of men. Third it is used to describe the trend of poverty as an increasing phenomenon among the women particularly female headed households as their number has been ever increasing from time to time (SIDA, 2001, 2010). What is implied in the third meaning of the concept is the idea that women-headed households constitute a disproportionate number of the poor and that they experience greater extremes of poverty than male-headed units (Moghadam, 1997; Paolisso and Gammage, 1996).

Although men are also affected by poverty, the gap between the poverty rates of men and women continues to grow. The reasons for men and women’s poverty are often different, thereby establishing a need for investigating these reasons. These reasons are manifold in their nature and explained in terms of political and cultural dimensions. These include disparities between men and women in rights, entitlements and capabilities and hence feminization of poverty has

become one of the major issues regarding inequalities of gender, race, and class (UNDP, 2008). It has been shown clearly that the largest proportion of formal sector jobs in developing countries, 85%, are dominated by men, while female-dominated occupations account for 5% (Ellis, 2001). As a consequence, much of women's exclusion from mainstream economic opportunities has led to their participation in casual, informal and unregulated labour at rates of pay that exceed those earned by men (Oberhauser ,1998).

Moreover, there is a continuing wage inequality between women and men though in principle it is argued that both should be treated equally as far as payment for the same work is concerned. Nevertheless, not only do women still get paid less than men, but they are also segregated into lower-wage occupations. Due to this unequal position of women in society in general and in the economy in particular, female headed households are highly vulnerable to various shocks (Everatt and Smith, 2008). Compared to the male headed households, female headed households usually have fewer family members who are productive and income earners.

Female headed households engage mainly in the informal sector and hence do not earn adequately which accumulates to their impoverished position in society. It has been argued that there has been a gradual feminization of work that is, available employment and labour options tend to increasingly characterize activities associated, rightly or wrongly, with women (Mate, 2001). In general, the growing involvement of women and children in the informal economy; differential treatment of girls and boys in households; pressure to get girls married off quickly; higher school drop-out rates for girls; less control over fertility; and recourse to prostitution are some of the path ways for the feminization of women in society.

2.1.7. Gender and Gender Inequality

Defining Gender

In the literature, it is clearly indicated that the concept of gender is different from, but related to, that of sex. Sex is a biological characteristic of human beings determined by genetic and anatomical factors. It refers to being male or female. Gender is a relative concept which refers to

socio-cultural characteristics of men and women. It implies the power relation between men and women which is time and culture bounded (Gezahegn and Eleni, 2003).

Gender is learned behavior which conditions the activities, tasks and responsibilities to be done either by male or female. It is therefore constructed through a process of socialization by which individuals acquire knowledge, skills and other behavioral patterns as defined by the cultural norms and values of a given community. This learned behavior is usually related to one's sex though sex as a status does not necessarily determine gender role. However, the differential treatment we received through the socialization process because of the status of our sex leads to the development of real psychological and personality differences between males and females (Almaz, 1989). The concept of gender is dynamic in its nature varying greatly by culture, geographic region, socio economic status and context. Even within a given society these defining characteristics of gender may change over time due to change in the norms and values of a culture which explain gender. Changes in gender roles may also occur in response to changing economic, natural or political circumstances, including development efforts.

Gender Inequality

Gender inequality may be due to the fact that men and women have different assets, access to resources and opportunities (Ellis, 2001). The socially constructed roles and positions given to female and male discriminates people on the basis of their sexes. Women and girls are subject to inequality not only in the public sphere but also within the private sphere such as within the home and their intimate relationships. Gender inequality may be manifested in various forms in different communities. The most common defining features include situations where women do not have equal access to basic resources such as land, education, health, nutrition, economic assets and resources, political opportunities and decision making power (DFID, 2000). Furthermore, women are typically faced with a narrower range of labour markets than men. This is reflected more in occupational segregation and wage differentials (Ellis, 2001).

Currently, the issue of gender equality is critical to global efforts to achieve sustainable development and poverty reduction. Women's poverty is, in part, caused by gender inequality. The unequal distribution of income and control over resources between women and men,

women's lack of decision-making power, the unequal distribution of household tasks, the care giving role assigned to women and girls, gender-based violence, and the constraints imposed on women's socio-economic mobility due to legal, cultural and labour market barriers, all act as contributory factors which cause and compound women's poverty.

2.1.8. Gender Based Discrimination

Even though, the position of women in society tends to be defined in terms of such outcomes as how many women are in education, in parliament, achieve the annual bench mark for a specified income level, we should also look at women's standing from the perspective what is driving these outcomes. Single women heading households encounter some challenges as they Endeavour to make ends for their families meet due to the patriarchal nature of most communities. Single women face social difficulties and discrimination in various social settings on account of their gender. (Newton et al, 2014). These women may find it hard to access jobs or other available resources. This makes their attempt to raise their family difficult and uphill task. The state of their unemployment and its subsequent poverty may complete various cycles of poverty and despondency in life (Yigremew, 2001).

Therefore, there is a need to explore the important social institutions and socio-cultural practices (such as long lasting codes of conduct and custom, norms, belief systems, traditions and informal and formal laws) that determine gender outcomes in education, health, political representation, labor markets, access and control over resources, decision making etc. These socio-cultural values, norms and perceptions are always crucial in determining who gets to perform wage labor outside the home. They are also important determinants of general status of women both in the family and the community. Custom also rules who gets to what sorts of protest against ill treatment both inside and outside the family, whose voice of protest to be heard along with freedom of speech, and who exercises legal and political rights significantly (Newton et al, 2014).

2.2. Theories regarding Gender

2.2.1. The Welfare Approach

After the end of World War II, welfare programs were widely initiated in Europe specifically targeted at 'vulnerable groups', which were among the first to identify women as the main beneficiaries. These were the emergency relief programs accompanying the economic assistance measures intended to ensure reconstruction (Björg, 2007). The welfare approach is the earliest approach concerned with development efforts in the Third World. It is rooted in the social welfare model of the colonial administration and post-war development agencies (Suzanne, 2009)

Introduced in the 1950s and 1960s, welfare is the earliest policy approach concerned with women in developing countries. Its purpose is to bring women into development as better mothers (Björg, 2007). The welfare approach addresses women "almost solely in their roles as wives and mothers. In the welfare approach, women are passive recipients rather than active participants in the process of development (Miller, 1999). The reproductive role of women is recognized and policy seeks to meet practical gender needs through that role by top down handouts of food aid, measures against malnutrition and family planning. Moser, (1993) states that the welfare approach is still very popular in development practice. Its main implementation method is the distribution of free goods and services in the form of food aid, relief aid, mother-child health programs; family planning programs (Suzanne, 2009)

The welfare approach is based on three assumptions. First, women are passive recipients of development, rather than participants in the development process. Secondly, that motherhood is the most important role for women in society. Thirdly, that child-rearing is the most effective role for women in all aspects of economic development (Björg, 2007). Therefore, the welfare approach addresses women solely in their reproductive role as mothers and wives, and ignores women's productive and community managing roles entirely. As regards women's gender needs, the welfare approach meets women's practical gender needs which arise from being wives and mothers. However it does not address their strategic gender needs at all (Suzanne, 2009).

2.2.2. The Women in Development (WID) Approach

This approach emerged in the early 1970s following the documentation of women's key productive roles in agriculture and industry. The previous exclusion of women in development projects and programs led to an emphasis on women specific projects. The rationale was that if women's productivity and income were improved, development would be more effective (Björg, 2007). WID theorists, including Boserup (1970), argued that gender inequalities were likely to decline as a country developed because of an increase in economic opportunities and firm competition. Like modernization theorists, WID theorists also believed that competition drives out discrimination (Becker 1985; O'Neill and Polacheck, 1993). Competition was expected to eliminate gender inequalities in employment, education, finance, training, and overall discrimination

WID was strengthened by various international conferences on women. The United Nations decade for women between 1975-1985 focused on sensitizing people to women's role in development, as well as concentrating on research and advocacy for women. Women's unpaid work both in the household and on the farm became increasingly recognized. Improvements were seen in some countries in terms of acknowledging and rewarding women's paid work in relation to that of men (Björg, 2007, Kaan, 2007)). . In other words, women's inclusion in the labor market or economic productivity can aid in the development of poor countries. Therefore, women are not only seen as benefiting from the development process, but also countries undergoing development would benefit from the inclusion of women (Suzanne, 2009).

A central critique lobbied against the WID perspective has been that it does not challenge the patriarchal and hegemonic capitalist systems (Kaan, 2007). It focuses only on women and highlights the importance of their contribution to development and targets them through women specific projects or women's components in programs (Suzanne, 2009). It has been suggested that, WID theorists failed to identify women's exploitation as part of the larger global system of capital accumulation (Beneria and Sen, 1987; Mies, 1986). WID has also been criticized for its top-down, structural approach that ignores women's agency (Moghadam 1999).

2.2.3. The Gender and Development (GAD) Approach

As a critique of the WID perspective, the “gender and development” (GAD) approach emerged in the 1980s. One important quality of this approach is that it shifts the focus from 'women' to 'gender' in that it looks at women and men in their relative positions within the socio-economic, political, and cultural structures (Kaan, 2007). GAD researchers focused on why women have been systematically positioned in inferior and/or secondary roles. Unlike the WID perspective, GAD called past and present social, economic, and political structures into question. The theoretical roots of GAD are in socialist-feminism (Rathgeber, 1990), which links the relations of production to the relations of reproduction and the system of capitalism to patriarchy. Patriarchy is present at the global level and interacts with the economic sphere through state policies and corporations taking advantage of gender ideologies and norms (Mies, 1986).

In the GAD approach, women are not recognized only as victims, but also as agents in the process of development. Much of the past traditional development and even WID research framed women as ‘a vulnerable group’ and portrayed them as passive, ignorant, and voiceless (Marchand, 1996). Unlike the WID concept, GAD puts a strong emphasis on women's emancipation. The WID concept assumes that any betterment in women's economic situation will automatically lead to advancement in other spheres of their lives (Suzanne, 2009).

Though women have frequently been framed as victims, women often actively resist exploitation by capitalism and patriarchy (Moghadam, 1998). Thus, the GAD perspective recognizes not only women’s victimization, but also their agency. It urges for a gender-sensitive transformation of these structures through top-down interventions. The main instrument of the GAD is the 'gender-mainstreaming' which demands giving a higher priority to women's concerns in the design and implementation of socio-economic and political interventions (Suzanne, 2009).

2.2.4. The Empowerment Theory: A Framework of the Study

The empowerment approach developed in the mid-1980s is a relatively new approach in women and development discourse. A distinctive quality of the empowerment is that it approaches the matter from the standpoint of the Third World women. In contrast to other policy approaches discussed above, "the origins of the empowerment approach are derived less from the research of the First World women, and more from the emergent feminist writings and grassroots organizational experience of Third World women" (Moser, 1993: 74). Different scholars have described the theory of empowerment in different ways. In general, empowerment means simply "bringing people who are outside the decision-making process into it. Empowerment as such implies participation and decision-making in political and economic structures (Kaan, 2007). According to Kabeer (2003), "Empowerment refers to the process by which those who have been denied the ability to make choices acquire such ability." In her definition of empowerment includes the processes that lead people to perceive themselves as able and entitled to make decisions. It involves the full range of human abilities and potential (Björg, 2007).

Women's empowerment is closely related to, but goes beyond, gender equality to cover not just women's condition relative to men's, but their power to make choices and their ability to control their own destiny (Kaan, 2007). The view is that women should somehow be 'brought into development' and become 'empowered' to participate within the economic and political structures of the society. The empowerment approach points to the existing structures in our societies as sources of women's subordination, and puts a strong emphasis on the necessity of challenging them in all areas and at all levels (Suzanne, 2009). Important elements of women's empowerment include access to and control over resources, meaningful political participation, the reduction of women's unpaid care responsibilities, and the ability to have control over their own bodies such as living free from violence and making decisions in relation to fertility. The empowerment approach argues that gender-sensitive transformation of the structures should begin at grass-roots level in a 'bottom-up' manner in that women increase their socio-economic and political powers. Awareness raising, political mobilization and networking are some of the instruments of this approach (Suzanne, 2009).

For the purpose of this study, the empowerment approach was considered to examine the factors that empower and/or disempowered female headed households in terms of their livelihood strategies as compared to male headed households.

2.3. Theoretical Perspectives on Livelihood Security

Since the beginning of international discourse on the problem of hunger and poverty as early as the 1970s, there have been different perspectives explaining the problem in various dimensions. As a result of continuous research and further investigations on the problem, there was a paradigm shift over time from then. The most prominent approaches include the Food Availability Decline Approach (1970s), the entitlement approach (1980s), and the Sustainable livelihoods Approach (1990s). The following section is a brief discussion on these theories. From this discussion, the sustainable livelihoods approach is selected as the framework for the study at hand.

2.3.1. The Food Availability Decline Approach

Supply side explanations of food security/insecurity are popularly known as Food Availability Decline (FAD) models and refer to the decline in per capita food availability (Assefa and Ramakrishna, 2002:130). These traditional explanations of the occurrence of famine have primarily focused on food availability decline (FAD) due to factors such as climate, demographic structures, and decline of natural resources (Yared, 2001).

During the 1970s, the availability of food was thought to be the overriding determinant of famine (Webb & Braun, 1994). Food security was expressed in terms of a sufficient supply of food at national and international levels, where by the required quantity was calculated on the basis of objectively established physical needs (Tollens, 2000:27). The question was whether a nation or a region could command enough food to meet the aggregate requirements of its people. Therefore, special attention was paid to fluctuations in aggregate food supply, and food security interventions were primarily concerned with providing effective buffer mechanisms against such fluctuations. In this context, food security measures came to be identified with macro-level

instruments such as national and international storage of food and balance-of-payments support for countries facing temporary food shortages (Tekeba, 2000).

Therefore, policy makers were mostly concerned with national food security, and failed to take into account access and distribution within countries. It was soon realized that the FAD approach led to a very narrow view of the food security problem. A large segment of a population could be living in hunger even if the country had sufficient food in aggregate terms during normal times. Likewise, a sizeable section of the population could plunge in to hunger during moments of crisis, even if the nation had an adequate 'cushion' to maintain aggregate food availability. Adequacy at aggregate level does not necessarily ensure adequacy at the household or individual level (Gezahegn and Eleni, 2003).

2.3.2. The Entitlement Approach

In 1981, Amartya Sen published his groundbreaking book, *Poverty and Famines: an Essay on Entitlement and Deprivation* which questioned traditional assumptions on famine, and argued that famine was a result of entitlement failure rather than a food deficiency (Devereux & Maxwell, 2003). According to Sen, the distribution of food is as important as the level of food production itself (Maxwell, 1989).

The entitlement approach to starvation and famines concentrates on the ability of people to command food through the legal means available in society. These mechanisms include own production from agriculture and involvement in some non-farm income generating activities (Thomson & Metz, 1998:12). In addition, transfers from sources external to the household, i.e. from the state or friends and relatives, will also add to household entitlement (FAO, 2003). Typically, these latter sources of entitlement take the form of cash payments or gifts, although in-kind payments and remittances are also common occurrences (FAO, 2003).

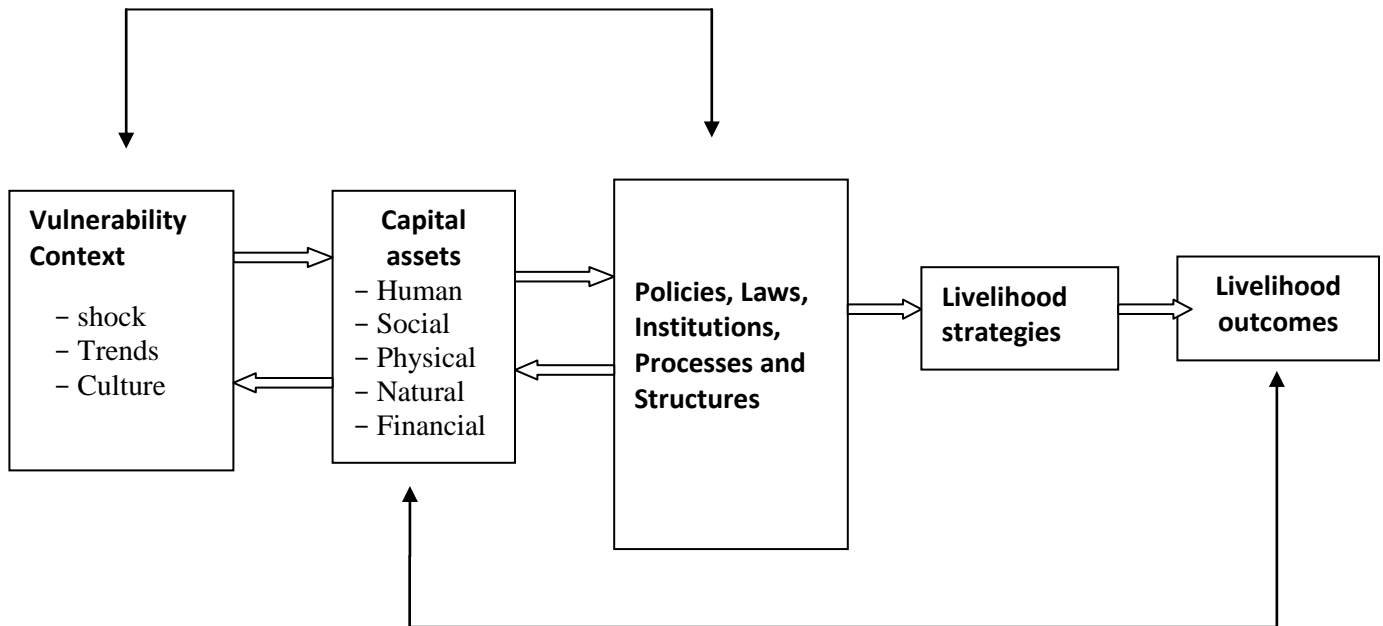
The entitlement approach has been acknowledged for its strong side for explaining the different impacts of famine on different population groups, how famine could occur amidst plenty, for its understanding of food insecurity, directing attention to policies to remedy it. The approach has been criticized for the fact that it implies that people's actions are largely determined by their need to consume food. Research into people's responses to famine (often referred to as 'coping strategies') has shown that their priorities in times of food stress are to preserve productive assets to protect livelihoods, rather than to meet immediate food needs (Devereux & Maxwell, 2003).

