LIVELIHOODS AND COPING STRATEGIES OF RURAL HOUSEHOLDS IN ABELA LIDA PEASANT ASSOCIATION OF SHEBEDINO DISTRICT, SOUTHERN ETHIOPIA.

By

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DECLARATION

I declare that livelihoods and coping strategies of rural households in Abela Lida Peasant Association of Shebedino district, Sidama zone in Southern region of Ethiopia is my own work and that all sources that I have used or quoted have been indicated and acknowledged by means of complete references.

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Signed by: Kemeria Barsenga Kedir

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Date: 01/04/2015

DEDICATION

This dissertation is dedicated to my mother Fatima Mohammed and all my sisters, brothers and friends who gave me support, strength and courage during my study.

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ABSTRACT

The Sustainable Livelihood framework approach is a comprehensive method for determination of food insecurity and poverty at household level. The objective of this study was to determine the livelihood strategies and the coping mechanisms used by rural households in *Abela Lida* PA, *Shebedino* district, Southern Ethiopia. This study used both qualitative and quantitative methods to estimate the contribution of different resources to total food access and cash income, detailing expenditure patterns, asset holdings and capacity to cope with shocks. Simple random sampling was used for selecting 72 households for the survey. The data was collected during the hunger season using the checklists designed for livelihood and coping strategies.

The study showed only 30% households had all the adults as working members, due to poor work skill, low awareness and lack of job opportunities. The main sources of income are sale of cash crops mainly coffee (55.6%) followed by sale of cash crops plus livestock (18%), labour (12.5%), PSNP (8.3%). The average annual income for the households was found to be birr 4,727.92 (~$293.34) and agriculture is the main livelihood strategy.

Awareness and access to basic social services has improved and escalated price of staple foods, has negatively affected poor households and safety net beneficiaries who rely on purchase. Seasonality has also affected agricultural activities, prices and employment opportunities. The increase in fuel price was found to be the main shock followed by coffee price fluctuations and failure in purchasing power of money. About (63%) households faced shortage of food or money to buy food, medical expenses, cooking fuel and school fees.

The conclusion is that households have good access to transport and market. Unskilled labour, depleted natural capitals, lack of social networks and financial institutions, very limited electricity supply have resulted in traditional livelihood strategies. Most households are food insecure and practise different coping strategies. Recommendations are: to improve the crop and livestock production, encourage various off - farm job opportunities and income generating activities.

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CHAPTER 1: INTRODUCTION

1.1 Background

Livelihood is defined as “the activities, the assets (natural, physical, human, financial and social capital), and the access (mediated by institutions and social relations) that jointly determine the living gained by an individual or household” (DFID, 1999; Kalinda and Langyintuo, 2014). Thus, in the rural context, the term livelihood can be taken as the different activities carried out using the available assets and institutions for survival and to improve living standard.

Livelihood-based approach is the current accepted approach for the determination and analysis of poverty and food insecurity. The livelihood framework based approaches were developed for operational and research purposes (Reed et al., 2013). Seamana et al (2014) indicated that the approach provides logic to know livelihoods, how they are affected by changes and shocks, and how households cope and adapt with the challenges to reduce vulnerability. The approach has got acceptance by different international agencies like Department for International Development (DFID), United Nations Development Programme (UNDP) and World Food Programme (WFP), and by different non-governmental organizations (NGOs) like CARE International and Save the Children - UK, and each has developed its own livelihood based framework for operation (Devereux et al., 2004).

In the struggle for a secured livelihood, rural households are faced with livelihood risks and they try to cope by means of different activities in which case they may succeed or fail and this will

determine the sustainability or vulnerability of their livelihoods (Nair et al., 2007). Households who have a sustainable livelihood system can cope with and recover from the risks and shocks, such as collapse of prices of cash crops and drought, and or enhance their capabilities and assets without undermining the natural resource base (DFID, 1999; OECD, 2014).

Livelihood strategies utilized by rural households, in southern Zambia, indicated that most of the livelihood assets like production resources such as livestock were owned by a few wealthy groups (27%) who had greater access to land as compared to the poor (Kalinda & Langyintuo, 2014). The study by Sophal and Acharya (2002) on the challenges faced by rural livelihoods in Cambodia showed only 44% owned land given by the state, 24 % reported they inherited, 17% purchased and 16 % claimed they cleared the forest. On average, 68% of the expenditure was on food consumption and in addition to land size and productivity, health problems, flood, child labour, unskilled labour that earn low wage rates were the main challenges observed during the study.

Webb et al (1992), working in Ethiopia, showed that, depending on the extent of progress of food shortage and the availability of natural resources, the severity of food shortage in the country varies from place to place. According to their classification, the first drought prone area is the mixed farming production system area of the highland, central and north-eastern highlands that stretches from northern *Shewa* through *Wello* into *Tigray*. The second belt is the range-based on pastoral economy of lowland Ethiopia, ranging from *Wello* in the north through *Hararghe*, Bale to *Sidama* and *Gamo Gofa* in the south. They also discussed that the latter is taken as resource poor with limited potential and is highly vulnerable to drought.

It is thus important to study the livelihood strategy of households in a particular community in order to understand how they are utilizing their resources to make a living. Ethiopia has a complete coverage of the household economy approach (Seaman et al., 2014) which is being used by different agencies working on livelihood and food security. Data from this study can also identify the opportunities and constraints of their livelihood and its sustainability or vulnerability and the coping strategies that they utilize to manage food shortages.

This study, therefore, aims to evaluate the livelihood strategies and coping activities used in rural households in *Abela Lida* Peasant Association (PA) of *Shebedino* district from *Sidama* zone in Southern Ethiopia, in their struggle to achieve food security.

1.2 Problem Statement

Poverty is the main underlying cause of food insecurity in Ethiopia. The immediate causes that trigger food insecurity in the country are lack of rainfall, plant diseases, pests and poor governances (Fisseha, 2014). High population pressure, that resulted in a decreased size of per capita land holding, unfavourable climatic change, degradation of natural resources, poor use of new technologies and institutional factors have also affected the food security status of the people (Degefa, 2002).

Food insecurity may cause irreparable damage to livelihood, thereby reducing self-sufficiency of the household (Bayu, 2013).

There has been a long debate on the approaches of food security which in the long run has shifted from national and international to the household and individual level that explains behavioural patterns of households and features of vulnerability to food insecurity (Ecker & Breisinger, 2012).

At Shebedino district level, dwellers suffer from both acute and chronic poverty and food insecurity caused by:

- market price fluctuation of coffee and staple crops,
- endemic coffee plant diseases,
- high population density and population growth,
- the fragmentation of landholdings into smaller and smaller fields,
- declining pasture land and livestock holdings and
- erratic and insufficient rainfall.

Lack of saving schemes, is another problem for farmers, many of whom obtain large sums of money during the coffee harvest period (CSA, 2007).

Two considerations influenced the selection of the study area. First, in the Region in general, in *Shebedino* district in particular, have occurred two recent shocks: erratic and insufficient rainfall (drought); and price crash in coffee (cash crop) and staple foods which had a major impact on agrarian livelihoods. Second, it is a representative district of the Region, which has the thick population in the smallest land size. In addition, the district extends in the three agro - ecological zones: highland, midland and lowland areas. The study site, *Abela Tula* peasant association, is

easily accessible to carry out the study on livelihood and coping strategies of the households living in *Abela Lida* peasant association.

1.3 Objectives of the Research

In Ethiopia, rural households implement different livelihood strategies to improve their food security and to cope with livelihood shocks. However, policy makers overlook livelihood diversification and focus only on agricultural activities (Allison, 2014). Thus, the problem became worse that led to big investment on humanitarian aid to support the immediate needs (Frankenberger et al., 2007). For example, the recent famine in the horn of Africa that affected Somalia, Kenya, Ethiopia and Djibouti due to prolonged drought and high food prices resulted in need of humanitarian assistance for around 13 million people (Maier, 2014).

Studies on livelihood strategies will help to identify the available resources such as land and water and to recommend different options: to maximize agricultural production or to identify other income sources that the community can utilize and improve its livelihood. Thus, study focused on the livelihood and coping strategies implemented by rural households in *Abela Lida* peasant association of *Shebedino* district, in Southern Ethiopia. The results obtained from this study will be made available to policy makers and other stakeholders.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This literature review will explore the concepts of sustainable livelihood and how the livelihood approach has evolved. It will identify the different components of the livelihood framework to show how different resources are related to different livelihood strategies and lead to different livelihood outcomes. It will also show the effects of transforming structures and processes on the livelihood of households. In addition, vulnerability context and the relation between sustainable livelihood and coping strategies will be examined. Finally, different coping strategies practised by households during bad times will be reviewed.

2.2 Sustainable Livelihood

Livelihoods are sustainable when they:

- Can cope with external shocks and stresses,
- Are not reliant on outside support (or supported sustainably both economically and institutionally),
- Can conserve the long-term productivity of natural resources and
- Do not damage the livelihoods of others (Chambers & Conway, 1992; Balcha, 2013).

Sustainability means preserving production for a long period of time, for example, when there is failure of crops in one season, to cover the household food from other sources of income or food

reserve and continue copping for the next season without applying negative coping strategies (Ellis & Allison, 2004). Sustainable livelihood is secured ownership of, or access to, resources and income earning activities, including reserves and assets to offset risks, ease shocks and meet contingencies (Bairwa et al., 2014). In the sense of linking social, economic and environmental issues, a sustainable livelihood can also be defined as when it can cope and deal fruitfully with the security of ecology, efficient economy and equal society (Singh & Hiremath, 2010; Soulineyadeth, 2014).

The basic ideology of sustainable livelihood framework is that, it is people-centred, multilevel, dynamic, and eventually aims, to attain sustainable livelihood. It is proposed as a systematic/operative structure with the complexity of livelihood, understanding effects on poverty and diagnosing where interventions can best be made (Alhassan, 2010). Based on sustainable livelihood framework, the sustainable livelihood approach enables the poor households to be considered as decision-makers with their own sets of priorities rather than victims (Soulineyadeth, 2014).

2.3 Livelihood Approach

During African famines in Ethiopia, Eritrea, Somalia and Uganda in the middle of 1980s and the beginning of 1990s, the emergency response began after the people had migrated to famine camps. At that time, those who participated in the response recognized that the response should have started earlier to prevent large-scale loss of livelihood assets and migration. Lives could have been saved in the longer term by saving livelihoods. As a result, the livelihood studies became centre

of focus for development in the late 1990s, at the beginning of the new millennium when sustainable livelihood framework was introduced by the DFID (De Haan, 2012).

According to Allison (2014), the livelihood approach recognizes the seasonal and cyclical complexity of livelihood strategies; supports to tackle access constraints to assets and activities that complement existing patterns; and identify ways to make livelihoods more capable to cope with adverse trends or sudden shock and improve rural development policy and practice.

The households' ability to undertake various livelihood strategies depend on the different assets they own (Scones, 2009). That also led more recent studies to focus on factors that determine livelihood strategies such as soil fertility (Tittonell et al., 2010), cropping, forestry and livestock products (Tesfaye et al., 2011; Adam et al., 2013; Diniz et al., 2013; Zenteno et al., 2013), and natural capital (Fang, 2013; Fang et al., 2014).

Other studies made on responses to food insecurity and famine showed the primacy for famine threatened people to protect their livelihood resources from deprivation rather than sustaining food consumption, also added the focus on livelihoods in emergency response (IFPRI, 2013). Similarly, Maier (2014) indicated that poor households may choose to reduce their food consumption in order to avoid long term losses in other welfare dimensions such as their income-level or level of assets and livestock.

2.4 Components of Livelihood Framework

The commonly used sustainable livelihood framework is the one developed by the Department for International Development (DFID) (1999) as shown in Figure 2.1. It clearly describes all the livelihood assets and outcomes through the transforming processes, changes and the vulnerability context. Ellis and Allison (2004) in their study of livelihoods approach, referred to resources as 'assets' or 'capitals' and they defined each of them as:

- human capital (age, gender, education, skills and health of household members),
- physical capital (e.g. farm equipment or a sewing machine),
- social capital (the social networks and associations to which people belong),
- financial capital and its substitutes (savings, credit, remittances, cattle) and
- natural capital (the natural resource base).

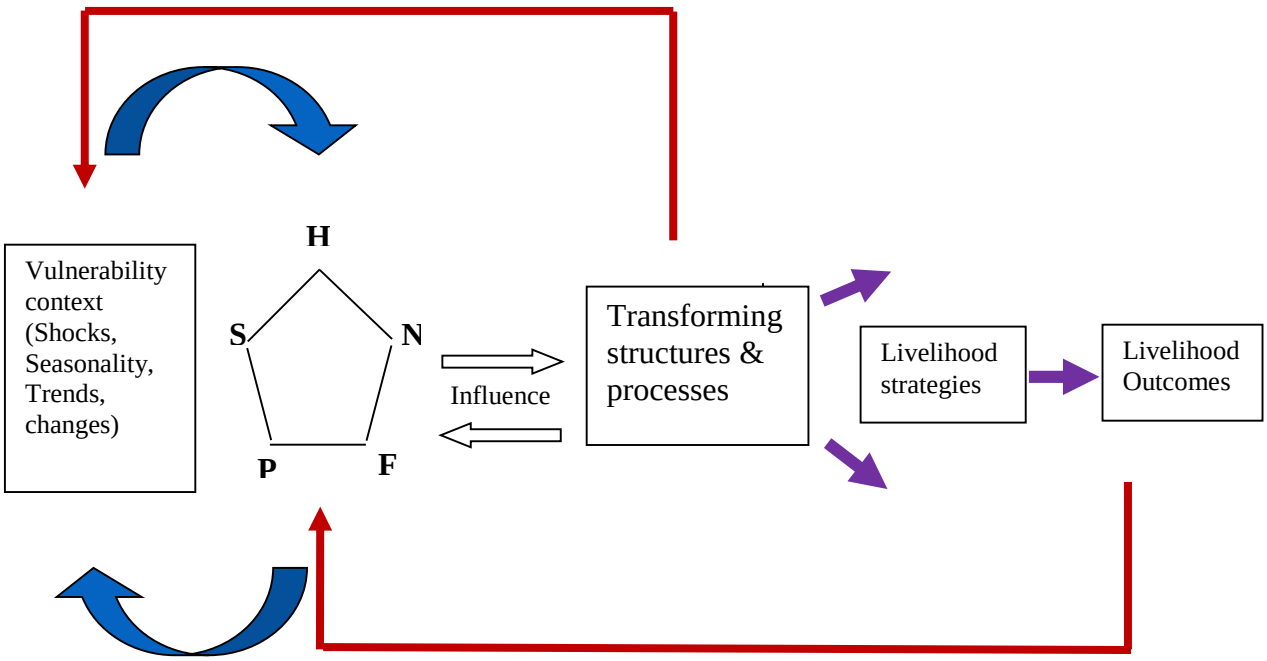


Figure 2.1 DFID's sustainable livelihoods framework (DFID, 1999; Mensah, 2012)

Key: H = human capital, N = natural capital, F = financial capital, P = physical capital and S = Social capital

The Department for International Development (DFID) (1999) also defined policies and institutions as important aspects of livelihoods that influence the rural household's access to livelihood assets. "Institutions are the social cement which link stakeholders to access capital of different kinds to the means of exercising power and so define the gateways through which they pass on the route to positive or negative livelihood adaptation" (Scoones, 1998; Sobang, 2014).

Household members use their ability, awareness and skill with the various resources they have to make their livelihood the best one they can achieve and all the activities which are made to construct sustainable livelihoods can be taken as a livelihood asset (Savath et. al., 2014). A qualitative study made in rural Zimbabwe through in-depth interviews showed that households are very much skilled of building their own productive sustainable livelihoods, given sound rural development policies (Chirau et. al., 2014). According to Kalinda & Langyintuo (2014), "A successful livelihood outcome may help to strengthen endowments, while failure could lead to depletion or loss of endowments".

2.4.1 Human Capital

Human capital in the context of sustainable livelihood framework is defined as "the skills, knowledge, ability to labour and good health that together enable people to pursue different livelihood strategies and achieve their livelihood objectives" (DFID, 2000). Human capital is widely substantiated as a key to successful livelihood diversification. It differs at household level based on the household size, skill levels, leadership potential and health status as these aspects

affect the utilization of the various assets (Alhassan, 2010). Hence, the positive changes in human capital have to be seen as a supportive factor for the other assets.

The significance of education, both formal and workplace skills, for improving livelihood prospects have been established by a number of studies. Poverty is closely associated with low levels of education and lack of skills; thus, the delivery and quality of rural education and skills acquisition requires continuing emphasis (ILO, 2014).

According to Fang et al (2014), human capitals showed a positive correlation with the farm livelihood strategy. According to Soban (2014) on his study on fishing, households in Ghana indicated that households with bigger family size tend to have more family labour for their work and to be recruited when the need arise to increase their human capital.

2.4.2 Natural Capital

Natural capital are resources from the nature stock that flows such as land, water, forests, air quality, erosion protection and the degree and rate of change in biodiversity that are useful for peoples' livelihood. Most of the world's poor are rural and most of the rural poor depend on agriculture or are otherwise dependent on natural resources in generating their livelihoods; which creates strong linkage between rural poverty and natural resources (Lee and Neves, 2010). Thus, the contribution of natural capital to the rural households' livelihood in terms of issues of access, use and control is significant.

In the sustainable livelihood framework, natural capital is closely linked with a vulnerability context and other shocks. In some circumstances, natural processes destroy natural capital such as wildfires destroy forests, floods and earthquakes destroy agricultural lands that challenge the livelihoods of the poor (DFID, 1999; Soulineyadeth, 2014).

In Ethiopia, environmental degradation in the form of land and water resources degradation and loss of biodiversity are the main challenges for agricultural productivity and economic growth (Meshesha, 2015). Similarly a study by Dubale (2001) indicated that from 1950 to 2000, the population of Ethiopia has increased three times that increased the demand for cropland and caused land degradation, deforestation, overgrazing. The country's subsistence agriculture, together with rapid population growth and environmental degradation, resulted in wide-ranging poverty and food insecurity (Tefera & Tefera, 2014).

2.4.3 Physical Capital

"Physical capital comprises the basic infrastructure and producer goods needed to support livelihoods, such as affordable transport, secure shelter and buildings, adequate water supply and sanitation, clean, affordable energy and access to information" (Kamaghe et al., 2014). Basic infrastructures such as roads, power and communications remain to be priority for sustainable development and poverty reduction (Ullah, 2014).

The impact of physical capital impact on the sustainability of a livelihood system is appropriately illustrated in the concept of opportunity costs or 'trade-offs', since a poor infrastructure impede education, access to health services and income generation (Kollmair & Gamper, 2002). For

instance, households who do not have irrigation facilities spent most of their time in non-productive activities, such as the collection of water that could have been used in productive activities.

2.4.4 Social Capital

There are many debates on the definition and aspects encompassed by social capitals. The sustainable livelihood framework approach describes social capital as social resources that people demand in search of their livelihood outcomes like networks and connectedness which increase their trust and aptitude to collaborate or be involved in formal groups and systems of norms, rules and sanctions (Ros-Tonen et al., 2014). Most of the time, birth, age, gender or caste can determine the access and amount of social capitals what may vary within a household.

The relationships in social capital are developed through dealing with interaction that increase people's ability to work together; for example, membership in formal groups where relationships are governed by accepted rules and norms, relationships of trust that facilitate cooperation, reduce transaction costs and may provide the basis for informal safety nets amongst the poor (UNIDO, 2014).

Social capital is a vital community asset which can contribute to increase the management of other forms of capital (Sanginga, 2005). For example, through increasing involvement of women in policy formulation and decision-making, improving discussion between researchers, policy

makers and local communities, constructing logical skills, and giving information, local stakeholders can better understand issues of natural resource management and can actively improve local policies.

Social capital is important, through direct impact on other capitals, as it improves the effectiveness of economic affairs or reduces difficulties related to public goods using the common trust and responsibilities put on the community (Ntale, 2013). Most importantly, it often denotes refuge for the poor in alleviating the effects of shocks on other assets through their informal links.

A cross sectional study in Uganda indicated that there was a significant difference between level of social capital and participation in collective farming. The community level of trust, reciprocity, and women's confidence was rated highly by households with high social capital. Nevertheless, social capital showed no significant effect on household income. Thus, they concluded that there was a positive relationship between level and dimension of social capital and access to livelihood assets, implying that strengthening social capital is a powerful way to improve communities and requires consistent and effective approaches to build and reinforce the social and human capital (Abenakyo et al. 2007).

2.4.5 Financial Capital

The financial resources which are used to attain positive livelihood outcomes include the availability of cash or its equivalent that allows people to implement various livelihood strategies. According to DFID (1999) there are two major bases of financial capitals, namely:

- available stocks including cash, bank deposits or liquid assets for instance jewelry and livestock, that aren't attached to liabilities and independent of third parties and
- regular inflows of money encompassing income from labor, pensions, or other transfers from the government, and remittances that are mostly dependent on others and need to be reliable.

Financial capital is multiuse and handy compared to the other four capitals, because it can be easily changed to other capital or can be used directly. Nevertheless, this capital, which creates opportunity to be a substitute for other capitals, is the least available asset for the deprived (Alhassan, 2010).

A study conducted by Gecho et al (2014) on rural household livelihood Strategies in *Wolaita* Zone, Southern Ethiopia, showed the contribution of each livelihood activities in income of three wealth categories: better-off, medium and poor households. The income for better-off households was mainly from crop (50.1%), livestock (43.6%), remittance (4.2%) and petty trade (2.1%); whereas the income of the poor households is derived from livestock (30.2%), crop (21.7%), wage income from local, urban and other regions (17.9%), petty trade (13.8%), handcrafts (10.3%), weaving (2.4%). This implied that poor households generate almost half of their cash income from non-farm and off-farm activities.

2.5 Transforming Policies and Structures of Ethiopia

Transforming structures and processes are significant aspects to be addressed in the analysis of livelihoods in any particular context, such as policy setting, politics, history, agro ecology, socio-

economic conditions and the capability to carry out different livelihood strategies (Scoones, 1998). They also have an impact on access to various types of resources (Fisseha, 2014).

Soulineyadeth (2014) defined the structures within the livelihoods framework as organizations that initiate and impose legislation, offer the required provisions for obtaining and capitalizing upon assets, manage natural resources, and deliver other services vital for achievement of access to assets, to trade them, and benefit from their use. On the other hand, the processes are policies, legislation, power relations, norms, market stability, and general rule of law that determine the interaction between the structures and individuals (Kollmair & Gamper, 2002; Soulineyadeth, 2014).

Most of these transforming structures and processes are similar for the whole country and some of them are narrated for the study area. The portfolio of activities in building a livelihood is determined by the institutions, the type or amount of capital they own and their position in the social structure (Fisseha, 2014).

2.5.1 Structure of the Country

Ethiopia was ruled under centralized monarchy up to 1974, thereafter, a Socialist government took power and ruled the country up to 1991. Currently, the country is in a federal type of government - decentralized by an ethnic based political map, extensive devolution of power to regions, and a new formula for unity based on equality of nations, and nationalities, and voluntary union (Bake-Migongo et al., 2012). The framework consists of regions, zones, districts and peasant associations (PAs) following similar tripartite structure, an elected head of the administration, a council with

an executive committee and a sector bureau. Currently, there are nine regions with two city administrations.

