

10/15/09 - Please Note from Concern Worldwide US - This document is a work-in-progress – some of the statistical data is still in the process of being collected. Thank you.

## TABLE OF CONTENTS

	<b>Page</b>
0. EXECUTIVE SUMMARY .....	2
I. INTRODUCTION .....	6
<b>1.1 Background to the Study Area.....</b>	<b>6</b>
<b>1.2 Objective of the Study.....</b>	<b>10</b>
<b>1.3 Sampling .....</b>	<b>11</b>
<b>1.4 Data Collection .....</b>	<b>11</b>
<b>1.5 Inquiry Methods.....</b>	<b>11</b>
<b>1.6 Limitations of the Study .....</b>	<b>12</b>
<b>1.7 Structure of the Report.....</b>	<b>12</b>
II. CONCEPTUAL FRAMEWORK TO LIVELIHOODS ANALYSIS .....	13
IV. LIVELIHOODS ANALYSIS IN THE STUDY AREA .....	13
<b>4.1 Vulnerability Context .....</b>	<b>14</b>
<b>4.2 Livelihoods Assets .....</b>	<b>18</b>
4.2.1 Natural Capital.....	19
4.2.2 Social Capital.....	21
4.2.3 Human Capital .....	23
4.2.4 Physical Capital .....	25
4.2.5 Financial Capital.....	26
<b>4.4 Structures and Processes .....</b>	<b>28</b>
4.4.1 Structures .....	28
4.4.2 Processes.....	31
<b>4.5 The Existing Livelihoods Strategies .....</b>	<b>32</b>
V. CONCLUSIONS AND RECOMMENDATIONS .....	36
<b>5.1 Conclusions.....</b>	<b>36</b>
<b>5.2 Recommendations .....</b>	<b>37</b>

**Concern-Ethiopia**  
**Sustainable Livelihoods Analysis**  
**Dessie Zuria, Wollo Zone of Amhara Region**  
**June 2006**

**0. EXECUTIVE SUMMARY**

This is a report on sustainable livelihoods analysis in Dessie Zuria Woreda of north Wollo of Amahara Region. The analysis is made under the terms and conditions stated in the terms of reference (TOR).

The objective of the study is to gather livelihoods information to be used as a basis to develop long-term integrated livelihoods project proposal for Dessie Zuria Woreda by involving communities, local NGOs, CBOs, relevant government offices and concern-Ethiopia field office.

According to Agricultural and Rural Development Office 2005 report, the Woreda is characterised by four agro-climatic zones namely; higher-highlands, highlands, midlands, and lowlands. The same source indicated that there is variability in availability, access and management of livelihoods assets (human capital, social capital, natural capital, physical capital and financial capital) in the Woreda. Hence, kebelles were stratified into more or less homogeneous categories of agro-ecological zones and randomly and proportionally selected that represents different agro ecological zones. As a result, a total of seven; two from higher highlands (Adey and Asgori) and two from highlands (Degamotte and Kedijo), and three from midlands (Ayata, Harawebello and Asgedo) were selected to conduct the livelihoods study. The planning team discussed about the livelihoods of the people with nine community key informant groups in seven sample Kebelles and undertook forty-two household surveys, which were stratified and randomly selected from the seven sample Kebelles.

Vulnerability context analysis of the study showed that higher-highlands which are represented by Adey and Asgori kebelles, are frequently facing natural shocks and stress due to erratic and shortage of rains, hailstorms, frosts, floods, and civil conflicts. Different economic groups apply different coping strategies to reduce impacts of the disaster caused by the above hazards (shocks). However, the poor is unable to resist the impact of disaster, unless otherwise assisted by external body. They do not have reserve asset to sustain their livelihoods. Hence, they either wait for food aid or migrate out to sell their labour or look for wild plants.

Dega Motte and Kedijo Kebelles represent the highland agro-ecological zone of the Woreda. These sample Kebelles suffer from food shortages, asset depilation that is caused by poultry and sheep diseases, landslides, hailstorms, and excessive, erratic and shortage of rains. These shocks affect different social groups at different level. They seriously affect the poor whereas; the effect is relatively less to the middle level groups and the rich.

The hungry periods for Degamote and Kedijo Kebelles vary from March to June, and June to October. Opinion surveys show that the length of the hungry period is increasing since the last five years in highland agro-ecology.

The study made in the midlands indicates that the major shocks related to crop production and productive assets in the agro-ecology are hailstorm, floods, pest and animal diseases, and erratic and shortage of rains. These shocks result in six months hungry period for the majority of people living in Ayata, Harawebello and Asgedo kebelles. The hungry period is between May and September. The poor in all the three Kebelles face seven months of food gap, whereas the middle group face three months. The rich can feed their families all round the year.

There are no formal financial institutions that give financial services for the rural people in the study area to help the rural people reduce distress sell of crops produced in the area. ***This situation calls for strategic intervention to support the livelihood strategy to achieve its livelihood objective by creating enabling environment for financial institution to operate in the area.***

The study identified farmlands, pasturelands, forestlands, springs, rivers, quarries, and sheep as major natural resources available at higher-highland agro-ecology. Farmlands and sheep are largely owned and managed privately. Springs, grazing areas are communal properties managed by the community themselves. The government owns large area of eucalyptus forests, which is looked after by Local Administration, which the local people do not share the benefit. As a result, there are evidences of conflicts over the resource use that needs serious attention.

The assessment result illustrates that the large portion of the landscape is very steep slop, which can't be used for food crop cultivation and not well protected. The study noted that the community believes that the very steep slope of the landscape should be managed properly because it has in direct use value: it could be used for protection of erosion, sources of biodiversity if protected well and it could also be potential and an ideal place for sheep rearing. Due to the nature of landscape higher-highlands farmers focus more on small animal rearing than crop production. ***The livelihood analysis recommends this as an entry point to start economically viable and ecologically sound intervention to support the meagre income of farmers struggling to make living out of crop husbandry from ecologically fragile agro-ecological zone.***

Trend analysis of the study demonstrated that over the last three decades, productivity of the resources (farmlands and pasturelands) in the higher-highlands is declining. This is reflected through decline in crop and pasture yield per hectare and decline in the yield of springs.

The study shows that the natural resource base in the highlands is different from the higher-highlands in terms of abundance and productivity. Cultivable land size in highlands is more than what is in higher-highlands but the farm size per household is less than the higher-highlands. Unlike the higher-highlands, people living in highlands and midlands enjoy small-scale irrigation schemes for horticultural production.

The livelihood asset assessment in the study shows that resources found in midlands (*"woina dega"*), are similar to the other agro-ecologies discussed earlier. However, the abundance, importance, and focus of the productive resources are different for people living in the midland agro-ecology than the above two. The landscape by itself is an opportunity for people living in midlands to have more arable land than the above two.

Group discussions made with the community through semi-structured interviews, indicated that formal and informal institutions exist in all agro-ecological zones. Some of the key informal institutions are Kere / Idir, Jige, Debo, Equb, etc. These institutions serve as means of informal safety net mechanisms among community members. They pool resources to support each other in time of happiness, mourning and undertaking activities that require teamwork.

The study concluded that these ***informal institutions are sustainable and has inherent strengths to mobilise and direct the community without any problem at any time. So, they can be considered as engines of development if they are well recognised and given the opportunity to take part in the process that concerns them.***

The average household size of the higher-highlands, highlands, and midlands are 6, 5 and 7, respectively. This implies that an average household size in the three agro-ecological zones is 6 persons, which is more than the national average 5 (CSO, 2002).

The study identified that in all the three agro-ecological zones have at least a primary school, a health post, and farmer's training centre. These institutions are means for human capital development in rural areas. However, they are not well equipped to undertake its function properly. The study illustrates that key and basic components of infrastructure are either incomplete or not available in all the three agro-ecology zones. Absence of these key infrastructures implies the level of poverty of the sample Kebeles. Without adequate services such as potable water, human health deteriorates and long periods are spent on non-productive activities such as fetching water. Without access roads, essential input and output markets will be hampered, which has a negative effect in crop yields. Hence, it is logical to invest on access roads, which has strategic effect on livelihoods strategies.

The study concluded that ***this is one of the major challenges for the people in general and the poor in particular to achieve their livelihood objectives. So, they need to be supported to have access to key infrastructures such as health, education and access roads.***

The livelihood financial capital analysis showed that the sources of cash income of the rich are: grinding mills, animal rearing and fattening, crop production, and interest from lending money. In the case of middle group cash income is from: crop production, animal rearing and fattening, trade, and petty trade. The main sources of cash income for the poor are: sell of labour within the community or in the near-by-towns, safety-net, poultry, rented out farmlands, fattening and sheep rearing for the rich on benefit-sharing arrangement.

Stakeholders' analyses were conducted in each sample Kebele in order to understand the structures existing and functioning in the Kebeles. The main stakeholders identified are: Offices of Agriculture and Rural Development, Health, Education, and Local Administration. The second level stakeholders are traditional community-based organisations represented by Kere/Idir and an NGO (Concern).

The study shows that livelihood strategies vary according to agro-ecology and economic status of the people. Economically rich and middle classes in the higher-highlands undertake mixed farming whereas the poor are depending on non-crop farming activities as their livelihood strategies. In the same agro-ecology only the rich are involved in grain trading whereas the medium are involved in petty trading. Moreover, the rich are highly involved in animal fattening and the medium class are engaged in small animal fattening through credit. The poor are engaged in small animal fattening on the basis of benefit sharing arrangements. The poor are selling their own and their child's labour as livelihoods strategies. This shows the poor are desperate for they don't have many choices.

In the highlands, the livelihood strategy of the rich is mixed farming, fattening, grain trading and apiculture. The middle class are depending on mixed farming, petty trading and fattening. However, the poor are selling labour, contract out land and undertake shared rearing of small animals, which is peculiar to this agro-ecology.