2.3.3. The Sustainable Livelihood Approach: Conceptual Framework of the study

The livelihoods approach was emerged from a critique of the earlier attempts which were set out to understand the crises in the household provisioning and food security. The most influential of these approaches was the entitlement approach which was proposed by Armatya Sen as a way to understand famine (Devereux, 2000). The sustainable livelihoods framework provides a basis for understanding the multiple connections between rural households and the broader physical, socio-political, institutional and gendered context in which agricultural development takes place. It also provides the basis for identifying the causes of poverty and options to enable the poor to escape from poverty. Jones *et al.* (2004) stated that it is the dissatisfaction with the income/or consumption model which give rise to basic needs perspectives which go far beyond income and include the need for basic health and education, clean water and other services which are required to prevent people from falling in to poverty.

This framework gives attention to the role of the vulnerability context and household assets (broadly defined to include physical, human, natural, social and financial assets) in determining the livelihood strategies of individuals and households (DFID 1999 cited by Ruben *et al.* 2007). As indicated in the figure below, the sustainable livelihood framework is a basic frame work portraying the interaction of household assets with other livelihood strategies and contexts resulting in some form of livelihood outcomes. This framework is going to be basically used to guide this study of livelihood situation of female headed households in the study areas.

Figure 1: Sustainable livelihood framework, adopted from DIFD



2.3.3.1. Dimensions of the framework and their interactions

The livelihoods framework demonstrates the interaction between household livelihood systems on the one hand, and the outside environment – both the natural environment and the policy and institutional context. It takes in to account the complex set of settings (factors) which influence the livelihood activities (strategies). The following section portrays the description of these elements and how they interact to each other in the overall livelihood system.

Vulnerability context

The risk factor that surrounds making a living is summarized as ‘vulnerability context’. The **vulnerability context** refers to unpredictable events that can undermine livelihoods and cause households to fall into poverty (Alice et al, 2005). It mainly includes seasonality, trends, and shocks that affect people’s livelihoods. The key attribute of these factors is that they are not susceptible to control by local people themselves, at least in the short and medium term (DFID, 2000). The vulnerability context is therefore exposure to stresses and shocks of different types and

magnitudes. Some of these factors are fast acting (such as earthquakes) and others are slower acting (such as soil erosion), but both can undermine livelihoods (Alice et al, 2005).

It is important to distinguish between shocks originating from outside the community, which affect all people in the same locality, and idiosyncratic shocks that principally affect only individual households. Exposure to weather-related shocks varies by location, whereas exposure to man-made shocks depends on historical, political and economic factors. As indicated in the figure above, critical trends as well as shocks and seasonality exert direct influence on households' availability of assets. Vulnerability emerges when human beings have to face harmful threat or shock with inadequate capacity to respond effectively (DFID, 2000).

Vulnerability context may have two dimensions. The first is the external dimension which refers to the external risks, shocks and stresses to which households are exposed and have little or have no control on it. This includes such events as Weather-related shocks and natural calamities, Pest and disease epidemics, Economic shocks, Civil strife, and Seasonal stresses (Lasse, 2001). The other side that is the internal side of vulnerability refers to the ability to cope without irreversible loss of assets. This dimension of vulnerability involves characteristics of individuals (age, sex, education, skills, health status etc.) and other micro network (Bronson *et al* cited in Amare, 2011).

Livelihood assets

In the livelihoods framework, there are different resources which are regarded as the building blocks of the livelihood. These assets are the resource base of the community and of different categories of households. Livelihood assets lie at the core of livelihoods analysis, referring to the resource base of the community and of different categories of households. They are grouped into human, natural, financial, physical and social assets (Adato *et al.* 2007). Livelihood assets are the resources on which people draw in order to carry out their livelihood strategies (Farrington *et al* cited in Amare, 2011). The members of a household combine their capabilities, skills and knowledge with the different resources at their disposal to create activities that will enable them to achieve the best possible livelihood for themselves. Everything that goes towards creating that livelihood can be thought of as a livelihood asset (Messer and Townsley, cited in Amare,

2011).As the livelihoods approach is concerned first and foremost with people, it seeks to gain an accurate and realistic understanding of these assets.

As indicated in the model, there is double causality between the vulnerability context and asset ownership. On the one hand, shocks cause people to lose their assets. On the other hand, assets help protect people's livelihoods against shocks. Human capital is less vulnerable to shocks because it cannot be stolen, lost or taken away easily (Alice et al, 2005). The following section is a brief description of these capitals.

Human capital:

Available human resources within a household in terms of quantity and quality are among the determinant factors in shaping livelihood situations. These types of capitals are related with age, education, gender, health status, household size, dependency ratio and leadership potential, etc.(Lasse,2001).The assets attached to these characteristics such as the skills, knowledge, ability and potential to labor and good health enable people to pursue different livelihood strategies.

Physical capital:

Physical capital comprises the basic infrastructures, the production equipment and the means which enable people to pursue their livelihoods (DFID, 2000). It refers to such infrastructures and resources as shelter, water, energy, livestock, irrigation pumps, roads, markets, and various farm inputs and tools. They are assets created by economic production process that are also essential for generating income sources which are generally regarded as producer goods.

Natural capital:

This includes the natural resource stocks such as land, water, wildlife, biodiversity, forests, fishing, common grazing lands, and other environmental resources (Scoones, 1998). These are general resource endowment whether renewable or non-renewable up on which rural people depend to make their living (Ellis, 2001),

Social capital:

This capital refers to the social resource upon which people draw in pursuit of livelihoods. This includes kin networks and connections, group membership, relationships of trust, farmer groups and community-based organizations, socio-political voice and influence (Lasse, 2001).

Financial capital:

Financial capitals are the financial resources which are available to people and which provide them with different livelihood options (DFID, 2000). Financial capital includes resources like savings, supplies of credit, pensions, income, insurance and remittances from family members working outside the home (Lasse, 2001).

Policies and institutions/Structures

The structures and processes associated with national and local government, authority, laws and rights, democracy and participation are generalized as the ‘policy and institutional context’. Policies and institutions which influence rural household’s access to livelihood assets are also important aspects of livelihood framework (DFID, 2000). They are an important set of man-made external factors that influence the range of livelihood options open to different categories of people.

An enabling policy and institutional environment makes it easier for people – poor and less poor – to gain access to assets they need for their livelihoods. A disabling policy and institutional environment may discriminate against the poor, thus making it difficult for them to get access to land, livestock, capital and information (Alice et al, 2005). The importance of policies, institutions and processes cannot be overemphasized, because they operate at all levels, from the household to the international arena, and in all spheres, from the most private to the most public. They effectively determine *access* (to various types of capital, to livelihood strategies and to decision-making bodies and source of influence), *terms of exchange* between different types of capitals, and returns to any given livelihood strategy (DFID, 2000; Lasse, 2001).

Livelihood strategies

According to DFID (2000) the term “livelihood strategies” is defined *as* the range and combination of activities and choices that people make in order to achieve their livelihood goals, including productive activities, investment strategies, reproductive choices, etc. The sustainable livelihoods framework illustrates the relationship between household assets or capabilities and the range of life choices open to different socio-economic strata. Livelihood strategies of different categories of households are also shaped by the policy and institutional context in which they live (Lasse, 2001). These livelihood strategies are conditioned by transforming structures and process and affect outcomes for individuals and households which feedback to affect their asset endowments over time (Ruben *et al.* 2007). On the basis of their personal goals, their asset base and their understanding of the options available, different categories of households develop and pursue different livelihood strategies.

Rural households may construct the following categories of livelihood strategies (Devereux and Maxwell, 2003):

- **Livelihood intensification:** where the value of output per hectare of land or per animal is increased by the application of more labor, capital technology.
- **Livelihood ex-tensification:** where more Land or animals are brought in to production at the same levels of labor, capital or technology.
- **Livelihood diversification:** where households diversity their economic activities a ways from reliance on the primary enterprise (livestock or cropping), typically seeking a wider range of on-and off-farm sources of income.
- **Migration:** where people move away from their initial source of livelihood and seek a living in another livelihood system.

Livelihood strategies are direct dependent on asset status and policies, institutions and processes. Households with plenty of assets such as land, water, livestock, equipment and money, as well as higher education and skills and better socio-political networks, generally have a wider range of livelihood options than households with fewer assets.

Livelihood outcomes

The sustainable livelihood approach explores livelihood outcomes, focusing on how the livelihood strategies selected by individuals contribute to their wellbeing, poverty reduction, and livelihood adaptation in their contexts in relation to the betterment or destruction of their livelihoods (Ellis and Tassew, 2005). The livelihood outcomes are very closely linked to the livelihood strategies that individuals use for their livelihoods. (Ellis *et al*, 2005). Livelihood outcomes of different types of households and their livelihood strategies are influenced by their vulnerability context – people’s exposure to unexpected shocks – and their ability to withstand the shocks, which depends on their asset base.

Livelihood outcomes are what household members achieve through their livelihood strategies, such as more income (e.g. cash), increased well-being (e.g. non material goods, like self-esteem, health status, access to services, sense of inclusion), and reduced vulnerability (e.g. better resilience through increase in asset status), improved food security (e.g. increase in financial capital in order to buy food) and a more sustainable use of natural resources (e.g. appropriate property rights) (Scoones, 1998). Unsuccessful outcomes include food and income insecurity, high vulnerability to shocks, loss of assets and impoverishment.

2.4. Situation of Female Headed Households in Ethiopia: An Empirical Overview

In many parts of the world, including the developing countries, there has been a steady increase in number of female headed households (Schatz, Madhavana and Williams, 2011). In rural Ethiopia, women encompass half of the population (31,321,214 out of 61,888,111) (CSA, 2011). There are several explanations for the proliferation of female-headed households in rural Ethiopia. High rate of male out migration, divorce, military conscription and overall gender bias treatments are among the commonly mentioned factors (Stone, 2001). They are vigorously involved in all socio-economic and cultural aspects of society. Women are both producers and procreators, and they are also active participants in the social, political and cultural activities of their communities (Sara, 2007). Even though rural women make a significant contribution to the

agricultural sector, similar to women in other parts of the developing world, they are usually vulnerable to poverty.

The effects of poverty have been more serious for women than for men. Women's families and economic responsibilities have allowed them little flexibility and fewer economic opportunities. Typically, their income levels are below the national average (Sara, 2007). It is also noticed that female headship has been linked to unfavorable circumstances, such as family dissolutions, single parenthood, or facing socio-cultural constraints (Metasebia, 2009). As a consequence, FHHs have been largely considered as vulnerable and at risk of poverty group, both among the academic and policy making spheres. FHHs are among those that are hit the hardest by the incidence of poverty in rural areas of the country. This is mainly due to the poor social and economic conditions of women, which result from gender inequalities and discrimination that prevail in the country (Ellis and Tassew 2005; MOFED 2010; IFAD 2010).

Female Headed Households are more vulnerable to poverty than Male Headed Households. The study conducted by Alemu & Dereje (2014) showed that the proportion of Female Headed Households who exit poverty in 2004 is less than that of Male Headed Households. This indicates that Female Headed Households face more difficulty to move out of poverty when compared to Male Headed Households. The same study also indicated that the numbers of those FHHs who are entering poverty are relatively higher than the number of those who exit poverty. The assessment study by Devereux (2000) in four regions of Ethiopia also concluded that female-headed households make significantly lower income compared with male-headed households with a 69% margin. Another study carried out by Fiona in 2004 in Southern Tigray asserted that female-headed households that constitute a great percentage of this region's population are among the most destitute. A similar study in Tigray Region also revealed that the chance of being impoverished for female-headed households is 35% whereas it is only 8% for male-headed households. The household survey that was undertaken by the BASIS research program in Ethiopia, in South Wollo and Oromiya zones also pointed out that the sample female-headed households had lower average income than male-headed households (Stone, 2001).

2.4.1. Access to livelihood assets

It is well documented that women almost everywhere are disadvantaged in relation to men in their access to the different livelihood assets (Chant, 2010 and Metasebia, 2009). Women have been marginalized and their access to resources such as land is limited. Generally, Ethiopia's fast population growth has led to limited access to the country's scarce land resources. Consequently, peasants have been forced to use marginal lands and/or migrate to other areas. Furthermore, women in general, and female-headed households in particular, have been identified as disadvantaged (Yigiremew, 2005).

As availability of land, farming tools, livestock and human labour are essential components of meeting the livelihood of a household, lack of these capabilities associate female household heads with incapability to fit the position of headship (Tizita, 2013). A study conducted by Mossa (2013) at *Libo Kemkem Woreda* showed that FHHs are resource poor segments of the society. According to the finding of this study, the most productive resources such as land, labor, oxen, and capital are the means to sustain once life in the rural areas; however, most FHHs with the exception of land lack these resources. Their counterparts, MHHs are better off than FHHs in access to and control over productive assets.

One of the components of human capital i.e. education of the house hold head is more highly important in determining whether highly remunerated off-farm salary employment or rural non-farm activities can be pursued. Mulu & Paul (2015) also found that labor availability in Ambo district was one of the potential factors that affect FHHs' participation in different income generation activities. Generally, FHHs on an average had fewer economically-active household members and were in a disadvantaged position in deploying family labour for own farm production. Hence, they face labour constraints which subject them to hire labor.

Studies have confirmed that in Ethiopia female headed households are prevented by cultural taboos from using oxen, which limited their ability to farm and often result in share cropping out their land (Tesfaye 2001 cited in Rudenet al. 2007). Studies conducted by Start et al. (2005), Mossa (2013) and Degefa (2005) stated that those who rent-in land are the male-headed in the

category of relatively rich and /or of better off-farmers. The result indicates that despite low holding size, FHHs shared-out and rented-out their land because they face labor shortage, gender division of labor and lack of oxen. Moreover, a reduced capacity for income generation and growing risk of serious illnesses are likely to increase the vulnerability of the female heads to fall into poverty, regardless of their original economic status (Chant, 2003).

The household survey that was undertaken by the BASIS research program in South *Wollo* and Oromiya zones identified that female-headed households own fewer livestock compared to male-headed households (Stone & Mengistu, 2002). Another study conducted by (Amare, 2011) in Amaro *Woreda* of SNNP, also indicated that access to resources/assets like livestock including oxen, cow and goat by the women who head their households was very low. A similar study conducted in Ambo district found that FHHs face oxen shortage and hence they depend on pairing oxen with others, borrowing oxen from relatives, hiring oxen and engaged in share cropping) Mulu & Mansingh, 2015). The same study has shown that only 15 per cent of FHH respondents had access to irrigation. Access to extension services to be provided with training, agricultural inputs, credits and other service providing institutions was also low among Female headed households (Amare, 2011). This study also reached on the fact that the financial problem of the women headed households was not solved. Some women choose to borrow money from relatives while most others choose living with their problems for different reasons. These include lack of guarantee, fear of debt and lack of collateral and long distance of the crediting institutions.

2.4.2. Social stigma and exclusion

The headship status of female household heads may face many challenges from the society and institutions. From the society perspective the deep-rooted association of headship and maleness has been creating problems to socially recognize a female's status and position as a head (Tizita, 2013). A study by Mulugeta (2009) reveals that FHHs, particularly widows, are stigmatized and socially excluded in their communities. Due to stigma and social exclusion, FHHs may face limited access to resources, negatively affecting their livelihoods and social capital.

Cases related to cultural practices and gender bias institutional treatments are also mentioned as causes of the disadvantaged position of female-headed households. The cross-cultural phenomenon in Ethiopia also suggests that the increasing visibility of male headship is largely based on traditional perceptions of headship (Yigremew, 2001). By implication, implicit in the coming up of the term “female-headed household” is the perception that it is a social problem running against the established norm, i.e., male headship. FHHs may also face hostility and stigma in their community in relation to their sexuality. Widows may not be expected to have sexual relations after the death of their partners. Due to this, widows exhibit a fear of the occurrence of unwanted pregnancies in case they engage in sex. This is because widows are not supposed to be sexually active outside marriage after a loss of their husbands (Newton et al, 2014).

2.4.3. Food insecurity and vulnerability

Feminization of poverty confirms the fact that women consist of the largest proportion of the poor globally. It is a gap in the level of poverty between men and women where women are more affected due to various factors. A study by Deverux and Maxwell (2003) pointed out that female-headed households are more prone to food shortage than male-headed households. The study by (Amare, 2011) has also shown that female headed households gain low production from their livelihood activities which is not adequate for supporting their households for the year. A study by Alemu & Dereje (2014) conducted in selected rural households in Ethiopia found that the mean vulnerability for Female Headed Households was higher than that of Male Headed Households portraying that Female Headed Households are more vulnerable to poverty than Male Headed Households. Other studies has also generally demonstrated that female-headed households were more food insecure than male-headed households (Mulu & Mansingh, 2015).