In Ethiopia, coordination structures and mechanisms have been promoted by institution coordination from the national level down to the decentralized level, with particular efforts to encourage cooperation and exchange of experience among regions (African Development Bank, 2014). The federal government and region states are responsible to discharge duties and responsibilities delegated to them according to the constitution and implement economic and social development policies and maintain public order.

Each *woreda* is represented to the regional council by an elected person. In Amhara and SNNP regions, zones are active administrative institutions and manage the functions of *woredas*. *Kebeles* are administrative units below *woredas* having an average population of 5000. *Kebeles* have administrative structures and their officials represent ordinary citizens. *Kebeles* are not budgetary units (Yilam & Venugopal, 2008).

2.5.2 Policy, Legislation and Institutions

Although natural disaster and market failures are known to be the root causes of famine, failures in policy design and weaknesses in institutional, and organizational set ups also have important contributions in the country (Magesa et al., 2014). There are many linkages between food security and the various national development policies, strategies and programs that call for food security concerns to be incorporated into the formulation and implementation of these policies, strategies and programs (GTZ, 2006).

The growth and transformation plan of Ethiopia prepared for 2011 to 2015 lay out multi sectorial, sustained, and people-centred economic development with the aim of achieving the MDGs by 2015 (The Federal Democratic Republic of Ethiopia, 2010). The Plan for Accelerated and Sustained Development to End Poverty (PASDEP) was implemented from 2005-2006 to 2009-2010 which was highly successful and achieved an average of (11%) GDP growth (Ministry of Agriculture and Rural Development, 2010).

The Government also formulated policies with the aim of ensuring food security and alongside addressing the causes of the problem in the long run. The long-term strategy is to reverse the calamitous state of small farmers and ultimately lessen its food deficiency, and concomitantly, promote the manufacturing sector to provide essential consumer goods (Van der Veen & Tagel, 2011).

The Country adopted agricultural development-led industrialization strategy (ADLI) that takes agriculture as its point of departure and growth engine. In the ADLI policy, food security is the main component that foresees raising farm productivity and income. It aims to improve and reinforce micro- and small-scale enterprise development, the food marketing system, supplementary employment, income generating schemes, and credit services to address problems from the demand side (Van der Veen & Tagel, 2011).

In addition, Ethiopia has adopted the International Covenant on Economic, Social and Cultural Rights within its national constitution to fulfil these essential human rights. Article 90 of the Constitution of Ethiopia states that “Policies shall, to the extent the country’s resources permit,

aim to provide all Ethiopians access to health and education, clean water, housing, food and social security" (Constitution of the Federal Republic of Ethiopia, 1994).

Article 92, of the Constitution of Ethiopia states that the "Government shall endeavour to ensure that all Ethiopians live in a clean and healthy environment. People have the right to be consulted, and to express their views in the planning and implementations of environmental policies and projects that affect them directly" (Constitution of the Federal Republic of Ethiopia, 1994).

The Constitution further states that the people and the government retain the land in their control, thus ruling out its purchasing and retailing which outlaws land sale and mortgages but ensures land rental. All farmers who want to create a living from agriculture are eligible to have a piece of land without payment. However, the transfer of land between users is mostly informal and non-transparent since the land lease market lacks clear rules and regulations that ensure transparency and security of land transactions, and farmers lack confidence in the ability of government agencies to enforce contracts (Abdo, 2014).

2.5.3 Markets

Marketing information and access to agricultural markets are crucial factors in stimulating competitive markets and improving livelihood interventions that require market analysis (Magesa et al., 2014). Local markets are important centres of economic transactions for the rural people.

Ethiopia has been one of the highest in Sub-Saharan Africa that recently faced extraordinary food price inflation mainly on cereals (Maier, 2014). The rise of food price affected particularly the

poor households since they spend most of their income on food items that resulted in poor nutritional status (Hadji and Gelaw 2012).

According to Frankenberger et al., (2007) the combination of items for sale in rural markets is poor that cause high price difference from the entry to the end of the markets. The nature of agricultural output markets in the central part of the country for irrigation based vegetable producers was found uncompetitive and segmented resulting in high fluctuation in prices with weak, non-binding trade agreements between producers and brokers that discouraged particularly female farmers (Gebreselassie, 2013).

Similarly, a study by Von Braun and Olofinbiyi (2007) indicated that the farmers had low access to market information on current prices; even from nearby markets; so that they used to rely on brokers and transporters. In 2008 ECX was established to improve the market information mainly in the trades of three groups of agricultural commodities: coffee, grains and pulses. Coffee was normally traded by auction (Kumo, 2012).

2.6 Livelihood Strategies

In the livelihood approach, resources are referred to as ‘assets’ or ‘capitals’. Sustainable livelihood strategies are defined as “sufficient stocks and flows of food and cash to satisfy basic needs” (DFID, 1999). Livelihood strategies encompass combinations of different activities and choices that people carry out to attain their livelihood goals. It is a dynamic process where households combine activities to meet their needs; and it directly depends on asset status, transforming

structures and processes. A changing asset status may further or hinder other strategies depending on the policies and institutions at work (Ahmad and Sultanta, 2014).

For the analysis of assets of rural livelihoods, the purpose of various kinds of assets within the asset portfolios held by poor households for different livelihood strategies needs to be studied (Kent, and Dorward, 2012). This categorization should relate poor households' access to different types of asset, to the utilities of those assets within changing and dynamic livelihood strategies, sorting out the most effective livelihood development ways and the altering roles of different assets within those routes.

Based on the definition of livelihood strategies, many scholars have classified it based on their findings. According to Alemu (2012) livelihood strategies are classified into four categories: only farm, farm and non-farm, only non-farm, and non-labour. Whereas, another study found three types of livelihood strategies as: forest/livestock strategy, crop farming/livestock strategy, and non-farm strategy (Fang et. al., 2014). Bairwa et. al., (2014) also showed that the main livelihood strategies of rural households were agriculture, self-employment in non-farm activities, rural labour employments, or migrating to town and other countries.

Particularly in agricultural livelihood strategies, income and production are affected by seasonal changes, trends and shocks (such as drought, war, famine) which cause uncertainty and irregularity for most livelihood activities (Dorward et al., 2001). The irregularity is stronger for rain-fed crop production, and for related off-farm activities, whereas seasonality affects income from many other

types of activity too. Income can be affected by a wide range of natural, market, social or political variables.

Figure 2.2 gives more attention to the active connection of the different livelihood activities, processes and assets with different uses in search of welfare. In this illustration, liquid assets exchange is at the centre while the assets with different uses are at the corners (Dorward et al., 2001).

Asset Functions in livelihood strategies

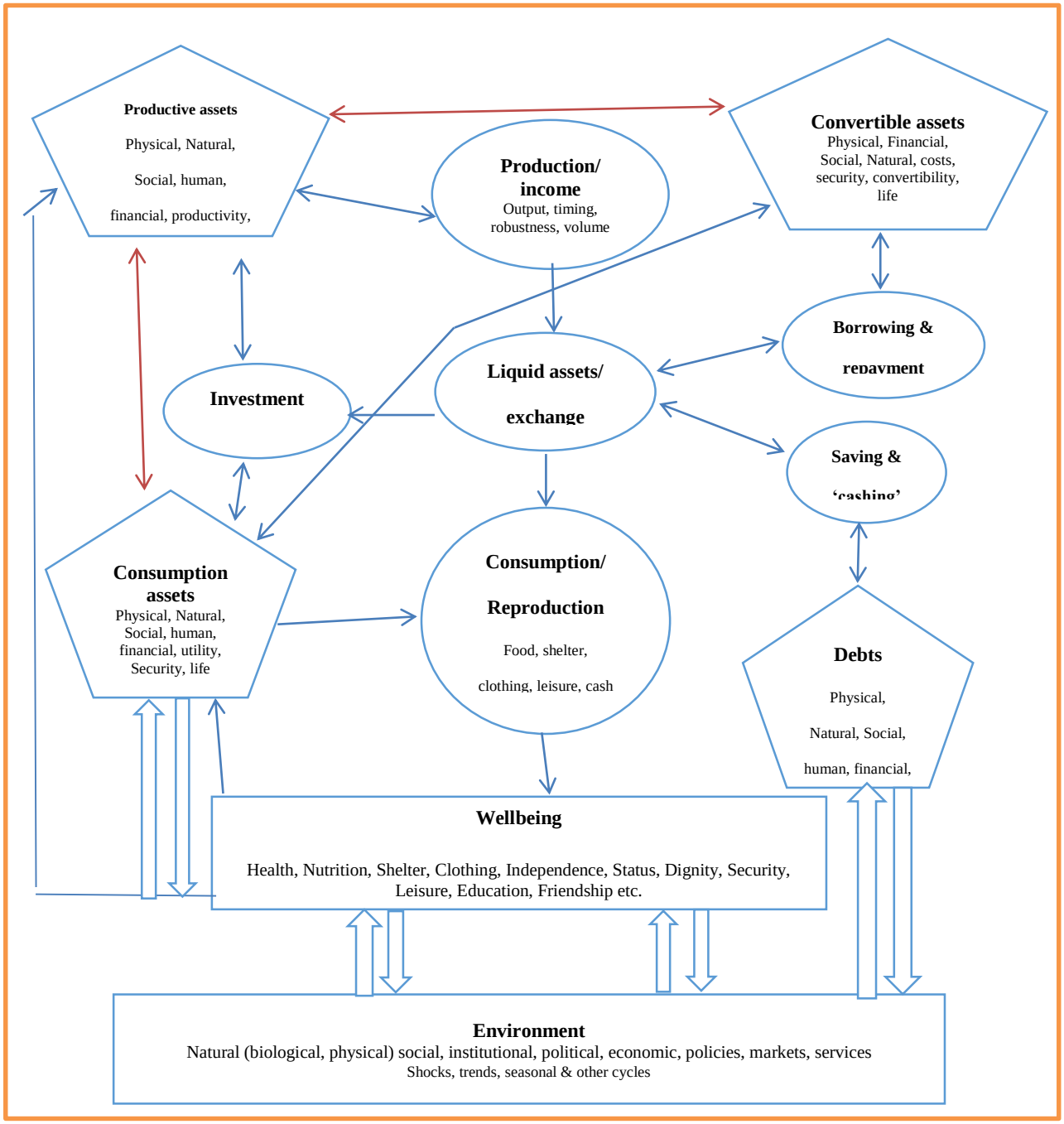


Figure 2.2. The Asset Function Framework (Dorward et al., 2001)

Key Flows & transformations

Overlaps

Blurred distinctions

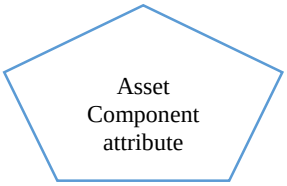


Figure 2.2 illustrates that the central vertical axis of production/ income activities and processes employing productive assets generate resources for consumption and social reproduction. This can be seen as representing simple income approaches to defining poverty and well-being.

For most livelihood activities, production or income is not regular it is to some extent uncertain, affected by seasonal changes, trends and shocks, particularly for rain-fed agricultural activity. The income variability may result from natural, market, social or political variables.

Therefore, resource demands of continuous nature, time specific and time neutral in consumption, may not match as a result of the resource flow from income. Continuous includes such as daily food, consumption that are time specific are such as house building or repairs that may take place in a specific seasons, or some goods that are available from traders only at particular times of the year and time neutral investment in consumption assets are resources that are more or less available any time. Thus, conceptual framework is developed by bringing together the relationships between the different livelihood functions of assets.

Households implement livelihood strategies, in trying to match expected resource availability with expected demand, by putting savings which can be converted to liquid or consumption assets, for example, by holding livestock or investing in social relations, by borrowing to gain current resources at the expense of later debt repayments, and by adjusting their consumption patterns (both levels of daily consumption and the timing of investments in consumption assets). They also try to select and diversify their productive activities and time their investments in productive assets to even out and buffer resource availabilities.

2.6.1 Migration

Either seasonal or permanent, migration is taken as a common livelihood strategy. People migrate to other places as a livelihood strategy (Sobang, 2014) or coping strategy when they lose what they have, for example, through environmental hazard such as drought, or flood (Ahmad & Sultana, 2014). Population density and growth, lack of natural resources, political or military conflicts, existing tenure and governance systems, and ongoing changes in institutions, laws and policies are the main reasons for increased migration from rural communities (Lee & Neves, 2010). Migration is one of the factors (such as globalization, market integration, democratization, and decentralization) that continue to change the relationship between rural people, their resource base, and their capacity to effect change.

According to Gecho et al (2014) seasonal migration was off-farm activity, as a means of increasing income and reducing food shortages of the households for long history in *Wolaita* zone of Southern Ethiopia. Ntale (2013) indicated that many youths in urban and rural Uganda migrate to be hired in the day time as *boda-boda* men (motorcycle /bicycles taxis) while at night time some of them resort to illegal activities.

2.7 Livelihood Outcomes

Livelihood outcomes such as:

- more income (cash),

- increased welfare, which includes non-material goods, like self-esteem, health status, access to services, sense of inclusion,
- reduced vulnerability such as better resilience through an increase in asset status,
- improved food security which might be due to increase in financial capital in order to buy food and
- more sustainable use of natural resources, like appropriate property rights are the final achievements reached from the livelihood strategies implemented by the household (DFID, 1999; Ahmad & Sultana, 2014).

Close relationships are established between livelihood outcomes and assets through livelihood strategies. Nevertheless, the livelihood outcomes are not always positive or sustainable because there are changes in the social and the political aspects that affect the livelihood outcome and strategies prioritized by the households (Fisseha, 2014). A successful livelihood outcome supports to strengthen endowments, whereas failure could lead to exhaustion or loss of endowments (Kalinda & Langyintuo, 2014).

Each combination of available assets helps achieve the diverse levels of livelihood outcomes such as farm and nonfarm production and income (Hinojosa, 2005). The household's position within the economy and community is found from those collective outcomes. Various livelihood strategies lead to various livelihood outcomes (Fang et al., 2014).

2.7.1 A Livelihood Approach for Household Food Security

Food security is one of the outcomes of sustainable livelihoods. "Household food security refers to physical and economic access to food which is nutritious, while improving the health of household members at all times" (FAO, 2003; Fisseha, 2014). It further stated that food security is only one aspect of the wider theory of livelihood security. In developing countries, with the current situation of global food price volatility and climate change issues, the agenda for post-2000 food security has shifted the attention progressively towards strategies that are more systematic and have coherent food security framework which integrates fragmented interventions and policies (CFS, 2012). Sustainable livelihood approach includes the fundamental approaches and evolution of concern, in food security, poverty alleviation and reduction and understanding and facilitating development.

Out of the multifaceted livelihood strategies of the poor people, food security is an important one, but not necessarily a predominant objective in consideration of a broader focus on household livelihood security (Maxwell & Smith, 1992). This may lead them to choose reducing food consumption in order to avoid long term losses in other dimensions of their welfare (Maier, 2014). On the other hand, Maxwell and Frankenberg (1992) explained that for the poor households, food is one of the factors that determine the reason to take decisions, spread risk and how they prioritize needs in order to survive. At times of food insecurity, determination to preserve assets also can affect their behaviour.

Table 2.1 shows that the food first approach addresses the immediate need through food aid as a priority for the problems by identifying food insecure households that have lack of food. Instead, in the sustainable livelihood approach, food is one part of the broad entitlement to address the problem of vulnerable households who are exposed to livelihood risk and it focuses on securing their livelihood from further deterioration. In addition, the sustainable livelihood approach preserve the environment so that the households can develop sustainably after the bad experience is over.

Table 2.1. Two approaches to household food security (adopted from Frankenberger, 1992)

Livelihood	**Food First Approach**	**Sustainable livelihood Approach**
Objective	Access to food	Secure and sustainable livelihood
Point of departure	Failure to subsist	Success in feeding and living
Priorities	Food at the top of needs	Food part of the jigsaw fit
Time preference	Food needs met first	Food given to meet livelihood needs
Entitlement	Narrow entitlement	Broad entitlement base
Vulnerability	Lack or want of food	Defenseless, exposure to risk
Security	Adequate food	Opposite of vulnerability is security
Vulnerable groups	Based on medical needs	Based on economic needs
Copying strategies	To meet immediate needs	To preserve livelihoods
Measuring	Present consumption	Livelihood intensity
Link to Food Security	Degrade Environment	Preserve Environment

Table 2.1 shows the difference between a Narrow "Food First" Approach and a Wider "Sustainable Livelihood" to Household Food Security as explained by Frankenberg (1992).

2.7.2 Food Insecurity in Ethiopia

Ethiopia is the second most populous country in Africa with an estimated population of 94.3 million people in 2013 (CSA, 2013). Given an annual population growth of (2.7%), the population is expected to double to 187.5 million until the year 2050 (Maier, 2014). According to 2014 Africa Food Security and Hunger/ Undernourishment Multiple Indicator Scorecard, Ethiopia ranks the first having the highest number of people in state of undernourishment/ hunger which is 32.1 million people. When we see the proportion, it is the fourth African country scoring (37.1 %) of the population being undernourished/ in hunger (Afri-Dev et al., 2014). Poverty is the main underlying cause of food insecurity in Ethiopia. Comprehensive Food Security and Vulnerability Analysis (CFSVA) conducted in Ethiopia indicates that food insecure households were also below the poverty line (CSA and WFP, 2014).

Other factors contributing to vulnerability of the country includes rapid population growth with low per capita income, rain-fed agriculture, under-development of water resources, land degradation, low economic development, and weak institutions (Disaster Risk Management and Food Security Sector, 2011). High population density resulted in depletion of natural resources, decline per capita landholding that are insufficient to meet subsistence needs - even at good rainfalls years (Devereux, 2000; Gebreselassie, 2006; Maier, 2014). Drought, human and livestock diseases as well as resource-based conflicts are aggravating factors for the food insecurity situation in Ethiopia (FAO, 2012; Fisseha, 2014).

The country has a tropical monsoon climate categorized by wide topographic-induced variations (Von Braun & Olofinbiyi, 2007). It has highly erratic rainfall, usually at a high risk of annual droughts as well as intrapersonal dry spells (FAO, 2005; World Bank, 2007; CIA, 2007). Most small farmers rely on traditional technologies and produce primarily for consumption (World Bank, 2007). In addition, such intense and less frequent rainfall affects the community's livelihood because it restricts their ability to plan for crop production and similarly bring loss to crops and homes through flooding (CARE, 2010). A study by African Development Bank (2014) showed that below normal rains and limited access to humanitarian assistance are among factors that affected some parts of the country in severe and emergency level food security problem until March, 2014.

After the 2010 and 2011 successive seasons of unfavourable rainfall and harvests, the February-to-May *belg* rainy season in 2012 and 2013 was localized below-average rainfall that slowed down recovery of the people that were affected by food insecurity and malnutrition in 2011 (USAID, 2014).

2.7.3 Productive Safety Net Program

The recent drought in the Horn of Africa which affected Somalia, Kenya, Ethiopia and Djibouti in 2011 resulted in 13 million people in need of humanitarian support in Ethiopia (Maier, 2014). The majority of households that were given emergency food aid or participated in public work projects were not "famine prone" but were "chronically food insecure". This was due to poverty and agricultural production constraints resulting in annual food deficit (Devereux et al., 2006). They

were also exposed to frequent shocks, caused by drought that increased their vulnerability by forcing them to dispose some of their assets to survive. By identifying this problem, the Government of Ethiopia initiated a Productive Safety Net Programme (PSNP) in 2004 with the aim of reducing household vulnerability, improving household and community resilience to shocks and breaking the cycle of dependence on food aid (Ministry of Agriculture, 2014).

The program links cash and food transfer in the setting of safety net grants arrangement with resilience financing against drought and other shocks, capacity development and institutional support targeted at food insecure households (FAO, 2013). It is a multiyear program that provides predictable and reliable transfers to the beneficiaries (Hoddinott, 2014).

PSNP has two components: public works and direct support

- Public works is a provision of counter-cyclical employment on rural infrastructure projects such as road construction and maintenance, small-scale irrigation and reforestation.
- Direct support is a provision of direct unconditional transfers of cash or food to vulnerable households with no able-bodied members who can participate in public works projects.

Initially, in 2005, the program targeted chronically food insecure households, with approximately 5 million people living in 262 "chronically food insecure districts". In 2006 it increased to 8 million. The PSNP was planned to be implemented for five years with complementary interventions at the end of this period. After that beneficiaries would be expected to "graduate" out of dependence on external support, except during food crises. Graduation means the household

is no longer chronically food insecure and also has the economic resilience to resist falling back into chronic food insecurity in the future.

The second cycle PSNP was launched in 2010 with a shift from other food security programs (OFSP) to Household Asset Building Programme (HABP) which is a demand driven extension and support component and improvements in access to financial services and an additional new component – Complementary Community Investments (Berhane et al., 2013). It was a 3 year cycle aimed to graduate the households and close the program in 2014. However, after 3 years of implementation, the plan was ambitious and unrealistic to achieve so that the revision is started (Devereux et al., 2014).

Graduation is based on the findings of annual socio-economic assessments made by the development agents for those who achieved benchmarks set to be achieved for graduation (Berhane et al., 2013). The study conducted by Devereux et al (2014) found that in 2009 only one out of four study *woredas* had a graduation plan, but by 2011 three out of four and in 2013 all four *woredas* submitted graduation plans. From the three *woredas* that had plans in 2012, their graduation target was met as (75%), (92%) and (98%).

Ethiopia PSNP transfer with complementary agricultural support measures, such as use of improved agricultural technologies, operate their own non-farm business activities, has improved household food security and protected their assets that contributed to resilience capacity (FAO, 2013). It also supported the local government capacity to estimate needs for assistance and to plan and provide that assistance, thus building resilience at the national level (Hoddinott, 2014).

2.8 Vulnerability, Shocks and Seasonality

The vulnerability context that comprises trends and shocks outside of the households affect the sustainability of the households' livelihood (Allison, 2014). Disaster comes from different combined hazards in vulnerable conditions and when there is low ability to decrease the negative results of risk. Shocks are sudden and irregular events that vary in intensity and include events such as natural disasters, civil conflict, losing one's job, a collapse in crop prices for farmers.

Seasonality is also an important aspect to take into account when analysing vulnerability, particularly related to drought and flood as it relates to natural cycle. In the tropics, seasonality is a driver of poverty and hunger that severely constrains sustainable rural livelihoods (Devereux et al., 2012).

The study conducted on Comprehensive Food Security and Vulnerability Analysis Ethiopia 2013 showed that in rural areas, livelihoods such as crop production, livestock, combination of both and labour are practiced by (90%) of households. The study indicated that the four livelihoods are found to be particularly vulnerable to food insecurity. "Households that rely on rain-fed agriculture as the main source of livelihood, unfavourable climate conditions such as drought can be experienced as a major shock and may well lead to food insecurity" (WFP and CSA, 2013).