In the midlands, the livelihoods strategies of the rich people are mixed farming (*livestock and crop production*), contract in land for crop farming, livestock and grain trading, and establishing household's woodland plantation. The livelihoods of the middle class are: crop farming, establishing woodland plantations, petty trade, and engaged in safety net programme. The poor in this agro-ecology lead their lives through small animal rearing, selling labour, selling out land and taking part in the safety net programme, which is peculiar to the midlands.

The study pointed out that selling out labour is one of the livelihoods strategies common to the poor across all agro-ecological zones. They opted for this because they have no or limited access to productive assets such as Physical (land) and financial (cash) capital. Hence, the study ***recommends that all development organisations need to work hard to avail variety of choices for the poor so that they can engage themselves on a productive work that will enable them to meet their livelihoods objectives.*** One among many possibilities are: understanding their priorities and interest, training them in particular skill, identify mechanism to support them through provision of start up financial capital on credit basis, which could revolve within the community.

## I. INTRODUCTION

### 1.1 Background to the Study Area

This section reviews basic district data on topography, demography, weather, farming systems, structures, education, health, natural resource management, etc.

Dessie Zuria is one of the ---Woredas in southern Wollo Zone of Amhara Region of Ethiopia. According to the Woreda Office of Agriculture and Rural Development the population of the Woreda is about 197,930. The area of the Woreda is 132,952 hectares and the population density is -----person per square kilometre. It is high compared to the national average ----- . According to the community, some of the reasons for high population density are: the area used to have quality land in terms of fertility, have strong traditional attachment to it, used to receive reliable rains, and low level of human and animal disease incidences.

Dessie, the capital town of the zone/woreda, is 412 km away from Addis Abba, the capital city of the country. Addis–Dessie tarmac road is under renovation and provides an excellent link through to Addis Ababa and Dessie. The capital town of the Woreda is also linked to Mekelle and Afar regions. This is an excellent opportunity for market outlets. Despite this, the Woreda is characterised as one of food insecure area of the county with little or no irrigation practices and few cash crops.

The altitude of the Woreda ranges from 1,800 to 3,500 m.a.s.l and characterised by a rugged and undulating topography (steep slopes, hills, and plains). It is categorised into four agro-ecological zones namely, higher- highlands (*wirch*) 32%, highlands (*dega*) 25%, midlands (*woina dega*) 43%, and lowlands (*kola*)<sup>1</sup>.

The rainfall in the study area is bimodal with short rainy season from ---to -----that is followed by long rainy season from-----to ----- . Annual rainfall ranges from about -----mm in midlands to -----mm in the higher-highlands.

Dessie is the capital town of south Wollo zone and the seat of Dessie Zuria Woreda. It is a busy town with daily markets, bus services, secondary schools, clinics, hospitals, hotel and taxi services, mechanics and machinery supplies, and it is connected to main power source.

#### ***Education:***

***Food Security:*** The study showed the number of rich households in the study area account for about 10 percent, while middle level households account for 30 percent and the remaining 50 percent are food insecure and poor households. This shows that the large majority of the people in the sample Kebeles face food shortage and poor. How do farmers define food insecure household?

They say a household is food insecure if it has small farm, but it doesn't have productive asset like oxen and gives the land to someone to plough for sharing the harvest; otherwise it will leave it unploughed. If it chooses the later the household will be displaced. In both cases the household is considered food insecure and poor.

They categorise middle level household, if the household has access to enough food for the whole year either through own production or purchases from the market from the cash income generated from sales of trees, animals as well as dip into savings if the worst happens. A

---

<sup>1</sup> The three Kebeles located in the lowland area are likely to be included Kalu Woreda soon or later. Hence, they are excluded from the study.

household that satisfies its household food requirement for the whole year with no surplus are considered as middle level household.

They categorise rich household as a household, which has access to food through out the year, and have surplus to sell or store as a contingency stock.

**The farming system:** mixed (crop and livestock) farming system is practiced in the study areas. Crop husbandry includes: food crops; including barely, wheat, and maize. Approximately two third of the area is sown for food crops. This pattern is similar across all weather groups and agro ecological zones.

Livestock has a very important role in the livelihoods of sample rural areas as a source of manure for firewood especially in higher- highlands and source of income for highlands and midlands.

The quality of agriculture depends mainly on the topography of the land and distribution and timely onset of rains. Thus, flat valley bottoms and plateaus provide relatively good quality soil with good potential for crop production. Whereas, hill slopes can provide adequate soil with terracing and soil conservation management. Steep slopes higher above the villages are the worst kind of land and generally owned by the poorest sector of the society or used as communal grazing land.

The study shows that average land holdings vary according to agro-ecological zones. The average land holding in higher-highlands is 0.91, in highlands 0.88 and in the midlands 0.95 hectares. In higher-highlands the topography is rugged and steep slopes and large proportion of the lands is not cultivable. The population pressure is very low compared to the other two lower agro-ecological zones. Major factors affecting livelihoods in the sample Kebelles have some similarities and vary in many aspects.

Generally, higher highlands that are cooler with rugged topography are far from markets and the inhabitants are relatively poorer than people living in highlands and midlands. Moreover, the seven sample Kebelles showed remarkable variations in their natural resource endowments. These differences are illustrated in table 2 below.

**Wealth Classification:** Discussion with sample household heads showed that how the different socio- economic groups: rich, middle and poor are classified according to farmer's context. The result of discussion is summarised and presented in table12.

**Table 12:** the top 5 criteria for differentiating the poor, middle and rich in the study area based on farmers' own perception

AEZ	Sample Kebelles	Economic Groups		
		Poor	Middle	Rich
Higher-highlands	<i>Aday</i>	No or little asset (One sheep and chickens) 8 months of Food gap	One ox One caw Five sheep No food gap (Can fill the food gap by purchasing)	Two oxen A caw or more A Donkey or more A Mule or more A Horse or more No food gap
	<i>Asgori</i>	No or little asset (One sheep and chicken) Eight months of Food gap	One ox One caw 5-6 sheep No food gap (Can fill the food gap by purchasing)	Two oxen A Caw or more A Mule or more A Horse or more No food gap through the year
Highlands	<i>Dega Motte</i>	Small plot of land <0.25h  8-10 months food gap	One ox One caw 5-6 sheep 4 months food gap but fills the gap through purchases	Two oxen or more Two caws or more A mule or more Two donkeys or more No food gap
	<i>Kedijo</i>	Small farm size(<0.25) 8 months food gap	One ox One caw Three months of food gap, but fills the gap with purchases	Two oxen or more Two caws or more A Mule or more A Donkey or more A Grinding mill
Midlands	<i>Ayata</i>	Take part in Safety net Contract out land Sells out labour 7 months food gap	One ox One caw 5-6 sheep No food shortage	Two oxen Two caws Ten sheep Enough food for the year
	<i>Hara Webello</i>	Contract out land Sells out labour 9-10 months food gap	One ox One Caw Three sheep Six months food gap	Two oxen Two caws 5-10 sheep No food gap
	<i>Asgedo</i>	Contract out land Sells out labour 7 months of Food gap	One ox One caw One sheep One donkey No food shortage	Two oxen Two caws One mule One donkey No food shortage

Source: Sustainable livelihood analysis, 2006



**Table 2: Summary of Key Findings in the Study Area**

<b>Key points</b>	<b>Higher- highlands</b>	<b>Highlands</b>	<b>Midlands</b>	<b>Remarks</b>
<b>Food Shortage</b>	Food gap for the poor is 7 months, and it is 3 months for the middle. The rich are producing enough for the year. No marketable surplus. The hungry period is between Apr.- Oct.	The poor people face 8 months food gap and the middle group of people face 4 months food gap (Mar.-Jun.) The hungry period is between Mar.- Oct.	Food gap for the poor is 6 and 3 months for the middle people.  The hungry period is between May and Oct.	The rich feed the family throughout the year in all agro-ecologies
<b>Conflict</b>	Civil conflict between individuals, upper and lower streams, government and community, based on farm land boundaries, forest management (lower parts of the AEZ)	Conflict on resources use mainly on forest resources	Conflict on water management	The conflicts is basically on resources and it pronounced on Higher-highlands
<b>Weather Trends</b>	Erratic and shortage of rains, hailstorms, <b>frost</b> , and floods	Erratic, excessive and shortage of rains, and hailstorm	Erratic and shortage of rains, hailstorm, and floods	Frost is a hazard that causes shocks only in higher-highlands
<b>Price Trends</b>	Prices are high for cereals between Apr. and Sep., are low between Oct. and Jan.	Prices are high for cereals between Feb and Aug. and decline between Sep. and Jan.	Prices for crops are rising between Apr. and Sep. and declining between Nov. and Jan.	
<b>Copping strategies</b>	Sell small animals, change the consumption patterns, eat wild plants, and use savings	Sell reserve food, sell animals, use savings, sale fire woods, and take part in productive safety net programme	Sell reserve food, sell animals, use their savings, focus more on trading and sale fire woods	Selling firewoods is not a coping strategy in Higher-highlands, which shows that there is lack or no forest resources.
<b>Land and Topography</b>	Higher slopes, and slides, productivity declines over the last 3 decades, high erosion, Land size is relatively bigger than other agro-	Land slides, productivity decreases over the last 3 decades, Farm size per household is bigger than	Productivity decreases over the last 3 decades. The topography is Almost flat (3%) to sloping (15%)	No land slides in Midlands

	ecologies, the topography is moderately steep 15% to very steep >50	higher-highlands; the topography is moderately steep (8-30%)		
<b>Water and irrigation</b>	Small number of rivers and springs but no irrigation practices Decline in yields of springs	Good number of rivers and springs, and few small scale irrigation practices exists	More rivers and sprigs exist Irrigation is best practiced in this agro-ecology	Midlands have irrigation potentials than other agro ecologies
<b>Food cropping</b>	Barely, pulses, lentils, beans, horse beans, <b>linseed</b>	Barely, wheat, teff, and horse beans, And some horticultural crops	Barely, horse bean, teff, maize, wheat, <b>sorghum</b>	Midlands have wider choices for food crop
<b>Cash cropping</b>	Some barely and pulses (10%)	10% of the food crops are marketed.	Barely, wheat, teff, horse beans, maize and some horticultural crops	Midlands have wider choices cash crops.
<b>Income generating schemes</b>	No or little experience on income generating activities	Cash income shows increasing and decreasing trends	Opportunities for income generating activities show increasing trend	
<b>Livestock husbandry</b>	Have experience in rearing small animals (sheep) rearing and fattening	Depend largely on cows then small animals due to Incidence of disease of sheep and poultry	Have experience in sheep and cattle fattening and rearing	Higher-highlands and midlands are potential area for rearing and fattening
<b>Institutions</b>	People prefer Kire/Idir, MOA, Concern, and Coops	People prefer Kire/Idir, WOA, WOE, WOH	People prefer MOA, Kire/Idir, Kebelle, Concern	Midlands get more extension services from MOA than others
<b>Labour</b>	Abundant ??	Less abundant ???	Abundant	The households Size is more in midlands

Source: livelihood assessment, 2006

## 1.2 Objective of the Study

The objective of the study is to gather livelihoods information to be used as a basis to develop long-term integrated livelihoods project proposal for Dessie Zuria Woreda by involving communities, local NGOs, Community-Based Organisations (CBOs), relevant government offices and concern-Ethiopia field office.