2.4.4. Community participation and decision making

The long standing attitude of associating a woman’s place mainly at household level has also limited female heads to have only minimal role in different institutions (Tizita, 2013). In most cultural settings, as Shah (2011) explained, rural women are evaluated from their connections to

the environment, from their work in subsistence, reproductive and productive realms and from the patriarchal nature of rural families. This, in turn, negatively affected their social and economic status. This long term effects of women's exclusion from general social systems have been observed in detaining their contribution, knowledge, skill and experience in public places. Hence, the coming out of women in public places, in some cases, is a recent phenomenon which was previously considered as taboo.

Research by (Amare, 2011) in *Amaro Woreda* demonstrated that the number of women in different governmental sectors is found to be very low representing only 27.5% while the number of men represents 72.5%. The same study also revealed that they are not taking part in farmers training programs and in agriculture extension services in equal basis. In this regard, only few women are privileged. In all social, economic and political matters of the community, males who are heads of households are considered to be eligible and capable since they are believed to have the necessary experiences, knowledge and skill. On the contrary, women, particularly heads of households, are excluded in matters for some reasons (Mossa, 2013). This situation also affects most women who cannot take part in the service use as they cannot gain knowledge and skills for how to improve their livelihood strategies. Generally, the empowerment level is low affecting their decision making level in equal basis. If we analyze males' position in the society, they are bestowed all the privileges available, including decision-making powers.

2.4.5. Support mechanisms for female headed households

Female headed households face difficulties in recovering from shocks that operate at an aggregate level, affecting the entire community, country and region, as risks cannot be shared (Bird and Prowse, 2008). Chant (2003) argues that unlike developed countries, some developing countries have not yet established schemes that can help support FHHs such as giving them benefits from the state. With such a lack of support, FHHs are challenged. Female-headed households are less able to deal with shocks than the male-headed ones (Munaku and Chigora, 2010).

On the basis of the empirical findings, the rural livelihood conditions can be improved and changed when there is a government policy conducive to environment, and interventions that can bring about better access to resources and services to create an environment conducive to commercialization and livelihood diversification (Mossa, 2013).

2.4.6. Livelihood Diversification and coping mechanisms

Livelihood strategies are those activities undertaken by smallholder households to provide a means of living, and its aim is to ensure households' economic and social security. With regard to gender, diversification is more of an alternative for rural men than for women. This may be due to the fact that men and women have different assets, access to resources and opportunities (Ellis, 2001).

Farming has increasingly been unable to provide sufficient means of survival for poor households and this has created serious problems in their livelihoods. For this reason, many rural people, especially rural women, have started adopting other strategies to enable them to cope up with livelihood problems (Sara, 2007). Similarly, the impact of losing a male figure and a breadwinner in various households prompt many households to adopt specific survival strategies to cope with the socio-economic and cultural challenges the female headship face in their lives (Mulugeta, 2009).

As a survival strategy and as a means of improving their livelihood, the rural communities in general and women in particular either engaged in various non-farm and/or off-farm activities or migrated to the nearest area (Mossa, 2013). In most cases the livelihood diversification of FHHs in rural areas are farming which include crop-based and livestock based diversification strategies (Mulu & Mansingh, 2015; Amare, 2011; Mulugeta, 2009). One of the strategies adopted by rural women is diversifying household income sources, which is more of an option for rural men than for women (Ellis, 2001). In addition to farming as strategy for survival, FHHs also involve themselves in the informal sector. This involves carrying out casual and informal income generating activities such as processing local beverages, selling fire wood, handicraft, petty trade, and selling of unskilled labour force (Tizita, 2013).

In semi-urban areas of the District ,they engaged in preparation of local food and drinks - *Tella*, *Areke*, labor wage and prostitution, which are few of the livelihood options being practiced by them (Mulu & Mansingh, 2015; Mulugeta, 2009).In addition to working in the informal sector, , social ties and networks are significant and enhance the empowerment of women. Social ties and networks may include relations with relatives and neighbors, which provide mutual support in times of need (Newton et al, 2014).

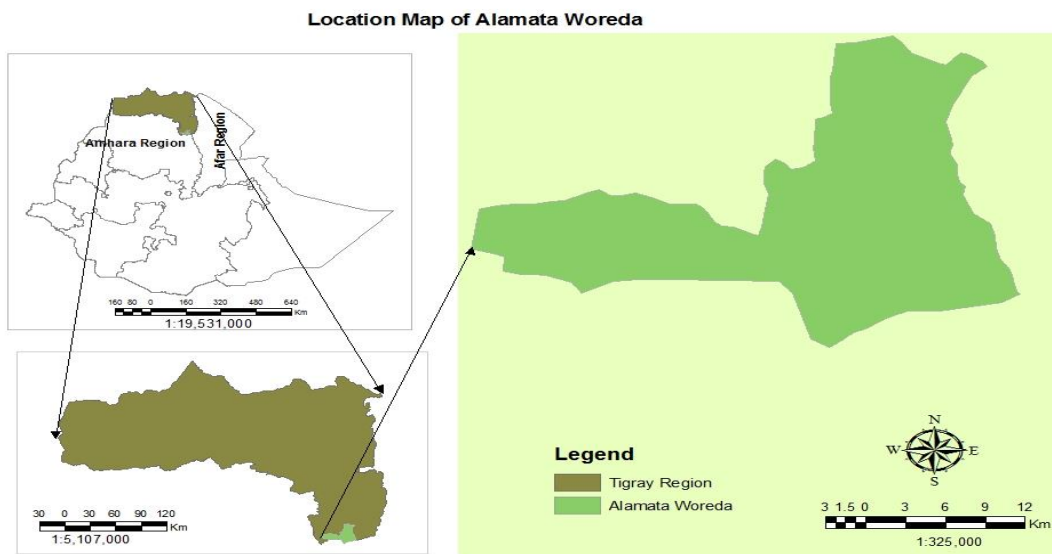
Chapter Three: Description of the Study Area and Research Methodology

3.1. Description of the Study Area

3.1.1. Location

Alamata town, the administrative capital of Alamata *Woreda*, is located 600 km north of Addis Ababa and about 180 km south of Tigray Regional capital, Mekelle. The main road from Addis Ababa to Mekelle crosses the town of Alamata. This *Woreda* is located at the southern tip of Tigray bordering Amhara Regional State. Specifically, the *Woreda* share borders with *Sokota* and *Kobbo Woredas* of Amhara region to the West and South respectively; the Afar Regional State in the east; and *Ofla (Korem)* and *Raya Azebo Woredas* to the north and north east, respectively, (both found in Tigray region). Astronomically, the town of Alamata is located at 12°15'N latitude and 39°35'E longitude (WOARD, 2009).

Figure 2: Location Map of Alamata Woreda



Source: Ethio-GIS using ESRI arc GIS Software Adindan-UTM-ZONE-37N, based on Transverse, Mercator projection

3.1.2. Topography

As far as the landscape of the study area is concerned, altitude ranges from 1,178 to 3,148m above sea level. 75% of the *Woreda* is lowland (1,500m above sea level or below) and only 25% is found in intermediate highlands (between 1,500 and 3,148m above sea level) (WOARD, 2009).

There are 14 rural *Kebeles* and two towns in the *Woreda*. These towns are Alamata and *Waja-Timuga* (the small town located 15 Km to the South of Alamata town). In the current administrative system, the entire *Woreda* is subdivided in to two sub-*Woredas*. These are the town *Woreda* (only Alamata town which has four *Kebeles*) and the rural *Woreda* (comprising of the 15 *Kebeles*).

Most of the *Kebeles* in the *Woreda* and the town of Alamata are located in the lowland part of the *Woreda* (*Qola*) and the rest four *Kebeles* are found in the intermediate zone (*Woyna Degga*). The *Woreda* is surrounded by undulating mountains that are very steep and characterized by low vegetation cover. These mountains covering a large area with a series of dissected gullies drain to Alamata valley and serve as a source of runoff water to the valley.

3.1.3. Climate and Soil Type

Alamata *Woreda* experiences bimodal rainfall: the main rainy season (*Meher*), which is from July to August and the short rain season (*Belg*), which lasts from February to April. However, recently the rainfall pattern has drastically changed in that the main rain starts at around the mid of August and withdraws soon after. Shortage of rainfall (moisture stress) is a major constraint of agricultural production in the *Woreda*. Even though exact data was not available for 2015 rain started very late, around end of August and only rained for a few days. This shortage of rainfall in the *Woreda* was the manifestation of the climate change called *Eliino* which occurred almost throughout the country.

Soil type: According to the Alamata *Woreda* Bureau of Agriculture and Rural Development, the major soil types are Eutric Vertisols, Lithic Leptosols (Cambic) and Lithic Leptosols (Orthic). The majority of the valley area is mainly covered by Vertisols. The gullies in the surrounding mountains join together and form rainy season rivers at the foot of the mountains. These are major sources of alluvial soil because of relatively higher elevation and rainfall in these areas. The dissected channels slowly spread over the valley depositing silts. The fine silt is relatively fertile and the water becomes a source of supplementary irrigation (WOARD, 2009).

3.1.4. Demographic Characteristics

According to the 2007 Ethiopian Population and Housing Census summary report the population size of Alamata *Woreda* was 85,259 (CSA, 2007). The 1994 census showed that the age structure of the people of Alamata *Woreda* is characterized by a very high proportion of the young ages and low proportion claimed by the old, reflecting the existence of higher fertility rate. The overall sex ratio (defined as the number of males per 100 females) of Alamata *Woreda* was 94.56, i.e., about 95 males per 100 females (CSA, 1994). Recent data reported by the *Woreda* Administration indicated that the total population of the rural *Woreda* in 2015/16 was 95,094 of which 46,983 were males and 48,111 were females. In terms of the number of households, there were 10,992 and 11,164 male and female headed households, respectively, in the rural *Woreda*. The study *Kebeles Limat* and *Waja-Timuga* had a total population 7,712 and 5,224, respectively (WOARD, 2009).

3.1.5. Religion and Ethnic Characteristics

The people of the study area described themselves *Raya*, having their own ethnic identity and cultural traits. The term *Raya* refers to both the people and their homeland that covers *Kobbo Woreda* in Amhara regional state and *Alamata, Offila (Korem), Raya Azebo (Moheni, Chercher, Balla)*, and some parts of *Wajirat* in Tigray regional state. Multilingualism is prevalent in *Raya*, as the People can speak any one or several of the following languages: Amharic, Tigrigna, *Afan Oromo, Afargna*, and to some extent *Agewugna*.

The majority of the population is Ethiopian Tewahedo Orthodox Christians followed by Muslims. Some Catholics and Protestants are also found in the towns.

3.1.6. The Rural Economy

In the study area, the main livelihood activity is mixed agriculture which comprise of crop production and livestock rearing. To some extent, peasants are also involved in some types of non-farm activities. Some form of social and public transfers of basic items can also serve as survival mechanism of some households.

The economy of the study area is basically dependent on agriculture. Agriculture in Alamata *Woreda* is characterized by mixed small holder farming system where crop and animal production are highly integrated. Agriculture in the area is mainly rain-fed and based on traditional farming system.

According to Alamata *Woreda* Agricultural Office, there are two major farming systems in the *Woreda*. The first category includes wheat, pulses and livestock production system. This kind of farming system is more common in the highland *Kebeles* (*Awudu kulu, Merewa, Tsetsera and Sorya*). *Teff*, sorghum, maize and livestock farming system is the other category which is common in the rest of the *Kebeles* found in the lowland areas. In the former farming system, barley is the dominant crop followed by wheat and pulses. In the lowland farming system (below 1600m above sea level), the major crops currently grown include *Teff*, Sorghum, Maize and Pepper and some pulses, in order of importance.

The other important livelihood activity in the study area is that of livestock husbandry. Livestock are used for different purposes as draught power, traction and transportation (equines), for household consumption (meat and milk) and as a source of income (through sale), especially for food purchase at the time of crop failure. Animal dung is also important source of fuel for household consumption and increase fertility of soil.

3.1.7. Rural Infrastructures

Rural Financial Institutions

The majority of farmers in the study area have access to credit. The Agricultural Bureau, the Relief and Rehabilitation Bureau and *Dedebit* Credit and Saving Institution (DCSI), which is under Relief society of Tigray (REST), are some of credit provider institutions in the *Woreda*. *Dedebit* Credit and Saving Institution (DCSI) is the major supplier of credit and saving services for the rural population in the *Woreda*.

Regular credit is mainly given for agricultural purposes such as to purchase improved seeds, fertilizers, herbicides and insecticides, and other agricultural inputs. Farmers are also encouraged to take credit for purchasing of improved breeds of animals and livestock fattening.

Agricultural Extension Services

The agricultural extension service in the *Woreda* is provided by the *Woreda* Office of Agriculture and Rural Development (WOARD). The task of distributing agricultural services is organized into four sectors: the agricultural development; Natural resources, environmental protection and land administration; Water supply and rural roads and cooperative development. Under this strategy, 12 Farmers Training Centers (FTC) have been established in the *Woreda* by which farmers were supposed to be given formal training on crop production, livestock production and natural resources management and conservation. However, according to key informants, these FTCs are not functional due to shortage of necessary materials and implementation problems. The input supply service is currently within the cooperatives development sector.

Marketing Institutions

Even though the farmers do not produce surplus for sale, they do sell their products to purchase some agricultural inputs and other necessary items. There are local markets in some of the *Kebeles*. However, the major markets in the *Woreda* are located at *Alamata* and *Waja* towns. Some *Kebeles* located far away from the towns and that are with limited road transportation

services have limited access to these main markets in the *Woreda*. Such *Kebeles* include *Awudu-Kulu* and *Sorya* that are found in the highland part of the *Woreda*.

3.2. Methods of the Study

3.2.1. Research Design

To address the objectives of the study, both qualitative and quantitative approaches to data collection and analysis were employed. This research strategy was preferred because using the mixed approach in the study of livelihood security yields more than the sum of the two approaches used independently. Fieldwork for the purpose of data collection from sampled households using survey questionnaire, FGDs and interviews with concerned subjects and experts as well as field observation was conducted in August, 2016.

3.2.2. Universe of the study

The study was conducted in Rural Alamata Woreda in Southern Tigray. Two particular rural Kebeles named Waja-Timuga and Limat were selected in consultation with the concerned people in the Woreda administration. The total number of households in Waja-Timuga was 1309 and that of Limat was 1,788. In Waja-Timuga there were 611 and 698 male and female headed households respectively. Similarly, the number of male headed and female headed households in Limat Kebele was 889 and 899 respectively. The sample households for the actual study were selected using the following sampling procedure.

3.2.3. Sampling Procedure

The specific study *Woreda*, Rural *Woreda* of Raya Alamata, consists of 15 rural *Kebeles*. The *Kebeles (Tabias)* are further designated into *Kushets* which are smaller local administrative units comprising some number of households. The units of analysis for the study were both female-headed and male headed households at this level. For the purpose of selecting such households for close and comparative analysis a probability sampling technique called stratified multi-stage cluster was used. Accordingly, from the total of 15 *Kebeles*, two *Kebeles* named *Limat* and *Wja-*

Timuga were selected at the first stage of selecting the clusters. This selection of Kebles was done purposefully in consultation with the *Woreda* administrator and experts from office of Women affairs. The criteria for selection of these two *Kebeles* were their relative status in terms of access to rural infrastructures and livelihood conditions as perceived by the experts during consultation.

Then at *Kebele* level a stratifying variable was introduced to select households for the study. Accordingly, sex of the household head was considered and hence 40 male headed and 40 female headed households were selected using simple random sampling from each *Kebele*. Consideration of this variable enabled the researcher to conduct comparative analysis of rural livelihoods in line with the possible impact of gender. Ultimately, this process of sampling the units for the study resulted in the selection of a total of 80 rural households for the purpose of gathering data using a survey questionnaire.

Then from the selected *Kebeles*, a total of 80 rural households were selected and female headed households were also proportionally selected. These finally selected female headed households were the actual sample of the survey for collecting data using structured questionnaires.

3.2.4. Methods of Data Collection

Both primary and secondary data sources were employed. The entire process of gathering information was carried out involving pertinent stakeholders, particularly target household members, and duty bearers mainly the government bodies, civil society, community members, key actors in community such as agriculture extension workers.

i. Primary Data

In order to gather primary data from different sources, the following techniques were employed.

Rural Household Survey

A cross-sectional survey design, which is characterized by collection of data at one point in time to describe the target population, was adopted to assess the livelihood security of rural households in the study area.

A questionnaire consisting of both open- ended and close-ended questions was developed and employed for collection of the relevant information from the heads of sampled households. This household sample survey generated both qualitative and quantitative data pertaining to the social, demographic, and economic characteristics of the households.

In-depth Interview

Information regarding the different kinds of government strategies and the challenges for their implementation was gathered through in-depth interview conducted with development agents, *Kebele* and rural *Woreda* administrators, and officials from women affairs office at *Woreda* level.

Focus Group Discussion

Focus group discussions are a means of familiarizing oneself with local reality and its constraints. These are, generally, discussions in which the villagers take part voluntarily (Tollens, 2000). Therefore, a focus-group discussion among females heading households was held in each of the selected *Kebeles*. In this exercise, an enormous amount of contextual information on the villages as well as data on the different causes of livelihood insecurity both at the community and household level; and facts about coping mechanisms were gathered.

ii. Secondary Data

Secondary data was also collected from various sources. Related articles, books, monographs, newspapers, official documents (policy, food security program documents, Safety net, and project papers) were thoroughly reviewed and used to supplement the primary data collected during the field work.