2.8.1. Vulnerability in Africa, Ethiopia

In general, agriculture is the backbone of the economy and the principal business of the population in most developing countries although the agricultural infrastructure is generally undeveloped

(Hyman, 2013). Rain fed agriculture is practised by the farmers in Africa which is subjected to the whims of erratic weather conditions. The Horn of Africa faces many natural hazards, mainly severe drought and floods. Landslides, dust storms, earthquakes, tsunamis and hurricanes are common, where the environment is complex. The region is affected by poverty, conflict, widespread violence, and governance problems (Nansen Initiative, 2014). According to Hugo (2012), the drought crisis in the Horn of Africa, from 2011-2012 affected an estimated 13 million people. It also stimulated millions of people to migrate within country in search of food, water, shelter whereas in Somali hundreds of thousands of people crossed international borders (UNHCR, 2011).

The majority of the population of Ethiopia lives in rural areas and depends on rain fed small scale agriculture for living (Von Braun and Olofinbiyi, 2007) which is very vulnerable to climate changes. The main reason for vulnerability in Ethiopia is drought that causes losses of crop and livestock with extremely negative impact on the lives and livelihoods of the pastoralists and farmers (USAID, 2014). It also indicated that other challenges such as flood, inter-communal conflict, and increase in food price, disease outbreaks and poor access to health facilities and water led the people to continuous humanitarian need in the country.

A study on measuring vulnerability in Ethiopia revealed that the relatively least-developed, semiarid, and arid regions Afar and Somali followed by the lowlands of *Oromiya* and *Tigray* regions are more vulnerable to climate change (Deressa et al., 2009).

Vulnerability has economic, social, demographic, political and psychological dimensions. People that live under various environmental conditions and facing different social, economic, political,

and institutional challenges are not equally vulnerable. For example, a study conducted by Oxfam (2010) in Ethiopia, indicated that in the *Wonsho woreda*, land size was the key constraint which makes the farmers with smaller land size more vulnerable, while in the *Yabello woreda*, pastoralists tend to be more vulnerable to climate change.

The Oxfam report (2010) further disclosed that the main factors that reduce peoples' ability to cope with shock and increase their vulnerability are poverty, limited resources, little alternative sources of income and livelihoods, lack of knowledge and expertise, and the absence of appropriate public policies and financing.

The households in the *Sidama,* coffee livelihood zone, depend on purchased staple food as most of the staple foods are imported to the zone, particularly at the hunger season. Thus, the increase in food price, particularly in bad crop production years, increases the vulnerability of the households (USAID, 2005). According to the High-Level Task Force on the Global Food Security Crisis (2008), the intense hike in the world food price is the result of the cumulative effects of long term trends and contemporary factors that encompasses the changes in supply and demand and the responses that brought additional price increments and volatility, rather than as a result of other shocks such as climate changes.

2.9 Coping Strategies

2.9.1 Coping Strategies Related to Household Food Security

Coping strategies are livelihood strategies used when there is shock and stress on livelihoods (De Haan, 2006). Webb and Braun (1994) in their study of the effects of the Ethiopian famine of the 1990's, explored the coping strategies of the most vulnerable households in the absence of external help. They observed the dangers of "idealizing private coping capacity". They stressed the significance of studying the way households implement their livelihood after shock to cope with food insecurity.

Appropriate public interventions can be designed for the resilience of the food insecure and to prevent those who are food secure not to fall into an insecure situation (Qureshi, 2007). On the other hand, comparative studies indicated that shocks such as crop failure are more difficult to deal with compared to distinctive shocks like illnesses (Debebe et al., 2013).

Maxwell et al (2003) divide coping strategies into two basic categories which can be practised to improve food security and sustainable livelihoods. The first is the immediate and short-term alteration of consumption patterns. The other includes the long-term alteration of income earning or food production patterns, and one of the responses could be selling of assets. When there is an emergency situation, knowledge of both the long and short term livelihood strategies are important, as short term consumption strategies are precise criteria to measure acute food insecurity only (Maxwell et al., 1999; Maxwell, 1996).

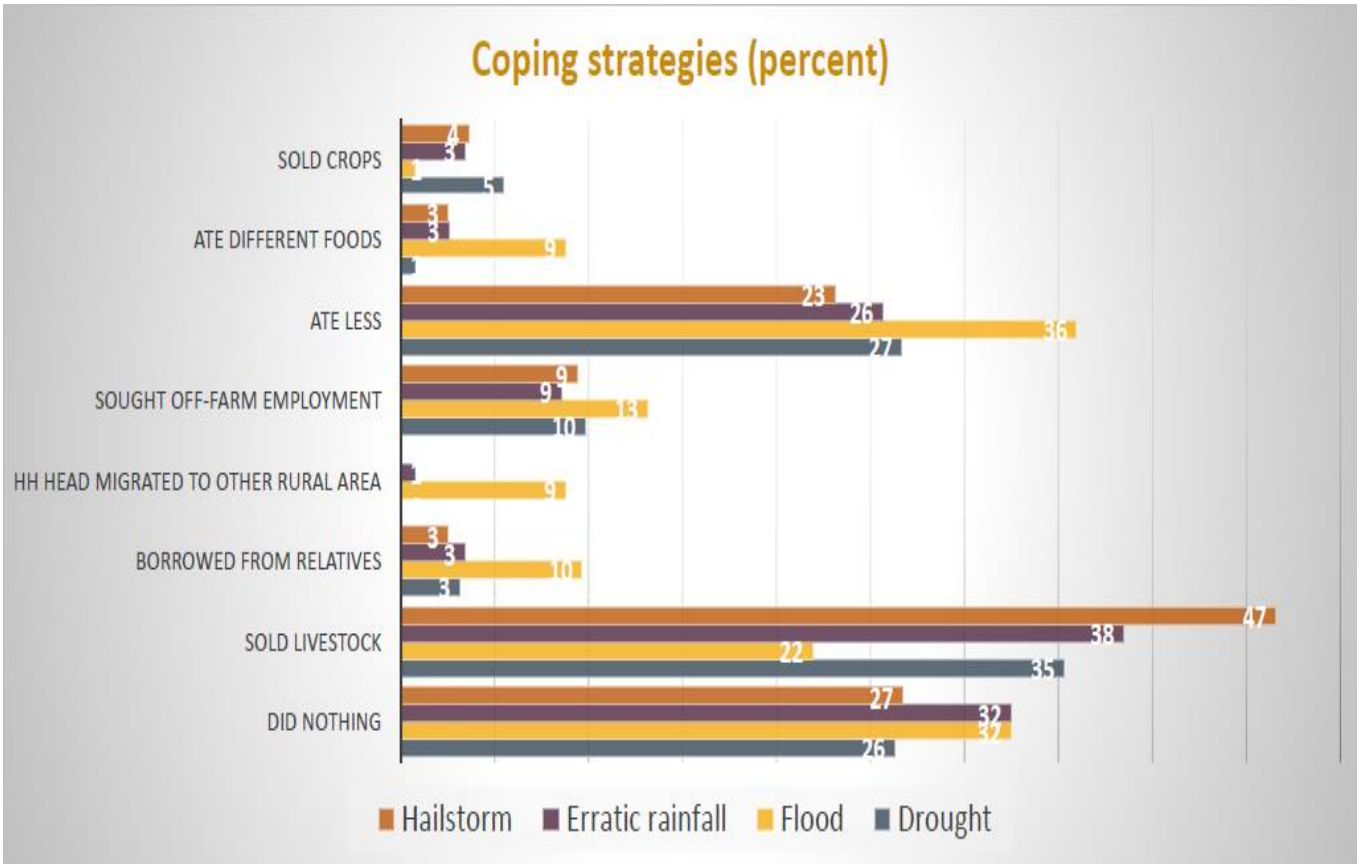
Maxwell et al. (2003) determined that typically food insecure households employ four types of consumption coping strategies:

- switch food consumption from preferred foods to cheaper, less preferred substitutes,
- increase food supplies using short term strategies that are not sustainable over a long period, typical examples include borrowing, or purchasing on credit and more extreme examples are begging or consuming wild foods, immature crops, or even seed stocks,
- reduce the number of people that they have to feed by sending some of them elsewhere (sending the kids to the neighbour's house when those neighbours are eating) and
- rationing the available food to the household members (cutting portion size or the number of meals, favouring certain household members over other members, or skipping whole days without eating).

The household's coping mechanisms make a sequence of strategies starting from "risk minimization" to "risk absorption" and finally to "risk taking" (Webb & Braun 1994; Bedeke, 2012). Accordingly, risk minimization was defined as activities including asset accumulation, saving and income diversification. Then from risk minimization, households change to risk absorption by using cash savings and food reserves and limiting consumption of food and non-food items. The final stage is risk taking, in which the households start practising desperate livelihood measures, such as migration of household members, eating wild foods, small amounts and/ or nutritionally low foods and sale of private possessions. The last stage had usually irreversible effects on the household livelihood, which might even concern their safety unless external assistance arrives. As a measure of last resort at the risk taking stage, the households were

reluctant to sell assets, including agricultural assets in an agrarian community which has negative effect during post-crisis recovery.

According to the findings of Bryan (2013), from the survey period of 5 years, drought and hailstorm were the most common shocks experienced that mainly affected crop production, income and consumption. The result showed that many of the households sold their livestock then followed by households who consumed less amount of food. On the other hand, some households reported that they did nothing to cope with the problem. Other coping strategies implemented by the affected households were looking for off farm employment, migration, and borrowing from relatives and selling crops. The detail result is shown below in Figure 2.3.



Source: IFPRI-AEMFI 2013, (Bryan, 2013)

Figure 2.3 Coping strategies implemented by the surveyed households for different climate shocks

The study of coping with shocks in rural Ethiopia by Debebe et al (2013), also showed that coping strategies due to natural and economic shocks were noticeable to reduction in food consumption while for idiosyncratic health shocks, the choices were reductions in savings, asset sales and borrowing.

2.9.2 Coping Strategy Index Tool (CSI)

The Coping Strategy Index (CSI) is an international tool intended for use as an indicator of household food security. It is a relatively simple and quick method, easy to understand, and correlates well with more complex measures of food security (Maxwell et al., 2003). It asks a series of questions about the way households manage to cope with a lack of food and the results are expressed in a simple numeric score. The simplified form can be used to observe the changes through time in the CSI score, to indicate whether household food security status is declining or improving.

The coping strategies fall into the following four major categories (Maxwell et al., 2003).

- Dietary change- Households change their favourite diet and start to consume less preferred or less expensive food.
- Using short-term strategies – Households increase their food supplies, by borrowing, purchasing on credit, begging or consuming wild foods and immature crops or even seed stock.

- Reducing the number of people in the household – Households reduce the number of the household members that they have to feed by sending some of them to eat elsewhere, for example, by sending children to eat with their neighbours.
- Reducing the portion sizes of meals – Some household members stay the whole day without food favouring certain household members (Maxwell et al., 2003).

2.10 Summary of the Literature Review

The sustainable livelihood approach is a comprehensive analysis of the household access to human, financial, natural, social and physical capitals (assets); and how they use their capitals for their livelihood strategies through transforming structures and policies to achieve livelihood outcomes. The approach analyses the changes and trends over time and external shocks affecting the livelihoods of the households. The study on the livelihoods of households in a community is an essential requirement for programming any food security and development intervention.

Similarly, the coping strategy tool is important to show the households' food security status. It indicates if there is a need for external support and the type of assistance needed by the households before they start negative coping strategies that destroy their sustainable livelihoods.

*Indicate knowledge gaps (study questions) revealed by the literature review

2.11 Conceptual Framework

The livelihood framework for this study was adopted from the DFID livelihood framework (DFID, 2000). The households' livelihood framework comprises the household capitals (assets) (human, natural, physical, financial and social) and their use in different livelihood strategies (farming, livestock production, trading, labour) in which respondents and their households depend for living.

The livelihood strategies of the households depend mainly on the household's capital and are affected by structures and processes in the area and by different environmental factors. When households are affected by these factors negatively, they start to implement short term coping strategies. The result of their livelihood activities are shown in the quality of life and wellbeing such as in food security, nutrition, health care, education, shelter and also ability to cope with shocks. Households with good livelihood outcomes have better capability to sustain their livelihood during bad times.

Figure 2.4 shows the conceptual framework in which the arrows indicate the relationship between influential variables. The livelihood strategies and outcomes are dependent variables which are affected by independent variables such as environmental factors, structures and processes and household assets. On the other hand, the livelihood outcomes also affect households' capitals which might result in building or deteriorating their existing assets.

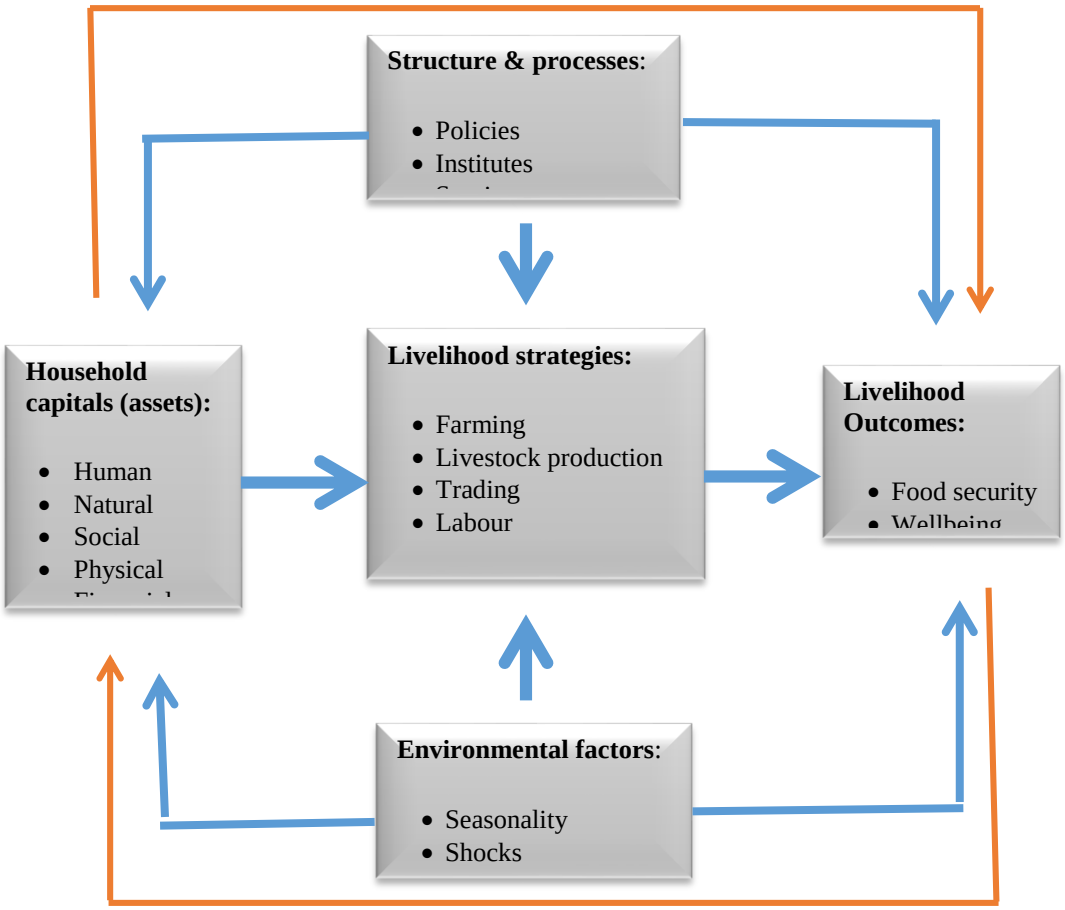


Figure 2.4. Conceptual framework of household livelihood showing the relationship between influential variables

CHAPTER 3: Objectives of the Study

3.1. General objective

The general objectives of this study is to examine the livelihood and coping strategies of rural households in *Abela Lida* peasant association, *Shebedino* district, Southern Ethiopia

3.2 Specific Objectives of the Study

The specific objectives are:

- to evaluate the livelihood strategies practised by farming households in the study area,
- to examine factors affecting choice of livelihood strategies in time of crisis to achieve food security in the study area and
- to investigate the coping strategies implemented by the households to overcome any household shock/ risk,

CHAPTER 4: RESEARCH METHODOLOGY

4.1 Description of the Study Area

The Southern Nations Nationalities and Peoples Region (SNNPR) is one of the nine regional states. The Region is located in Southern Ethiopia. It covers 113,539 square kilometers, and accounts for about (10 %) of the total area of the Country (Figure 4.1). The Region constitutes twelve sub-region administrative units called 'zones' and six special *woredas* classified on the basis of ethnicity (CSA, 2007). Figure 4.2 shows the administrative boundaries of *Sidama* zone in which *Shebedino* is one *woreda*. The *Sidama* zone covers around 69,819 meter square area of land which is divided into 19 *woredas* (CSA, 2007). *Awassa* is the capital city of *Sidama* zone. The zone lies between 6.14-7.18 latitude and 37.92 to 39.19 longitudes, with an elevation and the annual mean temperature of the zone ranges between 10.1 to 27^{o}C.

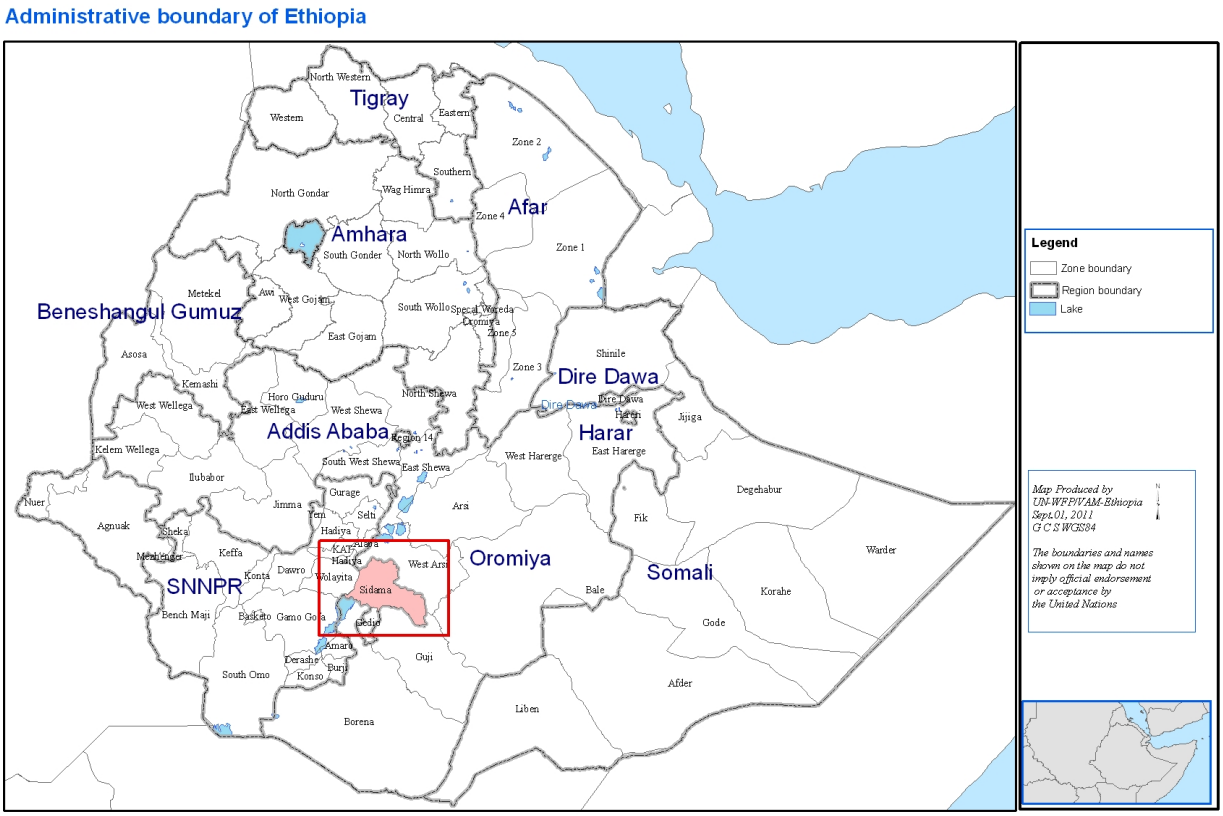


Figure 4.1 Region and zone map of Ethiopia (Map produced by UN-WFP/VAM Ethiopia, 2011)

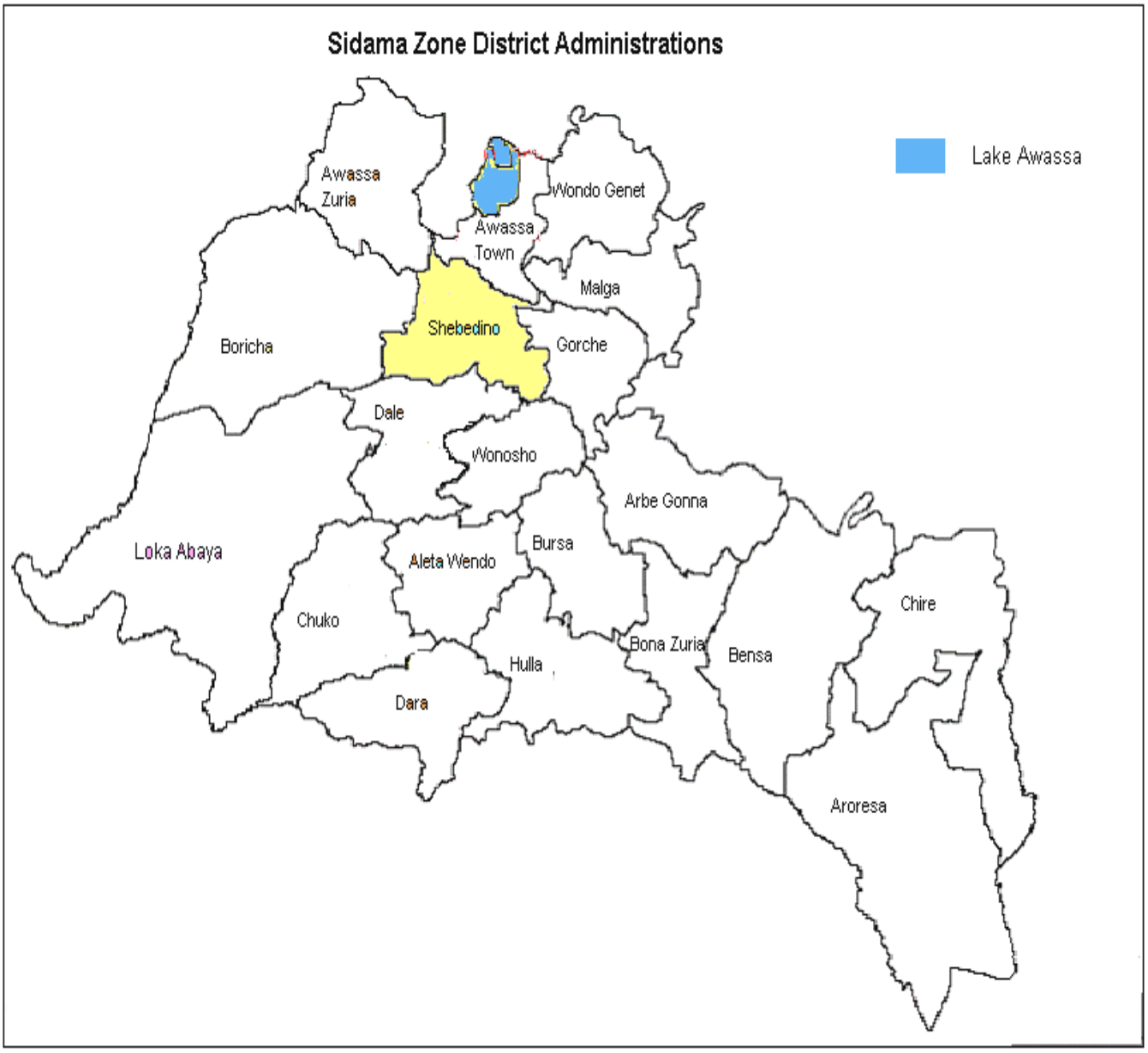


Figure 4.2 Sidama zone administrative boundaries (Map produced by UN-World Food Programme Ethiopia /Vulnerability Assessment and Mapping unit, 2011).