### **1.3 Sampling**

Dessie Zuria comprises 31 Peasant Administration and 38,544 households (ARDO, 2005). According to Agricultural and Rural Development Office 2005 report, the district is characterised by four agro-climatic zones, namely higher highlands, highlands, midlands, and lowlands. The same source indicated that there is variability in availability, access and management of livelihood assets (*human, social, natural, physical and financial capitals*). Hence, sample kebelles were stratified into more or less homogeneous categories of agro-ecological zones. It was, therefore, found appropriate to employ stratified two-stage random sampling. The study area was first stratified with respect to the four agro-ecological classifications (higher-highlands, highlands, midlands, and lowlands). And sample Kebelles were randomly and proportionally selected from each agro ecological zones. As a result, a total of seven; two from higher-highlands (Adey and Asgori), two from highlands (Degamote and Kedijo), and three from midlands (Ayata, Harawebello and Asgedo) were selected as sample Kebelles to represent the entire Woreda. Secondly, households in the sample Kebelles were classified into three categories (poor, medium, and rich). The planning team discussed on livelihood issues with nine community key informant groups in seven sample kebelles. In addition, 42 households were stratified and randomly selected from the sample kebelles for household surveys.

### **1.4 Data Collection**

Combinations of qualitative and quantitative approaches were employed to collect data. Since livelihoods situation change overtime relying merely on secondary data source may lead to wrong conclusions. Hence, the data sources for this research are both primary and secondary. The primary data were collected through participatory survey using Participatory Learning and Action (PLA) and livelihood analysis techniques using participatory tools such as semi-structured interviews, diagramming and mapping, and ranking and scoring.

To ascertain the availability of respondents, to learn about the learning conditions, to test the reaction of respondents to the duration of the interviews, to check the level of cooperation from the respondents, to identify difficult questions from the point of view of respondents and make the necessary correction on checklists, a field test was made in the near by Kebele right after the training.

The secondary data for the study were collected from relevant Woreda Government offices and from records of Concern Ethiopia.

The primary data was collected from the study area using participatory techniques. The method enabled the researchers to tap the current livelihood status and enormous indigenous knowledge and skills the community has.

A planning team that comprised nineteen senior experts from Woreda Office of Agriculture and Rural Development, Woreda Office of Health, Woreda Office of Education and Concern-Ethiopia field office was established. A seven-day training on the techniques of participatory livelihood analysis was organised and delivered for the planning team.

Checklists with key elements in livelihood analysis were prepared and discussed with the team to make sure that every body has understood them before embarking on the livelihood assessment. The key elements in the checklists include vulnerability context, livelihoods assets, structures and processes, livelihood strategies, and livelihood outcome.

### **1.5 Inquiry Methods**

Nineteen trained staff from Woreda Offices of Education, Health and Agricultural and Rural Capacity Building Office and Concern-Ethiopia field office carried out participatory livelihoods assessment and household surveys, and made a joint analysis. The survey was undertaken with close guidance and supervision of Concern commissioned consultants. Checklists were prepared by the team to be used as guides to facilitate the process. The process was pre-tested in one near by village around Kombolcha area and lessons were drawn and methods, checklists and tools were adopted to fit the context of the area under study. A team of three (a facilitator, a note taker and an observer) was organised to facilitate discussions with key informants and undertake household surveys. A total of six teams were formed to undertake the study. Three of the teams were planned to facilitate the discussion, whereas, the other three were made-up to facilitate household surveys.

All groups started the survey work in one Kebele to capitalise on learning the process of participatory livelihoods analysis techniques and build confidence on themselves regarding skills on participatory analysis techniques. All the six groups stayed two days in the first Kebele and moved to other six sample Kebeles in a team of six (three to conduct livelihoods discussion with key informant groups and three to undertake household surveys).

To collect qualitative data the planning teams facilitating group discussions used a checklist as a guide to facilitate the discussion and to keep steady flow of information. The team used a wide range of techniques to collect and analyse data on livelihood assets, vulnerability context, in which the livelihood operates, processes and structures that affects them, and strategies they have employed to achieve livelihoods outcomes in the sample kebeles. The tools used include mapping and diagramming, semi-structured interviews, and matrix ranking and scoring.

### **1.6 Limitations of the Study**

The time planned for the study was coincided with political conferences in most of the sample Kebeles. On one hand, this coincidence was an opportunity to easily get key informants from those coming to the conference. On the other, it was a challenge because Kebele authorities were interfering in the process of discussion, which brought about a little bit of fear among the respondents and reservations on sensitive issues. We have noted that some members of the community declined from telling their independent views freely because of the presence of Kebele authorities. To obtain balanced views of the community the planning team organised discussions with different social groups of the community at different times (women groups, youth groups, informal discussions with elders, school teachers, clinic workers, and development agents in addition to discussions made with Kebele authorities).

Getting consistent and sufficient data from relevant Woreda Offices were found to be very difficult and challenging. This is considered as one of the limitations of the study.

The livelihoods framework has an inherent limitation in terms analysing impact of policy at a community level. Community members do not know policies and their implications. Farmers realise the existence of policy (government regulations) when the government institutions are starting practicing. Surprisingly enough Woreda offices do not have a copy of their respective sectoral policies in their office. Discussing policy is a difficult task to undertake both at community and Woreda levels. It seems highly politicised and no-touch area for Woreda staff.

### **1.7 Structure of the Report**

The report is organised into five sections. The first section provides introduction to the study (objectives, sampling, methods, data collection and limitations). Section two gives an overview of sustainable livelihoods approaches. Section three describes general background

to livelihoods in Dessie Zuria. Section four analyses livelihoods situations in sample Kebeles. Section five draws conclusions and gives recommendations based on the analysis.

## II. CONCEPTUAL FRAMEWORK TO LIVELIHOODS ANALYSIS

Sustainable livelihood analysis (SLA) provides a framework for research and policy that takes into account the complexity and multidimensional relations between the social and physical environments, specially highlighting vulnerability context. SLA does so by linking different types of livelihood assets to transforming structures and processes (the market, the state and culture) that give these aspects, their meaning and values. It is a mode of analysis that permits one to shift readily from intra-household to global levels and from present to past to future.

The concept of poverty has undergone re-examination, with greater attention given to its complex, diverse and dynamic nature. Income and consumption thresholds are no longer viewed as the only definitions and measurements of poverty analysis. Instead of subjective approaches after drawing of participatory methods, now document the multi-dimensional nature of poverty, including its relationship to notion of wellbeing. Development analysts increasingly seek to undertake what the poor have, rather than what they lack, examining the nature of tangible and intangible assets. Currently research is focusing more on how and why people move into and out of poverty, reflecting new questions about vulnerability capabilities and social capital. Warner (2000) in his study entitled “*forest and sustainable livelihood*” indicated that policies and interventions aimed at alleviating poverty is increasingly seek to take into account these new insights and knowledge. Sustainable livelihood analysis has emerged as an alternative way of conceptualising poverty alleviation, including its context, objectives and priorities. Moreover, it focuses on one of the most fundamental aspects of life: the ability of the people to support themselves both now and in the future. Sustainable livelihood approach does so in a manner that views livelihoods within both micro-and macro contexts, spanning with both physical and social environment at the local to the global levels.

DFID, 1999 defined a livelihood as a set of capabilities, assets, and activities that furnish the means for people to meet their basic needs and support their wellbeing. Most development analysts agree that livelihoods are not simply a localised phenomenon, but connected by environmental, economic, political and cultural processes to wider national, regional and global arenas. The sustainability of a livelihood is ascertained by its sensitivity, hardness and resiliency in the face of short and long-term challenges. Chambers and Conway (1999) pointed out that “a livelihood is sustainable when it can cope with, and recover from, shocks and stresses and maintain or enhance its capabilities and assets both now and into the future, while not undermining the natural resource base”.

This study used DFID’s sustainable livelihoods framework as analytical tool in evaluating current circumstances and assessing future trends as well as past conditions and patterns of livelihoods in the sample areas.

## IV. LIVELIHOODS ANALYSIS IN THE STUDY AREA

The three agro-ecological zones are represented by seven randomly selected sample kebeles. Thus, *Aday* and *Asgori* are representing higher-highland agro-ecological zone (Wirch), *Degamote* and *Kedijo* are representing highland agro-ecological zone (*Dega*), and *Ayata*, *Harawebello* and *Asgedo* are representing midland agro-ecological zone (*Woinadega*).

The discussions were conducted with key informant groups and households in each sample Kebele on Vulnerability context, livelihood assets, structures and processes, and livelihood strategies.