3.2.5. Methods of Data Analysis

Both qualitative and quantitative techniques were applied for the analysis and interpretation of data collected by various methods. Information collected through key informant interviews and focus group discussions was qualitatively analyzed. The quantitative household survey data was

coded, entered into computer, and analyzed using the software called Statistical Package for Social Science (SPSS). The specific statistical procedures include univariate analysis such as the computation of frequencies, percentages, and means; as well as bivariate analysis such as cross tabulations and Statistical tests like chi-square test. These techniques helped to examine and establish statistical relationships between various independent variables.

Chapter Four: Results and Discussion

4.1. Socio-Demographic Characteristics of Respondents

4.1.1. Respondents' Age and Sex composition

As it is indicated in the sampling technique in the previous chapter, a total of 80 households were selected for the survey study, of which 40 were female headed and the other 40 were male headed.. When we see the age distribution of the sample household heads, the majority of them were in the age group of 31-45 (41.25%) followed by those in the age group of 46-60(about 31.25%). The disaggregated data in terms of sex shows that about 50% of female household heads were in the age category of 31-45. This finding indicates that the majority of such households are with a good human capital which can be further used for improvement of their livelihoods if appropriate interventions are in place. Table 4.1 shows the distribution of the sampled household heads by their sex and age.

Table 4.1: Frequency and Percentage Distribution of Sample Household Heads by Age and Sex,

Age	Sex of the household head				Total	
	Male		Female			
	No.	Percent	No.	Percent	No.	Percent
15-30	1	2.5	8	20	9	11.25
31-45	13	32.5	20	50	33	41.25
46-60	13	32.5	12	30	25	31.25
> 60	13	32.5	0	0	13	16.25
Total	40	100	40	100	80	100

4.1.2. Religion of Respondents

Even though there are followers of different religions in the *Woreda*, virtually the most majority of the sample households were Orthodox Christians (about 76%) followed by Muslims (about 23%).

Table 4.2: Distribution of Sample Households by Religion of the Household Head

Religion of the household head	Name of the Kebele				Total	
	<i>Limat</i>		<i>Waja-Timuga</i>		No.	Percent
	No.	Percent	No.	Percent		
Orthodox Christian	31	77.5	29	74.34	60	75.94
Catholic	1	2.5	0	0	1	1.27
Islam	8	20	10	25.64	18	22.78
Total	40	100	39	100	79	100

4.1.3. Family Size of Sample Households

Family size is one of the factors that affect the livelihood security of rural households. Table 4.3 presents the distribution of the sampled households by their sizes. The majority of the sample households' family size was greater than five. About 55% of the total households have a family size of 5 to 8 members and about 36% of the sample households have members up to four individuals. About 9% of the total sample households have family size of 9 to 12 members. The average family size for the total sampled households is five individuals in one household. However, disaggregated data on the family size showed that the mean family size for female headed households is 4 and that of male headed households was 6. Therefore, on average, male headed households were larger than female headed households by 2 more family members. This implies that male headed households are well in a better position in terms of this human capital in that they have more labour sources that could be used in various farming activities which are labour intensive in its nature.

Table 4.3: Frequency and Percentage Distribution of Sample Households by Family Size

Family size	Sex of the household head				Total	
	Male		Female		No.	Percent
	No.	Percent	No.	Percent		
1-4	9	22.5	20	50	29	36.3
5-8	24	60.0	20	50	44	55
9-12	7	17.5	-	-	7	8.75
Mean	6.3250		4.4250		5.3000	

4.1.4. Educational Status of Household Heads

In the literature, literacy was found to be one of the factors that influence livelihood diversification of households. Therefore, there is a need to describe the distribution of sample households in terms of the educational status of their heads. Table 4.4 shows the frequency and percentage distribution of sample households by the educational status of their heads.

Table 4.4. Distribution of Sample Household Heads by Educational Status of their heads

Level of education	Sex of the household head				Total	
	Male		Female			
	No.	Percent	No.	Percent	No.	Percent
Illiterate	17	43	27	68	44	55
Read & write only	13	33	7	18	20	25
Grades 1-4	8	20	4	10	12	15
Grades 5-8	1	3	2	5	3	3.75
Grades 9-12	1	3	-	-	1	1.2
Total	40	100.0	27	100.0	80	100.0

As shown in table 4.4 above, the majority of the sample household heads (about 55%) were unable to read and write and 25% of them were capable of only writing and reading. From the sampled female headed households, about 68% of them were illiterate compared to that of 43% of the sampled male headed households. So, relatively speaking males were better than females in terms of their educational status even though the general figure indicates the majority of the sampled households' heads were illiterate. So, this shows that female household heads in the study area possess lower human capital as compared to their male counter parts. This scenario significantly affects the livelihood situation of female headed households by limiting their level of diversification, affecting their chance of being addressed through training and various capacity building trainings since it is the men who often participate in such trainings due to their better educational background.

4.1.5. Marital Status of Respondents

Obviously, all female respondents were unmarried at the time of the study since they were purposively selected as female headed households. However, there was a need to see their

experiences related to marriage and why they ended up being heads of their households. As indicated in table 4.5, the main causes that were mentioned by the respondents were the death of their husbands due to various reasons (57.5% of them) and divorce (42.5%).

Table 4.5. Percentage Distribution of respondents by Marital Status and Sex

Marital Status	Male		Female		Total	
	No.	Percent	No.	Percent	No.	Percent
Currently Married	39	97.5	0	0	39	48.8
Widowed	0	0	23	57.5	23	28.8
Divorced	1	2.5	17	42.5	18	22.5
Total	40	100.0	40	100.0	80	100.0

4.2. Access to Resources and Livelihood Activities

4.2.1. Access to land and farming activities

In rural communities, land is the most important livelihood asset with significant value in both the economic and social life of households. Access to land in such communities significantly affects the livelihood condition since it is one of the key natural capitals with paramount effect on household own production. In the study area, almost all sample respondents had access to at least a small size of land in various ways. Table 4.6 below shows that about 90% of male headed households and 72.5% of female headed households got farm land through land distribution. Farm households had also other options of accessing land for farming purposes which include sharecropping, inheriting from parents and renting from others. However, there was significant difference in the size of farm land holding between male headed and female headed households. The mean comparison result shows that the average farm land size owned by female headed households was 2 *Timad*¹ which was less by half compared to that of male headed households (4 *Timad*). This relative lack of access to farm land by female headed households definitely affects the level of agricultural production and thereby their livelihood security.

¹ Number of days a plot could take for farming with only a pair of oxen. It is estimated to be the equivalence of 0.25 hectare of land

Table 4.6. Mechanisms of accessing farm land by sample households

Way of accessing land	Sex of the household head				Total	
	Male		Female			
	No.	Percent	No.	Percent	No.	Percent
through land distribution	36	90.0	29	72.5	65	81.3
inherited from parents	5	12.5	8	20.0	13	16.3
sharecropped in	2	5.0	2	5.0	4	5.0
Rented	8	20.0	1	2.5	9	11.3

Another important issue concerning farm land as a resource for production is that whether farm households are farming the land by themselves. As in any other part of the country, agriculture in the study area is labour intensive. So, the availability of adequate labour force for agricultural production is a requirement for increased food production. Even though shortage of human labour was not a problem for the majority of the households, there were some households lacking adequate human labour for farm activity. Farming, specifically plowing, is culturally considered as the task of only males. Therefore, these female headed households in the study area are faced with the problem of shortage of labour leading to decline in productivity. Most of such households rented out their farmlands for other farmers from which they obtained only a portion of the harvest. As indicated in table 4.7, the majority of male headed households (94.8%) ploughed their farm land by themselves whereas only 22.2% female headed households did plough their land by themselves. The majority of female headed households (75%) have given their farm land for share croppers on the bases of sharing half of the produces from their land. Compared to male headed households, female headed households experienced severe shortage of labour which negatively affected their farm production.

Table 4.7. Distribution of sample households based on labour for farming land

		Sex of the household head				Total	
		Male		Female			
		No.	Percent	No.	Percent	No.	Percent
Who plows your land?	Myself	37	94.8	8	22.2	45	60.0
	Sharecropper	2	5.1	27	75.0	29	38.7
	Relatives	0	0.0	1	2.8	1	1.3
	Total	39	100.0	36	100.0	75	100.0

The sample households were also assessed whether they have adequate farming tools apart from farm land possession. Similarly, female headed households were found to be lacking adequate tools for better farming activities. As indicated in table 4.8, 89.5% of male household heads responded that they have adequate farm tools whereas only 15% of female headed households do have enough farm tools. This lack of access to adequate farm implements also affects their level of agricultural productivity.

Table 4.8. Farm tool possession by sample households

		Sex of the household head				Total	
		Male		Female			
		No.	Percent	No.	Percent	No.	Percent
Do you think you have enough farm tools?	Yes	34	89.5	6	15.0	40	51.3
	No	4	10.5	34	85.0	38	48.7
	Total	38	100.0	40	100.0	78	100.0

Communal Land

The common property resources in the area are water, community grazing land, and forests that are sources of wood for fuel and construction. According to the FGD participants and key informants, people in the communities have almost equal access to these resources. Therefore, there is no difference between male headed and female headed households in accessing these resources. However, there are no formal rules which regulate the management and utilization of these resources. People commonly use resources according to their community and traditional rules. According to the interviewees, the amount of public grazing lands and forests is progressively decreasing from time to time. The major reasons for this were overgrazing and allocation of a portion of these lands to the landless people. Trees in publicly owned lands have been almost completely destroyed because they were nobody's responsibility.

4.2.2. Access to Agricultural Extension Services and Training

Agricultural extension services are among the various interventions by government so as to support rural households improve their agricultural productivity through different technical and financial supports. As elsewhere in the country, there was also such intervention by the office of agriculture in the area. In this study, an effort was done to identify if there was difference between households headed by men and women in their access to such services. In line with this,

respondents were asked whether they have got adequate support from the agricultural extension agents working in their community. Even though, the majority of male household heads indicated that they did not get adequate support from these extension agents, the number of these lacking access to these services is far greater in the case of female household heads which was about 68.7% of them.

Access to credit and credit utilization is also one of the possible factors to enhance the livelihood status of households by creating opportunities for livelihood diversification and purchase of agricultural technologies. Accordingly, an assessment of whether the sample households have used credit in the last five years was conducted and the result indicates that there is no problem of credit availability. However, majority of sample households did not take credit though it is available from such financial institutions such as *Dedebit* microfinance and cooperatives. During focus group discussions it was revealed that factors such as fear of risk of debt and lack of collateral hindered female headed households from using the available credit packages.

Table 4.9. Support from agricultural extension workers and access to credit packages

		Male		Female		Total	
		No.	Percent	No	Percent	No	Percent
Do you get adequate support form extension agents?	Yes	18	47.4	10	31.3	28	40.0
	No	20	52.6	22	68.7	42	60.0
	Total	38	100	33	100	71	100.0
Have you used credit package?	Yes	13	38.2	22	61.1	35	50.0
	No	21	61.8	14	38.9	35	50.0
	Total	34	100.0	36	100.0	70	100.0

Another important of component of extension service by government is provision of training for rural farm households on various aspects of their livelihood activities. Such training is supposed to enable rural households develop knowledge of risk minimization, effective utilization of resources and build their human capital in general. During the survey study, household heads were asked whether they have attended any training targeting on these aspects. The majority of them responded that they have never taken any training. But about 40% and 27.5% of male and female household heads, respectively, mentioned that they have taken training at least in one of livelihood strategies (see table 4.10).

Table 4.10. Provision of training for household heads

		Male		Female		Total	
		No.	Percent	No.	Percent	No.	Percent
have you taken any training on agricultural development	Yes	16	40.0	11	27.5	27	33.8
	No	24	60.0	29	72.5	53	66.2
	Total	40	100.0	40	100.0	80	100.0

4.2.3. Irrigation and Conservation Practices

Irrigation practices are believed to be very helpful in enhancing agricultural production in arid and semiarid areas. Even though such practice could help significantly, farmers in the study communities are not engaged in such activities for various reasons. As indicated in table 4.11, only 42.5% of the total sample households practice irrigated farming system. 60% of male headed and 25% of female headed households employed irrigation practices. The disaggregated data shows that male headed households are in a better position practicing irrigation in their farm lands. Most of these households adopted a traditional kind of irrigation.

Shortage of water is the major challenge for food security in the study area. According to the focus group discussants, erratic and scanty rainfall is the main problem as rain-fed agriculture is dominant in the area. Production, especially *Belg* season, is declining from year to year due to erratic and scarce rainfall. Productivity in such areas can be improved if the rain-fed agriculture is complemented by application of irrigation provided that there is available water source for this purpose. During the focus group discussions held in the sample *Kebeles*, participants mentioned that there was no adequate access to modern irrigation technologies in their communities. They indicated that only few households have access to modern irrigation in their farm land where motor pumps are installed for lifting up underground water. The major factors that were mentioned during the discussions include lack of information about the technologies, labour shortage, lack of water sources, lack of access to the modern technologies and their unaffordable prices.

Table 4.11. Irrigation practices by the sample households

		Sex of the household head				Total	
		Male		Female			
		No.	Percent	No.	Percent	No.	Percent
Do you have irrigated land?	Yes	24	60.0	10	25.0	34	42.5
	No	16	40.0	30	75.0	46	57.5
	Total	40	100.0	40	100.0	80	100.0

Soil and water conservation practices are also among those activities which help farm productivity by enhancing soil fertility and water availability. The majority of respondents described that they have been practicing soil and water conservation practices in their farm lands and the communal lands. Table 4.12 shows that the majority of both female headed and male headed households implemented this practice in their farm land. During focus group discussions it was mentioned that the campaigns on soil and water conservation practices by the government are the main factors for the fact that almost all farm households were engaged in this activity.

Table 4.12. Distribution of sample households by soil and water conservation practices

		Sex of the household head				Total	
		male		Female			
		No.	Percent	No.	Percent	No.	Percent
Have you practiced soil and water conservation practice?	Yes	32	82.0	32	80.0	64	81.0
	No	7	18.0	8	20.0	15	19.0
	Total	39	100.0	40	100.0	79	100.0

4.2.4. Participation in Community Based Organizations

Involvement in various types of community based organizations and institutions enhance the social capital of rural households thereby creating access to other relevant household capitals. Those households actively involving in such organizations and institutions will also have more social networks and relationships in their community. Labour based organizations are especially very important for rural households whose livelihood is mainly based on agricultural activities which require intensive labour force. Such community based organizations are important in sharing of labour and promote culture of cooperative farming activities. In the study area, such types of organizations are common. However, significant difference was observed between

female headed and male headed households in their involvement in the organizations. As portrayed in table 4. 13, the majority of male household heads 87.2% and 60% of female heads were members of such community based organizations.

Table 4.13. Participation of households in community based organizations

		Sex of the household head				Total	
		Male		Female			
		No.	Percent	No.	Percent	No.	Percent
Do you participate in CBOs?	Yes	34	87.2	24	60.0	58	73.4
	No	5	12.8	16	40.0	21	26.6
	Total	39	100.0	40	100.0	79	100.0
type of CBOs	<i>Debbo</i>	25	62.5	4	10.0	29	36.3
	Irrigation cooperation	35	87.5	22	55.0	57	71.3
	<i>Mekenajo</i>	2	5.0	2	5.0	4	5.0

The types of labour based organization which are common in the study include *Debbo*², irrigation cooperation and *Mekenajo*³. As indicated in table 4.13, the majority of farm households are involved in a traditional irrigation practice which is river diversion to their farm lands in a cooperative way. From the sample households about 87.5% of male headed and 55% of female headed households indicated that they participate in irrigation cooperation. Next to irrigation cooperation, *Debbo* is also widely practiced. 62.5% of male headed households responded that they participated in *Debbo* whereas only 10% of female heads took part in such type of labour organization. This indicates that female headed households do not participate actively in such types of community based organizations. According to the participants of FGDs female household heads were highly engaged in domestic chores and therefore they cannot participate in CBOs outside the household. They also mentioned that most of the CBOs (like *Debbo* and *Mekenajo*) are socially considered as the responsibilities of males.

Membership in cooperative is also another factor having its own impact on livelihood situation of rural households. It is known that membership in cooperatives strengths the saving culture of households, creates credit opportunities, market information and linkages, and links households with development agencies. In the study area there were multipurpose cooperatives serving the

² Group of people working together where shared labour rotates to work on every member's farm land

³ When two partner farmers share their labour to work on each other's farmland on the basis of reciprocity

community in various ways. From the sample respondents, only 40% of male headed and 53.8% of female headed households were members of such cooperatives (see table 4.14). In this case, female headed households were relatively better in their involvement in cooperative development activities than male headed households.

Table 4.14. Membership of sample respondents in cooperatives

		Male		Female		Total	
		No.	Percent	No.	Percent	No.	Percent
Are you member of any type of cooperative?	Yes	16	40.0	21	53.8	37	46.8
	No	24	60.0	18	46.2	41	53.2
	Total	40	100.0	39	100.0	79	100

4.2.5. Crop Production and Diversification

Even though the type of crop grown and the size of land used vary across different agro-climatic zones, crop production is the main economic activity in the *Woreda*. Sufficiency of crop production has a direct impact on the food availability status of the households. The common types of crops that grow in the study area are cereals and pulses. Cereals include *Teff*, wheat, barley, maize, and sorghum; whereas pulses include bean, field pea and chickpea. During the focus group discussions conducted in each of the *Kebeles*, two crop harvesting seasons were identified. These are the *Belg* and *Meher* seasons. However, harvest of these seasons (especially that of *Belg*) is ever decreasing from year to year due to shortage of rainfall.