4.2. Research Design

In this study, both qualitative and quantitative methods were used to estimate the contribution of different resources to total food access and cash income, to see expenditure patterns, asset holdings and capacity to cope with shocks. In the qualitative method, information on changes and processes which cannot be quantified were collected by means of key informants and focus group discussions.

4.3. Sampling of respondents

4.3.1 Sampling of households

A simple random sampling was used for selecting 72 households for the survey. This method is a fair way to select a sample and it is reasonable to generalize the results from the sample back to the general population of 1072 households in *Abela Lida* peasant association. A document containing a list of 6 villages in *Abela Lida* peasant association was obtained from the *Abela Lida* peasant association office. From this list, three villages were chosen randomly for the survey. The house numbers of households were arranged in a logical sequence from the lowest to the highest for the three selected villages. Thereafter, 72 households (24 per village) headed by men (or husbands) were randomly selected from the final list of households in each of the selected villages using a random numbers table. All the households in each village had an equal chance to be sampled. The head of the household were contacted for the interview.

4.3.2 Sampling of key informants

The technique used for sampling the key informants was purposeful sampling. Key informants were contacted from district offices of Rural Development, Health and Water and Sanitation. They are experts who knew the area well and were recommended by their supervisors in the respective offices for the interview. Ten key informants were selected. The key informant group constituted of two experts from the Bureau of Agriculture, one expert from the Bureau of Health and one expert from the Bureau of Water and Sanitation Office and two development agents from agriculture, two teachers, one health extension worker and a chairperson from the peasant association. From this group one development agent, one health extension worker and one teacher were women.

4.3.3 Sampling of focus group

The technique used for sampling the focus group participants was purposeful sampling. A total of 46 persons participated in the focus group discussions from the three villages (15-16 per village) representing the young, elders, traders, farmers, labourers and women. The number of, each focus group discussants was six. Two discussion sites were selected for each village. The members of the focus group were from diverse social and professional groups as well as from different gender and age groups. The selection was made by discussing with the respective leaders of each peasant association and development agents to ensure the representation of all villages. The composition, of the focus group participants, was as follows:

- seven women aged more than 30, dependent on farming only,

- ten men aged greater than 30, dependent on farming and trading only,
- five women aged less than 30, dependent on farming only,
- nine men aged greater than 30, dependent on different livelihoods such as: farming and PSNP, labour, farming and labour, labour and PSNP, student, petty trading and farming,
- eight men aged less than 30, dependent on farming, trading and labour and
- seven women aged more than 30, dependent on farming, trading and student.

4.4. Research Instruments

Two types of data collection instruments were used for eliciting and collecting information on the livelihood and coping strategies of respondents. In order to collect data on the livelihood of the respondents, a structured questionnaire was developed and designed by the researcher. Furthermore, the coping strategy index (CSI) questionnaire described by Maxwell et al (2003) was used to gather data on the coping strategies employed by respondents. In addition, qualitative data were collected from the focus groups and from the key informants using a common questionnaire designed by the researcher.

4.5. Establishment of Validity and Reliability

All questionnaires used were piloted by the researcher prior conducting the survey to ensure validity and reliability. The pilot study consisted of nine respondents from the survey study, six from the focus group and two from the key informant group.

Content validity was ensured by panel of experts with experience in food security by cross-checking the questionnaires with tools used for similar studies from literatures to determine whether the instruments are valid for their intended purpose and the contents are appropriate for measuring what is intended to measure. Data collected from the pilot study was not incorporated in the final study.

4.6 Data Collection Techniques

4.6.1 Data collection from household respondents

Interview was used to collect data from the selected households. The researcher went from house to house to conduct the interview and fill the questionnaires. Teachers and development agents were used to translate the questions and the responses of the respondents who could not speak Amharic (the official language of Ethiopia). The head of each household was informed about the aim of the study and asked for his/her consent to provide the necessary information about the household livelihood and coping strategies. Household heads, who gave their consents, were approached for the interview. The data for the coping strategies were collected during a hunger season from April to May and the time taken to complete an interview was approximately an hour.

4.6.2 Data Collection from Focus groups (FGDs) and Key Informants (KIs)

Six focus group discussions were conducted. Information on resources, institutions, services, and policies were obtained from the focus group discussions; the researcher posed questions and participants responded by discussing in detail.

The total number of key informants who participated in the study were 10, with an average age of 35 years. They were working at different offices in the peasant associations. There were 2 experts from the Bureau of Agriculture, 1 expert from the Bureau of Health and 1 expert from the Bureau of Water and Sanitation of the District Offices, 2 experts from the Development Agents of Agriculture, 2 key informants were school teachers, 1 health extension worker and 1 peasant association chairperson. From the 10 key informants, 3 were women.

4.6.3 Ethical Consideration

Permission to conduct the study was obtained from the Bureau of Agriculture and rural development office. Respondents were made to be aware of their rights, to extent of withdrawing from the study, and gave their consent by signing the consent form.

4.6.4 Data Analysis and Presentation

Data collected from both qualitative and quantitative methods were cross-checked, sorted, summarized and categorized into topics based on objectives and checklists outlining information collected. Quantitative data were analysed using SPSS and Excel. Frequencies and cross-tabulations were used to give percentages, means and standard deviations in the descriptive analysis and in the presentation of general household livelihood and coping strategies.

The coping strategy questionnaire was analysed by Excel according to the CSI tool by Maxwell *et al*., (2003). The severity weight score was given based on the stages of coping strategies as (1) for change of diet; (2) for strategies that increase availability of food; (3) for sending household

members to eat elsewhere and (4) for reducing ration size. The frequency was ranked as: (5) All the time (everyday), (4) Pretty often (3- 6 weeks), (3) Once in a while (1-2 weeks), (2) Hardly at all (less than a week) and (1) (Never) as described previously (Maxwell & Caldwell, 2008; Dlamini & Tabit, 2014).

CHAPTER 5: RESULTS

5.1. Socio-biographic Details of Focus group discussants and key informants

Table 5.1 shows that there was a total of 56 participants in the study. The age range, of the participants, was from 19 – 63 years with an average age of 34 years. The majority of the participants were farmers (23), followed by farmers and traders (8), farmers and labourer (7), PSNP dependents (2), traders (2) and students (2).

Table 5.1 Socio-biographic details of focus groups (FG) and key informant (KI) respondents

Socio-biographic parameter	**FG1**	**FG2**	**FG3**	**FG4**	**FG5**	**FG6**	**KI**	**Total**
Mean age [SD]	45.0 [13.3]	39.0 [14.8]	23.2 [12.3]	43.1 [10.4]	23.4 [7.4]	25.1 [17.2]	35 [8.79]	34.3 [12.46]
Gender ratio (Male: Female)	0 : 7	10 : 0	0 : 5	9 : 0	8 : 0	0 : 7	3 : 2	33 : 23
Marital status								
Married	6	6	4	7	6	4	9	42
Divorce		1		1				2
Never married		2	1		2	1	1	7
Separated	1	1		1		2		5
Village	Nure Raffisaa	Nure Raffisaa	Chafee	Chafee	Gerano	Gerano		
Source of income								
Farming	7	3	5	1	3	4		**23**
Farming & PSNP				2				**2**
Farming & Labour				2	4	1		**7**
Farming & Trading		7				1		**8**
Labor				1				**1**
Trading				1	1			**2**
Labor & PSNP				1				**1**
Student				1		1		**2**
Hired							10	**10**
No. of participants	**7**	**10**	**5**	**9**	**8**	**7**	**10**	**56**

5.2. Human Capital

5.2.1 Age of Respondents

Most of the male heads of households (35%) were in the age range of 41 – 50 years followed by 31- 40 years (32%), 51+ years (19%) and lastly 20-30 years (14%). Most of the female head (wife of male head) were in the age range of 20-30 years (44.5%), followed by 31-40 years (30%), 41-50 years (11%) and lastly 51+ (3%) (Table 5.2). In the community, most (54%) of the people were children (below 18 years), while (42%) were adults and only (4%) were individuals above 50 years of age (Figure 5.1).

5.2.2 Household Size

A total of 490 individuals lived in the 72 households selected for the study. The majority of the households had 5-6 members (43%), followed by households with 7-8 (33%), 9-10 (13%) and lastly 3-4 (6%), 11-12 (4%) and 1-2 (1%) individuals. The household size was 6.8 individuals with a standard deviation of 1.90 individuals (Figure 5.2).

Table 5.2 The percentage age ranges of male heads of households and mothers (wives/partners of households' heads)

Age in range	**Age ranges of male head of Households**	**Age ranges of mothers**
	% (n)	**% (n)**
20-30	13.9 (10)	44.5 (32)
31-40	31.9 (23)	41.6 (30)
41-50	34.7 (25)	11.1 (8)
51+	19.4 (14)	2.8 (2)
Total	**100.0 (72)**	**100.0 (72)**

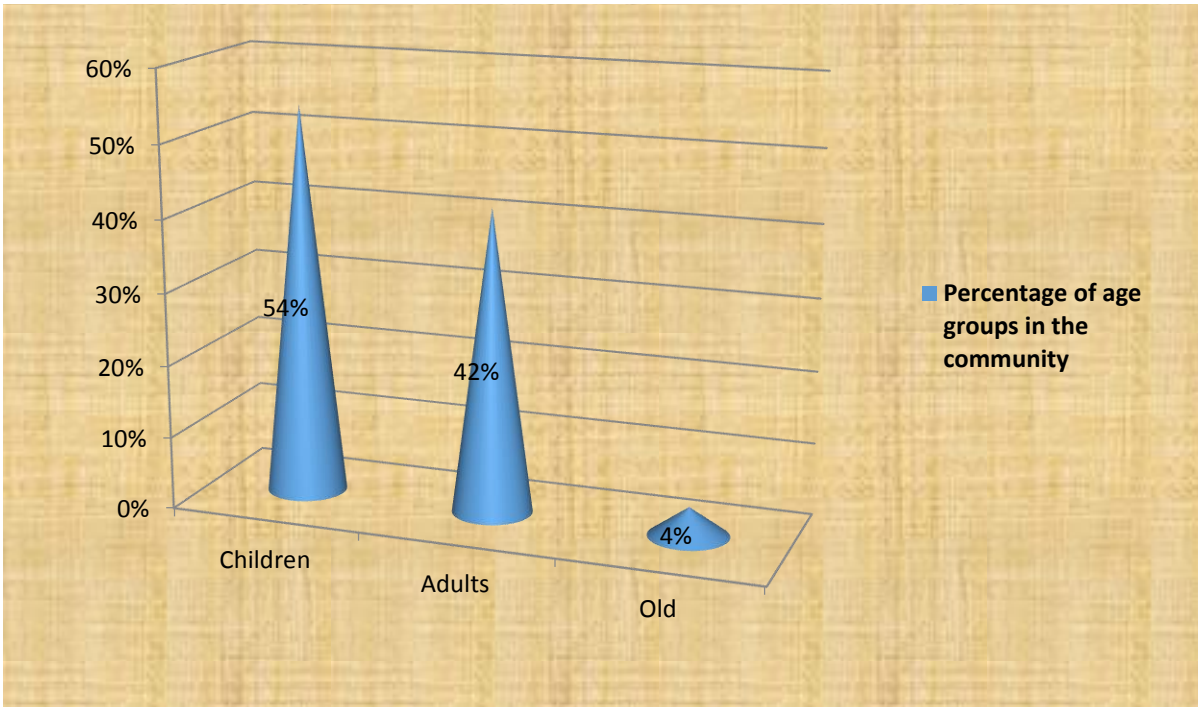


Figure 5.1 Percentage distribution of the different age groups in respondents' households

(Children: below 18 years, Adults: 18-50 years and Old above 50 years)

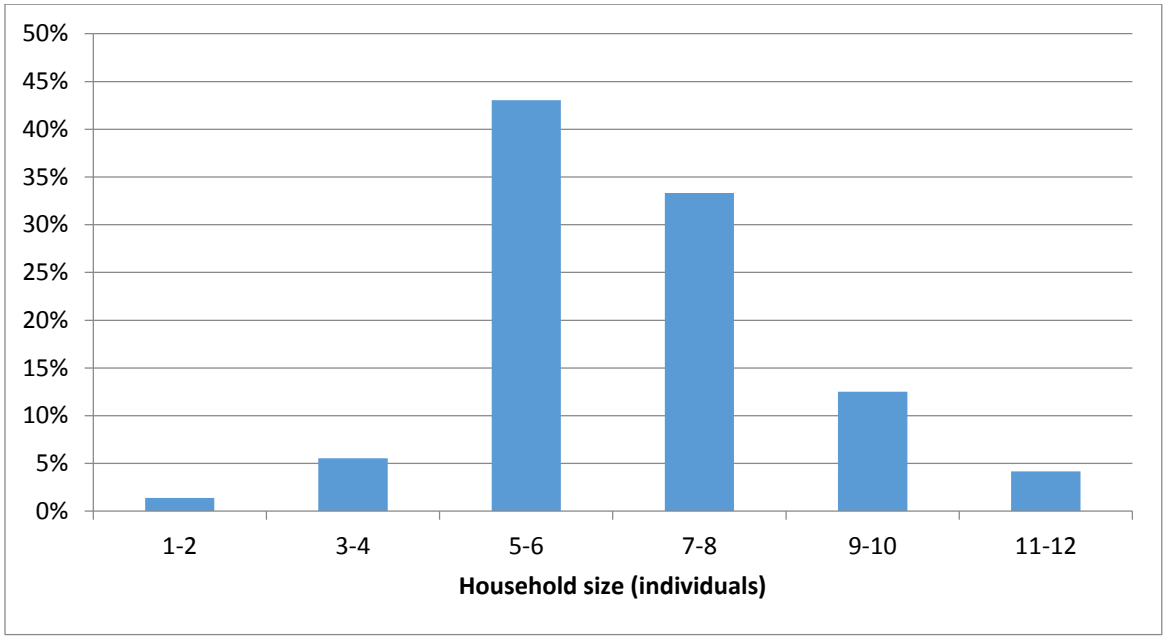


Figure 5.2. Percentage distribution of household size of respondents

(Total household size = 490 individuals, n=72 households, mean = 6.8 individuals and SD 1.90)

5.2.3 Marital Status

Almost all the respondents (98.5%) were married and only one household was found to have a divorced household head (Table 5.3).

5.2.4 Religion

The majority of the respondents (81%) were Protestant Christians followed by approximately 10% Muslims, 7% Orthodox Christians and 2% of the respondents were of other believes. Furthermore, none of the respondents were Catholic Christians (Table 5.3).

Table 5.3 The percentage distribution of the marital status and religious affiliations of respondents

	Category	Frequency (%)
Marital status	Married	71 (98.6)
	Divorced	1 (1.4)
	Never Married	0 (0)
	Separated	0 (0)
	Co-habiting	0 (0)
	Total	**72 (100)**
Religion	Protestant	58 (80.6)
	Muslim	7 (9.7)
	Orthodox	5 (6.9)
	Other, traditional	2 (2.8)
	Catholic	0 (0)
	Total	**72 (100)**

5.2.5 Education and Health Status of the study Respondents

5.2.5.1 Level of Education

80% of the respondents had never enrolled to school or withdrawn at primary level. From these household heads, 43% had never enrolled whereas 18% of them could read and write only. 19% household heads started primary school and withdrawn without completing; 13% had completed primary school; 6% of the household heads had completed junior high school and only 1% reached university level. The major reasons for never being enrolled or discontinuing school was Poverty (42%), unavailability/ inaccessibility of educational facilities nearby (35%), to look after animal (16%), loss of parents (2%), housing problem (2%) and others (2%) (Table 5.4).

5.2.5.2 Access to and use of health facilities

Some (15%) of the respondents reported that they or other members of their households had been sick for a maximum of three months in the past one year. Of all those who were sick, the majority (73%) visited a government health centre or clinic while the rest visited the central/referral hospital and the private hospitals or clinics (Figure 5.4).

Table 5.4 School attendance history and education level of respondents (n=72)

Question	**School attendance history and education level**	**Frequency (%)**
Level of Education	Never enrolled	31 (43%)
	Read and write only	13 (18%)
	Primary started	14 (19%)
	primary completed	9 (13%)
	Junior secondary	4 (6%)
	University level	1 (1%)
	Total	**72** (**100%**)
Reasons for never enrolled/ discontinued	Poverty	18 (42%)
	Unavailability/ Inaccessibility of schools	15 (35%)
	Look after animals	7 (16%)
	Housing problems	1 (2%)
	Loss of my parents	1 (2%)
	Others	1 (2%)
	Total (Never enrolled/ discontinued)	**43** (**100%**)

Table 5.5 Access to and use of health facilities by study respondents

Question	Response	Frequency (%)
*Been sick for a minimum of 3 months in the past 1 year	Yes	11 (15.3)
	No	61 (84.7)
	Total	**72 (100)**
If yes, where did you go for health care?	Central/ referral Hospital	2 (18.2)
	Health centre or clinic	8 (72.7)
	Private hospital or clinic	1 (9.1)
	Total	**11 (100)**

NB: * = being sick implies too sick to work or do normal daily activities for a minimum of three months in the past 1 year

5.2.6 Working Members of the households

All the households had at least one working member. The majority of the households (53%) had 2 working persons, 17% of the households had 3, 11% had 4 and the rest 14% had between 5 to 7 working persons. The minority of the respondents (31%) had working persons in their respective households who were not involved in off-farm activities. The majority of the respondents (55%) reported lack of work skills as the main cause of the working members of the households not to be engaged in off-farm activities. Also, the respondents reported lack of start-up capital (16%), lack of awareness (8%), lack of job opportunities (8%), health problems (6%), lack of spare time from agriculture (4%), aging and others (2%) as the additional causes of working members of households not to be involved in off-farm activities (Table 5.6).

FGDs and KIs were asked if there existed any form of division of labour in the households. The respondents of the FGDs and KIs were that women were responsible for housekeeping: food preparation, child rearing, *enset* (a staple food plant in the area) harvesting and processing, and in selling grains, *enset*, livestock products and pursuing petty trade activities. On the other hand, the FGDs and KIs reported that men were responsible for food crop planting and harvesting; preparing the land for cash crop, planting, harvesting and marketing; livestock rearing and marketing and other labour activities. Young girls were expected to assist their mothers in maternal activities while boys were supposed to assist their fathers in executing some of the paternal duties.

Table 5.6 Percentage distribution of the human capital of study respondents

	Human capital	Frequency	Percent
Number of working members of the Households	1 person	3	4.17
	2 persons	38	52.78
	3 persons	12	16.67
	4 persons	8	11.11
	5 persons	5	6.94
	6 persons	5	6.94
	7 persons	1	1.39
	Total	**72**	**100**
Number of working members of households involved in off-farm activities	0 person	22	30.56
	1 person	24	33.33
	2 persons	21	29.17
	3 persons	5	6.94
	Total	**72**	**100**
Major Reasons for working members of household not being involved in off-farm activities	Lack of spare time from Agriculture	2	3.9
	Lack of work skill/ trainings	28	54.9
	Lack of awareness about its contribution	4	7.8
	Lack of job opportunities	4	7.8
	Unable to work due to old age	1	2
	Health problems	3	5.9
	Lack of start-up capital	8	15.7
	Others	1	2
	Total	**51**	**100**

5.3 Social Capital

5.3.1 Social Networks

FGDs and KIs were asked about the availability of social resources in the communities and they reported the existence of formal networks such as cooperatives and unions formed to support farmers in the provision of fertilizers, selected seeds and also participate in market stabilization of the products of the communities. It was also reported that members of cooperatives often contributed money to support the cooperatives and members of the cooperative during hard times, at funerals and in other shocks.

5.3.2 Access to Information on Policy or Strategies that Affect Livelihoods

The majority of the respondents (83%) used different sources to access information on new policy or strategies that directly affected their livelihood; and out of this, 41% of the respondents used farmers association as their sources of information; 33% of the respondents used friends and families as their main source of information and 22% of the respondents and 3% respondents used the media and peasant associations as sources of information, respectively. On the other hand, 17% of the respondents had no access to information; 58% had no information on policies and strategies; 25% had no access to media and 17% had not been consulted or invited by the leaders of the peasant associations (Table 5.7).

FGDs and KIs were asked from where peasant associations got information on policies, regulations and legislations that directly affected their livelihoods. They reported that households got the

information from different media. However, they got agricultural information from the farmers union and peasant association offices and they got information on market prices from the local markets. The Ethiopia Commodity Exchange (ECX) had started to publicize the prices of main crops particularly coffee on billboards in big towns, such as *Awassa.* The farmers also used their mobile phones to know the prices agricultural items. Few households owned television and radio sets and some travelled to different towns for trading where they could get different information and share with their neighbours and relatives.

Table 5.7 Access to information on policy or strategies that affects the livelihoods of households

Access and sources of information	Response	Frequency	Percent
Have access to information	Yes	60	83
	No	12	17
	Total	**72**	**100**
Sources of information	Farmer associations	25	41.67
	Friends and family	20	33.33
	Media	13	21.67
	PA officials	2	3.33
	Total	**60**	**100**
If no information, the reason	no access to media	3	25
	no available info about policy & strategies	7	58.33
	not consulted or invited by PA leaders	2	16.67
	Total	**12**	**100**

5.4 Physical Capital

5.4.1 Access to Water, Sanitation, Fuel, Electricity and Transport

5.4.1.1 Source of Drinking Water and availability of Toilet facilities

The majority of the respondents (99%) used communal tap water (Bono) as a source of drinking water while only one respondent used unprotected well as a source of drinking water. Close to 71% of the respondents used private pit toilet and 19% used communal pit toilet while the rest (10%) had no toilet facility or used the nearby bush as their toilet (Table 5.5).

5.4.1.2 Source of Fuel and Electricity

Up to 97% of the respondents used wood as a source of energy while close to 3% respondents used charcoal or kerosene as a source of fuel and 85% respondents used gas/kerosene/paraffin as the main sources of light. Only 7% respondents used electricity as source of light and the rest used wood and candles (Table 5.8).

5.4.1.3. Access to Roads, Transport and Markets

Up to 71% of the respondents used minibus taxi as their means of transport, 26% of the respondents travelled on foot, 1% used minibus or walk on foot and 1% respondents used domestic animals and karts (Table 5.8).