#### 4.1 Vulnerability Context

The vulnerability context frames the external environment in which people exist. People's livelihoods and the wider availability of assets are affected by critical trends as well as by shocks and seasonality over which they have limited or no control over. Thus, this section deals with vulnerability context of people living in different agro-ecological zones of the study area.

**Higher-highlands:** the discussion made with community living in the higher highlands, represented by Adey and Asgori Kebelles, revealed that they are frequently facing natural shocks and stress due to erratic and shortage of rains, hailstorms, frosts, floods, and civil conflicts. The shocks due to natural hazard are a recent phenomenon, while the incidence of conflict goes back to 1991. These shocks have caused food shortage and depletion of productive assets mainly livestock. Different economic groups of the society felt the shocks differently and apply different coping strategies during crises (*table 3*).

**Table 3:** Summary of coping strategies of the poor, medium, and the rich people during food crisis in the three agro-ecological zones

AEZ		Copping strategies	Remark Male/female
<b>Higher-highlands</b>	<b>Poor</b>	<ul style="list-style-type: none"> <li>• Food aid</li> <li>• Out migration</li> <li>• Wild plants</li> </ul>	Male migrate, female collect wild plants for food
	<b>Middle</b>	<ul style="list-style-type: none"> <li>• Productive safety net</li> <li>• Change consumption pattern</li> <li>• Sell out small animals</li> <li>• Purchase food from markets</li> </ul>	Male take part in the PSNP, sell small animals, women purchase food from local market
	<b>Rich</b>	<ul style="list-style-type: none"> <li>• Change consumption pattern</li> <li>• Sell out small animals</li> <li>• Use their savings</li> </ul>	Women are the first to change consumption pattern, men start using savings
<b>Highlands</b>	<b>Poor</b>	<ul style="list-style-type: none"> <li>• Food aid,</li> <li>• Change eating habits, and</li> <li>• Sale firewood</li> </ul>	Women are the first to change eating habits, women start selling firewood in the local market
	<b>Middle</b>	<ul style="list-style-type: none"> <li>• Purchase of food from market</li> <li>• Give more time for petty trading</li> <li>• Transfer from relatives</li> </ul>	Women purchase food from local market and men go to relatives to ask for support in time of crisis.
	<b>Rich</b>	<ul style="list-style-type: none"> <li>• Sell out small animals (sheep)</li> <li>• Use reserve food from store</li> </ul>	Male manage the store and sale small animals

<b>Midlands</b>	<b>Poor</b>	<ul style="list-style-type: none"> <li>• Food aid</li> <li>• Change eating habits</li> <li>• Sale firewood</li> </ul>	Women are the first to change eating frequency and sell firewood, and no one trusts and borrows food for the poor
	<b>Middle</b>	<ul style="list-style-type: none"> <li>• Change eating frequencies</li> <li>• Borrow from neighbours and</li> <li>• Transfer from relatives</li> </ul>	Neighbours usually trust the medium Class that they will pay back the food they borrowed.
	<b>Rich</b>	<ul style="list-style-type: none"> <li>• Sell out small animals</li> <li>• Reduce marketable crops</li> <li>• Use reserve food from store</li> </ul>	Men decide on the stored food and whether to sell small animals or not.

Source: Sustainable Livelihood Assessment, 2006

Community members equally face the impact of disaster, however, all socio economic groups are not affected equally. Different groups apply different coping strategies to minimise the impact. The poor is unable to resist the impact, unless otherwise assisted by external body. They do not have reserve asset to ensure food security and sustain their livelihoods. Hence, they either wait for food aid or migrate out to sell their labour and look for wild plants to feed the household. This has been an experience of Aday and Asgori kebelles during the severe droughts of 1999\00 and 1984\85.

The rich and the middle level groups strive to cover their food gaps by selling their small animals and changing their consumption patterns in terms of frequency and amount. In addition the rich will turn to its savings and buy food from the market to feed the household (table 3).

Resilience to such shocks depends on the type of crop they have during the crisis. If farmers have Barely and Lentils at the time of such Shocks, then they have confidence to cope with the shock. The main crops grown at higher- highland agro-ecology are Barely, Pulses, Lentils, Beans, Horse beans and Linseeds. The community highly depend on the production of Barley and Lentils. Hence, these are very important food and cash crops for higher-highlands. Barley is mainly used as food crop and small portion of the production is soled in the market. Pulses are cash crops and they are partly used for household consumption. The cash income from the sale of these crops is mainly used to cover household expenditures, clothing, medical care, tax, etc. The amount of crop taken to the market is estimated to be about 10% of the total production.

**These show that the farmers living in higher-highlands have no marketable surplus. Income from the sale of low proportion of crops is used for basic household expenditures, clothes and taxes. This means the farmers are forced to sale the produce to meet the basic household expenditures and pay taxes.**

**Seasonality shocks:** The study revealed that prices of different crops vary through the year. As a result, farmers in Aday and Asgori get higher prices for their produce if they sell between April and September. They get lower prices if they sell between October and January. For instance, the price of Barely in 2006 went up from Birr 100 per quintal in January to Birr 180 in May, the price of lentils increased from Birr 250 in January to Birr 400

in May, and the price of linseed raised from birr160 in January to Birr 240 in May. Respondents confirmed that the trend of price changes of the above crops is more or less similar over the last five years. These data shows that there is a real market opportunity in terms of getting higher price for their produce by waiting for about 4-5 months until the prices get higher in the market. The seasonal price fluctuations are highly correlated with crop harvesting time. **It is possible to intervene at this juncture and support farmers in minimising the seasonal price fluctuation, which adversely affects the income, and discourages production.**

**Food shortage:** The study also showed that economically poor sector of the society produces food enough only for three months. This means that they have nine months of food gap, which is filled through food aid. The middle level groups produce food crops, which are enough for seven months, hence, they have three months food gap, which they fill through purchases and food obtained by engaging in productive safety net programmes. The rich are producing enough for the family for the year. The food gap for poor is severe; they highly depend on their labour and wild plants and pushed by the government to go for resettlement and they are not even allowed to take part in the productive safety net programme. In addition, the trend analysis of the household survey shows that the length of the hungry period is increasing since the last ten years.

The household survey result demonstrated that they need cash income badly between April and October to cover school fees, taxes and address food gaps. It tallies with the hungry season (April-October). This forces them to sell their crops when prices drop. If they manage to store their produce for some time and sell it when the price is high, they would get good return from the sale when price increases. **However, people living in these Kebelles do not have access to any financial service institutions that encourages saving and provide credit services to minimise distress sale of agricultural produces. This could be one of the areas of intervention.**

**Highlands:** Dega Motte and Kedijo Kebelles represent the highland agro-ecological zone of the Woreda.

**Shocks:** the sample Kebelles suffer from food shortages, asset depilation that is caused by poultry and sheep diseases, landslides, hailstorms, and excessive, erratic and shortage of rains. These shocks affect different social groups at different level. They seriously affect the poor whereas; the impact is relatively less to the middle level groups and the rich.

In the highland agro-ecology, the main crops grown are Barely, Wheat, Teff, and Horse beans. The crops are grown largely as food crop and only small amount, 10% of the total production were sold out in the market to cover the cash need for clothing, medical care, petty household expenditures.

**Seasonality:** the prices of cereals in highlands also vary through the year; prices rise between February and August and declines between September and January. For example, the price of barely in 2006 raised from Birr 120 in February to Birr 240 in August and prices of horse beans increased from Birr 110 to Birr 180 in the same period. The rich and middle classes of the society can possible tap this opportunity if they are supported. The poor will be highly affected by these price fluctuations unless otherwise supported by external body to fill the food gap due to rise in price of food crops.

**Food shortage:** 25% of the annual food needs of the poor come from own production. The rest come from other sources such as sale of labour, shared rearing and fattening small animals with the rich, wild plants, and sales of firewood. About 58% of the annual food needs of the middle class of the society come form own production. The rest come from sale



of small animals, income from petty trading and productive safety net programme. The rich people in the two Kebelles produce enough food for their families for the whole year. If there are sudden shocks, the rich use their reserve food, sell small animals and use their savings as a last resort.

The hungry periods for Degamote and Kedijo kebelles vary from March to June, and June to October.

The community would like to get cash income either between December and February or June and October. The first one is a harvesting time and it is a period of low price, if they get cash to cover some of their basic expenditures then they think they will sell the produce with relatively high price.

**The community living in highlands prefers to get cash income during the second period (June-October) because prices for small animals are cheap and pasture is available so that they can buy and engage in fattening and rearing small animals easily. Thus, this time is an ideal time to organise and implement small-animal loan scheme to be effective.**

*Opinions:* opinion surveys show that the length of the hungry period is increasing since the last five years. This shows that livelihood strategies are getting weaker and well-being of the community is getting worse than before. Thus, it calls for appropriate interventions before the situation deteriorates.

**Midlands:** Ayata, Hara Webello and Asgedo Kebelles are representing the middle agro-ecological zones of the Woreda.

*Shocks:* major shocks related to crop production and productive assets in the midlands are hailstorm, floods, pest and animal diseases (2003-2004), and erratic and shortage of rains. These shocks result in six months of hungry period for the majority of people living in Ayata, Harawebello and Asgedo Kebelles.

*Seasonality:* The major sources of food as well as cash income are Barley, Horse Beans in the higher parts of the midlands, while Teff, Maize, Wheat and Sorghum on the larger parts of the agro-ecology. In this agro-ecology, the rural population depends on relatively wider choices of crops compared to the other two. Moreover, the discussion groups that represented the communities in the two sample Kebelles believe that income-earning opportunities are gradually increasing in this agro-ecology.

Prices of different crops vary over the year. The study clearly shows that crop prices are declining between November and January, while it rises between April and September. However, farmers prefer to have cash income when prices are lower and when availability of animal feed is abundant (June-January). Hence, the time of cash income and the need for it does not coincide.