Crop diversification, though limited to specific varieties of crops, is facilitated by farm land fragmentation in that farmers possess more than one plot and can grow different crops at their different plots. One of the implications of this type of cropping is risk redistribution in that farmers can save some type of their crops when natural catastrophe that devastates a certain type of crop occurred. The other implication is that different farm plots may have different quality and fertility of soil that are suitable for different types of crops. As discussed in earlier sections most of the female headed households have farm land only in one parcel which limited their possibility for such kind of crop diversification. Another form of agricultural diversification which is also important for risk minimization and increasing income of households is production of other perennial crops. The sample households were assessed whether they practice such form

of diversification. Most of the sample households 77% do not produce such type crops. However, disaggregated data in table 4.15 shows that more number of male headed households, about 36%, produces perennial crops than that of female headed households which are only 8.6% of them.

Table 4.15. Production of other perennial crops by the sample households

		Sex of the household head				Total	
		Male		Female			
		No.	Percent	No.	Percent	No.	Percent
Do you grow other perennial crops?	yes	14	35.9	3	8.6	17	23.0
	no	25	64.1	32	91.4	57	77.0
	Total	39	100.0	35	100.0	74	100.0

Participants of the focus group discussions conducted in the two *Kebeles* and the key informants for interviews have identified the main factors for decreased crop production. The first and most frequently mentioned cause for failure in crop production in the study area was related to natural hazards (erratic rainfall and drought). The *Woreda* is one of the drought prone areas in Tigray region which has been affected by recurrent drought at different times in the past. Moreover, the rainfall distribution is becoming more erratic from year to year. These days, the rain is characterized by late entry, early withdrawal and scanty and erratic in its nature especially during the summer season. The key informants in the Rural *Woreda* administration and development agents mentioned that the 2014/15 *Belg* harvest was highly decreased or almost none in the majority of areas in the *Woreda* due to late and inadequate rainfall. As elsewhere in other parts of the country, the impact of *Elino* was also significant in the study area. Consequently, the *Meher* harvest was also much decreased due to the fact that the rain started late around the mid of July and withdraw early towards the end of August.

The second factor for declining crop production identified by the participants of focus group discussion was small land holding. As indicated in the previous section female headed households possess smaller farm land size compared to that of male headed households. This scenario definitely affected the crop production by female headed households. In addition to the size of farm land, the quality of farm both in terms of its soil fertility and suitability for farming

and irrigation practices was also mentioned as other factors that affect crop productivity in the study area.

Lack of draught power and human labour were also mentioned as important factors affecting crop production especially for female headed households. In the study area, draught power is used for crop production starting from land preparation/ plowing. As it is in the majority of rural communities in the country, agriculture in the study area is also heavily dependent on the availability of oxen. Therefore, lack of access to adequate farm oxen for some households may lead to decreased food production and hence declining food self-sufficiency and food security status. As indicated in the previous sections most of female headed households do not possess farm oxen as a result they depend on renting out or share cropping their plots to other farmers.

The focus group participants have also identified lack of man-power for farming as a factor behind decline in food availability. Mulu Amare, a female household head in *Limat*, described the impact of shortage of labour on her family's food security condition as follows:

My husband died in battle during the Ethio-Eritrea war in 1992 (E.C) leaving me with three children. All of my children are female and hence they cannot help me in farming our farm plots. I have four Timad of farm land. The only thing that I can do is sharecropping the farmland to other farmers. Since this farmer is not using it properly as my husband used to, the amount of harvest is declining from year to year. During this Meher I obtained only one quintal of Teff and three quintal of sorghum which may cover only four to five months of the household food consumption. But had I farmed my land myself, I could have got above the doubled amount of the crop which may cover the household food requirement for more than 9 months.

4.2.6. Livestock Production

Animal husbandry is another important livelihood activity in the study area. Mixed agriculture is highly practiced in the sampled communities. Rearing of various types of animals for different purposes is very common. The study *Kebeles* in particular and the Raya community in general are well known specially for cattle production. Other animals such as goats, sheep, horses, mules and donkeys are also common in the study area. To identify whether there is difference in livestock possession between male headed and female headed households, sample respondents were asked if they possess at least one animal. Table 4.16 shows that more number of male headed

households (89.5%) possessed at least one type of animal than that of female headed households (54.1%).

Table 4.16. Livestock possession by sample households

		Sex of the household head				Total	
		Male		Female			
		No.	Percent	No.	Percent	No.	Percent
Is there any livestock you currently possess?	Yes	34	89.5	20	54.1	54	72.0
	No	4	10.5	17	45.9	21	28.0
	Total	38	100	37	100.0	75	100.0

The mean comparison of possession of various types of animals indicates that male headed households are far better than that of female headed households. As indicated in table 4. 17, the average number of equines, cattle and shots owned by female headed households is less by half than those owned by male headed households.

Table 4.17. Mean comparison of livestock possession by FHH and MHH households

Sex of the household head	Average number of animals possessed			
	Equines	chicken	cattle	shots
Male	2.1818	6.2143	5.2222	6.6333
Female	1.6667	6.2727	2.3846	3.8947
Total	2.1200	6.2400	4.4694	5.5714

Moreover, the surveyed household heads were asked about the trend in the size of livestock possession. The majority of the total respondents (71.2%) answered that their livestock holding size is decreasing from year to year. Only 19.7% answered that their livestock holding increases to some extent over the last five years. As indicated in table 4.18, there was no significant difference between female headed and male headed households in the trend of change in the number of livestock possessed by male and female headed households. The main factors for the ever decreasing number of livestock possession in the study area were identified during the focus group discussion held in the sampled *Kebeles*. According to the participants of the discussion, de-stocking (sale of animals) as a survival strategy during food crises, lack of forage/grazing land, animal disease and poor stock management are among the major factors contributing for decreasing livestock production.

Table 4.18. Trends in livestock possession by the sample households

		Sex of the household head				Total	
		Male		Female			
		No.	Percent	No.	Percent	No.	Percent
What happened to your livestock asset in the last five years?	Increase	8	22.9	5	16.1	13	19.7
	No change	2	5.7	4	9.1	6	9.1
	Decreased	25	71.4	22	71.2	47	71.2
	Total	35	100.0	31	100	66	100.0

According to a key informant in *Limat Kebele* who was a development agent working as livestock expert, shortage of animal feed is the main problem for the decline in livestock population in the *Woreda* in general. Since there is shortage of land, there are no separate individual grazing plots for each household. The farmers in the study area cultivate all of their lands for crop production without leaving some portion for grazing or fallowing. This informant described more on the problem with communal grazing land in the following way:

Communal grazing lands, if any, are the only available grazing lands which are over grazed. The marginal grazing lands are quite unproductive due to the fact that they are grazed all round without respite and hence they are not covered with grass.

Moreover, due to the growing human population which is in need of land, some of these communal grazing lands and forests are being divided up and allocated to the landless people. Now, the forest and communal grazing lands are being converted in to individual farm plots for cultivation. Farmers in the study area tried to cope up with this problem of animal feeding by depending on feeding them from crop residues and other crop bi-products such as straw.

Key informants and FGD participants mentioned that livestock in the study area are also vulnerable to different types of animal diseases due to poor feeding status. According to the extension workers in the selected *Kebeles*, animal disease outbreak is the most impressing problem in the lowlands. This problem is triggered by absence of adequate veterinary services in the *Woreda*. According to the *Woreda* Office of Agriculture and Rural Development, there are only two veterinary service centers. These are found in *Alamata* and *Waja* towns. Such

incompatibility between the prevalence of different types of animal diseases and availability of veterinary services in the *Woreda* has led to a drastic decline in livestock holding. The *Woreda* is one of the frequently drought affected areas in northern Ethiopia. According to the participants of the discussions, drought at different years in the past has devastated their livestock holdings. These droughts have left the households vulnerable to minor shocks in production due to which they might be forced to sell their animals.

Another factor identified by the participants of FGDs was Poor stock management. They described that there is poor livestock management due to lack of awareness and necessary technological inputs. Back in history, livestock production was the dominant practice in Raya in general and the study *Woreda* in particular. There was good livestock production in the area. According to the participants of the focus-group discussions, previously there was favorable condition for livestock rearing. There was good amount of grazing land and feed of animals. However, the condition has deteriorated over the last few years.

4.2.7. Non-Farm Activities

Where it is available, non-farm sectors in rural areas provides employment opportunity for the rural population. It also links the agricultural community with the urban population and other economic sectors. Furthermore, it provides agricultural inputs, technologies, and market for agricultural production. Logically, farm households that engage in non-farm income generating activities as a supplement of agriculture will have better livelihood conditions than those that are not involved in non-farm income generating activities. Accordingly, the sample households were assessed whether they engage in the non-farm activities apart from agriculture and livestock rearing. As indicated in table 4. 19, the majority of the total sample households didn't engage in non-farm activities for different reasons. Only 16.5% of the total population was involved in such type of activities of which the majorities were female headed households.

Table 4.19. Work in activities apart from crop production and livestock rearing

		Sex of the household head				Total	
		Male		Female			
		No.	percent	No.	percent	No.	percent
Work in activities apart from crop production and livestock rearing?	Yes	3	7.7	10	25.0	13	16.5
	No	36	92.3	30	75.0	66	83.5
	Total	39	100.0	40	100.0	79	100.0

During the focus group discussions conducted in the two *Kebeles*, lack of awareness (knowledge and work skill) about non-farm activities and fear for taking risk were identified as the main factors that hinder participation in non-farm activities. The peasants also identified other factors such as lack of start-up capital for petty trading (and lack of adequate market and market information system), and lack of non-farm job opportunities.

Discussion on the demographic characteristics of sample households indicated that the majority of household heads were illiterate and lack basic education. Information, knowledge, and skill are important requirements for rural households to participate in non-farm activities. However, in the study area, distance from information centers (more likely towns and market places), cultural influences and fear of risks/loss are hindering female headed households from taking part in non-farm income generating activities. Even though most of the farm households have access to rural credit, they are not using it as starting capital for engagement in non-farm activities.

The participants of focus group discussions mentioned that they can take credit from Dedit Credit and Saving Institution (DCSI)/REST. However, these credit providing institutions encourage farmers to use the money for agricultural activities. Since both credit providing institutions as well as participant peasants think that farming is viable and easily implemented activity, the farmers use the money for such purpose as the purchase of seeds and small ruminants hoping that these activities are profitable enabling them to repay the credit. The other problem is that farmers are not willing to take credit for non-farm activities due to low level of awareness and fear of risk.

Beside lack of knowledge and startup capital, the focus group participants also mentioned that there are no easily accessible non-farm job opportunities in their localities. Actually, female

heads of households were not even clear which type of non-farm income generating ventures are viable and available for them. According to them, all the available non-farm income generating activities seem unviable and unprofitable for them. Therefore, there are no adequate non-farm job opportunities that can absorb the illiterate female heads of households in the study *Kebeles*.

4.2.8. Social and Public Transfers

Some households depend on some social and public transfers for their livelihoods. Such external dependence shows that these households cannot feed their members sustainably from own production or livelihood resources. When households are unable to feed their family members with their own produce, dependence on different types of formal and informal transfers becomes inevitable.

Some of the informal transfers identified by the respondents during the focus group discussions were reciprocal relationship and assistance among relatives, friends and neighbors. People may help one another by borrowing each other's animal labour (oxen, donkey mule etc.), human labour, and some agricultural implements during periods of agricultural activities. Even though these transfers are not always fully reciprocated, recipients are expected to pay back the favor when they are in a position to do so.

Some of the informal transfers include getting loan of cash, grain or seed by the peasants from local lenders on the basis of some amount of interest. The most important types of formal transfers that were identified during the focus group discussions include food /cash-for-work, free handouts (food aid) and credit from different institutions.

Table 4.20 shows that from the total of 80 sampled households 56.3 % were involved in food/cash for work and earn some amount to support their livelihood. In this regard, about 60% and 52.5% of female headed and male headed households, respectively, participated in such programs organized by the government. As mentioned by the focus group participants in the above discussion, only 30% of the total sampled households had taken credit at one time or another from credit provider institutions for purpose of agricultural production or livelihood diversification. Another form of social transfer which also affects the livelihood condition of

rural households is cash transfer in the form of remittance. From the total of sampled households, about 46.3% of them mentioned they have some source of remittance from relatives living abroad or somewhere else. Direct and free food aid was provided only to those households whose heads could not participate in productive activities for food/cash for work due to age and/or disability.

Table 4.20. Items received outside households

items received outside the household	Sex of the household head				Total	Percent
	Male	Percent	Female	Percent		
remittance in Birr	17	42.5	20	50.0	37	46.3
Food/cash for work program	21	52.5	24	60.0	45	56.3
cash credit	9	22.5	15	37.5	24	30.0
food aid/cereals	5	12.5	8	20	13	16.3

4.3. Food Security Status and Food Self-sufficiency Trends

If there is unsustainable and inadequate access to the different types of resources or assets that are important for improved food production, there will be decline in food availability and food security status of farm households. As discussed in the earlier sections, the main livelihood activity of the study area is mixed agriculture. Yet, there is inadequate access to the basic resources, especially by female headed households, for this livelihood activity that has led to livelihood vulnerability and food insecurity.

4.3.1. Food Self-sufficiency

In order to identify the food self-sufficiency status of the households, respondents were asked whether their own production and purchase from market covers all year-round household food requirements. Cross tabulated responses by male and female household heads in table 4.21 shows that about 80 % and only 27.5% of male headed and female headed households respectively do fulfill their annual food requirements from their own farm production and/or purchase from the market. This shows that households headed by males are far better than those headed by females in achieving all year round food required for household consumption.

Table 4.21. Food self-sufficiency among the sampled households

		Sex of the household head				Total	
		Male		Female			
		No.	Percent	No.	Percent	No.	Percent
Does your household produce food for all year round requirements?	Yes	32	80.0	11	27.5	43	53.8
	No	8	20.0	29	72.5	37	46.3
	Total	40	100.0	40	100.0	80	100.0

4.3.2. Trends In Household Food Self Sufficiency

Another important dimension of assessing livelihood condition of farm households is the trend in change of their food production for household requirement. This trend can speak whether a household is improving its livelihood on sustainable manner. Accordingly, sample respondents were asked to evaluate how their households' food production has been changing since the last five years. The majority of the respondents mentioned that there was no any improvement in the food production by their households since the last five year. They indicated that either it remained unchanged (about 56.3 % of them) or has decreased (38.8%). As indicated in table 4.22, 47.5 % of female headed and 30% of male headed households demonstrated that their food production for household requirement has been ever decreasing since the last five years.

Table 4.22. Trends in household food self-sufficiency since the last five years

Trend in Household food security	Sex of the household head				Total	
	Male		Female			
	No.	Percent	No.	Percent	No.	Percent
Increased	3	7.5	1	2.5	4	5.0
no change	25	62.5	20	50	45	56.3
Decreased	12	30.0	19	47.5	31	38.8
Total	40	100	40	100	80	100.0

4.3.3. Household Food Security

The concept of food security is beyond that of food self-sufficiency. Food security entails the households' feeling of being secure about the food they require. Annual food self-sufficiency does not ensure households food security. In other words, food self-sufficiency is the state of a household where the annual food produced or purchased is equivalent to its annual demand at

normal situation (excluding seasonal risk such as drought) where as food security implies the ability to withstand risks, such as periodic climatic shocks.

The study was not directed towards, and did not measure the households’ calorie intake to assess each household's food security status; rather the study completely depended up on sample household heads’ self-response about their households’ food security status. Food security is mostly defined as “access by all people at all times to enough food for an active and healthy life” (Devereux & Maxwell, 2003:15)” and the opposite is true for the definition of food insecurity. Households in the study area were asked whether they feel food secure or not based on their own perception by taking in to account this definition. Based on this assessment, an effort was done to see whether there is difference in the food security status of households between female headed and male headed households and across the *Kebeles*. Table 4.23 shows that male headed households (about 82.5%) had better food security status than that of female headed households (which are only 42.5%).

This differential impact of sex on food security status of households is also indicated by the chi-square test of significance. The test shows a significant statistical association (chi-square 13.653, level of significance 0.000) between sex of household head and food security status of households (at $p < 0.001$ level). Therefore, we can conclude that sex difference in headship of farm household influences food security status of the households. This is due to the fact that female headed households lack the various resources compared to male headed households as described in the previous sections. However, as it is indicated in table 4.23, there is no significant difference in households’ food security status between those households in the two *Kebeles*.

Table 4.23. Food security status of sample households as rated by the respondents

		Food security status				Total
		Food secure	Percent	Food insecure	Percent	
<i>Kebele</i>	<i>Limat</i>	24	60.0	16	40.0	40
	<i>Waja-Timuga</i>	26	65.0	14	35.0	40
	Total	50	62.5	30	37.5	80
Sex	Male	33	82.5	7	17.5	40
	Female	17	42.5	23	57.5	40
	Total	50	62.5	30	37.5	80

Chi-square= 13.653, level of significance=0.000

The causes of food insecurity are many, complex and vary across place and time. Hence, there may be different factors affecting the food insecurity of different households. However, in all cases these factors can be categorized in to factors that affect agricultural production (both crop production and livestock rearing) and participation of households in non-farm activities. All of these factors that were identified by the key informants and focus group discussants in the study area can be categorized in to three important groups: crop production constraints that affect food availability, livestock rearing constraints and constraints on involvement in non-farm production which are discussed in detail in the preceding sections.

4.4. Formal Interventions and Coping Mechanisms

4.4.1. Coping mechanisms adopted by sample households

Food insecure households in the study area developed their own mechanisms of coping with food shortage. The major coping strategies used by the households in the study area were identified both in the focus group discussions and through the household survey. All the mechanisms indicated by the respondents can be put under two categories: Mechanisms for increasing food availability and adaptive mechanisms of food-consumption.