FGDs and KIs were asked if there were good roads to travel to different areas in peasant associations and to market places. Accordingly, the respondents reported that feeder roads existed

to access neighbouring peasant associations; there were also all weather roads. In addition, there were major tarmac roads that cut across the peasant associations and public transports to travel to the neighbouring peasant associations. The two big markets, *Leku* (the district's capital, around 5 km from the PA) and *Tulla* (in the neighbouring district, approximately 15 km from the PA) were easily accessible according to the respondents. They believed that there was enough access to markets, particularly to buy food and non-food items and to sell their cash crops, grains and animals. Whenever they want a bigger market, they go to the Region capital *Awassa.*

Table 5.8 Access to water, electricity, fuel and transport resources by study respondents

Resources	type of resources	Frequency	Percent
Number of rooms occupied by the households	1 room	19	26.4
	2 rooms	40	55.6
	3 rooms	12	16.7
	4 rooms	1	1.4
	Total	**72**	**100.0**
Source of drinking water	Unprotected well	1	1.4
	Bono	71	98.6
	Total	**72**	**100**
Type of toilet used	Communal pit	14	19.4
	None-bush	7	9.7
	private pit	51	70.8
	Total	**72**	**100**
Sources of fuel	Charcoal	1	1.4
	Kerosene	1	1.4
	wood	70	97.2
	Total	**72**	**100.0**
Sources of light	Wood	3	4.2
	Candles	1	1.4
	Electricity	7	9.7
	Gas/ kerosene/ paraffin	61	84.7
	Total	**72**	**100.0**
Means of transport	minibus	51	70.8
	On foot	19	26.4
	On foot & minibus	1	1.4
	Pack animals/ chart	1	1.4
	Total	**72**	**100.0**

5.4.2 Access to Services

5.4.2.1 Health

A health worker KI was asked how communities in the PAs got access to health services. The KI reported the existence of one health post in the PA with two female health extension workers whose main task was to increase and sustain the prevention and control of communicable diseases such as malaria. They give first aid in emergency situation and provide family health services such as family planning and immunization. They give education on hygiene, environmental sanitation, nutrition, health on an outreach basis.

5.4.2.2 Education

FGDs and KIs were asked where members of the communities sent their children to attend school. They reported the existence of one primary school in the PA which accepted children from different proximities. In addition, it was reported that there existed one secondary school in the neighbouring PA (town) which is around 9 km from the centre of the PA.

5.5 Natural Capital

5.5.1 Land Ownership

Close to 97% of the respondents owned land, from which up to 86% respondents inherited their lands from their parents while close to 9% of the respondents owned a shared piece of land with their relatives and only 4% owned land as a result of land redistribution (Table 5.9).

FGDs and KIs were asked how households owned or accessed land. They indicated that most households obtained most of the lands they owned by inheritance from their parents. Furthermore, it was also reported that, at present, on average, a household possess one hectare of land. The reported reason was that male children when they get married share land from their family again they in turn share some portion of their land with their respective descendants when the get married. The KIs reported that land redistribution was done in 1975 by a previous military regime but since then no further land distribution had occurred. Furthermore, the KIs said that population growth in the area, for generations, had significantly affected the land sizes of individual households so parents had become obliged to share their lands with their male children when they get married. Thus, access to land had become a challenge. The KIs further reported that unlike male children, female children had no right to inherit land from their parents.

5.5.2 Availability of Grazing and Community Land

FGDs and KIs were asked if communities in the PAs had access to use communal land for grazing or agricultural use. They reported that the majority of residents in the community did not have

adequate communal land for grazing. Out of the six focus groups, only members of FGDs2 reported using communal land for grazing. The reason was that large area of the communal land (about 2 hectares) was water logged and could not be used for cultivating crops during the rainy season. The rest of the FGDs (FG1, 3, 4, 5, 6) reported that the communities did not have access to any communal grazing or forest land, as there was no open area in their neighbourhoods.

As reported by KIs, the reason for the lack of communal grazing or forest land was increase in population density in the surrounding area. The KIs also reported that the lack of grazing land had reduced the number of domestic animals owned by each households in their respective communities.

Table 5.9 Ownership of Land by respondents

Land access and ownership	Response	Frequency	Percent
Own land	No	2	2.8
	Yes	70	97.2
	Total	**72**	**100**
If yes how?	Inherited from parents	60	85.7
	purchased	1	1.4
	redistribution	3	4.3
	Share with relatives	6	8.6
	Total	**70**	**100**

5.5.3 Water Sources for Drinking and Access to Irrigation

FGDs and KIs were asked about the sources of drinking water, the average time to reach the water point and whether their respective PAs have access to irrigation water. They reported that the PAs did not have water sources in the nearby and it took them approximately from half an hour to one hour to reach the nearest water taps. When the nearby water taps stopped working, the communities travelled to the next village and sometimes up to the next town to fetch water. FGD3 and FGD4 from the *Cheffea* village reported that they would go to *Tirishe* River which was found in the neighbouring PA to fetch water. In addition, they reported that as a result of water scarcity, water for irrigation was not readily available.

A KI from the Water Resources Office reported that the *Abela Lida* PA had four water taps which were used as a source of drinking water both for humans and animals. He also reported that these water taps were made up of boreholes and were free for the community. There was no irrigation scheme or potential water source for irrigation in the village.

5.6 Financial Capital

5.6.1 Income

The respondents reported that the cash crops, chat and coffee, were the main sources of income for the majority of the households (56%). Livestock selling (18%), casual labour (13%), cash crop and PSNP selling (10%), grain and cash crop selling (3%) and firewood and charcoal selling (1%) were sources of income (Figure 5.4).

Range of the incomes of the respondents was widely spread (mean = USD16.1178). The income for the following percentage of respondents (28%), (25%), (18%), (18%), (11%) ranges within USD94-186, USD187-310, USD62-93, USD311-620 and USD621 respectively (Table 5.10).

5.6.2 Income Generating Activities

FGDs and KIs were asked if there were any other income generating activities other than agriculture in the area and to explain if there existed any.

Both FGDs and KIs reported the area as a good market place for coffee and chat trading. Better off households engaged themselves in trading businesses and some young people were also involved in petty trading and labour activities.

As reported by KIs, the agricultural bureau had introduced different income generating activities particularly for the poor households. Productive Safety Net Program (PNSP) was one such activity whereby households participate in labour activities planned by the *Woreda* Agriculture Bureau. In

this program household members worked for five working days per week and in return got 15 kg of cereal per person. Some households who did not have capable persons to work got direct support which was equal in amount to those who were capable to work. There was also family package program whereby household members were provided oxen for fattening, horses to pull cartridges and goats for breeding.

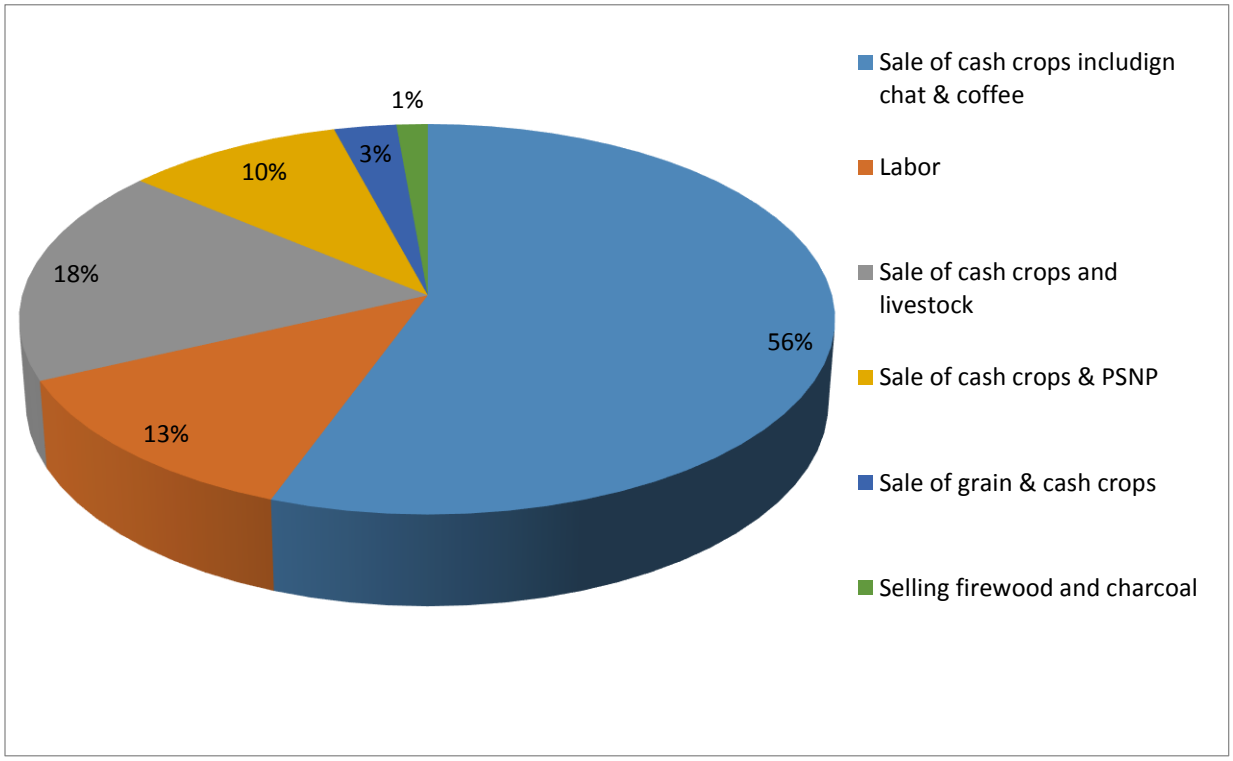


Figure 5.3 Percentage distributions of the different Sources of income of the study respondent

Table 5.10 Annual income ranges of study respondents

Income range (Ethiopian birr)	Income range (USD)	Frequency	Percent
1,000 - 1,500	62 - 93	13	18
1,501-3,000	94 - 186	20	28
3,001-5,000	187 - 310	18	25
5,001-10,000	311 - 620	13	18
10,001+	621+	8	11
Total		**72**	**100**

Mean = 1 USD =16.1178

5.6.3 Access to and Use of Credit, Savings and Remittances

The majority of respondents (86%) had never borrowed money. The main reasons were 50% of them had never tried to borrow or they had not had the need to borrow money; and 4% of them did not borrow money because of the absence of lending institution. Similarly, 4%, 3% and 1% of the respondents were unable to borrow money because of lack of collateral, high interest rate and other reasons, respectively (Table 5.11).

The majority of the respondents (53%) had never saved any money/ grain for emergency. Emergency in this case refers to any shock resulted from shortage of food at household level. On the other hand, 47% of the respondents had saved money/grain for emergency and from which 12% of them saved in the form of buying animals, while 17% of them saved by depositing it at home, 3% of them saved by stocking some grains and 2% of them saved by depositing it at friends or neighbours houses. Depositing at home refers to save cash or grain at home separately, to use it only in emergency situation. Similarly, some households saved at friends' or neighbours' places so that they would use it only during emergency situations. As reported none of the respondents had ever received remittance from anyone (Table 5.11).

Table 5.11 Access to and use of credit, saving and remittances

Question	Response	Frequency	Percent
Borrow money	Yes	10	13.9
	No	62	86.1
	Total	**72**	**100**
If yes, from where	Government micro finance	1	10
	Private (friends/neighbours/ relatives)	5	50
	Social association (Eder)	4	40
	Total	**10**	**100**
Reasons for not borrowing	Not tried or needed	50	80.6
	Absence of lending institution	4	6.5
	Lack of collateral	4	6.5
	High interest rates	3	4.8
	Other reasons	1	1.6
	Total	**62**	**100.0**
Save money/ grain to use in case of emergency	Yes	34	47
	No	38	53
	Total	**72**	**100**
If yes, how	buy animals	12	35
	deposit at home	17	50
	put at friends/ neighbours	2	6
	Stock some grain	3	9
	Total	**34**	**100**
If no, why	Don’t have extra money	38	100
	Total	**38**	**100**
Have you received any remittance	Yes	0	0
	No	72	100
	Total	**72**	**100**

FGDs and KIs were also asked if credit and saving organizations exist in the area and to provide information if they do exist.

Both FGDs and KIs have reported that the culture of saving and accessing to credit was generally poor in the communities. They also reported a saving organization called *Abella Genet Fafate* was established in 2001/02. This organisation created awareness among its members on use of savings and it also provided credit to members based on the amount of money they had saved.

The KIs reported that, earlier, there was a micro finance organisation which grouped 10-20 farmers and provided them with loan ranging from 1,000 up to 5,000 Birr. But, at the time of discussion, it was reported that, the micro-finance organization had stopped its operations. There was also farmers union which provided saving services to coffee suppliers. This one was functional during the KIs discussion. It was also reported that some Commercial Banks in the district town did not provide loans to the local people due to problems related to viable collateral.

5.6.4 Expenditure

Expenditures of households are presented in Table 5.12. The expenditures are presented from the highest to the lowest in a descending order. Expenditure on food is the highest. The next highest expenditure was on building houses and on agricultural inputs. The least expenses were loan repayments, tax payments and savings (Table 5.12).

Table 5.12 the percentage distribution of total annual expenditure

S.I	Types of expenditure	Total expenditure	Percent from total expenditure
1.	Purchase Food	$186,250	31.3%
2.	To build house	$172,000	28.9%
3.	Agricultural inputs	$84,941	14.3%
4.	Non-food items	$84,425	14.2%
5.	Social	$34,828	5.9%
6.	Others	$24,410	4.1%
7.	Saving	$4,160	0.7%
8.	Pay Tax	$2,979	0.5%
9.	Pay Loan	$600	0.1%
	Total	**$594,593**	**100.0%**

5.7 The main Livelihood Strategies

5.7.1 Agricultural Activities of Households

The majority of households (65%) used multiple livelihood strategies. Agriculture and trading were the main livelihood strategies used by 53% of the households. Nearly 26% of the households used a combination of agriculture, labour and trading livelihood strategies. Then 11% of the households used agriculture and labour, 6% of the households used only agriculture and 1% of the households used only trading and 3% of the households used only labour (Table 5.13).

Chemical fertilizers and improved seeds were the most used agricultural inputs. Herbicides were the next most used by households. The majority of household (78%) used fertiliser for agricultural input. Agricultural inputs include chemical fertilizers that are used to increase the fertility of the soil, insecticides and herbicides are used to protect the crops from disease, insect and weeds; improved seeds are high yield varieties and resist adverse weather; manure and mulch are used as organic fertilizers and as a shed during seedling, respectively (Table 5.13).

From the total 22% of the respondents did not use agricultural inputs; 38% did not use agricultural input because they did not pay the money in time. Lack of credit scheme was also another main reason for not using agricultural input in the households. For 38% of the respondents, shortage of farm land was the main reason; 19% of the respondents gave high price as their main reason and 6% of the respondents gave other reasons (Table 5.13).

The majority of the households (62%) own livestock as part of their agricultural livelihood activities. But some households do not possess live stocks. Reported reasons for this were: 40% of the households had sold their livestock to purchase food, 20% lost their livestock through death, another 20% had no breeding animals and one household had no land for grazing or money (Table 5.13).

The study also revealed that, last year, 72% of the households produced coffee, the major crop in the area, 1kg and 300kg per household, and 19% produced more than 450kg coffee per household and 8% produced no coffee. Similarly, the study showed the amount of chat produced by households: 82% of the households produced between 1kg and 200kg, 13% produced more than 200kg and 6% did not produce chat. The study also indicated the amount of *enset* produced by households last year: 38% households produced between 1kg and 300kg, 18% produced more than 300kg and 44% did not produce *enset*. The study had shown that production of coffee is the first, chat is the second and *enset* is the third (Table 5.14)

According to the study findings, last year, up to 83% of the households owned between 1 and 4 cows, 1% had more than 5 cows, 15% had no cow. Furthermore, 38% of the households had 1-4 sheep and goats, 3% had more than 5 sheep and goats and 60% had no sheep and goat. Oxen and cows were the most common livestock owned by the households in the study areas (Table 5.14).

Table 5.13 The main livelihood strategies and agricultural activities of study respondents

Livelihood strategies and activities		**Frequency**	**Percent (%)**
Main Livelihood strategy	Agriculture	4	5.6
	Trading	1	1.4
	Labor	2	2.8
	Agriculture + Trading	38	52.8
	Agriculture + Labor	8	11.1
	Agriculture + Labor + Trading	19	26.4
	Government job	0	0
	Total	**72**	**100.0**
Use of Agricultural input	Yes	56	77.8
	No	16	22.2
Type of agricultural input used	Chemical fertilizers	55	76.4
	Improved seed	55	76.4
	Herbicides	10	13.9
	Insecticides	0	0
	Manure and mulch	0	0
	Total	**78***	**100.0**
Main reasons for not using inputs	Shortage of money & no credit scheme	6	37.5
	The price is too high	3	18.75
	Shortage of farm land	6	37.5
	Others	1	6.25
	Total	**16**	**100.0**
Own Livestock	Yes	62	86.1
	No	10	13.9
	Total	**72**	**100**
Reason for not owning livestock	Sold to purchase food items	4	40
	livestock disease	2	20
	Lack of breeding animals	2	20
	Lack of grazing land	1	10
	Lack of money	1	10
	Total	**10**	**100**

*Total percentage is calculated from total households however households who used at least one of the agricultural inputs are only 56.

Table 5.14 Amount of perennial crops produced and number of livestock owned by households in the previous year (N=72)

		Amount in range	Frequency of households (%)
Type and amount of major perennial crops produced (kg)	Coffee	0	6 (8%)
		1-150	21 (29%)
		151-300	31 (43%)
		301-450	8 (11%)
		>450	6 (8%)
	Chat	0	4 (6%)
		1-100	31 (43%)
		101-200	28 (39%)
		201-300	6 (8%)
		>300	3 (4%)
	Enset	0	32 (44%)
		1-150	10 (14%)
		151-300	17 (24%)
		301-450	6 (8%)
		>450	7 (10%)
Type and number of livestock owned	Oxen & Cows	0	11 (15%)
		1-2	47 (65%)
		3-4	13 (18%)
		>5	1 (1%)
	Sheep and goats	0	43 (60%)
		1-2	16 (22%)
		3-4	11 (15%)
		>5	2(3%)

FGDs and KIs were asked about the main livelihood assets and strategies and how the types of assets possessed by households vary with class differences in the study area. They reported that land and livestock are the main livelihood assets of households. The land size and type and the number of livestock increase with wealth. But, almost all households, in the different economic status, cannot produce enough food for themselves because most of the land is covered by perennial crops such as coffee. It is reported that better off households have more agricultural resources and they also are engaged in trading. On the contrary, poor households tend to fill their livelihood gaps by engaging themselves to casual labour activities.

KIs reported that assets possessed by the poor and the rich households were different in size than in type. KIs were asked about the support provided by the Agriculture Bureau to improve the farmers' livelihood activities in the study area. KLs reported that three agricultural agents were assigned to each PA to provide advisory services on how to combine endogenous and exogenous knowledge and how to use agricultural land efficiently. They disseminated suitable and innovative ideas to facilitate the use of improved seeds, livestock, and natural resource management technologies. They also educated farmers on how to use input for different crops. It was reported that using improved seed varieties was increasing, although the supply remains a bottleneck. The need to use fertilizers had also increased regardless of the problem related to credit access.

FGDs and KIs were asked on the main challenges of agriculture in the study area and they reported that the main challenges or constraints of productivity in the area particularly for the major crops were: shortage of grazing land, decrease in the number of domestic animals and decrease in the amount of manure from animals. This in turn decreased the amount of manure to be distributed in

the farms and affected productivity. It was also reported that the rising price of fertilizers and limitation in the availability of improved seeds was another constrain in the study areas.

Shortage of rainfall was another major challenge because households were dependent on it for agricultural activities. Farmers who were not using fertilizers were not encouraged to use improved seeds by the agricultural development agents.

5.7.2. Trading

FGDs and KIs were asked on the involvement of households in trading activities. Both FGDs and KIs reported the existence of good access to markets in the study areas. The farmers produced mainly cash crops, particularly coffee and chat so their income was mainly from sales of cash crops they produced.

FGDs and KIs were also asked on labour opportunities available to households in the study areas. They reported that coffee harvesting and processing was the only labour available. They also reported that household members migrated to far places in search of labour in the time of severe food insecurity situations.

5.8 Food Security Status and Coping Strategies of the Households

5.8.1 Food security status

From the study, it can be seen that in the previous year, 25% of the households produced 1-300kg of cereals, 43% produced between 301-500kg and 32% produced more than 500kg and 86% of the households consumed 1-300kg of grain and 14% consumed more than 300kg. Similarly, 92% of the households consumed 1-100kg of milk and milk products, 4% consumed more than 100kg and 4% consumed no milk and milk products. Furthermore, 92% of the households consumed 1-50kg of meat, 7% consumed more than 50kg and 1% consumed no meat. In addition to this, 90% households consumed e*nset*, 3% consumed more than 300kg and 6% consumed no *enset*. On the whole, in the previous year, cereal was the most consumed food item, followed by grain, *enset*, milk and milk products. Meat was the list consumed food item by households (Table 5.15).

FGDs and KIs were asked on the staple foods consumed by households and they reported that maize and *enset* as the most consumed staple foods and the main type of pulse that was consumed most by the community was haricot bean. It was also reported that in the past, *enset* was had been the main staple food but during the study period it had been replaced by cereals.

Results of the survey showed that maize was the most consumed food stuff during the previous hunger season. It was reported that 100%, 86% and 11% of the households consumed maize, *enset* and haricot bean respectively. On the other side, chat and coffee were the main sources of income during the previous hunger season: 53% households earned money by selling chat and 50% of the households earned money by selling coffee. Furthermore, the main source of income during the

previous hunger season was daily labour and 15% of the households earned money out of it. Daily labour was mostly the source of income for the landless and land short farmers during lean season (Table 5.16).

FGDs and KIs were also asked on the main sources of food during lean season. They reported that most food items consumed during lean season were produced at the harvest season. When the harvested products exhaust, the households rely on purchased foods during the hunger season.

Table 5.15. Amount of main food types consumed by households in the previous year (N=72)

Response	Amount in range in kg	Frequency of households (%)
Cereal	1 - 300	18 (25%)
	301-500	31 (43%)
	501-700	19 (26%)
	>700	4 (6%)
Grain	1 - 300	62 (86%)
	301-450	4 (6%)
	>450	6 (8%)
Milk and milk products	0	3 (4%)
	1 – 100	66 (92%)
	>100	3 (4%)
Meat	0	1 (1%)
	1 - 50	66 (92%)
	>50	5 (7%)
Enset	0	4 (6%)
	1 - 300	65 (90%)
	>300	3 (4%)

Table 5.16 The most consumed foods and main sources of income for households to purchase foods during the previous hunger season (April-May)

Question	Response	Frequency of households (%)
Main foods consumed during hunger season of the year (April-May)	Maize	72 (100)
	Enset	63 (87.5)
	Haricot bean	8 (11.1)
Main sources of income to purchase food during huger season	Sale of chat	38 (52.8)
	Sale of coffee	36 (50)
	Daily labour	11 (15.3)

NB: Hunger season (April-May) for the study communities refers to the season when the households exhaust the household food mainly obtained from their farm and sale of their production; Daily labour in the study area refers to coffee planting, picking and washing, enset harvesting and processing, agricultural land preparation, planting and harvesting, water fetching, mud making for house construction and latrine digging.