**There are no formal financial institutions to give financial services for the rural people in highlands to address distress sale of crop produce. This situation calls for strategic intervention to maintain livelihood strategies in the area.**

*Food shortage:* The poor people in the higher-highlands face seven months of food shortage and in the highlands eight months. The hungry period for midlands is between May and October. Like other agro-ecological zones, the middle level social groups face three months of food gap in the study area. These groups fill the gap either through purchase or food aid or taking part in productive safety net programme. Thus, the challenge lies only on the poor.

**Opinions:** some middle level group and some rich people said that the wellbeing in midlands is getting better while the poor people said that the wellbeing is getting worse than before.

Table 4 shows a summary of the result of opinion surveys in the three agro-ecological zones. The survey deals with general perception of changes in material wellbeing in the three agro-ecological zones over the last five years.

**Table 4:** Summary of opinion surveys on changes in material wellbeing over the last five years

AEZ	Economic Class	Got better F/M	No change F/M	Got worse F/M	Total F/M
Higher- highlands	Poor	0/0	0/1	3/2	3/3
	Middle	0/0	0/0	1/1	1/1
	Rich	0/0	0/3	0/1	0/4
Highlands	Poor	0/0	0/2	2/0	2/2
	Middle	0/0	2/2	0/0	2/2
	Rich	0/0	0/2	0/2	0/4
Midlands	Poor	0/0	0/2	3/0	3/2
	Middle	1/1	0/1	1/3	2/5
	Rich	0/2	0/0	0/2	0/4
<b>Total F/M</b>		<b>1/3</b>	<b>2/13</b>	<b>10/11</b>	<b>13/27</b>

Source: Livelihood Assessment, 2006

**General opinions:** The result in table 4 illustrates that about 67 percent of the respondents living in higher-highlands feel that the material well being is getting worse and about 34 percent feel no change in the wellbeing. In highlands, 50 percent of the respondents feel that the situation is getting worst and the rest says there is no significant change on livelihoods over the last five years. Whereas, about 27 percent of the respondents in midlands say the wellbeing is getting better than before and 20 percent of the respondents feel that there is no noticeable change and the other 53 percent of the respondents said that the situation is getting worse than the last five years.

In general, opinions of respondents both men and women from all agro-ecologies show that only 10 percent of the respondents feel that the wellbeing is getting better, 38 percent says that there is no noticeable change in the lives of the people, and 51 percent of the respondents have an impression that the situation is getting worse than before.

**Opinions of Women:** Opinions of women on wellbeing trend were considered in the survey and about 48 percent of the respondents were women. The result in the table 4 above shows that in higher highlands, 33 percent of the respondents were women and all said the material wellbeing in the higher-highland agro-ecology is getting worse than before, in highlands, 33 percent of the respondents were women and 50 percent of them also said that the wellbeing is getting worse over the last five years, and in midlands, 31 percent of the respondents were women of which 20 percent said the wellbeing is getting better and 80 percent said that the situation is getting worse than before.

#### 4.2 Livelihoods Assets

The livelihoods asset analysis deals with the five livelihood capitals: natural, physical, financial, social and human capitals in the three agro-ecological zones namely higher-highlands, highlands and midlands.

#### **4.2.1 Natural Capital**

Analysis of natural capital at different agro-ecologies will give an overview of the topography; will explain the availability, access and sustainability of key resources.

**Higher-highlands:** the higher-highland agro-ecology is locally called “Wirch”. Adey and Asgori Kebelles were randomly selected to represent this agro-ecology. The topography of the landscape is largely hilly and undulating and slopes vary from moderately steep (15%) to very steep (> 50%). The very steep slope of the landscape has not been managed properly

**Availability:** The major natural resources available at higher-highland agro-ecology are: farmlands, pasturelands, forestlands, springs, rivers, and livestock. Discussion with households revealed that average land holding of those sample households in the higher-highlands is 1.9 hectare including land provided for pasture.

Rich and middle level households rent in land from the poor since they do not have the capacity to cultivate their farms. Hence, in most cases they contract it out for relatives or rich or middle class household in the area.

The average livestock holding of each household varies from 8 to 13 in the case of smaller animals depending on the agro-ecology zones. For instance, average holding at the higher-highlands is around 13 sheep.

**Access:** Farmlands and livestock are largely owned and managed privately. Whereas, springs, pasture / grazing areas are common properties of the community. The government owns large area of eucalyptus forests that is looked after by Kebele Administration, which the local people do not share the benefit. As a result, there are evidences of conflicts over the resource use. The study confirmed that unlike the recent past, women have equal access to land and other natural resources.

Land is the property of the government and the people have use-right. To this effect, land certification is being carried out in the study Kebelles. However, farmers claim that land belongs to them not to the government. The key informants said that they would sell if they want to. But as a tradition, selling is not a usual practice in the study area. This implies that the land policy didn't go down to the grassroots level.

In this agro-ecology there are conflicts between individuals on farm boundaries, between upper and lower streams, and between government and community. The later is conflict over forestlands. The high number of landless youth of the community is challenging Kebele Administration to have a share of land from the forest area. The trend analysis of the study shows that over the last ten years, the population is increasing while the sizes of the farmlands are decreasing.

**Sustainability:** The forest owned by the government is believed to be unsustainable because the community members have no use-right on these resources. As a result, people gradually encroach into the forest and currently the coverage is reducing. Some of the springs dried up while the others reduced yield. Steep slopes exposed to heavy torrential rains and hailstorms resulting in land slides which ultimately reduces the size of farm and pasture lands which resulted in changing farming practices, which exposed farmlands to severe erosion. They have to be managed properly for it has in direct use value: it could be used for protection of erosion; it could be used as a source of biodiversity and potential area for rearing sheep.

Due to the nature of the landscape farmers opted for rearing small animal than crop production. This could be an opportunity and a good entry point to start economically viable and ecologically sound intervention to support the meagre income of farmers struggling to make living out of crop husbandry from ecologically fragile agro-ecological zone.

The study demonstrated that over the last three decades, productivity of the resources (farmlands and pasturelands) is declining. This is reflected through decline in crop and pasture yield per hectare, decline in yield of springs. Farmers said that decline in productivity can be attributed to erratic and shortage of rains, decline in soil fertility, incidences of floods, frost, and hailstorms.

Despite all these challenges, some part of the land, mainly hillsides with relatively gentle slope to moderately steep (8-30%) are used for crop production, springs on hillsides and valleys were used as a source of drinking water and some private woodlands are used for construction of houses and sources of firewood for the people of the two Kebeles.

**Highlands:** the highland agro-ecology is locally called “*dega*” and it is represented by Dega Motte and Kedijo Kebeles. Observations from Transect walks show that the topography is hilly and undulating. The slopes of the land vary from sloping (8%) to moderately steep (30%) and no coordinated conservation measures are taken, but farming on moderate steep slopes has been practiced through out the agro- ecology which accelerated erosion hazards.

**Availability:** the natural resources available in highlands are different from the higher-highlands in terms of abundance and productivity. The total arable land size is relatively more than what is in higher-highlands but the farm size is less than the higher-highlands. The land holding of households in the highlands is 0.88 hectare. Unlike the higher-highlands, people living in highlands enjoy small-scale irrigation for horticultural production due to availability of water for irrigation. Livestock is herd in this agro-ecology in small quantity because sheep and poultry are badly attacked by diseases. Average small animal holding in the case of highlands and midlands; is about 8. Moreover, government owned and community managed eucalyptus forest exist in highland agro-ecology, but it is a source of conflict.

**Access:** The policy indicates that land belongs to the government and farmers have use-right. But discussions with key informants revealed that they own the land that is under their holdings. They said that they could do whatever they like with the land. This shows that ownership of land is not an issue for them. The issue is the level of productivity of the land.

There are conflicts on natural resources that could be easily mitigated/ resolved by the community leaders. But the issues related to forest resources needs to be resolved before the relationship between the government and the community deteriorates. This is a serious issue that needs special attention and policy decisions.

**Sustainability:** Government owned forests are subject to encroachment, which leads to environmental degradation and ecological imbalances. Discussion with the community indicated that the productivity of land, pasture, and livestock are declining over the last two decades. This implies that it has not been managed to use the resources on sustainable basis.

**Midlands:** the midland agro-ecology is locally called “*woina dega*”. The landscape in midlands is almost flat (3%) to sloping (15%). The landscape by itself is an opportunity for people living in midlands to have more arable land than the above two.

**Availability:** the types of resources found in midlands are similar to resources found in other agro-ecology zones discussed earlier. However, the abundance, importance, and focus of the productive resources are different for people living in the midland agro-ecology than the

above two. The household land size in midlands is 0.95 hectare, which is less than higher-highlands (1.9 hectare) and higher than highlands (0.88).

The herd size in this agro ecology is small compared to higher-highlands. The average size of sheep per household is 9.

The number of rivers and springs are relatively more than the other two agro-ecologies, which give more opportunities for establishing small-scale irrigation schemes unlike the other two. This is manifested by relatively small area covered by forest and pasture, and relatively less number of livestock at household level. This shows that the people living in midlands focus more on crop production than livestock herding

**Access:** Access to resources is not different from the highlands, with the exception of what has been practiced in Ayata Kebelle. The Kebelle Administration has allocated a portion of forestland for 51 youth that has no land. This is a positive action, which needs to be encouraged and researched into as to why and how they did it. This issue has not been solved in other study areas.

The discussion with community leaders indicates that forest resources established in their own community should not remain government property by any means. They said, “Government owned community properties should be handed over to the communities”.

A new phenomenon in the midlands is conflict that usually arises from directing floods to individual farms and conflict arises from irrigation water management. Unlike the two highland agro-ecological zones, irrigation is a common practice in the midland agro-ecology. **This practice is an opportunity for development practitioners to introduce intensive farming using small irrigation technologies to increase productivity and production.** As a result, crop production will be sustainable source of livelihoods for people living in midlands.