According to the respondents, there are different mechanisms of increasing food availability and adaptive mechanisms of food consumption used by different households at different levels of severity of the problem. Even though there may be variations from household to household in applying which strategy at what level of the problem, the majority of the sample households adopted the following mechanisms to increase food availability. When food shortage is less severe: changing cropping patterns (growing of cereals that are tolerate to droughts and less susceptible to natural calamities regardless of the commercial values and food preferences), sell of small ruminants/animals (instead of reproducing sheep/goat, people sell these animals to purchase grain); rely on relief grain (government and non-governmental organizations respond during crises seasons). Whereas the adaptive mechanisms related to food consumption were reducing the number of meals per day and reducing the amount of food that is consumed during each meal.

When food shortage is moderate, households also adopt mechanisms of increasing food availability such as migrating to nearby towns in search of casual labour; sharecropping-out of land for one or more cropping seasons and receiving grain loan from the sharecropper; borrowing grain/cash from local lenders with high interest rate to purchase food; firewood and charcoal selling, selling of dry grass for house construction purpose. The consumption related to mechanisms adopted at this stage include consuming less preferred foods, reducing both the number of meals per day and the amount of food intake per meal.

When food shortage problem is very severe, the mechanisms of increasing food availability are the selling off critical assets (such as oxen, livestock de-stocking, lease out-off land) and migration to other areas for wage labour employment. While consuming less preferred foods, reducing food intake, sometimes the skipping of meals by adults in order to feed children are the major consumption related mechanisms. Moreover, the asset disposal strategies adopted at different levels for survival during food crisis, do affect the household livelihood. The early coping strategies are not abnormal, are reversible and do not cause long lasting damage on the livelihood of households. However, the severe crisis strategies may permanently undermine future food security. It may cause stress or mass migration and the selling of strategic assets.

4.4.2. Formal interventions and strategies to enhance rural livelihoods

In the study *Woreda*, Government agencies and some non-governmental organizations have been implementing different strategies and programs to alleviate the problem of rural livelihoods in general and food insecurity in particular. Through focus-group discussions, as well as in-depth interviews with local level development actors, it was possible to identify the different attempts made by both government and non-governmental organizations to surmount the problem. Moreover, there was an opportunity to assess the role these strategic programs have so far played in the study area especially for the livelihood situation of female headed households. However, this did not mean conducting complete impact assessment and evaluation of the various programs which is neither in the objectives of this study nor within its scope. Rather, its aim was to assess briefly some of the institutional issues, like how activities were designed, sustained and promoted in line with the reality in these rural communities.

The study area has been identified as one of the most food insecure *Woredas* in the region. Hence, government has been implementing various strategies related to agricultural development in order to reduce the undesirable situation of food insecurity. The major government interventions that were undertaken over a long period of time were various agricultural extension packages. These packages mainly focused on promoting crop productivity potential of the peasants. To some extent, some efforts to improve livestock production were also in place. The agricultural extension service in the *Woreda* is provided by the *Woreda* Office of Agriculture. To address these objectives, the sector (WOARD) is organized into four departments. These are agricultural development; natural resources, environmental protection and land administration; water supply and rural roads; and cooperatives development. According to informants in this sector at the *Woreda* level, the agricultural input supply service is merged with the cooperatives development sector.

In each *Kebele*, there are three specialized development agents/ extension workers that are supposed to provide advice and technical support for farmers. One of these DAs is a specialist in crop and plant science. This development agent is responsible for creating awareness among the farmers on how to improve crop productivity. He/she has direct contact with the farmers and their farm plots. S/he teaches the farmers how to use the different types of agricultural inputs and the modern farming practices that help increase productivity. For example, s/he is responsible for teaching local farmers about the contribution of fertilizers in increasing crop productivity and how and when to apply them. In order to increase crop productivity in the *Woreda*, government has been distributing chemical fertilizers to farmers on the bases of credit. However, the participants of focus group discussion described that there was a problem arising from the application of fertilizers. According to them, productivity did not increase as it was expected and they complained that fertilizer has negatively affected the soil fertility of their farm lands. By the time of the study, they opposed to use fertilizers even though government was distributing the fertilizers in higher prices.

The other agent is a specialist working on natural resource conservation and management. This extension worker also has direct contact with the local farmers, their farm lands and other natural resources in the village. He/she is responsible for teaching the farmers about conservation and

appropriate utilization of different kinds of natural resource measures appropriate to the area. Specifically, he/she teaches them about the necessity and advantage of on-farm and off-farm soil and water conservation practices. He/she also provides farmers with technical support on how to make use of both traditional and modern irrigation practices, and planting of different trees that can retain water and soil.

Since the major livelihood of the peasants is based on mixed farming system (both crop production and animal husbandry), a formal means of awareness creation and technical support about livestock rearing is provided by the third extension worker who is a specialist in livestock production. The participants of the focus group discussion in each of the *Kebeles* explained that the extension workers are helping them well in these aspects even though they are not adequate in number.

According to key informants, the extension workers in each *Kebele*, Farm Training Centers (FTCs) were established in most the Kebeles in the rural *Woreda*. These FTCs were meant to provide formal education for farmers about different types of technological innovation and farming methods that help increase agricultural productivity/development. However, none of these centers was found to be functional. One of the extension agents in *Limat Kebele* expressed the problem of implementing this strategy in the following way:

The centers in our Tabia (Kebele) and others are not operational and we are not giving the formal training as it was supposed in the objective of the program. There is complete lack of materials and problem of coordination. The center is there only as a symbol, and does not yet make any contribution.

The focus group participants too affirmed that these FTCs are not yet functional and are useless establishments. During the focus-group discussions held in each of the *Kebeles*, a single peasant was not heard saying anything positive about the centers.

The Productive Safety Net Program is the other strategy that has been implemented by the government in the area, with the objective of decreasing the problem of food insecurity. It is one of the components of the government's food security strategy. The Productive Safety Net

Program provides cash and/or food for chronically food insecure households. The program is designed to prevent asset depletion at the household level while creating assets at the community level. In the course of the interview with the *Woreda* Administrators, two components of the Productive Safety Net Program were identified. These are labour intensive public works for those households who can contribute labour (through cash/food-for-work) that are selected and designed based on local priorities and opportunities; and direct support for labour poor households such as those households with aged and disabled household heads. Thus intensive public works included afforestation program by planting of trees on the mountain areas in the *Woreda*, water and soil conservation practices and construction of rural roads.

Inquiry into the government sponsored water harvesting schemes has revealed a history of complete disaster. In interviews held with a range of professionals working at the *Woreda* level, it was learnt that all the water harvesting schemes were planned and implemented in a top-down manner with hardly any enthusiasm and conviction on the part of the community. Therefore, the farmers were not convinced that these water harvesting schemes could have benefited them. These informants also added that farmers were not involved in planning of these projects and hence had lack of awareness about them.

A number of farmers from each *Kebele* were given credit of four to five thousands Birr to dig out water harvesting ponds and purchase necessary materials for the construction of the ponds. However, an internal evaluation done by the *Woreda* Agricultural and Rural Development Office has found that almost all water harvesting scheme were not operational. During the discussions held in *Limat* and *Waja-Timuga Kebeles*, farmers involved in that program bitterly expressed their negative feelings towards these futile exercises over which they wasted their time, energy, and other resources. Moreover, the majority of the farmers participated in the program remained in financial debt since the schemes were unproductive and therefore they were unable to repay the loan they took for the purpose. Some have sold their cattle and others have rented out their farm lands in order to pay back the loan.

The other strategy that has been implemented since some years ago as a means of helping farmers improve their livelihood was providing credit for productive purpose. As it has been

indicated in the preceding section the majority of farmers in the *Woreda* have access to credit from different governmental and non-governmental credit institutions such as DCSI/REST and the Reproductive Safety Net Program. In this respect there were some farmers who benefited in taking credit which they used for purchasing improved breeds of cows and animal fattening. However, the majority of beneficiaries took credit during food shortages and used the money to purchase food for consumption. Moreover, the farmers are encouraged to use the money for agricultural activities which are supposed to be productive, profitable and easily implemented by the farmers. However, as indicated in the preceding section of this document crop production and livestock rearing is decreasing from year to year in spite of these efforts.

A part from government activities, a Faith based NGO called Sisters' Missionary of Charity was one of the non-government actors contributing to alleviating the problem of food aid in the *Woreda*. This NGO has been distributing food (grains and pulse) to chronically food insecure households with disabled and aged heads. This organization is also well known for providing health service for community members in its own hospital. It provides both clinical and financial support for those who are unable to afford the bill for getting health facilities from the private and government health centers.

Chapter Five: Conclusion and Recommendations

5.1. Concluding Remarks

This study was conducted in two selected *Kebeles* from Rural Alamata *Woreda* with the main objectives of assessing the livelihood situation of rural households, identifying the differential impact of gender in resources accessibility and livelihood diversification. A comparative study was conducted focusing on male headed and female headed households regarding their level of vulnerability to various types of livelihood crisis and shocks. Moreover, an attempt was also done to assess the various coping mechanisms and formal interventions by government and non-government organizations in order to address the problems of rural livelihoods in the study area.

The majority of households covered by the study did not have adequate access to the different types of basic livelihood assets. Since the main livelihood activity in the study area is mixed agriculture, access to resources necessary for crop production and livestock rearing is a determining factor. The main constraints on crop production in the study area are erratic rainfall, drought, shortage/lack of draught power and human labor; insufficient land holdings; and poor soil fertility. On the other hand, shortage of grazing land, poor livestock management and animal diseases were identified as the major limiting factors for livestock production. For some farm households, off-farm income was found to be complementary factor for food security. However, lack of knowledge and skills; lack of start-up capital, and lack of viable and appropriate non-farm job opportunities were the bottle necks on involvement in non-farm activities.

Significant difference was observed between female headed and male headed households in their possibility of accessing basic resources that could enhance their livelihood security and diversification. It was noted that male headed households were far better than female headed households in their access to resources such as farm land, labour force, irrigation technologies, and livestock especially farm oxen. As it is clearly indicated in the sustainable livelihood approach, all these capital do have their own significant impact on the livelihood condition of farm households. As a result, female headed households were found to be more vulnerable to various livelihood crisis and shocks. This impact of capital scarcity on the livelihood of female headed households was also confirmed by the analysis result on the relationship between sex of

household head and the food security status of the sample households as rated by the perception of the respondents. The Chi-square test regarding this shows that there is significant relationship between the two variables.

As elsewhere in rural Ethiopia, farm households in Alamata *Woreda* have also developed different coping mechanisms that they revert to during livelihood crisis. These mechanisms are of two types. One of these types refers to increasing food availability. The strategies for increasing food availability include changing cropping patterns, sell of small ruminants/animals, rely on relief grain, sharecropping-out plots (for those households that have draught power/labour surplus), borrowing grain/cash from local lenders and formal credit institution and firewood or charcoal selling.

The second type of coping mechanism refers to consumption related strategies. Under this coping system households employ such consumption options as reducing food consumption both in terms of number of meals per day and quantity of food per meal; reducing food consumption in terms of quality by eating less preferred food items and even skipping meals during sever stage of the problem. The depletion of resources both at household level (such as sell-off productive assets) and at community levels (such as firewood collection and sell of charcoal) have further worsened the already vulnerable situation of household in the study area in general and that of female headed households in particular.

That means, as households sell of their productive resources such as oxen, their productivity potential will also be affected negatively and hence will be more vulnerable to other livelihood shocks. Likewise, as common resources in the community are depleted for coping with such crisis, this resulted in environmental degradation which in turn affects agricultural productivity.

Governmental and non-governmental development agencies have designed and implemented different programs and strategies for alleviating problems related to rural livelihood vulnerability in the *Woreda*. Some of the governmental activities include distribution of credit and other extension package services to the farmers, water harvesting projects for increased crop production and currently construction of underground water pump motor machines.

Even though an overall impact assessment of these attempts was not conducted as part of this study, it was possible to assess the general institutional set up of these strategies and their visible outcomes. Accordingly, the large-scale attempt of constructing of water harvesting ponds was a complete failures and disadvantageous to some farm households as they wasted their time, energy, money, and other resources for no benefit.

Providing technical support and advice to farmers through extension agents was relatively successful. The specialized agents in the three sectors (crop production, Natural resources conservation and management, and livestock production) had direct contact with the farmers providing them with technical support and advice. In line with this, a sort of complexity was observed in distribution and application of chemical fertilizers among the farmers. Though it is believed that these agricultural inputs are important for enhancing agricultural productivity farmers in the study communities strongly resist the use of these fertilizers in their farm lands.

The Productive Safely Net Program was under operation helping people involved in food/cash-for-work public activities that are designed to prevent asset depletion both at household and community level.

5.2. Recommendations

Based on the findings of the research, it is important to address at least the following issues that help alleviate the problem of rural livelihoods in the study area in general and that of female headed households which were found to be more vulnerable in particular.

1. The finding of this research indicated that farm production of female headed and labourless households was relatively low. So, government and non-governmental welfare providers should give especial attention on strengthening the livelihood situation of such households
2. Since shortage of land was found to be one of the major causes of livelihood insecurity, government and other development agencies could reduce the problem by introducing and expanding different types of non-farm income generating activities that are viable for these vulnerable female headed households.
3. Even though there is currently good educational cover in the study area for the current or coming generation, the illiteracy of the farm household heads was found to affect the livelihood condition of households. This was especially true for female headed households. This is due to the fact that illiteracy hinders adoption of agricultural innovations and involvement in non-farm activities. Therefore, especial training and awareness making strategies should be implemented among these FHHs.
4. Erratic rain fall and drought were among the major factors for declining crop production in the study area. Agriculture is completely rainfall dependent, supplemented, to some extent, by traditional river diversion mechanisms during the rainy season. Even though different attempts to increase water availability for crop production failed due to planning and implementation problems, still more should be done in this regard with appropriate planning and implementation procedures which take in to consideration local realities and community participation.
5. Constraints on livestock production in the study area also affect the household food security since livestock production is important part of the livelihood activity in the study area. So, more should be done by both government and other development agencies in

relation to improving livestock rearing especially focusing on livestock management and veterinary services.

6. Low soil fertility was also one of the determinant factors for crop production in the study area. Despite the terrible history and experience of application of inappropriate fertilizers in the study area, the office of agriculture and rural development should revisit its intervention with appropriate approach. Consequently, relevant types of chemical fertilizers and other mechanisms that increase soil fertility should be distributed to the farmers. This should be done along with creating awareness among the farmers on how to apply the fertilizers to increase fertility and hence crop production.
7. The Farmer Training Centers (FTC) should be strengthen and stimulated functionally so as to disseminate knowledge and skill about crop production, livestock rearing, communal resources conservation and management; and participation in non-farm activities as it was supposed in the objectives of the program.

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Annexes

Annex 1: Survey Questionnaire

Survey Questionnaire to Assess the Livelihood Security of Female Headed Households in Rural Areas of Alamata Woreda

Dear respondent:

The purpose of this questionnaire is to gather information on accessibility of livelihood resources, livelihood vulnerability and strategies and the possible impacts of various interventions adopted so far. Your cooperation has vital role for the success of this study. The entire study is an input for academic requirement of MA Degree in Rural Development from Indra Gandhi National Open University, Addis Ababa. Any information you provide will be kept confidential and will be used only for the purpose of this study. **Thank you in advance for your cooperation.**

General Direction:

- For the close-ended questions, circle the choices of your answer and when necessary put “✓” in the provided boxes.
 - For the open-ended questions, write the answers on the provided blank spaces.
-

1. Questionnaire ID _____

2. Kebele: _____

SEGMENT ONE: SOCIO-DEMOGRAPHY PROFILE OF RESPONDENTS

1. Sex of the household head

1. Male 2. Female

2. Age _____

3. Religion:

1. Orthodox Christian
2. Catholic
3. Protestant
4. Muslim
5. Other (specify) _____

4. Marital status

1. Currently Married
2. Never married
3. Widowed
4. Divorced

5. Household size: _____

6. Number of dependent children in the household: _____
7. Educational status of household head
 1. Illiterate
 2. Read & write only
 3. Primary school complete
 4. Secondary school complete
 5. above secondary school
8. How many dependent children are in the following category of Educational status?
 1. Grades 1-5 _____
 2. Grades 6-10 _____
 3. Grades 11-12 _____
 4. University students _____
9. What is your occupation? (*Multiple responses is possible*)
 1. Farming
 2. Handcraft work
 3. Daily laborer
 4. Merchant
 5. Other (specify) _____

SEGMENT TWO: ACCESS TO RESOURCES AND ASSET POSSESSION

A. Access to Land

10. Do you have access to land for agricultural use?
 1. Yes
 2. No
11. If your answer for Q. 10 is yes, how did you get access to it? (*Multiple response is possible*)
 1. Through land distribution
 2. Inherited from parents
 3. Share cropped in
 4. Rented
 5. Other (specify) _____
12. If you rented or sharecropped in land from others, why did you do so?