5.8.2 Trends of Household Food Security and Livelihoods

FG and KIs were asked on the trend of household food security and livelihood over time in the study areas. FGDs and KIs reported improvements in the peoples' life style because of improvements in basic services: access to agricultural extension services, health extension programs, drinking water, access to schools, mobile telephone services and access to electric power in some parts of the PAs.

5.8.3 Vulnerability, Shocks and Seasonality

FGDs and KIs were asked on vulnerability, and seasonality of activities and shocks in the area, FGDs reported poverty as the main factor which made households vulnerable. Seasonality also affects households' vulnerability. Recurrent droughts and irregular rainfalls were the main shocks in the study area. The decline in the price of coffee and the rise in the price of staple foods were also contributing factors to shocks.

The people in the study area were highly dependent on coffee; incomes from coffee and hired labour increased during harvest time. As days pass by, the income generated from coffee harvest decreased and this affected the purchasing power of households, particularly the poor. The hunger season for these households mainly started in April and continued to June. In the harvest time the market price of staple foods decreased, because of high supply and increased at the hunger season because of high demand (Figure 5.5).

Figure 5.9 shows the seasonal calendar for the households in *Abela Lida* PA. The information was obtained from both FGDs and KIs. The data were collected in May 2010.

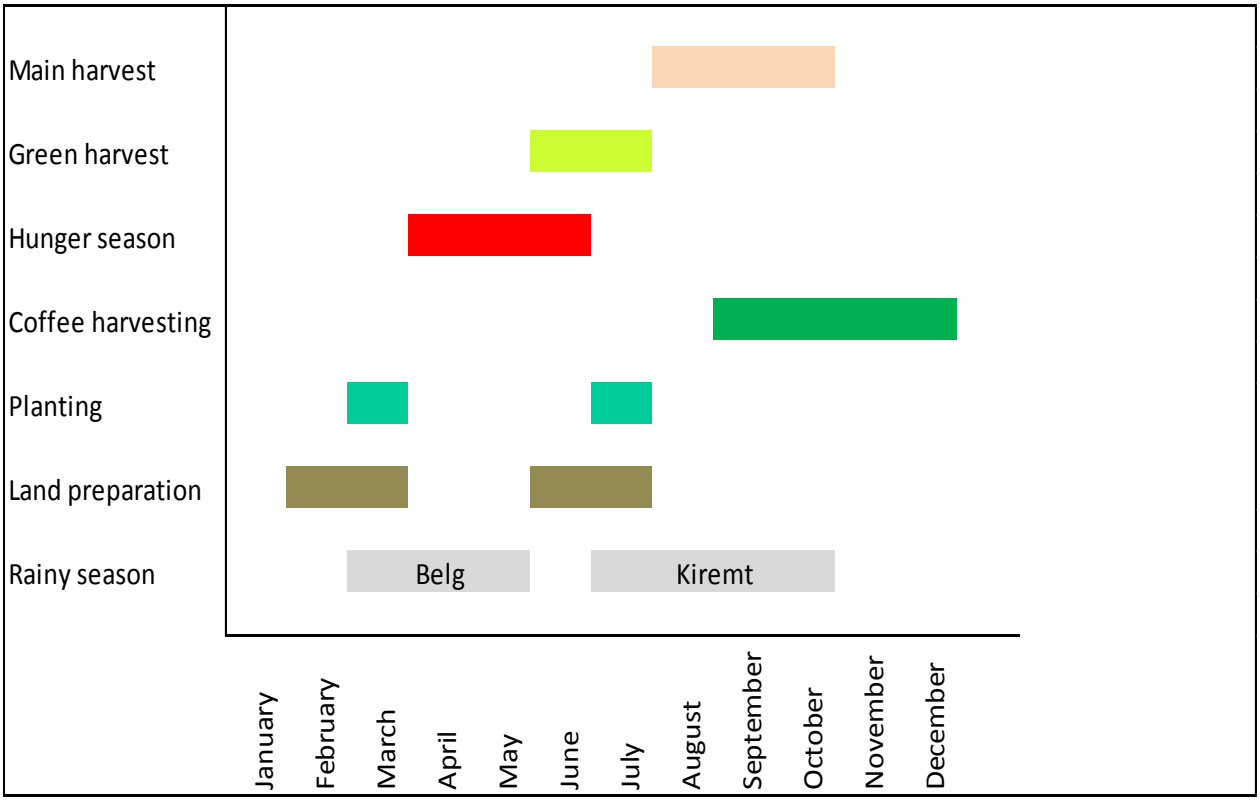


Figure 5.4. Seasonal calendar for the main activities of the community in Abela Lida PA

5.8.4 Coping Strategies for Sustainable Livelihoods

5.8.4.1 Difficulties or shocks experienced by respondents' households

Last year households experienced five shocks most frequently. These shocks starting with the most severe were: drought, high fuel prices, high food prices, electricity or gas cuts, crop pests or disease. They affected 94%, 92%, 89%, 83%, 75%, 53% households, respectively.

Theft, loss of job, serious illness – (being sick at least for three consecutive months in the year), were also shocks that affected 40%, 32% and 25% households, respectively, in the same last year.

Death of a working member of the household, death of household head, household violence were also other shocks that affected 1%, 3%, and 6% households, respectively, in the same last year. Death of another member from the household and floods were also shocks experienced and affected 8% and 7% households, respectively.

Table 5.17 Difficulties or shocks experienced by the households in the past year (N=72)

Difficulties/Shock in the past 12 months	Frequency	Percent
Drought	68	94.4
High fuel price	66	91.7
High food price	64	88.9
Electricity or gas supply cuts	60	83.3
Reduced income	54	75.0
Crop pests or diseases	38	52.8
Theft of productive resources	29	40.3
Lost employment	23	31.9
Serious illness	18	25.0
Floods	7	9.7
Death of other members in household	6	8.3
Insecurity or violence in household	4	5.6
Death of household head	2	2.8
Death of a working member in household	1	1.4

5.8.4.2 Coping Strategies used by Households in the Past 30 Days

Consuming less preferred foods, decreasing the number of livestock such as selling some of their animals and crop and livestock adjustment (change between production of crop and livestock such selling some animals to buy crop seeds or selling some crops to buy animals) were used as copping strategies by 88%, 82% and 64% households, respectively.

Cash or cereal loan from merchants, relying on relief foods, borrowing grain from neighbours/ relatives, selling small animals (chickens, goats, sheep) were also served as copping strategies in the same time and used by 24%, 13%, 13% and 8% households, respectively.

Productive asset sales (such as farming tools and oxen), Stress out migration, (migration of the whole family from their place to another area), migration of household member and sale of firewood and charcoal were the least used copping strategies; they were used by 3%, 4%, 4% and 6% households, respectively (Table 5.18).

Table 5.18 Frequency of coping strategies used by households in the past 30 days (N=72)

Coping strategies	Frequency	Percentage
Consume less preferred foods	63	88%
Decrease number of livestock by selling some animals	59	82%
Crop or livestock adjustment by selling some animal and buy crop seeds or vice versa	46	64%
Cash or cereal loan from merchants	17	24%
Borrow grain from neighbours/ relatives	9	13%
Rely on relief foods	11	15%
Small animal sale (sheep, goat and chicken)	6	8%
Migration of household member	3	4%
Sale of firewood or charcoal	4	6%
Stress or out migration (migration of all household members)	3	4%
Productive asset sales	2	3%

5.8.5 The frequency of utilisation of food consumption coping strategies

The top five food coping strategies are relying on less preferred and less expensive food, rationing the money one has, buy prepared food, purchase food on credit, reduce the number of daily meals, and reduce portion size of foods at meal times; they were used by 69%, 67%, 53%, 51% and 36% households, respectively.

Sending household members to beg, spending the entire day without eating food, sending household member to eat elsewhere, gathering wild food, hunting or harvesting immature crops, and consuming seed stock held for the next season were the top five strategies not often used; they were least used by 1%, 14%, 14%, 24% and 29% households, respectively (Table 5.19).

The top three most often used (3-6 time/week) coping strategies were borrowing food or relying on help from a friend or relative, relying on less preferred/ less expensive foods and rationing the money one had and buying prepared foods; they were used by 28%, 26%, and 22% households, respectively.

The coping strategies used quite frequently (1-2times/week) were relying on less preferred and less expensive foods, limiting the portion size of food at mealtimes and restricting the consumption of food by adults and letting the small children to eat; these strategies were used by 25%, 24%, and 19% households, respectively.

The coping strategies used the least frequent (once in a week) were purchasing food on credit, rationing the money one had and buying prepared foods and reducing the number of meals eaten

per day and these strategies were used by 35%, 32% and 25% households, respectively (Table 5.19).

The CSI score of the households indicated that as the severity increases the frequency of the households decreases (Table 5.20).

Table 5.19 Utilization of food consumption coping strategies by household in the past 30 days (N=72)

Food Consumption coping strategies	Percentage Utilization (%)				
	All the time? Everyday	**Pretty often? 3-6 times per week**	**Once in a while? 1-2 times per week**	**Hardly at all? <1 times per week**	Never 0 times per week
a. Rely on less preferred and less expensive foods?	1 (1%)	19 (26%)	18 (25%)	12 (17%)	22 (31%)
b. Borrow food, or rely on help from a friend or relative?	1 (1%)	20 (28%)	3 (4%)	8 (11%)	40 (56%)
c. Purchase food on credit?	0 (0%)	11 (15%)	2 (3%)	25 (35%)	34 (47%)
d. Gather wild food, hunt, or harvest immature crops?	1 (1%)	5 (7%)	0 (0%)	11 (15%)	55 (76%)
e. Consume seed stock held for next season?	0 (0%)	11 (15%)	0 (0%)	10 (14%)	51 (71%)
f. Send household members to eat elsewhere?	0 (0%)	2 (3%)	0 (0%)	8 (11%)	62 (86%)
g. Send household members to beg?	0 (0%)	0 (0%)	0 (0%)	1 (1%)	71 (99%)
h. Limit portion size at mealtimes?	1 (1%)	4 (6%)	17 (24%)	14 (19%)	36 (50%)
i. Restrict consumption by adults in order for small children to eat?	1 (1%)	7 (10%)	14 (19%)	12 (17%)	38 (53%)
j. Feed working members of HH at the expense of nonworking members?	1 (1%)	4 (6%)	11 (15%)	10 (14%)	46 (64%)
k. Ration the money you have and buy prepared food?	0 (0%)	16 (22%)	9 (13%)	23 (32%)	24 (33%)
l. Reduce number of meals eaten in a day?	0 (0%)	11 (15%)	8 (11%)	18 (25%)	35 (49%)
m. Skip entire days without eating?	0 (0%)	0 (0%)	1 (1%)	9 (13%)	62 (86%)

Table 5.20. The distribution of the surveyed households based on their Coping Strategy index (N=72)

CSI score	Frequency	Percentage
< 50	24	33%
51-65	19	26%
66-80	18	25%
> 80	11	15%
Total	**72**	**100%**

CHAPTER 6: DISCUSSION

This section discusses the results obtained from the study households' livelihood assets (Human, social, physical, natural and financial), livelihood strategies such as farming, labour, trading and outcome on food security. It also discusses the outcomes of the coping strategies implemented by the households. It compares the findings of this study with other similar studies conducted in different places. It also interprets the results of the study for the whole Peasant Association.

6.1 Socio-biographic of FGDs and KIs

The focus group discussions were carried with different sex, age groups and livelihood strategies. This was done to have a clear picture of the different livelihood and coping strategies of the communities and see the problem from different perspectives that would help to be able to triangulate the data, verify and complement with the household level information. The methodology used for the selection of the households was random which is commonly used to draw participants from large defined group and also those who were familiar with the topic, known for their ability to respectfully share their opinions, and willing to volunteer about 2 hours of their time (Browell, 2014).

The key informants were experts from different offices who had information on different aspects of the communities' livelihood. Thus, "qualitative, in-depth interviews of 15 to 35 people selected for their first-hand knowledge about a topic of interest are conducted. The interviews are loosely structured, relying on a list of issues to be discussed. Key informant interviews resemble a

conversation among acquaintances, allowing a free flow of ideas and information. Interviewers frame questions spontaneously, probe for information and take notes, which will be elaborated later on" (USAID, 1996; MacFarlan, 2014).

Focus group discussions and key informant interviews were used for the qualitative data collection method. The advantages of these methods are cost effectiveness in both resource and time; open-ended question are used for discussion that helps to collect specific views on behaviours or attitudes (Berg, 1998). Focus group discussions gives opportunity for collective thinking and recommendation (Sussman et al., 1991).

6.2. Human Capital

This section discusses the human capital of households and its relationship to their livelihood strategies. It also discusses the division of labour between households and its effects on livelihood strategies.

6.2.1 Age of Respondents

The majority of male heads of households in *Abela Lida* PA were between 41-50 years of age. On contrary, the majority of females were between 20-30 years of age. In a previous study conducted in Ethiopia, it was reported that girls married early had significant age differences compared to that of their spouses' ages and that often compromised the girls' ability to make decisions on family planning and childbearing in the marriage (Erulkar, 2013).

The Population Council (2014), reported early marrying of girls as disadvantageous. The study conducted in Ethiopia revealed that (78%) of girls married at age 15 had no education which implies they possess very limited skills and capabilities (Erulkar, 2013).

The result did not show significant relation between age and choice of different farming practices which might be due to the mixed farming they practice. However, a study was conducted in Nigeria to determine the socio-demographic factors that influence farmers' decision for livelihood diversification and to examine the effect of livelihood diversification on rural households' income. Among the socio-demographic factors the age of farmers had more (97%) impressive influence on farmers' livelihood diversification engagements (Nasa'i et al., 2010).

On the other hand, Zakaria (2009) showed that younger women respondents aged below 30 years had better ability to reduce vulnerability to external stress of seasonality and shocks than older women respondents aged above 60 years, in terms of improving their livelihood capital to advance their livelihood sustainability.

The life cycle hypothesis relates productivity to age in human capital. According to this hypothesis, income and livelihood asset security increase with age early in the life cycle and then decrease with age late in the life cycle (Mpofu, 2014).

Similar to the national ratio, the age of the population in the study area reflects that of a developing country; having a flat base of population, due to early marriage and high level of fertility rates with low life expectancy (CSA, 2013).

6.2.2 Household Size

The majority of households in this region had number of occupants ranging from 5-8 with an overall average of close to 7. This is in line with the national average fertility rate of 6 children per woman in the rural areas of Ethiopia (Susuman et al., 2014). Early , low use of contraceptives and the social and economic value of children in the culture would be the main reason for it. Similar results including high level of fertility, depressed status of women, extent of unwanted and mistimed pregnancies were reported by other studies in the country (CSA, 2011; Alemu, 2003).

Households who rely on agriculture and mixed farming require much labour for their activities hence the acceptance of large family size is a norm in Ethiopia. Large family size means shorter time to do farm work as farm workload is divided among family members (Mekonnen and Worku, 2011). Thus, because of the common practice of having large family size that led to high population pressure, the natural capital is being depleted resulting in limited farm size and livestock.

An increase in family size also showed increase in the number of households involved in off farm activities. In a study conducted in *Abdelali*-Martini and Hamza (2014), households with larger family size had contributed to increase in the number of migrants that increased non-agricultural activities that had a positive impact on the rural livelihood that contributed significantly to their annual income. However, in *Abela Lida* PA, the rate of migration by the community was low.

6.2.3 Marital and Religious Status

A huge majority of the respondents were married. Similarly, the national survey for women aged 15-49 years found that 61% were currently married, 3% were living together with a man, whereas, from women aged 45-49, only 15% never got married which indicated that marriage is nearly universal in Ethiopia (CSA, 2014).

Another study conducted in India showed that married rural youth who practise agriculture and other income generating non-agricultural activities showed significant positive result in terms of livelihood diversification than unmarried ones which might be due to the greater responsibility associated with marriage (Umunnakwe et al., 2014).

In terms of religious affiliation, the majority of the respondent households were Christian who attended the Protestant Christian Church. Most of the *Sidama* people converted to Protestant Christianity during the *Derg* regime resulting in only 15% who exercised traditional beliefs (Sillan, 2013). The reason for this high level of conversion was related to capitalism, "the new doctrine of Christianity implied that people could be made equal by earning and possessing money" (Hamer, 2002; Lackovich-Van Gorp, 2014). However, Lackovich-Van Gorp (2014), observed no much change on the livelihood and traditional practices of the households. On the other hand, Woldemariam and Fetene (2006) indicated that changes in religion in *Sheka* zone of the same region had changed the people's perceptions and respect of taboos regarding cultural forests, sacred sites and sensitive habitats such as riverine forests, wetlands and rivers. Together with the increased population that need more fuel, the use of the forest for fuel source also increased.

6.2.4 Educational and Health Status

Education wise, the majority of respondents never enrolled in primary schools or dropped out of schools and poverty was put forward as the main reason for this. According to the Central Statistics Agency (CSA) (2014), nationally, 49% females and 37% of males had never enrolled for school. This result is almost similar with the survey result which showed that 43% never enrolled and 18% read and write only.

In some rural households of Ethiopia, unskilled, off-farm wage employment seekers are desperate due to lack of land access and viable livelihood opportunities whereas urban salaried jobs (such as in government offices or private companies) are attractive opportunities for those with education and resources. Land-rich households are more able to afford to educate their children increasing their chance to obtain better paying jobs (Bezu and Holden 2014).

In line with the study findings, other studies also showed a strong relation between education and non-farm employment (Reardon et al., 2001). Education is linked to shifting away from agriculture to non-farm wage employment activities that have higher earnings (Winters et al., 2009). According to Reardon (1997), better skill and education increases business start-up and wages received from non-farm activities, as observed in Ghana by Jolliffe (1995) and Schultz (1996) in Cote d'Ivoire by Schultz (1996), in central Kenya by Bigsten (1984) and Collier and Lal (1986), in Malawi by Simler (1994), and in western Kenya by Francis and Hoddinott (1993). Reardon et al., (2001) concluded in a study at Latin America that education helps the poor to get better paid rural non-farm income activities.

The level of education also increases migration (Bezu and Holden, 2014). They indicated that while the push factors for migration from rural to urban areas of Ethiopia are population pressure, land scarcity, lack of alternative livelihoods, and climate shocks, the pull factors are employment opportunities in construction and manufacturing sector and better infrastructure and technology. Level of education was strongly related with migration as it gave more information on opportunities outside of their surrounding and increase expectation for better life.

The majority of respondents who had been sick for a minimum of 3 months in the past one year had access to health care facilities, health centres and clinics were the most solicited. However, the coverage of health facilities particularly to severe sicknesses is poor and only better off households get the health facilities. Thus, severe sickness affects the capital of the households particularly of the poor households.

A study by the Ethiopian Economics Association (2009) indicated that health care is affected by poor availability of health facilities, human resources, inappropriate policies and strategies that focus on curative than preventive care whereas, from the demand side income, education, culture and location created inadequate utilization of the services. The study indicated that better education and information improves the communities' health service utilization.

In low and middle income countries, poor health is a source of destitution because households spend their incomes, borrow money and even sell their assets and livestock for treatment (Alam and Mahal, 2014). Access to good health care is likely to be afforded by better off households than poor households hence increases inequality to health care access (Evans et Al., 2007).

6.2.5 Working Members of Households and their Activities

There was at least one working member per household and the majority of households had 2-3 working members. Poor rural households with many members often implement nonfarm activities to compliment to their agricultural activities and add their farm income (Micevska and Rahut, 2008). It has been reported that in Ethiopia households participates in off farm activities to improve their economy and household food security particularly when agricultural production decreases (Endale et al., 2014).

The majority of households had at least one working member who is involved in off-farm activities. However, compared to the number of people who can work, the number is very low. The two major reasons provided for household member not to be involved in off farm activities were lack of skill and proper training and lack of start-up capital to do business. This is in line with the finding that the main determining factors for practising non-agricultural livelihoods were family job, rural life inclination, success inspiration and economic motivation (Umunnakwe et al., 2014).

The majority of respondents in this study had not attained secondary school education and were therefore less likely to secure specialised jobs. According to Umunnakwe et al., (2014) an increase in the level of education in rural area showed lower involvement in both agricultural and non-agricultural activities leading to specialized jobs.

Poor households who could not afford to educate their children and did not have enough farmland to cover their livelihood sought unskilled labour work in off-farm activities. The shortage of land is forcing the rural youth away from their agricultural livelihood (Bezu and Holden, 2014).

6.2.6 Division of Labor in Households

The study results show that there is considerable division of labour among household members. Women are responsible in child rearing, *enset* processing, and in selling agricultural products. On the other hand, male are involved in agricultural and manual work activities. These findings are in line with a study conducted in *Sidama*, which found that Ethiopia the role of women in agriculture was limited to manure preparation, harvesting, and storing agricultural products. It is not women's duty to plough, hoe, sow and weed. Producing food and cash crops is also the responsibility of men (Kifle, 2013).

6.3 Social capital

6.3.1 Social Networks

Formal networks such as cooperatives and unions provide farmers with fertilizers, improved seeds and also participate in market stabilization. Members of cooperative unions have been found to make better use of agricultural technologies such as fertilizer adoption and use of pesticides and were more involved in off farm activities (Abebawa and Haileb, 2013).

6.3.2 Information on Policies, Conventions and Legislations

The majority of the respondents (83%) had access to information on new policies or strategies that directly affect their livelihood mainly from the offices of farmers' associations, media and family members and friends. The farmers also use mobile phones and few households use TV and radio. Some respondents travel to different towns for trading and get different information and they share it with their neighbours and relatives when they come home. The national survey result particularly for rural households indicated that the availability of mobile phones had significantly increased access to information and communication; 48% of households had cell phones, 34% had radios, 10% had televisions, and 3% had landline telephones (CSA, 2014).

The study results also indicated that information related to cash crops, particularly coffee, was obtained from the Ethiopian Commodity Exchange billboards. It shares market prices mainly of coffee, sesame, cowpea, maize and wheat that are disseminated using websites, electronic billboards in 250 rural markets. Radio, television, newspaper, newsletter, SMS and interactive voice mails are also used to disseminate information (David-Benz et al., 2011). This has made it simple for farmers to sale their products by avoiding intermediate brokers.

Information reduces the risk and uncertainty of agricultural production and marketing. According to the report from UNDP (2012), though use of ICT in Ethiopia is poor even compared to other Sub Saharan Africa, farmers training centres (FTCs) are situated in each *kebeles* to provide training and technical support on agriculture by development agents with the support from the district

agricultural offices. This is the main forum for the government to disseminate important knowledge and technology to the farmers.

6.4 Physical Capital

This section covers households' access to housing, drinking water and sanitation, sources of fuel and electricity, and transport which are important for the livelihood of the households. The major components that come under the physical resources are mainly infrastructural aspects and access to good production resources like affordable transport, secure shelter and buildings, adequate water supply and sanitation, affordable energy and access to information needed to support livelihoods (Kollmair and Juli, 2002).