#### 4.2.2 Social Capital

Group discussions made with the community through semi-structured interviews, indicated the existence of formal and informal institutions in all agro-ecological zones. Formal institutions are usually identified as public offices or officially recognised private institutions operating at grassroots level. The types of formal and informal institutions operating in the three agro-ecological zones are the same.

Some of the key informal institutions are Kere / Idir, Jige, Debo, Equb, etc. These institutions serve as means of informal safety nets among community members. These institutions are pooling resources to support each other in time of happiness, mourning and undertaking activities that require teamwork.

The study identified opinions of communities in prioritising institutions in terms of sustaining their livelihood strategies.

The following are outcome of prioritising formal and informal institutions according their importance. Attitude of the people to institutions is location specific. As result, importance of institutions differs from one agro-ecological zone to another and from one Kebelle to another.

**Table 5:** Institutions prioritised according to their importance

Rank	Agro-Ecological Zones		
	Higher- highlands	Highlands	Midlands

	Adey	Asgori	Dega Motte	Kedijo	Ayata	Hara Wobello	Asgedo
<b>Formal and Informal Institutions</b>							
1 <sup>st</sup>	Concern Ethiopia	Office of Agriculture	Kere/Idir	Kere/ Idir	Kebelle Administration	Kere/ Idir	Office of Health
2 <sup>nd</sup>	Kere/Idir	Kere/Idir	Office of Agriculture	Office of Agriculture	Office of Agriculture	Concern Ethiopia	Office of Agricultur
3 <sup>rd</sup>	Office of Agriculture	Office of Education	Office of Health	Office of Education	Office of Education	Office of Agriculture	Office of Education
4 <sup>th</sup>	Service Cooperatives	Office of Health		Concern Ethiopia		Service Coops	
5 <sup>th</sup>		Kebelle Administration		Kebelle Administration			
6 <sup>th</sup>				Associations			

Source: livelihoods analysis, 2006

The table 5 indicates that offices of agriculture, Kere/Idir and education are top important institutions for the communities. This is followed by Concern, Office of Health and Service cooperatives. Farmers Associations (farmers', youth and women's associations) and Service Cooperatives are relatively less important for the community to support their livelihood strategies.

When the communities discussed the sustainability of the above formal and informal institutions, they pointed out that Kere/Idir are institutionally sustainable. The table 6 summarises the outcome of the discussion on levels of sustainability:

**Table 6:** Level of Sustainability of Formal and Informal Institutions

Level of sustainability	Higher- highlands		Highlands		Midlands		
	Adey	Asgori	Dega Motte	Kedijo	Ayata	Hara Wobello	Asgedo
High	Kere/idir	Kere / Idir	Agriculture	Kere/Idir	Kebelle	Kere /Idir	Health
Medium	Concern	Agriculture	Kere / Idir	Agriculture	Agriculture	Concern	Agriculture
Low	Agriculture	Education (1-4)	Education (1-4)	Education (1-4)	Education (1-4)	Agriculture	Education (1-4)

Source: Sustainable livelihood study, 2006

The community representatives confirmed that sustainability of Office of Education depends upon community's contribution to the sector. Primary education, grade 1 to 4 requires the community to build classrooms as well as residence to the teachers. Thus, the total investment, in this regard, goes to the community not to the government. Therefore, the community believes that education services up to grade 4 are economically and socially sustainable.

All the above institutions came to being and have gone through different stages of development during the last three decades whereas Kere/Idir existed for centuries. It has the oldest article of association in the country. However, the role of Kere/Idir improved its management during Derg and strengthened its capacity during EPRDF regime, they have still untapped huge potential to be used for development purposes.

Provision of health services and coverage of education and agriculture have been promoted and further strengthened during "DERG" and EPRDF regimes.

The role of Concern dates back to the early 1990s and remembered by the community due to its engagement in emergency relief operation between 1991 and 1993 Eth Cal. Secondly, discussion with the community indicated that Concern is known for its nutritional support programme between 1994-and 1997 Eth. Cal.). Thirdly, it is recognised for its current small ruminants loan programme targeted the poor.

Concern Ethiopia is currently addressing the felt needs of the poor people in some of the study areas through its sheep loan programme. It is a good start but needs to explore how to use the informal local institutions, which farmers have trust. The study also revealed that these informal institutions are socially and institutionally sustainable and has inherent strengths to mobilise and direct the community without any problem at any place in time. So, they can be considered engines of development if they are well recognised and given the opportunity to take part in the process that concerns them.

#### **4.2.3 Human Capital**

The average household size of the higher-highlands, highlands, and midlands are 6, 5 and 7 persons, respectively. This implies that an average household size in the three agro-ecological zones is 6 persons, which is more than the national average 5 (CSO, 2002).

##### ***Household Demography: Household Size, Age, Education:***

Out of the 42 heads of households 4 of them are less than 35 years of age, 28 of them are between the age of 35 and 64, and the remaining 10 household heads are above 64 years of age. This shows that about 9 percent of the respondents are young, about 67 percent are within the active population group and about 23 percent of the respondents were relatively old.

On the other hand, the age structures of the spouses are divided between those who are less than 35 years of age, between 35 and 64, and above 64 years of age. The spouses that are below the age of 34 are 25 percent and the spouse whose age is between 34 and 64 is 70 percent and the rest account for only 5%.

42 sample households have 164 children below the age 34. Those children below the 15 years of age are 99, while those above the age of 15 are 65.

Examining the distribution of those children below age 15, significant part of the total number i.e. 44 are from households in midland agro-ecology, 30 children are from the highlands and the remaining 90 are from households in the higher-highlands. The average number of children per sample households in the higher-highlands and highlands are less than 2.5 children per household, while average children in the midland households are more than 3. This might have explanations that would be dealt in the analysis part of the survey.

Children who are enrolled in primary school, grade 1-6 are 70, and those who joined grade 7 – 10 are 31.

In all three agro-ecological zones, at least, there is a primary school, a health post, and farmer’s training centre. These institutions are means for human capital development in rural areas. The study shows that most of the schools, health posts are in good conditions. These facilities are distributed fairly and it is shown in table 7 below.

**Table 7:** Number and Conditions of Formal Institutions serving for human resource development

	<b>Agro-Ecological Zones</b>		
	<b>Higher-</b>	<b>Highlands</b>	<b>Midlands</b>

Facilities /PA	highlands			Kedijo	Ayat a	Hara Wobell o	Asged o
	Adey	Asgori	Dega Motte				
<b>School</b>							
- Primary School	1*	1	1	1	1	2	1
- Satellite School		3	3			1	
-Secondary School				1			
<b>Health Post</b>	1*	1		1*	1	1	1
<b>Farmer's Training Centre</b>		1			1	1	1

Source: livelihood Assessment, 2006

One aspect of human capital is special skills people have. In all sample Kebeles; there are traditional healers and traditional birth attendants, though the number varies from one Kebele to another. These skills have not been sufficiently supported by development organisations to maximise their service to the community.

The other aspect of human capital is access to information. The communities believe that they have formal and informal sources of information. The formal ones are meeting and conferences organised by the Local Administration, the zone and the region. The other sources are radio, kere/idir, chat at coffee ceremony with neighbours, religious leaders and sometimes NGOs. In this connection, a discussion was triggered with community members on policy issues. The respondents are not sure of knowing any of the policies in the country except the land policy, which they are not fully aware off. They usually follow what the Local Administration tells them as a regulation of the regional state, otherwise they do not have any idea of the legislations, laws, regulations which even concerns them.

**School enrolment:** There are 70 out of 99 children enrolled in primary school, grade 1- 6. This makes the total enrolment 71 percent. Table 14 shows that 92 percent of children under 15 are enrolled in higher-highland, 80 percent in highlands and 52 percent in Midlands. This result shows that households in midlands do not send their children to school; instead they engage them in other productive activities that generate income for the household. So, this could be one area to intervene after conducting detailed study.

**Table14:** School Enrolment of Children in Sample Kebeles

Agro-ecological zones	Number of student in Grade						Total	Children < 15	%
	1	2	3	4	5	6			
Higher-highland	5	3	4	1	7	3	23	25	92.0
Highland	7	6	4	3	2	2	24	30	80.0
Midland	6	2	10	2	1	2	23	44	52.0
<b>Total</b>	<b>18</b>	<b>11</b>	<b>18</b>	<b>6</b>	<b>10</b>	<b>7</b>	<b>70</b>	<b>99</b>	<b>71.0</b>

Source: own computation, 2006

**Dependency ratio:** Data collected from the household survey indicate that ages of 30 out of 38 household heads are between 35 and 64. This shows that about 79 percent of the respondents are within the active population group and it is the productive force of the community. This is a potential human capital that can be tapped for development purpose. For details, please refer to table 13 below

♦ Have poor internal facilities

\* Not yet completed

\* Not yet completed



**Table 13:** Age structure of household heads and dependents / children

	Household heads - age					Children / dependents – age							B/A
	<3 5	35- 49	50- 64	64 +	Total A	<5	5-9	10- 14	15- 24	25- 29	29 +	Total B	
High highlands	1	6	2	2	11	2	13	10	17	5		47	4.3
Highlands	1	6	5		12	6	9	15	20	1	2	53	4.4
Midlands	2	2	9	2	15	12	15	17	17	3		64	4.9
<b>Total</b>	<b>4</b>	<b>14</b>	<b>16</b>	<b>4</b>	<b>38</b>	<b>20</b>	<b>37</b>	<b>42</b>	<b>54</b>	<b>9</b>	<b>2</b>	<b>164</b>	
						<b>99</b>			<b>65</b>				

Source: Own computation, 2006

The above table indicates that in the 38 sample households there are 164 dependents, of which 99 are under the age of 15. This implies that there are 4.3 dependents in each household living in higher highlands, 4.4 and 4.9 dependents are living in highlands and midland households respectively. This shows that dependents in midland households are higher than the other two agro-ecological zones.

#### 4.2.4 Physical Capital

Physical capital comprises the basic infrastructure and producer goods to support livelihoods. Some components of infrastructure are transport, shelter and buildings, water supply and sanitation, and access to information.