13. What is the total size of your own cultivated land holding in timad? _____
14. Currently, who plows your land?
 1. Myself
 2. Sharecropper
 3. Rented out

4. Relatives
5. Other (specify) _____

15. If you are not cultivating your land by yourself, why?

16. Is your cultivated land holding in one parcel?

1. Yes
2. No

17. If your answer for Q. 18 is No, how many plots do you have? _____

18. If you are plowing the land by yourself, what are the labours for farming?

1. Only myself
2. Children
3. Monthly hired
4. Daily laborer
5. Labour exchange party
6. Other (specify) _____

19. How often is your land cultivable per year?

1. Only once
2. Twice a year
3. Three times a year
4. More than three times

20. How can you describe the fertility of your land?

1. Poor fertile
2. Middle fertile
3. Highly fertile

21. Is there land that you use communally with other people in your *kebele*?

1. Yes
2. No

22. If your answer for Q. 21 is yes, what are the benefits that your household is getting from it? (**Multiple response is possible**)

1. Grazing
2. Fire wood for home consumption
3. Firewood for selling
4. Water
5. Source of construction material
6. Source of various types of fruits
7. Other (Specify) _____

B. Access to Draft Power, agricultural extension services and rural infrastructure

23. During the last cropping year, how did you plough?

1. Hand tool/hoe
2. Own oxen

3. rented/shared oxen
4. Rented tractor

24. Are there agricultural development agents/extension workers in your locality?

1. Yes
2. No

25. If your answer for **Q. 24** is yes, do you think they are supporting you adequately?

1. Yes
2. No

26. Do you think you have enough farm tools?

1. Yes
2. No

27. Which of the following agricultural inputs did you use during the previous cropping year?

Agricultural inputs	yes =1 No=2	Source	If No, please explain why?
fertilizers			
Improved seeds			
herbicides			
Pesticides			
Other (specify) _____			

28. Have you used credit packages in the last five years? *[if no, skip to Q. 34]*

1. Yes
2. No

29. What was the source and amount of credit taken?

Sources of loan	1= yes 2= No	Amount borrowed (in Birr)
DECSI (ደደቢት)		
Relief Society of Tigray/ REST (ላዲት)		
Equb (ዕቁብ)		
Idir (እደር)		
Banks		
Relatives		
Others (specify) _____		

30. How is the repayment status?

1. fully repaid
2. partially repaid
3. not started yet

31. If you ever faced with problems associated with credit repayment, what were the major reasons?

32. What methods did you use for credit repayment when there was a danger of crop failure and/or marketing problem? (*Multiple response is possible*)

1. selling of livestock
2. Selling of household assests
3. Renting out of lands
4. Borrowing from relatives or friends

33. What did you do with the money you borrowed?

34. If you did not use the credit packages, what were the reasons for not taking?

35. Do you have irrigated land? [*if no, skip to Q. 39*]

1. Yes
2. No

36. What type of irrigation practices do you use?

1. traditional
2. Modern
3. both types

37. What are the sources of water for the irrigation practices?(*Multiple response is possible*)

1. River diversion
2. water harvesting ponds
3. Gruond water walls
4. Drip irrigation
4. Other (specify) _____

38. If you are using water ground walls, what are the types of lifting mechanisims? (*Multiple response is possible*)

1. pedal pumps
2. Motor pumps
3. Hand lifting
4. other (specify) _____

39. What major problems do you face in the application of irrigation technologies?(*Multiple response is possible*)

1. lack of information about irrigation technologies
2. Labour shortage
3. lack of water sources
4. Lack of capacity to purchase lifting technologies
5. other (specify) _____

40. Have you practiced soil and water conservation measures?

1. Yes
2. No

41. If your answer for Q. 39 is yes, what types of soil conservation measures do you practice?

(Multiple responses is possible)

1. traditional soil conservation structures/ston bunds and others
2. introduced soil/stone bunds
3. plantation of multipurpose trees
4. ther (specify) _____

42. If your answer for Q. 39 is No, What are the reasons for not using soil and water conservation measures?

43. Have you taken any training on agricultural development?

1. Yes 2. No

44. If your answer for Q. 42 is yes, what type of training was that?

45. In your opinion, do you think that female headed households are discriminated in the provision of different supports form different institutions?

1. Yes 2. No

46. If your answer for **Q. 45** is yes, who would describe how?

C. Social Relations And Networking

47. Did you participate in various community based labour organizations?

1. Yes 2. No

48. If your answer for Q. 44 is yes, in which of the following organizations do you participate?**(Multiple responses is possible)**

1. *Wenfel*
2. *Debbo*
3. Irrigation cooperation
4. *Mekenajo*
5. Other (specify) _____

49. In which of the following local informal Associations do you participate? **(Multiple responses is possible)**

1. *Equib*
2. *Mahiber*
3. *Iddir*
4. *Senbetie*
5. Other (specify) _____

50. Are you member of any type of cooperative?

1. Yes 2. No

51. If your answer for **Q. 50**, is yes, what benefits do you get form your membership?

52. If your answer for **Q. 50** is No, please explain why?

53. Are you member of Women's Association? (*Only for Female headed Households*)

1. Yes 2. No

54. If your answer to **Q. 53** is Yes, what do you benefit from your membership?

55. If your answer for **Q.53** is No, please explain why?

SEGMENT THREE:LIVELIHOOD ACTIVITIES AND STRATEGIES

A. Diversfication of Crop Production and Livestock Rearing

56. What happened to your previous *Belg* harvest?

1. Increased 2. No change 3. Decreased

57. If your answer for **Q. 56** is increase or decrease, please explain why?

58. What happened to your *Meher* harvest?

1. Increased 2. No change 3. Decreased

59. If your answer for **Q. 58** is increased or decreased, please explain why?

60. For what purpose did you use the food harvested?

1. for Consumption only
2. for Sale only
3. for both Sale & consumption

61. Do you grow some other perennial crops, fruits and vegetables? [*If No, please skip to Q. 64*]

1. Yes 2. No

62. What are these crops, fruits and vegetables?

1. _____
2. _____

3. _____

4. _____

63. Would you tell me the total estimate of annual income (in Birr) from these? _____

64. Is there any livestock you currently possess?

1. Yes 2. No

65. If your answer for **Q. 64** is yes, would you tell me the number of the following livestock you currently own?

1. Cattle _____
2. Shots _____
3. Equines _____
4. Chicken _____
5. beehives _____
6. other (specify) _____

66. If your answer for **Q. 64** is No, why?

67. What happened to your livestock asset in the last five years?

1. Increasing 2. No change 3. Decreasing

68. For any of your answer for **Q. 67**, please explain why?

B. Non-Farm Employment, Formal and Informal Transfers

69. Did any of your household members work in activities apart from crop production and livestock rearing?

1. Yes 2. No

70. If your answer for **Q. 69** is yes, please mention, below in the table, these activities and indicate the estimated amount of income monthly (in Birr)

	Type of activity	Monthly income (in Birr)
1		
2		
3		
4		
5		

71. If your answer for **Q. 69** is No, What are the main reasons?

72. What are the various items received outside the household? (*Multiple responses is possible*)

1. Remittance(in Birr)
2. Food/ grain gift
3. Seed gift Seed loan
4. Food For Work
5. cash credit
6. Food aid /cereals
7. pulses
8. others (specify) _____

SEGMENT FOUR: FOOD SECURITY AND COPING MECHANISMS

A.Food security

73. Do you meet the all-year round food requirements of your household members from own production?

1. Yes
2. No

74. If your answer for **Q.73** is No, for how many months do your own productions cover the food requirements at home? _____

75. How do you perceive your household food security since the last five years?

1. Increasing
2. No difference
3. Decreasing

76. If your answer for **Q. 75** is 1 or 3, please explain why such change?

77. According to your own self-assessment, how do you rate your household?

1. Food secured
2. Food insecure

78. If your answer for **Q. 77** is 2, what do you think are the main reasons for being food insecure?

B.Household Coping Mechanisms to Food Insecurity .

79. How do you cope with the problem of food shortage? (*Multiple responses is possible*)

1. Livestock disposal or de-stocking
2. Change cropping patters
3. Migration to near by towns for weage labours
4. Consuming famine periods or less preferred foods
5. Borrow grains from relatives

6. Borrow grains or cash from money lenders
7. Migrate to other rural areas for wage labour
8. Sell of small animals
9. Firewood and charcoal selling
10. Relly on relief grains
11. Sell off farm oxen
12. Lease out land
13. Sell off land
14. Other(specify)_____

80. What food consumption related mechanisms do you use in times of food shortage crisis?

1. Eating foods that are less preferred
2. Borrowing grain/money to buy food
3. Buy food on credit basis
4. Receiving donation from relatives or friends
5. Reducing consumption during cash meal
6. Skipping meals for adults to feed children
7. Reducing the number of meal per day
8. Not eating for whole days at a time
9. Others(specify) _____

81. During the time of food shortage do you get food aid?

1. Yes
2. No

82. If your answer for **Q. 81** is yes, do think that food aid was sufficient to feed your household members?

1. Yes
2. No

83. Are you involved in safety net programs?

1. Yes
2. No

84. If your answer for **Q. 83** is yes, what benefits do you get?

85. If your answer for **Q. 83** is No, Why?

86. Is there any support your household is getting from NGO?

1. Yes
2. No

87. If your answer for **Q. 86** is yes describe the sources and type of support in the table below.

	Type of support	Source/ name of the NGO?
1		
2		
3		
4		
5		

Thank You!

Annex 2: Focus Group Discussion Guide

Focus Group Discussion Guide with Female Headed Households

Date: _____ *Kebele:* _____

General information on the group discussants

No.	Discussants (name)	Age
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

1. How are female heads of households considered in your society?
 - Their social status and societal acceptance
 - In terms of contribution to the society in various ways:
 - *Production,*
 - *community works,*
 - *participation in social affairs,*
 - *political affairs and decision making process*
 - Cultural values and norms affecting the livelihood condition of female headed households
2. How do you see the condition of access to and control over land by female headed households in your community?
 - Challenges and opportunities
 - Farmland accessibility/ Means for acquiring land
 - Ownership of farmland
 - Extent of bargaining power with the shareholder or cropper (if the land is hired)
 - The inheritance (division) mechanism of property with your ex-husband (divorced or widowed).
 - Communal land and other common property resources
 - Conflict over resources and access to justice

3. How do you compare the livelihood security of female headed households with that of male headed households?

- Vulnerability to drought and various shocks (unexpected crop failure, livestock attack.....)
- Capacity to cope up with such challenges

4. Who do you see the status of female headed households in terms of access to various rural infrastructures and services?

- *Health care services,*
- *Schools/education,*
- *Water sources and supplies*
- *Market and market information*
- *Veterinary services*
- *Electricity*
- *Credit/ financial institutions*

5. Tell us about accessibility of Agricultural inputs and extension services for female headed households in your community:

- Accessibility of modern farm inputs (such as fertilizers, insecticides, improved seeds, pesticides, etc...)
- Irrigation or water harvesting practices [Modern, traditional, small scale, large and communal, private, water walls, ponds.....]
- Role of local extension workers
- Do you think there is discrimination against female headed households?

6. Let us discuss about community based organization and local associations in your community?

- What are these?
 - *Labour organizations,*
 - *indigenous associations,*
 - *cooperatives*
 - *women's association*
- What looks like your membership: opportunities and constraints?
- How are you treated in such local institutions?
- What are their roles in your household livelihood?
- What looks like your level of participation? Leadership positions?

7. Please tell us about the various Livelihood activities (farm and non-farm) that your households are engaged in:

- Trends in agricultural productivity over the last five years and the determinants
- Trends in livestock possession and constraints for livestock rearing
- Availability of non-farm activities and their contributions

8. What looks like the impact of various formal support and interventions on the livelihood of female headed households?

- What are these interventions? By government? By NGOs and other civil societies?
- Is there special consideration for female headed households? How?
- How do you evaluate their impacts?

Annex 3: Key Informant Interview Checklist

Key Informant Interview Guide

1. How do you compare the livelihood security of male headed and female headed households in your *Woreda*? Which one do you think is more vulnerable? Why?
2. At the time of livelihoods crises like drought, are there special support and interventions given for female headed households to improve their livelihoods? What are these? By government? By NGOs?
3. In distribution of services/infrastructures is there special consideration for female headed households? How and why?
4. How are female heads treated at the time of resolving conflict over various resources? What looks like their access to justice? Both at formal justice system and traditional dispute resolution mechanisms?
5. How do you evaluate the impact of formal strategies and interventions targeting female headed households, if any? Tell us about the failures and success stories?
6. What are the most common challenges that female headed households face to secure their livelihoods? Why these challenges are there?
7. As compared to male headed households, how do you see the status of Female headed households in access to and control over farm land?
8. In your *Woreda*, what are the most common coping strategies that female headed households revert to at the time of livelihood crises? How do you evaluate the effectiveness of such options?
9. How do you evaluate the participation of Female heads in community works and political affairs? Please explain why?
10. Are there special government structures which are in charge of supporting Women in general and female headed households in particular? Please mention them and tell us about their mandates? How do you evaluate their impacts?

Annex 4: Research Proposal



**Indra Gandhi National Open University
School of Continuing Education**

A research proposal on

**Livelihood Security of Female Headed Rural Households in Raya Alamata
Woreda, Southern Tigray, Ethiopia**

**Submitted for the partial fulfillment of the Masters Degree (M.A) in Rural
Development**

Submitted by: Melesse Berhanu Shemuye

ID. No: 109100687

**May, 2016
Addis Ababa**

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1. Introduction

In spite of some improvements in the last decade, literatures indicate that the intensity and severity of rural poverty and food insecurity in Ethiopia is still rampant. Many of the available studies focus on food security of households as indicators of poverty levels and the overall standard of living rather than in livelihoods security. Monitoring and Evaluation report by Food Security Coordination Bureau of Ethiopia (2009), pointed out that every year millions of rural households in Ethiopia suffer from chronic food insecurity, affecting as much as 45% of the population, making them to be dependent on food aids and emergency reliefs. Similarly, recent study by World Bank (2009) confirmed that rural food insecurity was pervasive, and the situation gets worsened over time and exacerbated by natural factors such as repeated droughts and the subsequent decline in agricultural products as well as man-made causes such as the escalation of food prices.

In Ethiopia, rural poverty and vulnerability to risks of food insecurity are highly influenced by gender (World Bank, 2008). Women are disproportionately prone to and affected by poverty and livelihood insecurity. Women as household heads are often trapped with problems of achieving economic responsibilities and domestic chores by their own simultaneously. Women who head the family on a temporary basis (i.e. who have migrant husbands) face the problem of not being able to take full decisions regarding the use of land and other productive resources.

A number of studies (e.g. Muluneh, 2001; AfDB, 2004; Lingam, 2006; Gebremedhin & Mulubrehan, 2007) have found out that there are several reasons of why female-headed households are more susceptible to poverty. Among others, such households have less direct access to land, are more labor deficient and thus more reliant on hired labor for farming which is expensive. However, in the development debates, it has been disputed that female-headed households can necessarily be signified with poverty and the blame being put on the socio-cultural, economic, and even political shackles that jeopardized women's potential and capabilities for self-support and developments. A World Bank report (2009) articulated that female-headed households are not necessarily poorer than other households nor are poorer than women in the male-headed households. However, this report also reminded it seems that female-headed households are more susceptible to shocks, stress and risks of insecurity with significant fluctuations in their wellbeing. According to this report, the gendered division of labor leaves

these households lag behind, with fewer livelihood options, particularly in rural areas where they usually rely on socially unacceptable occupations as they cannot make a living in agriculture.

Tigray region is one of the most poverty stricken regions in Ethiopia. Similar to the other parts of Ethiopia, rural poverty and vulnerability is deep-rooted, multidimensional and widespread. The largest segment of the Tigrayan population subsists on agriculture and agricultural production. As the region has been hit by frequent droughts, wars and famine, the agricultural production and productivity is meager, short of supporting the livelihood security of households. As Frankenberger, *et.al* (2007) stated large numbers of the Tigray highlanders are sedentary agriculturalists practicing crop cultivation for household subsistence supplemented by animal husbandry. However, their agricultural production and productivity has remained very low mainly due to small landholdings (average 0.5 ha. per household), the use of traditional farming systems, land degradation and low soil fertility; recurrent drought; prevalence of pests, etc. Given variations across regions and communities about these livelihood challenges, this research, therefore, aims at assessment of the livelihood situation of female headed rural households in Alamata *Woreda*, Southern Tigray.

2. Statement of the problem

At least 70% of the world's very poor people reside in rural areas of the developing world (IFAD 2011). Livelihoods of the rural poor usually depend either directly or indirectly on agriculture, with women providing, on average, more than 40% of the agricultural labor force.

Ethiopia is one of the poorest countries in the world and ensuring the livelihood security of its citizens remains a big challenge ahead. So far the mainstay of Ethiopian economy is dependent on agriculture and agricultural production. Ethiopian agriculture remained largely rain-fed, subsistence-oriented and hence highly vulnerable to droughts and famines. It suffers from traditional farming systems and low modern technological inputs. The country has been suffering from severe poverty, hunger and droughts. In terms of extent and distribution, poverty is more widespread and severe in rural areas.

Studies revealed that in Ethiopia rural poverty and vulnerability to risks of insecurity are highly influenced by gender (World Bank, 2008). Women are disproportionately prone to and affected by poverty and livelihood insecurity. At household level, there exists wide gap in susceptibility

to livelihood insecurity and risks of shock absorption among female-headed households than male-headed households (Lingam, 2006). Discussions on women and poverty, captures the frequently mentioned dictum of “feminization of poverty” which implies that women are the poorest of the poor. Habitually, feminization of poverty is referred with the female-headed households as the poorest of the poor.

A number of studies (AfDB, 2004,) have found out several reasons of why female-headed households are more susceptible to poverty. Among others, such households have less direct access to land, are more labor deficient and thus more reliant on hired labor for farming which is expensive.