6.4.1 Access to Housing

The houses of the majority of the households had 1-2 rooms hut (cultural houses) made of grass roofs. This finding is similar to that of the economic ranking study conducted in *Bule woreda* of the Southern region which showed that better off households had houses made up of corrugated iron with separate kitchens whereas the huts of the poor households were made of grass (Abebe et al., 2014).

6.4.2 Drinking Water and Sanitation

Bono (public tap water) is the main source of water in the study area. This is well beyond the national coverage of 46% of the rural people in the country have access to improved drinking water

from which 16% have pipe water, 16% have a protected well, and 12% have a protected spring (CSA, 2014).

Although households have access to public tap water, many households still travel on average from half to an hour to get there and also queue up for another 3 to 4 hours to get the water, all these can negatively affect the quantity and quality of water consumption of households (Mogues et al., 2011).

It should be noted that in sometimes, community wells are also used. The water from community wells is often good in quantity and poor in quality in the rainy seasons and poor in quantity and better in quality in the dry season (Butterworth et Al., 2013).

The study results also show that most of the households have private pits as a toilet and some of them use communal pits. This finding is similar to the finding of the national survey. In the latter survey pit latrine or pit latrine without slabs was found to be the most common type of non-improved toilet facility in in rural areas of Ethiopia, they were owned by 57 % of the households (CSA, 2014).

6.4.3 Source of Fuel and Electricity

Wood is the main source of fuel for households in this region. In a similar study, conducted in Ethiopia, wood was found to be the main source of energy for rural households (Mogues et al., 2011). In Sub Saharan Africa, 80% of the rural population are considered to have no access to

electricity hence the usage of firewood, animal dung and agricultural crop residues serve as sources of energy for cooking (OECD/IEA, 2014).

These is due to limited access to electricity and other improved stoves. Köhlin et al., (2011) indicated that rural households usually have limited financial resources coupled with limited market access to buy and use fuel or other improved stoves for cooking. So they have resorted to using traditional three-stone cooking stoves that are low in energy efficiency. On the other hand, the high use of wood causes increase exposure to indoor air pollution (Scheurlen, 2015), increase in deforestation, land degradation and climate change which are environmental challenges that affect rainfall and access to quality water (Mogues et al., 2011).

The main sources of energy for light are gas and paraffin. Only 10% of the households use electricity for light. Only 21% of the households in Ethiopia have access to electricity and the majority 89% live in the urban areas whereas only 6% of them live in rural parts of the country (CSA, 2014). Other studies also showed that more than 60% of the households in countries such as Uganda, Kenya and Ethiopia rely on kerosene as a source of energy for light (Lam et al., 2012).

In addition to poor access, the high cost of electricity and unreliability in its supply are other reasons for these developing countries to use kerosene as a source of energy for light (Lam et al., 2012). The contribution of electricity to improve the households' livelihood was high. According to Alliance for Rural Electrification, (2014) the main contributions of electricity for development are

- lessens hunger and increases access to safe drinking water through food preservation and pumping system,
- fosters education by providing light and communication tools,
- improves gender equality by relieving women of fuel and water collecting tasks,
- reduces child and maternal mortality as well as the incidences of disease by enabling refrigeration of medication as well as access to modern equipment and
- with sound environmental technologies, it directly contributes to global environmental sustainability.

6.4.4 Access to Transport

The majority of respondents use minibuses as a mean of transport and close to 25% of them walk on foot. The reason for this could be that only a few households in urban areas own a means of transport in the country and only 1% of the rural households own means of transportation. The rest of people walk on foot, use animals or public transport (CSA, 2014).

The result of this study has shown that the PAs have good roads, good transport availability and good access to market. All these contribute to improving the livelihood of the households and increase the opportunities for different livelihood strategies. Access to roads and transport has been found to improve the livelihood diversification of the rural households in Northern Ethiopia by increasing access to market that connects supply and demand, opportunities for non-farm activities and access to social services (Elias & Negatu, 2012).

6.5 Natural capital

In this section, the results of the study on the availability of land for agriculture, community grazing land and water for irrigation and the contribution of these assets to livelihoods will be discussed.

6.5.1 Access to Natural Resources

Land is one of the main assets for agriculture based livelihood among rural households. A vast majority of households own land which is inherited from their parents. The law in the country forbids the sale of land (Bezu & Holden, 2014). However, due to increasing population pressure, the average size of land owned by the households is small (less than a hectare) and this is in line with the findings of a study conducted in *Sidama* in which 69% of households' farm size was found to be < 0.5 hectare (Menbere, 2014). Although the constitution of the country provides the right to own land by rural households, there are no more open lands to be distributed to the youth; thus the land size they possess is small (Bezu & Holden, 2014). A study in the Northern part of Ethiopia also showed that most of the households (55.5 %) owned from 0. 2 to 0.5 hectares, 17.7% owned more than one hectare, 13.3% owned from half to one hectare and 11.1% owned 0.1-0.2 hectares of land (Kassa & Eshetu, 2014).

6.5.2 Availability of Grazing Land and Community Land

The findings of this study show that the population pressure in the study areas has been increasing and this has led to the destruction of the natural forests and grazing areas to be used as agricultural land. Thus, only 6% households have communal land for grazing that cannot be used for planting

during the rainy seasons. This also limits the number of animals the households can own. Similarly, a study conducted in *Bule woreda* of Southern region showed that due to land scarcity, only 1.5 hectares were considered as a communal land while the rest land was owned by individuals (Abebe et Al., 2014). Another study in Northern part of the country showed that only (9%) of the area was used for grazing (Kassa & Eshetu, 2014). According to Abebe et al., (2014), shortage of grazing land had forced the people in *Bule woreda* to limit the number of animals they possess and to stall feed their livestock at home.

6.5.3 Access to irrigation

Irrigation is a useful source of water for agriculture and reduces the risk caused by unpredictable rainfall. It plays a significant role in increasing land utilization, stabilizes and improves crop production and ensures farm husbandry that sustains growth and development by ensuring food security, alleviating poverty and improving the livelihood of households (Hordofa et al., 2008). Despite its benefits, no use of irrigation has been reported by households in the study areas. Similarly Bekabil (2014) and CSA, (2013 and 2014) reports indicated that the lack of irrigation facilities and water scarcity were among the key agricultural constraints. In general, irrigation's contribution to Ethiopia was estimated to be about 9% of the agricultural GDP and 3.7% of the total GDP for the year 2009/2010 (Hagos et al., 2009). In the *Deder* district, located in the Eastern part of Ethiopia, farmers have access to irrigation and this has led to a significant increase in the income and livestock holdings of households (James & Maryam, 2014).

6.6 Financial Capital

Financial capital includes savings, credits, and remittances from family members working outside their homes and also the households' sources of income and expenditure (Bezemer & Lerman, 2003).

6.6.1 Sources of Income

The majority of households in the study areas obtain their income from sale of the cash crops such as chat and coffee and from the sale of livestock such as sheep, goat and cattle. A similar study in *Sidama* found that the main source of income for the majority of the households (around 93%) was from agriculture which was their main livelihood strategy (Menbere, 2014).

PSNP that was implemented by the Bureau of Agriculture was also another source of income for poor households. These households participate in labour activities and get transfers for 6 months of the year during hunger season (Berhane et al., 2013).

Living close to market places might also be a reason to increase the engagements of farmers in cash crops. In the same Zone the production of chat and maize increased with proximity to roads and markets (Abebe, 2013).

Daily labour is also a source of income for the poor households. Households who rely on subsistence agriculture on small lands complement their income from non-farm activities such as casual daily labour and petty trades (Gecho et al., 2014). However, the daily labour opportunities are only available during the coffee harvesting season. This has reduced the number of individuals

involved in daily labour activities. Hence, the low non-farm employment has contributed to poverty in the areas concerned (Endalew et al., 2015).

6.6.2 Access to and Use of Credits and Savings

Access to credits and savings improves the households' livelihood by enabling them to engage in income generating activities. Credit provision is an important tool to improve the wellbeing of smallholder farmers and increase their productive capacity by financing investment in their human and physical capital (Baiyegunhi & Fraser, 2014).

The majority of respondents had not borrowed money and the reason they gave was that, they never had the need to borrow money and only a few reported the non-existence of lending institutions, lack of collateral or high interest rate as their reasons. Studies showed that farmers in countries where subsistence based agriculture with low use of input is in practice, where unpredictable weather is common, where the price of agricultural products are low and where good policy are not in place, had little interest in making use of agricultural credit except for fertilizer which is supported by the government (Samuel, 2003; Bekabil, 2014). A study conducted in *Hulla woreda* of the *Sidama* zone in Ethiopia revealed that membership of farmers to saving and credit associations was very low and out of the small proportion who are members, only a few used the credit service to diversify their sources of income and often the small amount of loan disbursed were not repaid (Adi, 2013).

Close to half of the respondents did not save money for the future and the reason for this was lack of excess disposable income and for the few who saved money, saving was in the form of

depositing money in a safe place at home or buy animal that could be converted to cash. This is in line with the findings of a study conducted in Sidama which indicated that farmers use cattle and informal network connections between cattle owners for saving with only few households saving cash. Furthermore, poor saving culture was identified as one of the reason for food insecurity in coffee producing areas (Handino, 2014).

6.6.3 Sources of Household Expenditure

Expenditure is also a crucial indicator of the households' food security status and livelihood. The finding indicated that it mainly depends on the amount of resource they have and on their income.

In this study, the bulk of household expenditure was on the purchase of food, building of houses and agricultural inputs while a small amount was spent on other items such as loan repayment, land tax and others. This finding is similar to that reported for Southern Ethiopian highlands where the main sources of expenditure of the community were found to be on food, holiday festivities, school fees, agriculture input loans, land taxes and other expenditures (Handino, 2014). Information from the FGDs in this study reiterated the fact that most poor households spend most of their income on food. Similarly, in Ghana, the amount of money spent on food was higher for rich households than poor households but when expressed as a proportion of total income, poor households spent higher proportion of their income on food (Donkoh et al., 2014). Furthermore, in Bangladesh poor and vulnerable households spend at least half of their budgets on food (Shrestha, 2014). Studies in some African countries also showed that poor households spend most of their incomes on food and other necessities while better off households spent the larger portion

of their income on luxury goods and services (Jacobs, 2009; Umeh and Asogwa, 2012; Donkoh et al., 2014).

6.7 Livelihood Strategies

This study found that the communities in the PAs participate in mixed livelihood activities such as production of cereals, legumes, fruits, *enset*, coffee, chat, livestock, petty-trade and daily labour activities. The type of activity each household performs depends on available resources (Scoones, 2009).

6.7.1 Agricultural Livelihood Strategies

The main livelihood strategies practised by 75% of the respondents were agriculture and trade. Livelihood in the *Sidama* zone is based on mixed agriculture in which crop production is dominant, particularly coffee, maize, haricot bean, root crops such as *enset* and potato, chat and fruits (Menbere, 2014). Educational status, farm size, livestock holdings, social networks, income level, use of fertilizer and improved seed are some of the main factors that determine rural livelihood strategy selection (Gecho et al., 2014).

Coffee and chat unlike *enset* were the perennial cash crops produced by the majority of respondents. Similar study showed that farmers in *Sidama* zone are specializing in coffee and chat crops, replacing the traditional *enset* crop (Temesgen, 2014). Coffee is also one of the most significant commodity of economic and social importance for the country. Approximately 25% of the total population depends on coffee for livelihood income (Baraki, 2013).

The utilisation of the recommended improved seed and fertilizer by farmers has led to higher agricultural yields and profit (Ashamo & Mekonin, 2014). Of those respondents who are engaged in agricultural activity, 75% use agricultural inputs such as chemical fertilisers, herbicide and improved seeds. However, the farmers in the study area were using less than the recommended amount of fertilizer for the crops because they couldn't afford the high prices. In addition, poor rainfall also decreased the provision of manure for coffee and *enset which* resulted in low agricultural productivity. Shortage of money, lack of credit, shortage of farmland, and high prices of inputs were the main reasons for low use of agricultural inputs.

The PSNP transfer did not improve use of agricultural inputs by farmers as the money obtained from it was not enough to pay for fertilizer. Fertilizer was the only input the farmers could possibly access on credit considering that it was also supported by the government policy (Bekabil, 2014).

Similarly, Bekabil, (2014) indicated that in general, factors that have resulted in poor and low agricultural production in Ethiopia are erratic rainfall, limited irrigation schemes, shortage of improved seed varieties, low mechanization, poor rural infrastructure, poor and volatile market linkages.

In addition, to farming and trading, the vast majority of respondents also own livestock. Livestock and their products have major roles in the economy of Ethiopia and contribute to 16.5% of national GDP and 35.6% of agriculture GDP (Ethiopian Biodiversity Institute, 2014; Leta & Mesele, 2014). The composition, ownership and size of livestock kept in the households increased with the wealth status of the households (Handino, 2014).

Oxen and cows unlike goat were the most kept livestock by respondents' households in this study with the majority of them possessing 1-4 animals. In most parts of the country, small ruminants are reared mainly for income generation (Chanie et al., 2014) whereas cattle are used as savings asset (Handino, 2014).

6.7.2 Trading Livelihood Strategies

More than 50% of the population were engaged in both trading and agriculture and 25% of the population also supplemented agriculture with trading and labour for livelihood and only few (1%) engaged in trading only. Access to good roads and markets might be the main reason for involvement of many households in trading as off- farm activities. There is an increase in supply and demand in areas which have access to roads and are closer to markets (Elias & Negatu, 2012). In addition, to these, production of cash crops also encourages households to participate in trading as cash crops motivate farmers to increase their capital for agricultural investment and trading (Achterbosch et al., 2014).

6.7.3. Labour Livelihood Strategies

The poor households gain some income by performing labour-intensive activities such as coffee and *enset* harvesting and processing. Furthermore, other migrant workers come into the Zone during harvest season (USAID, 2005). Similarly, there is a considerable increase in wages and employment opportunities during harvest period in rural area of Africa where there is production of cash crop such as cocoa, coffee, tea and cotton (Achterbosch et Al., 2014).

Some households in this study also benefited from the government productive safety net program that was used to provide cash for half of the year during the hunger season; the households participated in labour on public works in exchange for cash (Devereux et al., 2014).

6.8 Household Food Security and Coping Strategies

Household food security is part of the bigger livelihood security. Poor households have diverse livelihood strategies of which household food security is the main one (Maxwell & Smith, 1992). When a household faces acute shortage of food, it may start to practise coping strategies that might bring negative consequence in its livelihood. The following subsections discuss the findings regarding household food security and coping strategies.

6.8.1 Household Food Security

Dietary diversity is an indicator of the households' consumption of food from different food groups over a period of time (Tembwe, 2010). The dietary intake of households was fairly diverse and most households consumed the following food groups: grains (including cereals and legumes), milk and milk products, meat, and *enset*. A similar result was obtained in a study at the neighbouring *Boricha* district (Tesfaye, 2011). However, the amount varied in different households, indicating poor households take smaller amount of animal products.

At the peak of the hunger season (April-May), maize followed by *enset* were the most consumed staple foods in the households. Arimond and Ruel (2004) reported from surveys done in 11 countries: Rwanda, Zimbabwe, Nepal, Peru, Nepal, Mali, Malawi, Haiti, Ethiopia, Colombia,

Cambodia and Benin that poor households consume food of low diversity and rely heavily on cereals as they cannot afford to buy other food types.

At the peak of the hunger season (April-May), most of the income to buy food comes from the sale of chat and coffee as they are the main cash crops produced in the Zone (USAID, 2005; Menbere, 2014).

Like in *Abela Lida* PA, the underlying causes of food insecurity, in Southern highlands were high population pressure, reduced *enset* production, policy failure, poor job opportunities, recurrent shocks, poor saving culture, shift of livelihood from *enset* to cereal and more focus on cash crops production and depleted household assets (Handino, 2014).

6.8.2 Vulnerability, Seasonality and Shocks

The result of this study indicates that vulnerability is highly related to poverty and varies with seasons. Poor people are more vulnerable to shocks and repeated shocks deplete their assets and make them more vulnerable to form a kind of a vicious cycle (Shiferaw et al., 2014). In *Boricha* district of *Sidama* zone, where the major livelihood of the community is agriculture, their vulnerabilities are related with the seasonal calendar (Tesfaye, 2011). In addition to this, in Eastern and Southern Africa the probability of experiencing shock due to failed season was 10-40% during the main cropping calendar (Shiferaw et al., 2014).

The hunger season for the households in the study area starts often in April and continuous up to the green maize harvest in June, but the hunger season in most of Southern highlands is from

March to July (Handino, 2014). The market price for staple foods decreases in the harvest time because of high supply and low demand and increases in the hunger season because of high demand and low supply. The main shocks that affected the livelihood of households were irregularity of rainfall, recurrent drought, high prices of staple foods, high price of fuel, decline in coffee price and coffee diseases (USAID, 2005).

Drought and the escalation of fuel and food prices are the main shocks affecting the livelihood of almost all the households in the study area. More than 75% of the households had also faced shortage of fuel or electricity and reduced income. Similarly, a study in the Horn of Africa showed that drought and increase in the prices of staple foods had affected the people in Ethiopia, Somalia, Kenya and Djibouti resulting in high numbers of needy people (Maier, 2014). Studies conducted in Ethiopia also indicated that, unlike with the rural households, the major shocks that affected urban households were failure in purchasing power caused by escalating market prices and increase in expenditure of the households (WFP & UNICEF, 2009).

6.8.3 Difficulties and Shock to Livelihood Experienced by Households in the Past Year

More than 50% the households faced shortages of food or money to buy basic livelihood needs in the past year. Last year the difficulties or shocks experienced by 50% or more of the households starting with the most experienced were: drought, high fuel price, electricity or fuel supply cuts, reduced income and crop pest or diseases. At the same time, recurrent drought, rise in food prices, and reduced crop production were also reported in some communities in the Horn of Africa (Sasson, 2012).

6.9 Household Coping Strategies

Household coping strategies are also livelihood strategies implemented when the households face shocks and stresses on their livelihood (De Haan, 2006). As observed in the study, households have faced shortage of food during the survey period; it was during the hunger season. Almost 88% of the households had implemented at least one of the coping strategies. Most of the time, they changed their diet, reduced food portions, passed a day without meal or sent out members of the family to eat with their relatives or neighbours. Some of these coping strategies are short term strategies and even some can be destructive to their livelihood in the long term (Maxwell et al., 2003).

6.9.1 Coping Strategies Applied to Food Shortage in the Past 30 days

The coping strategies utilised by 50% or more of the households, starting with the most used were: consuming less preferred foods, decreasing the number of livestock and crop/livestock adjustment (the selling of livestock to buy more seed or vice versa).

Other studies also showed that the first coping strategies normally reducing expenditure on some 'non-essential' materials for instance clothing, social functions, on food and medical treatments and adjusting food balance (Pandey and Bhandari, 2009) and if they cannot cope with this, they will be forced to reduce the quantity and frequency of meals (Shiferaw et al., 2014).

Similarly Qureshi, (2007) indicated that at times of famine, especially when there is lack of or absence of external assistance, an increase in the sale of livestock has been observed in Ethiopian villages.

Migration of a household member or the whole family and selling productive assets during the period of severe food shortages was practised by few households in this study.

6.9.2 Food Consumption Coping Strategies

Coping strategy index (CSI) is a tool used to indicate household food security in an easier way to understand and associates well with complex food security measures (Maxwell, 2008). Many studies have shown that the coping strategies that households utilize against food insecurity are changes in food consumption patterns, rationing food intake, migration, liquidation of assets and borrowing money (Maxwell et al., 2003; Qureshi, 2007).

Similarly, the relative CSI weight score based on the different stages of coping strategies also showed that a third of the households were slightly food insecure and implemented mainly change of diet and strategies that increase food availability. On the other hand, 15% of the households scored a very high CSI, which indicates severe food insecurity. These households had started sending members to eat elsewhere and food rationing. This section will discuss the various types of coping behaviours and respective coping strategies used by households.

6.9.2.1 Dietary Change

Dietary change as a coping strategy was implemented by the vast majority of households in the form of relying on less preferred or less expensive foods and 50% of the households used this method from one to six times a week. Studies conducted in different towns of Ethiopia also found that the most common coping strategy was to change their diet to less preferred and less expensive food (Bryan, 2013).

6.9.2.2 Increase Short Term Food Availability

Under the "increase short term food availability" coping behaviour, the most used coping strategy was purchasing food on credit. The other coping strategies under this coping behaviour were used at least once by less than 50% of the households. Similarly, other studies conducted in Ethiopia indicated that the households preferred borrowing food from neighbours or relatives than selling their assets (Webb & Braun, 1994; Bedeke, 2012). However, the value of assets owned by food insecure households were lower than the assets of food secured households (Qureshi, 2007). The fact that 30% of the households had consumed seed stock at least once a week during the last hunger season implied that these households were in severe food insecurity (Handino, 2014).

6.9.2.3 Decrease the Numbers of Household Members Consuming Food

Very few households used the coping strategies under this category. Not more than 14 households used any of these coping strategies once a week. Similarly, Laar et al (2015) found in Ghana that

sending household members to eat elsewhere, to beg and harvesting immature crops were the least employed coping strategies.

On the other hand, Tembwe (2010), in her study conducted in Botswana found that unemployed young single mothers having children under 9 years of age, 50% of the mothers sent their children to eat elsewhere once in a while and few of them did it always.

6.9.2.4 Rationing Strategies

In general, coping strategies in this category were the least practised by the households in the study areas. Rationing money was relatively practised by almost 50% of the households and skipping meals for the whole day was the least used coping strategy. A study conducted in Swaziland reported skipping meals as a coping strategy was practiced by more than 30% people who did not eat for the whole day (Plus News, 2009).

CHAPTER 7: CONCLUSIONS AND RECOMMENDATIONS

7.1 Conclusions

7.1.1 Conclusions Regarding Livelihood Capital

The human capital of the households shows that adults who are the most productive group in the population are comparatively smaller in number than the rest of the groups (children and elders) that are dependent on them. Almost half of the household heads (47%) were never enrolled to school. Only 32% households started primary school and 12% of them went to high school and 1.5% of the reached university level. The household size is big and creates labour force mainly for agricultural labour but skilled labour, is low because of lack of education and training.

Existing social networks, farmers' unions and cooperatives, support farmers in the distribution of agricultural inputs and in the marketing of agricultural products. Physical networks are not in good condition in the study areas. In the study areas, the main sources of water are public water taps, people travel long distances and queue for hours wasting their time and sometimes, during the dry seasons, the water taps stop functioning. Electricity fails constantly and people are forced to travel long distances to fetch water. Electricity is not dependable so wood and fuel are the main sources of energy for cooking and light, respectively. The lack of these facilities has affected the communities not to use various technologies for development. But the study areas have good access to roads, transport and market.

Population pressure, high dependence and unregulated utilization have exhausted the natural resources in the surrounding areas. Although all households possess land, its size is small and grazing land is almost none existent.

Cash crops are the main sources of income, followed by petty trades and labour. The community has poor saving culture and low demand for loan. Food takes the biggest share of expenditure in poor households.