The study illustrates that key and basic components of infrastructure are either incomplete or not available in the three agro-ecology zones. The absence of these infrastructures shows the level of poverty of the sample kebelles. Without adequate services such as potable water, human health deteriorates and long periods are spent on non-productive activities such as fetching water. Without access roads, essential input and output markets will be hampered which has a negative effect in crop production and productivity.

The study shows that all the sample areas have complete access road to and from Dessie town except Dega Motte. Cooperative offices are neither incomplete nor available, farmer training centres are not functional, no veterinary services to keep the animals healthy and productive, schools and health posts physically exist but do not give services so that people will meet their basic needs to be more productive. Table 8 below illustrates availability and conditions of basic infrastructures.

**Table 8:** Availability and conditions of basic Infrastructures

Infrastructure /Kb	Agro-Ecological Zones						
	Higher-highlands		Highlands		Midlands		
	Adey	Asgori	Dega Motte	Kedijo	Ayata	Hara Wobello	Asgedo
Access road from Dessie to	Complete	Complete	Incomplete	Complete	Complete	Complete	Comple
Office of Service coops	Not available	Not available	Not available	Not available	Available but Incomplete	Not available	Availab Incomp

Farmer's training centre	Available but Incomplete	Available but Incomplete	Available but Incomplete	Not available	Available but Incomplete	Available but Incomplete	Availab Incomp
<i>Vet clinic</i>	<i>Not available</i>	<i>Not available</i>	<i>Not available</i>	<i>Not available</i>	<i>Incomplete</i>	<i>Not available</i>	<i>Not ava</i>
Health post	Available but Incomplete	Complete	Not available	Available but Incomplete	Complete	Complete	Comple
Satellite School	Not available	Available	Incomplete	Not available	Available	Available	Not ava
Primary school (1-4)	Poorly facilitated	Available	Available	Available	Available	Available	Availab
Primary school (1-6)	Not available	Incomplete	Incomplete	Incomplete	Incomplete	Not available	Incomp
Secondary (7-10)	Not available	Not available	Not available	Available	Not available	Not available	Not ava
<i>Springs</i>	<i>1 Developed</i>	<i>1 Developed</i>	<i>5 Developed</i>	<i>6 Developed, 37 Undeveloped</i>	<i>1 Developed</i>	<i>5 Developed</i>	<i>1 Devel</i>
Agriculture office	Available	Available	Available	Available	Available	Not available	Availab
Local Administration Office	Available	Available	Inappropriate Location	Not available	Not available	Not available	Incomp
Market Place	Available	Available	Not available	Not available	Not available	Not available	Not ava
Telephone	Not available	Not available	Not available	Available	Not available	Not available	Not ava

Source: livelihoods assessment, 2006

These basic components of infrastructure are neither equipped with necessary materials, nor completed to give service for the people as envisaged. On the other hand, number of developed springs and their distribution does not match with the wide range of needs of the community for potable water. The study shows that one spring developed for -----number of people, which is less than the national average. This is one of the major challenges that cause human health problem for the people in general and the poor in particular to achieve their livelihood objectives. So, they need to be supported to have access to key infrastructures such as access roads, veterinary clinics, developed water points, and health posts.

#### **4.2.5 Financial Capital**

**Sources:** Financial capital stands for financial resources that people use to achieve their livelihood objective. Normally the main sources of financial resources are savings and regular inflow of money. In the case of sample study Kebelles, the main sources of cash income of the rural communities are different in the case of the different socio-economic groups and agro-ecologies. The sources of cash income of the rich are: grinding mills, animal rearing and fattening, crop production, and interest from lending money. In the case of middle group cash income is from: crop production, animal rearing and fattening, trade, and petty trade. The main sources of cash income for the poor are: sell of labour within the community or in the near-by-towns, safety-net programme, sell of poultry, rented out farmlands, fattening and rearing small animals on shared benefit arrangement.

**Expenditure:** Taking annual expenditure as a proxy indicator for annual income of the sample households, the three agro-ecology zones have revealed different annual average incomes. Annual expenditures of different economic groups are shown in the table 11.

Agro-Ecological Zone	Sample kebelles	Economic Group		
		Poor birr	Middle birr	Rich birr
<b>Higher-highlands</b>	Aday	940	1200	3212
	Asgori	2000	2050	2139
<b>Highlands</b>	Degamotte	1427	1107	1720
	Kedijo	360	1948	2500
<b>Midlands</b>	Ayata	2009	5600	5750
	Harawabello	762	1133	2015
	Asgedo	1905	3450	3450
	<b>Average (birr)</b>	<b>1,343</b>	<b>2,355</b>	<b>2,969</b>

**Table 11:** Annual Expenditures of different economic groups  
Source: own computation, 2006

The average annual expenditure of sample households of the higher highlands, irrespective of economic grouping, amount to Birr 1,923, while that of highlands is Birr 1,510 and midlands are estimated Birr 4,345.

**Role of women:** Semi-structured interviews with women group and key informants indicated that women play an active role in generating additional cash income to the family through petty trade, poultry, saving from wage, hair dressing, etc.

**Financial Institution:** The formal financial institutions engaged in the provision of credit to the rural population are Amhara Credit and Savings Institutions (ACSI), Concern-Ethiopia (revolving credit in kind) and Regional Food Security Office (input credit) through office of Agriculture and Rural Development. The informal ones are the local moneylenders. ACSI provides credits and savings, the rest are engaged in the provision of credits only. The coverage of these services is very small and insignificant in terms of addressing the immense needs and poor performance in case of fertiliser loan. It would be good to discuss with these institutions to increase the provision of services to the community.

#### **4.4 Structures and Processes**

Transforming structures and processes within the livelihoods framework are considering the institutions, policies, and legislation that shape livelihoods. Structures are the public, the private and the civil society organisations whereas; processes are policies, legislations, institutions, and culture.

##### **4.4.1 Structures**

In order to understand the structures in the sample Keblles, stakeholders' analysis were conducted together with the discussion groups in each sample Kebele and the outputs of the discussion are as follows:

**Stakeholders analysis:** the main stakeholders identified that make interaction with the rural population directly or/and indirectly are Offices of Agriculture and Rural Development, Health, Education, and Local Administration (the lowest administrative structure of the government).

The second level stakeholders are traditional community-based organisations represented by kere/Idir and NGO (Concern). Although these have been prioritised by the community representatives of each Kebele interactions of financial institutions like ACSI, Service Cooperatives as well as Elders, Youth and Women Associations are among the stakeholders of the rural communities.

The planning team discussed with key informants about the roles stakeholder institution plays, its membership status, its management system, main activities and sources of finance. This will give us an idea to focus on the relevant stakeholders to maximise their contributions to support the rural people livelihood strategy. The following are organisations operating at a grassroots level.

##### ***Office of Agriculture and Rural Development:***

This is one of the government offices that focuses on rural development and agriculture. The role of this office is provision of software and hardware to enhance and improve food security through increased agricultural production, diversify household income and utilisation. The office is established at each Kebele and development agents have been assigned to deliver technical support. The technical persons at grassroots are providing awareness, technical know-how and provision of agricultural inputs such as fertilizers, modern beehives, seedlings, vegetable seeds, equipment and tools, etc. In addition to these, they mobilise and monitor government managed productive safety-net programme (PSNP).

The office is responsible to organise service cooperatives that would provide basic social and economic services to its members.

##### ***Office of Health***

This is a government office operating with the objective of improving the nutritional and health status of children, mothers and the community at large. It provides primary health care services. This office is represented by health post in all sample Kebeles.

##### ***Office of Education***

This is a government office operating with objective of delivering primary education for citizens. The office is represented by schools in each sample Kebeles. Some of the schools levels in the study area are satellite primary schools, 1-4 grade primary schools, and 1-6 grade primary schools.

The rural communities are responsible for constructing 1-4 primary schools and residence for the teachers and the government covers running cost, material cost and pays salaries for teachers. These arrangement works in almost all sample Kebelles.

### **Kebelle Administration**

This is the lowest administrative structure representing the government at grassroots level. It is responsible for administering public properties, mobilising the people for development work, streamlining guidelines and regulations and collecting taxes. The administration is composed of ten government appointed members of the community called “*Mengistawi Budden*” which literally means Administration Team.

### **Concern**

This is an international NGO working in the area to address food insecurity, destitution and poverty. It was engaged in the provision of emergency relief programme during 1991-1993, and implemented nutrition support programme for children and mothers during 1994-1997 and currently undertaking sheep credit to poor households in the Woreda, which is managed by the service cooperatives.

### **ACSI**

This is one of parastatal micro-finance institutions operating in Amhara regional state. It works towards diversification of household income of the poor and contributes to the economic growth and development of the country. It provides saving and credit services in Dessie Zuria Woreda on the basis of group collateral and charges 12.5 percent interest rate on credit and pays 8 percent on savings. Activities eligible for credit are inputs, trade (grain, livestock, and petty trade), handicraft, animal rearing and fattening, promoting new technologies, etc.

### **Kere/Idir, Jige, Debo,**

Kere, Idir, Jige and Debo are some of traditional community-support mechanisms in which the community pool together their labour, material and financial resources to meet the entire community or individual needs during happiness, mourning and economic activities that require team work.

The community have different perceptions for different institutions. Their perception has a lot to do with effectiveness and efficiency of the institutions. Thus, it is important to analyse the strength, limitations, opportunities, and threats of important institutions operating in the sample Kebelles. Representatives were taken from each agro-ecological zone for analysis. Summary of the analysis was presented in Table 9 below.