In most part of Northern Ethiopia, the issues of poverty, hunger and livelihood insecurity remain as a serious challenge. Historically, this region was exposed to prolonged drought, environmental degradation and deforestation, internal/civil wars and more recently border conflict with neighboring Eritria. These have contributed for the prevalence of higher number of female headed households compared to other parts of Ethiopia. Data from CSA (2007) indicated that women constitute nearly 52 percent of the population and from this over 30 percent of the populations are estimated to be female-headed households. Women in the region, as is the case in most developing countries, are the worst victims of poverty. Households, especially those that are headed by women, are believed to lack the basic assets that could help them survive through harsh living situations.

According to World Bank (2009), the higher incidence of female headed households in the Region is due to the loss of male partner during the civil war and the Ethio-Eritrean conflict, traditionally high age gap between wives and husbands that led to the early death of males and subsequent widows, as well as the migration of males without legal divorce in de facto means female led family. In addition, the impact of HIV/AIDS to increasing female-headed households should be understood.

So far, there is no a such specific study on the livelihood condition of female headed households in the rural areas of Alamata *Woreda*. The above facts as well as personal observations have instigated the researcher to deal with the issue of female headed households (FHH) and their

livelihood security. The researcher strongly believed that studying the livelihood status of female-headed households is vital to effectively achieve the development goals of reducing extreme poverty, hunger and the livelihood security of households in the study area. It is indicated that for Ethiopia, promoting gender equality is not only in the best interest of the society at large, but also fundamental to ensuring the human and democratic rights of women (MoFED, 2004). As a guiding strategic plan, the currently launched GTP II also reaffirms these facts by stipulating eradicating extreme poverty and hunger, and ensuring the food security of households as a priority agenda.

3. Objectives of the study

General Objective:

Generally, this research proposal aims at assessing the livelihood security of female headed households in rural areas of Alamata *Woreda*.

Specific Objectives:

In line with the stated general objective, this proposal intends to specifically address the following specific objectives.

1. To assess livelihood assets of rural female headed households in the study area.
2. To identify the livelihood strategies of female rural households in the study area
3. To explore the livelihood vulnerability of rural female households.
4. To assess formal strategies and interventions done with especial consideration of female headed households

4. Chapter Plan

The entire report will be organized in five chapters keeping logical coherence of ideas and following standard research report writing. The first chapter will deal with the introduction and the general background of the study. In this chapter, the statement of the problem justifying the need to conduct the study and the main objectives will be clearly indicated. Chapter two of the report is will be devoted to a vast review of related literature. In the theoretical review of this chapter, basic concepts related to livelihood security and various theoretical frameworks are going to be reviewed. Moreover, review of empirical research finding will be also made in this

chapter in order to gather relevant information and share methodological experiences from the work of others. Description of the study area and methods of the study will be altogether dealt in chapter three. Chapter four is going to be about the data presentation and discussion where the data collected in various ways from various sources will be organized, analyzed and interpreted. In chapter five, the last chapter of the report, some concluding remarks and recommendations will be forwarded based on the finding of the study.

5. Conceptual Framework of the study

Owing to the historical occurrence of repeated droughts and famine since the 1970, the problems of food and livelihood insecurity have been a subject of continuous discussions for scholars, policy makers and the government. There is conceptual distinction between food security and livelihood security. According to the World Bank (1986) definition, food security exists when all people, at all times, have access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. The notion of food security emphasizes on the availability of food and peoples' access to it. A household is considered food secured when its occupants do not live in hunger and/or fear of starvation.

The notion of livelihood security is a very broad concept that goes beyond food security. Generally speaking the concept includes basic human needs such as food, shelter, basic social services such as education, health, water and sanitation. The availability of adequate food reserves, supply and cash income, social services, peace and stability are essential elements to meet people's livelihood security. The most cited definition of livelihood security is the one given by Chambers & Conway (1992) stated 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) that together determine the living gained by the individual or household. (Ellis, 2000:15)

This definition is adopted in this research. As stated in the definition, livelihood security depends on the ability of a household to attain the basic needs to make its means of living. It entails possession of variety types of assets and household's ability to sustain these over time.

The varieties of capital asset categories (natural, physical, human, financial and social capital) identified in the above definition are vital to the attainment of livelihood security of rural households. As mentioned by Ellis (2000), natural capital consist of land, agro-climatic and biodiversity resources that are used by rural people to make their living. These are general resource endowment whether renewable or non-renewable. Physical capital refers to assets created by economic production process that are also essential for generating income sources such as ownership of buildings, irrigation works, tools and machineries etc. which are generally regarded as producer goods. Human capital principally denotes to the labor forces (whether educate and skill or not) owned by the household and that is useful for production. Financial capital refers to the cash capital or stocks of money which the household owns and has access to it. Social capital entails the social networks and relationships such as family and kinship networks that the household possesses and developed on for its livelihood.

All these capital assets form, household's institutional and social network relationships and the various economic activities are essential determinants of the sustained livelihood security of rural households. From this discussion, it has to be noted that the distinction between food security and livelihood security. Food security is one component of livelihood security that focuses on food; the latter is much broader concept embracing the overall means of survival. While food security emphasize on food availability, consumption pattern and individual's access to it, livelihood security embraces the overall standard of living.

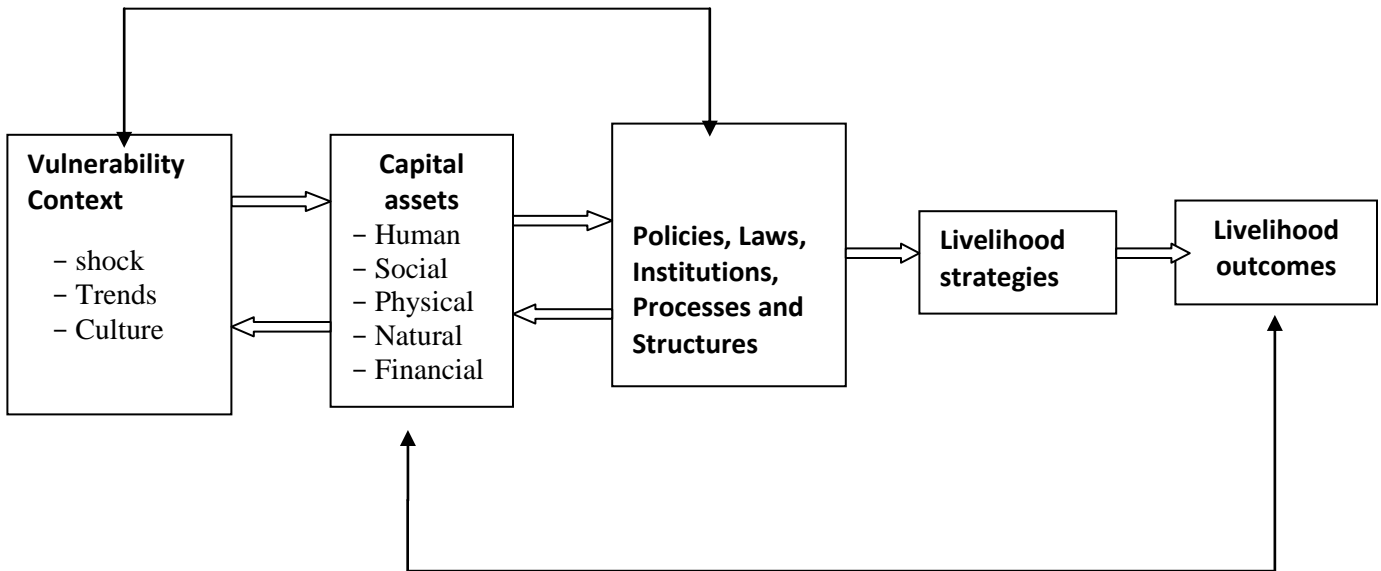
The tendency for rural households to engage in multiple occupations or involvement in diversified income portfolio is often regarded as better strategy to sustained livelihood security. According to Ellis (2000):

Rural livelihood diversification is defined as the process by which rural households construct an increasingly diverse portfolio of activities and assets in order to survive and to improve their standard of living.

Areas of diversification for rural households can be on-farm (engagement in variety of agricultural activities such as crop farming, livestock production or animal husbandry), and off-farm activities (such as wage or salaried work, petty trading, remittance). A household that is more diversified is more secured, better-off, and more resilient to risks and shocks than a less diversified one. Thus, it is extremely vital to assess and analyze the level of livelihood

diversification and the alternative dimensions of income sources in order to determine the risk absorption and resilience of households. As indicated in the figure below, the sustainable livelihood framework is a basic frame work portraying the interaction of these capitals with other livelihood strategies and contexts resulting in some form of livelihood outcomes. This framework is going to be basically used to guide this study of livelihood situation of female headed households in the study areas.

Figure 1. Sustainable livelihood framework, adopted from DifD

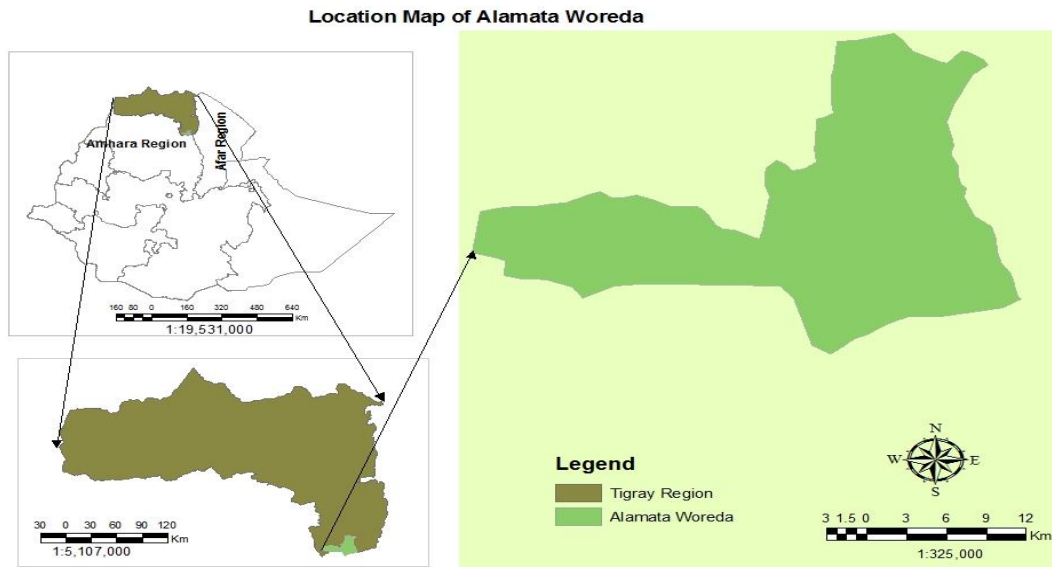


6. Description of the Study Area

6.1. Location

Alamata town, the administrative capital of Alamata *Woreda*, is located 600 km north of Addis Ababa and about 180 km south of Tigray Regional capital, Mekelle. The main road from Addis Ababa to Mekelle crosses the town of Alamata. This *Woreda* is located at the southern tip of Tigray bordering Amhara Regional State. Specifically, the *Woreda* share borders with *Sokota* and *Kobbo Woredas* of Amhara region to the West and South respectively; the Afar Regional State in the east; and *Ofla (Korem)* and *Raya Azebo Woredas* to the north and north east, respectively, (both found in Tigray region). Astronomically, the town of Alamata is located at 12°15'N latitude and 39°35'E longitude (WOARD, 2009).

Map1: Location of Alamata Woreda



Source: Ethio-GIS using ESRI arc GIS Software Adindan-UTM-ZONE-37N, based on Transverse, Mercator projection

6.2. Topography

As far as the landscape of the study area is concerned, altitude ranges from 1,178 to 3,148m above sea level. 75% of the *Woreda* is lowland (1,500m above sea level or below) and only 25% is found in intermediate highlands (between 1,500 and 3,148m above sea level) (WOARD, 2009).

There are 14 *Kebeles* and two towns in the *Woreda*. These towns are Alamata and *Waja* (the small town located 15 Km to the south of Alamata town). In the current administrative system, the entire *Woreda* is subdivided in to two sub-*Woredas*. These are the town *Woreda* (only Alamata town which has four *Kebeles*) and the rural *Woreda* (comprising of the 10 *Kebeles*).

Most of the kebeles in the *Woreda* and the town of Alamata are located in the lowland part of the *Woreda* (*Qola*) and the rest four *Kebeles* are found in the intermediate zone (*Woyna Degga*). The *Woreda* is surrounded by undulating mountains that are very steep and characterized by low vegetation cover. These mountains covering a large area with a series of dissected gullies drain to Alamata valley and serve as a source of runoff water to the valley.

6.3. Ethnicity and Religion

The people of this area described themselves *Raya*, having their own ethnic identity and cultural traits. According to Agezew, the term *Raya* refers to both the people and their homeland that covers *Kobbo Woredain* Amahara regional state and *Alamata, Offila (Korem), Raya Azebo (Moheni, chercher, balla)*, and some parts of *Wajirat* in Tigray regional state (Agezew, 2000). Multilingualism is prevalent in *Raya*, as people can speak any one or several of the following languages: Amharic, Tigrigna, *Afan-Oromo, Afargna*, and to some extent *Agewugna*. The majority of the population is Ethiopian Tewahedo Orthodox Christians followed by Muslims. Some Catholics and Protestants are also found in the town of *Alamata*.

7. Research Methodology

To address the objectives of the study, both qualitative and quantitative approaches to data collection and analysis will be employed. This research strategy is preferred because using the mixed approach in the study of livelihood security yields more than the sum of the two approaches used independently.

7.1. Universe of the study

The study will be conducted in Rural *Alamata Woreda* in Southern Tigray. Two particular rural Kebeles named *Waja-Timuga* and *Lemat* are selected in consultation with the concerned people in the *Woreda*. The total number of households in *Waja-Timuga* is 1309 and that of *Limat* is 1,788. In *Waja-Timuga* there are 611 and 698 male and female headed households respectively. Similarly, the number of male headed and female headed households in *Limat Kebele* is 889 and 899 respectively. The sample households for the actual study will be selected using the following sampling procedure.

7.2. Sampling Procedure and Sample Size

As stated above, the study *Woreda* consists of 15 rural *Kebeles*. The *Kebeles (Tabias)* are further designated into *Kushets* which are smaller local administrative units comprising certain number of households. The units of analysis for the study will be (rural female-headed households) identified and reached out using the multi-stage cluster sampling methods. Accordingly, first from the total of 15 *Kebeles*, Two *Kebeles* will be selected using simple random sampling (SRS)

method. Then from the selected *Kebeles*, a total of 80 rural households (40 female headed and 40 male headed households) will be selected. These finally selected household heads will be the actual sample of the survey for collecting data using structured questionnaires.

7.3. Methods of Data Collection

Both primary and secondary data sources will be employed. The entire process of gathering information will be carried out involving pertinent stakeholders, particularly target household members, and duty bearers mainly the government bodies, civil society, community members, key actors in community such as agriculture extension workers.

7.3.1. Primary Data

In order to gather primary data from different sources, the following research will be employed.

Farm Household Survey

A cross-sectional survey design, which is characterized by collection data at one point in time to describe the target population, will be employed to assess the livelihood security of rural female-headed households in the study area.

A questionnaire consisting of both open-ended and close-ended questions will be developed and employed for collection of the relevant information from the heads of sampled households. This household sample survey will generate both qualitative and quantitative data pertaining to the social, demographic, and economic characteristics of the households.

In-depth interview

Information regarding the different kinds of government strategies and the challenges for their implementation will be gathered through in-depth interview to be conducted with development agents, *Kebele* and rural *Woreda* administrators, and officials from women affairs office at *Woreda* level.

Focus group Discussion

Focus group discussions are a means of familiarizing oneself with local reality and its constraints. These are, generally, discussions in which the villagers take part voluntarily (Tollens, 2000). Therefore, a focus-group discussion among females heading households will be held in each of the selected *Kebeles*.

In this exercise, an enormous amount of contextual information on the villages as well as data on the different causes of livelihood insecurity both at the community and household level; and facts about coping mechanisms will be gathered.

7.3.2. Secondary Data

Besides, secondary data will be collected from various literature consultations. Related articles, books, monographs, newspapers, official documents (policy, food security program documents, Safety net, and project papers) will be thoroughly reviewed.

7.4. Methods of Data Analysis

Both qualitative and quantitative techniques will be applied for the analysis and interpretation of data. Information collected through key informant interviews and focus group discussions will be qualitatively analyzed. The quantitative household survey data will be coded, entered into computer, and analyzed using the software Statistical Package for Social Science (SPSS). The specific statistical procedures will include univariate analysis such as the computation of frequencies, percentages, and means; as well as bivariate analysis such as cross tabulations. Statistical tests such as chi-square test and t-test will also be employed to examine and establish statistical relationship between various independent variables.

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Annex I: Action plan

	Activities	May	June	July	August	September	October	November
1	Proposal Development							
2	Data collection instrument design /Survey questionnaire, FGD guide, Key informant interview check list							
3	Sampling survey respondents, recruiting FGD participants and identifying appropriate key informants							
4	Field work/the actual data collection							
5	Data analysis and produce first draft report							
6	Final thesis submission to IGNOU							

Annex II: PROFORMA FOR SUBMISSION OF M.A. (RD) PROPOSAL FOR APPROVAL

Signature: _____

Name and: _____

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Enrollment No: 109100687

Date of submission: 17/06/2016

Name of the study center: St. Mary University (8105)

Name of guide: _____

Title of the project: Livelihood Security of Female Headed Rural Households in Raya Alamata
Woreda, Southern Tigray, Ethiopia

Signature of the student:

Approved/Not Approved _____

Date: _____