7.1.2 Conclusions on Livelihood Strategies

Households implement mixed agriculture by producing cash crops, cereals, legumes, fruits, *enset* and livestock together with small trading and labour activities as the main livelihood strategies derived from the resources they have. Their agriculture is rain-fed and repeatedly negatively affected by recurrent drought, frost, low input of fertilizer and improved seeds. The resources of households differ more in quantity than in type. Cash crops encourage farmers to diversify their livelihood: better households engage themselves in small trades and poor households work on related labour activities.

7.1.3 Conclusions on Factors Affecting Livelihood Strategies

Agricultural livelihood strategy – Factors that determine communities to follow agricultural livelihood strategies are: land availability, human labour and indigenous knowledge transferred to next generations. The households' agricultural activities are very traditional: the land is small, using agricultural technologies is very limited, saving and credit culture is also poor, no irrigation,

limited electric power and poor method of forage production for livestock production. Only few households are members of the farmers unions or cooperatives. These institutions supply inputs and help farmers in marketing their products.

Labour livelihood strategy – The factors that make poor households choose this strategy to complement their livelihood are shortage of land (own smaller land) and low level of education. Some households are beneficiaries of the government productive safety net program for half of the year. Most of these households also involve in agricultural livelihood at small scale. Other factors that affected their livelihood diversification are limited education and lack of start-up capital. Poor drinking water source and limited electric power also affected their productive time and labour. There are no social networks to support labour opportunities and skilled training for these groups.

Trading livelihood strategy – Some of the households owned bigger land and more livestock that resulted in better initial capital for trading. Thus, they have relatively better diversified livelihood through crop and livestock production and trading. Others have less capital and resource and they do only petty trading. Production of cash crops in the area, access to roads and market are good opportunities for the households. However, most of their trading is limited to petty trading. The factors that limited households from bigger trading are limited capital, limited use of saving and credit, low level of education, low income from agriculture, limited drinking water source, and limited use of electric power. The social networks of farmers union or cooperatives are limited in capacity to provide support on the trading.

Some households did not get loans because of the non-existence of lending institution, lack of collateral and high interest rates.

7.1.4 Conclusions on Livelihood Outcomes – Household Food Security

The study has shown that the staple food in the study area has changed from *enset* to maize. Both maize and *enset* are starch based foods that are low in micronutrients, which are mainly obtained from vegetables, fruits and animal productions. The trend in household food security and livelihoods has improved because of the improvements made in basic social services such as access to agricultural extension services, health extension programs, drinking water, schools, and mobile services and in some places because of access to electric power.

Seasonality affects agricultural production, activities, prices, health, and employment opportunities. It also affects the households' vulnerability as the food produced in the farmlands cannot cover their needs for the whole year, resulting hunger seasons before the next harvest period. Thus, shortage of agricultural land as the result of high population pressure are the main reasons for chronic food insecurity and poverty. In addition to these factors, there are other shocks that aggravate the food insecurity of the households mainly during the hunger seasons. Recurrent drought and irregular rainfall is the main shocks followed by coffee price failure and high costs of staple foods.

Increase in the price of fuel is the main shock that negatively affected the food security and livelihoods of the households. High prices of food also affects almost all households as most of them rely on purchase particularly during the hunger season. The other major shocks are price

fluctuations in coffee and failure in purchasing power of the money. In general, around 63% of the households has faced shortage of money for purchase of food, medical expenses, cooking fuel and school fees.

The community is not used to migration as there are enough general labour employment opportunities in the study area. However, after recurrent shocks due to drought and price crash, some men have started migrating in search of jobs. The households do not obtain sufficient food from own production as most of the land is covered by perennial crops such as coffee.

7.1.5 Conclusions on Coping Strategies

The results of coping strategy index (CSI) show that the households are food insecure during the lean season and use different strategies to cope with food shortage. Most of the households change their diet to less preferred foods as the first coping strategy. The next frequent coping strategy was selling their livestock to purchase food as they usually buy animal or put grain to save money for emergency cases. Then crop or livestock adjustments are used frequently followed by loan or borrowing from neighbours or relatives. Some households reported that they rely on relief food. Migration and sale of productive assets were the last resorts during severe shortage of food.

7.2 Recommendations

Based on the findings of the study, some recommendations are made to improve the livelihood strategies of the community. The main recommendations to improve the livelihoods of the households are:

- raise awareness and work on behavioural change activities in the communities to limit their family size based on the resources they have,
- improve access to both informal and formal education, including vocational and technical schools by the community which can increase employment and other off farm activities,
- strengthen improved drinking water supplies so that they households can use the time they spend searching of water for productive activities,
- improve access to saving and credit associations for the community to become involved in off farm activities and
- increase electricity supply to the rural households so that they can rely more on electric power for light, cooking and also improve health facilities, schools and promote development of small factories and protect trees.

The recommendations for the rain fed agriculture that is cultivated in small land, to improve the extension services and market condition are:

- introduce construction of water harvesting ponds to use for the production of high yielding crops, including vegetables that helps as additional income generation activity and also diversify the diet of the community,
- increase the provision of quality seeds particularly drought resistant and high yielding improved seeds. Also improve the supply for fertilizer and facilitate credit system for low income households and
- give training on sustainable forage development methods and improve access to water supply for livestock and access to artificial insemination services to up-grade the existing breeds and veterinary services.

Recommendations based on findings of coping strategies are:

- Transfer timely and sufficient PSNP to cover household food needs during the hunger season,
- Strengthen food security monitoring and early warning systems to get information on coming shocks timely and
- Provide short term relief responses before communities implement negative coping strategies. During relief intervention targeting of the households, timeliness of the response and sufficient quantity and quality of food must be assured.

In general, policy makers should consider diversified livelihood strategies that encourage various income generating activities, increasing access to credit and creating awareness and improving saving culture of the community which are vital to improve their livelihood.

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APPENDICES

APPENDIX A: CONSENT FORM

Annex I. Ethics Letter of Consent

Dear Sir/ Madam,

I am a student at the University of South Africa. Currently, I am doing my MSc Theses by conducting a survey on the livelihoods and coping strategies of rural households in this Abela Lida Peasant Association. I would like to ask you some questions about yourself and your family. The interview will take only about 1 hour to complete. Any information that you provide will be kept strictly confidential and will not be shown to other people. This survey will help both the student and other offices working in the area in understanding of the livelihood and coping strategies and the necessary interventions to improve the livelihood of the community.

APPENDIX B: PERMISSION LETTERS

Letter to Shebedino District Rural Development and Agriculture Office

11 April 2011

To: Head, Rural Development and Agriculture office
Shebedino district,
Leku

Permission to conduct research

Dear Sir,

I am kemeria barsenga, a student at the University of South Africa in Masters of Human Ecology. I would like to ask permission to conduct a research on Livelihoods and coping strategies of rural households in rural Abela Lida peasant Association of Shebedino district, southern Ethiopia.

The findings of this study will be documented and can be used as a reference to design appropriate policies and programs to address rural development and food insecurity amongst rural households in Shebedino area as a whole. The community of Abela Lida PA will also benefit from the research as it will create awareness about the different livelihood strategies.

Yours Faithfully,

Kemeria Barsenga

Letter from Shebedino District Rural Development and Agriculture Office

Shebbadinni Worzdi
Giwirinnu Bo/mine
የሸበዲኖ ወረዳ ግብርና
ጽ/ቤት

REF-no-RS-2/
13 April 2011

Head,
Rural Development and Agriculture office
Shebedino

To whom it may concern

Kemeria Barsenga Kedir, a student of UNISA, has requested to conduct research in Shebedino district, particularly Abela Lida peasant association. The research will focus on livelihoods and coping strategies of rural households that will help to understand the situation and recommend necessary interventions to improve the livelihood of the community. Thus, this is kindly to inform the student that the request to carry out the research in the district is accepted. The office will cooperate to provide the necessary information to the study.

Sincerely,

Daaniel Liggiso Hiqe
ዳንኤል ልግሶ ሂቄ
Jm/Qo/Da/Lo/Ha/Qeessaacho
የቅድመ ማስጠንቀቂያ ምላሽ
ሥራ ሂደት አስተባባሪ

Shabbadinni Worzdi
Giwirinnu Bo/mine
የሸበዲኖ ወረዳ ግብርና
ጽ/ቤት

APPENDIX C: QUESTIONNAIRE

Annex-I Survey Questionnaire

Livelihoods and Coping strategies of rural households in Abela Lida Peasant Association of Shebedino district, Southern Ethiopia. – April 2011 Questionnaire for Individual household heads **Questionnaire No|___|**

Consent: I am a student at the University of South Africa. Currently, I am doing my MSc Theses by conducting a survey on the livelihoods and coping strategies of rural households in this Abela Lida Peasant Association. I would like to ask you some questions about yourself and your family. The interview will take only about 1 hour to complete. Any information that you provide will be kept strictly confidential and will not be shown to other people. This survey will help both the student and other offices working in the area in understanding of the livelihood and coping strategies and the necessary interventions to improve the livelihood of the community.

1. General Information

Code	|__|

Name of respondent:	
Address/ Peasant Association:	
Village/ Got:	
Date:	|__|/|__|/|__||__| *day/ month/ year*
Time of Interview:	Starting time: _____ Finishing time: _____

A. Socio-Demographic and Socio Economic Data

Section A: Household Demographics			
A1	What is the respondent's age in years	1= 20-30 2= 31-40 3= 41-50 4=51+	|____|
A2	What is the respondent's Marital status?	1= Married 2 = Divorced 3 = Never married 4= Separated	|___|

		5= Co-habiting	
A3	Total size of the household (eat and sleep in the household)	1= Total number of adults 2= Female 3= Male 4= Total No of children 5= Total No of old persons	|___| |___| |___| |___|
A4	What is the age of respondent's wife in completed years (select and put in the range)	1= 20-25 2= 26-30 3= 30-39 4= 39-50 5= >50	|___|
A5	Religion of the respondent?	1=Orthodox 2=Protestant 3=Catholic 4=Muslim	|___|

		5=Other, Specify_____	

B. Education and Health

Section B: Education and Health of head of HH			
B1	What is your level of education?	• Never enrolled • Read and write only • Primary • Primary completed • Junior secondary • Senior secondary • Vocational training • University level • Other (specify)_____	|___|
B2	If you never enrolled or discontinued your education currently, what were the major factors contributing to this?	• Loss of my parents/ guardian/ relatives • Unavailability of educational facilities nearby • Inaccessibility of schools • Unaffordable payment • Poverty - lack of financial support to cover my basic needs • Housing problem • Seek alternate means of survival • Other (specify)_____	|___|

B3	Have you been very sick for at least 3 months during the past 12 months? *(By very sick means too sick to work or do normal activities for at least 3 of the past 12 months?)*	1 = Yes 2 = No	|___|
B4	Where did you go for health care?	0 = Did not get health care 1 = Central/Referral Hospital 2 = Health Centre or Clinic 3= Health post 4 = Missionary Health Facility 5 = Village/Community health worker 6 = Private Hospital/Clinic 7 = Pharmacy 8 = Outside Ethiopia 9 = Traditional/Spiritual Places/Practitioners	|___|

		10 = Other, Specify_____	
B5	If You were very sick and did NOT get Formal health care, what was the MAIN reason?	1 = No money to pay for treatment 2 = No transport, too far 3 = Poor quality of service 4 = Religious reasons 5= Don't believe in health care 6 = Shortage of health professionals 7 = Other, Specify _____	|___|

C. Household assets

Section C: Housing, Water, Electricity, Fuel and Transport		
C1	How many rooms are occupied by the household? (exclude bathroom, toilet and livestock)	|___|

C2	What is the main source of your **drinking water** at the moment?	**1**= Piped water **2**= Communal tap/(BONO) other people **3**= Borehole/protected well **4**= Unprotected well **5**= River, stream, pond **6**= Rain water **7** = Other *(Specify)*_____	|___|
C3	What type of **toilet** facility do you have?	**1**= Flush private to household **2**= Pit private to household **3**= Pit communal **4**= None - Bush **5**= Other *(Specify)* _____	|___|
C4	What are you using as main source of **fuel for cooking**?	**1**= Wood **2**= Charcoal	|___|

		3= Animal dung **4**= Kerosene **5**= Electricity **6**= Other *(Specify)* _____	
C5	What are you using as main source for **lighting**?	**1**= Wood **2**= Candles **3**= Electricity **4**= Gas/Kerosene (paraffin) **5**= Other *(Specify)* _____	**|___|**
C6	What is your means of transport? (to travel long distances most of the time)	**1**= On foot **2**= minibus **3**= big truck **4**= Pack animals **5**= Other *(Specify)* _____	**|___|**

1. **Access to natural capital**

Section D: Access to Natural Resources			
D1	Do you have access to the natural resources such as rivers, forest, parks, communal land, etc.	1 = Yes 2= No	|___|
D2	If yes for D1, for which do you have access? specify	_____ _____	
D3	Do you own land?	1 = Yes 2= No	|___|
D4	If your response is 'yes' for D3, how did you access to it? (Multiple responses are possible).	1= Through land redistribution 2= Share with relatives 3= Inherited with parents 4= via share cropping 5= Purchased 6= Others (specify)	|___| |___| |___|

E. Access to Financial Capital

Section E Access to Financial Capital

E1	What are the **income sources** of the household? **Yes/No** for the list of incomes	1= Sale of grain 2= Coffee trading 3= Chat (a cash crop consumed as a stimulant) trading 4= Sale of other cash crops 5= Sale of livestock/ Livestock trading 6= Government job 7= Food for Work/ Productive safety net program 8= Selling firewood/ charcoal 9= Labour 10= Leasing out of land 11= Petty trading 12= Milk selling	|___| |___| |___| |___| |___| |___| |___| |___| |___| |___| |___|

		13= remittance	|___| |___|
E2	If yes for E1, How much did you earn from each this year?, Amount earned (in cash/ year)	1= Sale of grain 2= Sale of cash crops 3= Sale of livestock/ Livestock trading 4= Government job 5= Food for Work/ Productive safety net program 6= Selling firewood/ charcoal 7= Labour 8= Coffee trading 9= Chat (a cash crop consumed as a stimulant) trading 10= Leasing out of land	|____| |____| |____| |____| |____| |____| |____| |____| |____|

		11= Petty trading 12= Milk selling 13= remittance	|____| |____| |____| |____|
E3	Did you borrow any money from lending institutions during the last 12 months?	1 = Yes 2= No	|____|
E4	If your response is yes, from which lending institutions did you get a loan?	1= Government micro-finance 2= Social associations 3= private (friends/ neighbours/ relatives) 4= NGOs 5= Others, specify_____	|___|
E5	If your response is no for E3, why?	1= Absence of lending institutions 2= High interest rates	|___|

		3= Lack of collateral 4= I haven't tried or needed 5= Other (specify) _____	|___|
E6	Did you save some amount of money (grain) to use in case of emergency?	1 = Yes 2= No	|___|
E7	If yes for B6, how?	1= stock some grain 2= buy animals 3= Save at Banks 4= put at friends/ neighbours/ relatives 5= deposit it at home 6= Others, specify_____	
E8	If no for B6, why not?	1= don't have extra money/grain	

		2= don't know/ think of saving at all 3= not necessary 4= Others, specify _____	
E9	Have you received any remittance from someone living elsewhere during the last 12 months?	1= Yes 2= No	|___|
E10	What are the **expenditures** of the household?	1= Food 2= Pay tax 3= pay loans 4= to build a house 5= Medical 6= For social things 7= Agricultural inputs	|___| |___| |___| |___| |___| |___| |___|

		8= Savings 9= Others specify_____	|___| |___|
E11	How much did you spend from each this year? Amount spent on each this year in cash.	1= Food 2= Pay tax 3= pay loans 4= to build a house 5= Non-food items 6= For social things 7= Agricultural inputs 8= Savings 9= Others specify	|____| |____| |____| |____| |____| |____| |____| |____| |____|

1. Human Capital

Section F: Human Capital			
F1	How many working household members do you have?		|___|
F2	How many household members are involved in off farm activities?		|___|
F3	If the answers for question F2 is 'NO' what is the major reason?	**1=** Lack of spare time from Agriculture **2=** Lack of work skill **3=** Lack of awareness about its contribution **4=** Lack of job opportunities **5=** Unable to work due to old age **6=** Health problem **7=** Lack of start-up capital **8=** Others	|___| |___| |___|
Perceptions on Policies, Conventions and Legislations			
F4	Do you have access to information which is valuable for your livelihood?	**1**= Yes **2**= No	|___|

F5	If yes, how?	**1**= through media **2**= form PA/ district officials 3= from friends, relatives, neighbours… 4= farmers associations, unions…	|___|
F6	If the answers for both questions are 'NO' what is the major reason?	**1**= Have no access to media **2**= Have no information about them **3**= Was not consulted/invited to participate **4** = Other, specify _____	|___|

2. Agriculture

G1	What is the main livelihood of this household?	1= cropping 2= cropping and animal rearing 3= trading 4= labourer	|___|

		5= government job 6= Others, specify	
G2	Tell us the amount of your perennial crops, fruits and vegetables produced this year. (Amount in Kg)	1= Coffee 2= Chat 3= Enset 4= Onion 5= Red pepper 6= Banana 7= Mango 8= other	|____| |____| |____| |____| |____| |____| |____| |____|
G3	Did you use improved seed and fertilizers in order to augment your crop yield?	1= Yes 2= No	|___|
G4	If your response is yes for G3, which type of input did you apply? If yes, tell us the amount and total price.	1= Chemical fertilizers 2= Improved seed 3= Herbicides	|___|_____| |___|_____| |___|_____|

		4= Insecticides 5= Manure and mulch	|___|_____| |___|_____|
G5	If your response is no for Q.14, what were the reasons? (put three reasons in order of importance)	1= Lack of inputs in the market 2= Shortage of money 3= No credit scheme 4= Not important for the land 5= The price is high 6= others, specify	 |___| |___| |___|
G6	Do you own livestock?	1= Yes 2= No	|___|
G7	If your response to G6 is yes, please give us the number by type of livestock owned	1= oxen 2= Cows 3= Sheep 4= Goats 5= Horses	|___| |___| |___| |___| |___|

		6= Donkeys 7= Mules 8= Heifers 9= Calves 10= chicken	|___| |___| |___| |___| |___|
G8	If your response to Q. G6 is no, why? (Put three reasons in order of importance)	1= Lack of grazing land 2= Lack of breeding animals 3= Livestock disease 4= Sold to purchase food items 5= Other (specify)	|___| |___| |___|
G8	How much food is consumed by your household for a year?	1= Cereal _____ in quintals 2= grain _____ in quintals 3= milk and milk products _____in kg 4= meat _____in kg 5= enset _____in kg	

3. Food security status

H. **Food security status**			
H1	What are normally your **main foods** at this time of the year (**April-May**)?	1= Maize 2= haricot bean 3= teff 4= Wheat 5= Sorghum 6= Potato/ Sweet potato 7= Enset 8= Others, specify	|___| |___| |___|
H2	What is normally the most **important source of food** at this time of the year?	1= Own production 2= borrowed 3= food for work Safety net transfer 4= Purchase 5= gift	

		6= free relief food (government)	
H3	If bought, what were the **three main sources of money** from agriculture? (Put in order of importance).	1= sale of livestock 2= sale of livestock products 3= sale of coffee 4= sale of chat 5= sale of fire wood 6= daily labour 7= petty trading 8= remittance 9= Safety net cash transfer 10= Others, specify	|___| |___| |___|

4. Coping strategies for sustainable livelihoods

Section I: Vulnerability Context and Coping Strategies		
I1	**Has your household experienced any difficulties or shocks in the past 12 months?**	1=Yes

		2=No
1= Loss or reduced employment for HH member		|___|
2= Reduced income of a household member		|___|
3= Serious illness or accident of HH member		|___|
4= Death of head of household		|___|
5= Death of working HH member		|___|
6 = Death of other member		|___|
7= Unusually high food prices		|___|
8= Unusually high fuel/transport prices		|___|
9= Electricity/gas cuts		|___|
10= Drought/irregular rains, prolonged dry spell		|___|
11= Unusually high level of crop pests and disease		|___|
12= Theft of productive resources		|___|
13= Insecurity/violence		|___|
14= Floods		|___|
15= Other (Specify)_____		|___|
I2	During the **PAST MONTH**, have there been times when you did not have enough money to buy food or cover other essential expenditures (health, cooking fuel, school etc.)?	1 = Yes 2 = No *(skip to I19)* |___|

Has anyone in your household done any of these things to manage this problem in the past 30 days?					**1=Yes 2=No**
	Coping strategies	**1.yes 2.No**	**If yes, Use Strategy when food shortage is**		
			Less	**Moderate**	**Severe**
1	De stocking/Decreasing number of livestock				
2	Crop and livelihood adjustment				
3	Consuming less preferred food				
4	Borrowing grain from relatives				
5	Labour sale (migration) few members				
6	Small animal sales				
7	Cash/cereal loan from merchants				
8	Fire wood and charcoal sale				
9	Relied on relief food				
10	Productive asset sales (ox, jewellers etc.)				
11	Farm land pledging				
12	Farmland sales				
13	Stress/Out migration (the whole family)				

Annex-II: CSI Questionnaire

Box 1: Consumption Coping Strategy Responses (CSI)					
In the past 30 days, if there have been times when you did not have enough food or money to buy food, how often has your household had to:	**Relative Frequency**				
	All the time? Every day	**Pretty often? 3-6 */week**	**Once in a while? 1-2 */week**	**Hardly at all? <1 */ week**	**Never 0*/week**
a. Rely on less preferred and less expensive foods?					
b. Borrow food, or rely on help from a friend or relative?					
c. Purchase food on credit?					
d. Gather wild food, hunt, or harvest immature crops?					
e. Consume seed stock held for next season?					
f. Send household members to eat elsewhere?					
g. Send household members to beg?					
h. Limit portion size at mealtimes?					
i. Restrict consumption by adults in order for small children to eat?					
j. Feed working members of HH at the expense of nonworking members?					

k. Ration the money you have and buy prepared food?					
l. Reduce number of meals eaten in a day?					
m. Skip entire days without eating?					

I.e. if there are other coping strategies specific to the area, it will be included in the survey after the questionnaire is tested at field level.

Executive Summary

The study used the sustainable Livelihood framework approach which is a comprehensive method for determination of food insecurity and poverty at household level. The aim of the study was to determine the livelihood strategies and the coping mechanisms used by rural households in *Abela Lida* PA, *Shebedino* district, Southern Ethiopia. Both qualitative and quantitative methods were used to estimate the contribution of different resources to total food access and cash income, detailing expenditure patterns, asset holdings and capacity to cope with shocks.

The main sources of income were sale of cash crops mainly coffee (55.6%) followed by sale of cash crops plus livestock (18%), labour (12.5%), PSNP (8.3%). The average annual income for the households was found to be birr 4,727.92 (~$293.34) and agriculture is the main livelihood strategy. Awareness and access to basic social services has improved the livelihoods of the households. However, high price of staple foods, poor work skill, low awareness and lack of job opportunities has negatively affected poor households. Poverty was the underlying cause of vulnerability.

It was concluded that the households have good access to transport and market. However, unskilled labour, depleted natural capitals, lack of social networks and financial institutions, very limited electricity supply have resulted in traditional livelihood strategies. Most households are food insecure and practise different coping strategies. The main recommendations are to improve the crop and livestock production, encourage various off - farm job opportunities and income generating activities.