**Table 9: SLOT Analysis of Institutions in three Sample Kebeles**

<b>Institution</b>	<b>Strengths</b>	<b>Limitations</b>	<b>Opportunities</b>	<b>Threats</b>
<b>Adey</b>				
Concern	1991-1993 emergency relief support; support to children and mothers; pro- poor support provided through cooperatives	Every three months nutritional support to children	Saving lives of children and supporting the poor	Less coverage; termination of the on going interventions
Kere/Idir	Pooling labour, material and finance of community members for farm work, wedding, burial, house construction, etc	Less cash resources; economic factors affecting members' commitment; environmental degradation	Self financed, cooperation and efficiency	Nothing
Agriculture	Provision of technical and provision of inputs	Focus on awareness creation but less in input provision; unable to hand over forest and nursery to the community	Assigning experts and providing technical services	Loss the forest
<b>Degamote</b>				
Kere/Idir	Pool of resource for burial and wedding ceremony; compensate who lost their ox or cow; members own and manage	No office and budget; materials not yet fulfilled	Social security for the community	Religious difference of the community members
Agriculture	Provision of inputs; farmer training centre and presence of DAs;	Late delivery of inputs,; lack of animal health services	Presence of DAs	Loss of productivity
Health	Maintain hygiene; family planning	Lack of FP injection; Health post not providing health services	Health extension workers presence	Awareness of HIV;
<b>Harawobello</b>				
Kere/Idir	It has been our traditional support mechanism, has article of association, financed by its members, managed by the known personality of the society, do not exclude any one irrespective of wealth, support the community during happiness, sorrow and accidents, etc	Used to plough for those in problem but not now; not supporting orphans; lack of know how to manager better	Disaster response; support coverage beyond required	Kebele admin. Interference; religious factions weakening our strength
Concern	Supports orphans; developing springs, sheep loan that revolves to the community through service	Unfinished works in spring development; less quota for child care support; not responding to	Pro - poor intervention	Might not intervene in the area in the future

	cooperatives	complains regarding arm measurement criteria; nor monitoring		
Agriculture	Provision of seed, fertilizer, animal loans, beehives, etc, i.e. all agricultural inputs	Artificial insemination; timely and enough quantity provision of inputs; vet clinic	Assigning development agents	

**Networks:** The discussion with key informants revealed that the community have two major networking systems. For the formal institutions, like offices of agriculture and rural development, education, health, associations, and task forces the centre of the communication is Local administration. For informal institutions the centre of communication is Kere/idir, which is stronger than the formal channel.

#### 4.4.2 Processes

If structures are considered as hardware, processes can be taken as software. Processes determine the way in which structures operate and interact. They are very important but complex. They operate at different levels, but they sometime overlap and have conflict between them.

They are important to every aspect of livelihoods because they grant or deny access to assets, determine how to manage resources, enable people to transform one type of asset into another through markets, and have strong influence on interpersonal relations.

**Access to Natural Resources:** Accessibility stems primarily from policy as well as from non-formal or traditional practices. During the Derg regime land had been nationalised and owned by state and distributed to farmers and on use-right basis. During that time, there were community and state forests for specific purposes like fuel wood and electric pole supply.

With the fall of the regime, establishment of EPRDF government, the constitution did not change the ownership; instead it asserted that land is the property of state and farmers have use-right, which is authorized through land certification. As a result, the community owned forests were transferred to the state. This decision triggered conflict between the community and local Administration. The use of this resource remains a challenge that needs serious action. The best way is to take time and thoroughly discuss the issue with the community and find ways that community members will be part of the benefit.

Access to land is not a problem in the study area. Farmers said that they own land under their holding. They also say they can sell if they want too, but it is not a usual practice to sell land for they have no alternative means of living. What the policy says and what happens in practice are different. The good thing is no one denied farmers use-right even before certification. However, access to other resources like water, communal pasture and irrigation water is still causing conflict. Access to resources may mean a lot in a rural setting. Say for instance, if someone doesn't have access to resources like land or fixed asset, ACSI would not provide financial services to him/her whether the project is feasible or not. In general, further work is required to develop more effective methodologies for analysing policies, their effects on livelihoods and how they themselves can be influenced by what happens at local level in order to have pro-poor policy.

#### **Conflict Analysis**

Discussions with key informants showed that there are conflicts over resources, and conflict between informal and formal institutions.

Regarding conflict over resources, it has been manifested among individuals on: farm boundaries, flood diversion, and watering irrigation farms.

The other aspect of conflict is group conflict on utilising drinking water sources (springs) that is supposed to be shared between those in the upper and lower stream.

Complex conflict, this is a type of conflict, which arises when the disadvantaged community group, the landless youth, cuts trees for survival from the government-owned forest. The conflict starts with the local administrators and extends to landless youth families and finally to the entire community members. This is a serious conflict, which cause hatred among the community members who claim to have stake on the forest, the landless that need their daily subsistence and the local administration.

Competing conflict exists between formal institutions like ACSI and Service cooperatives because of different lending interest rates. Conflict between formal and informal institutions; say conflict between Kebele Administration and kere/Idir sometimes they are playing the same role. The later is membership institutions while the other is government-established structure.

### ***Gender Analysis***

The issue of gender is favourably considered in the policy and encouraging measures have been taken at national, regional and to some extent at Woreda levels. But nothing happens in practice at a grassroots level. Social norms and beliefs are stronger than the policy regulations in the study area. Gender is a role given to men and women, boys and girls in a society. Thus, every body grown up in a conservative society will acquire gender-biased attitude. So, development organisations are expected to work hard to change attitudes of the people. To change the attitude of the people who are very conservative in terms of accepting and eternalising gender equality a lot has to be done. The starting point to do this is mainstreaming gender at all levels.

### **4.5 The Existing Livelihoods Strategies**

The study shows that livelihood strategy varies according to agro-ecology and economic status of people. The current livelihood strategies of the study area is summarised as follows in Table 10:

**Table 10:** Summary of Livelihood Strategies for Sample Kebelles

AEZ	Kebeles	Socio-Economic Group		
		Rich	Medium	Poor
		Livelihood strategy		
<b>Higher-highlands</b>	<b>Aday</b>	<ul style="list-style-type: none"> <li>Mixed farming (Crops and small animals)</li> <li>Store own production for sell when price rises</li> <li>Rearing animals,</li> </ul>	<ul style="list-style-type: none"> <li>Mixed farming,</li> <li>Petty trade,</li> <li>Fattening</li> </ul>	<ul style="list-style-type: none"> <li>Shared fattening,</li> <li>Shared rearing of livestock,</li> <li>Sell labour</li> </ul>



	<b>Asgori</b>	<ul style="list-style-type: none"> <li>• Mixed farming</li> <li>• Rent in land</li> <li>• Shared grinding mill</li> <li>• Rearing and fattening Exotic breeds</li> <li>• Give out livestock for shared reading and fattening</li> <li>• Grain trading</li> </ul>	<ul style="list-style-type: none"> <li>• Mixed farming</li> <li>• Fattening</li> <li>• Shared farming</li> </ul>	<ul style="list-style-type: none"> <li>• Fattening</li> <li>• Sheep rearing</li> <li>• Selling labour</li> <li>• Sell out Child labour</li> <li>• Shared farming</li> </ul>
<b>Highlands</b>	<b>Dega Motte</b>	<ul style="list-style-type: none"> <li>• Mixed farming, apiculture</li> <li>• Fattening</li> </ul>	<ul style="list-style-type: none"> <li>• Mixed farming</li> <li>• Petty trade</li> <li>• Fattening</li> </ul>	<ul style="list-style-type: none"> <li>• Crop farming</li> <li>• Shared rearing</li> <li>• Selling labour</li> </ul>
	<b>Kedijo</b>	<ul style="list-style-type: none"> <li>• Crop farming</li> <li>• Give loan</li> <li>• Rent in land</li> <li>• Grain trading</li> <li>• Store own production and sell out when price is high</li> <li>• Woodland farming</li> </ul>	<ul style="list-style-type: none"> <li>• Mixed farming</li> <li>• Fattening</li> <li>• Petty trading</li> <li>• Gets loan to buy animals for fattening</li> </ul>	<ul style="list-style-type: none"> <li>• Crop farming</li> <li>• Sell labour</li> <li>• Shared rearing of small animals</li> <li>• Petty trade</li> <li>• Contract out his land for shared cropping</li> <li>• Engaged in handicrafts if he/she has skills</li> </ul>
<b>Midlands</b>	<b>Ayata</b>	<ul style="list-style-type: none"> <li>• Mixed farming</li> <li>• Livestock trade</li> <li>• Buy farming land extensive farming</li> <li>• Engaged in trade</li> </ul>	<ul style="list-style-type: none"> <li>• Crop farming</li> <li>• Safety net</li> </ul>	<ul style="list-style-type: none"> <li>• Crop farming</li> <li>• Sell-out land</li> <li>• Sell labour</li> <li>• Safe net</li> </ul>
	<b>Harawobelo</b>	<ul style="list-style-type: none"> <li>• Mixed farming <ol style="list-style-type: none"> <li>1. Animal rearing</li> <li>2. Crop production</li> <li>3. Woodland farming</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>• Mixed farming <ol style="list-style-type: none"> <li>1. Animal rearing</li> <li>2. Crop production</li> <li>3. Woodland farming</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>• Crop farming</li> <li>• Sell labour</li> <li>• Small animal rearing</li> </ul>

	<b>Asgedo</b>	<ul style="list-style-type: none"> <li>▪ Mixed farming</li> <li>▪ Grain trading</li> </ul>	<ul style="list-style-type: none"> <li>▪ Crop farming</li> <li>▪ Petty trade</li> </ul>	<ul style="list-style-type: none"> <li>▪ Safety net</li> <li>▪ Sell labour</li> </ul>
--	---------------	--	---	---

Source: Sustainable livelihood assessment, 2006

The table 10 above shows that economically rich and middle classes in the higher-highlands undertake mixed farming whereas the poor are not using crop farming as their livelihood strategy. The rich are involved in grain trading whereas the medium are involved in petty trading. Moreover, the rich are highly involved in animal fattening and the medium class are involved in small animal fattening through credit. The poor is also involved in small animal fattening on the basis of benefit sharing arrangements. The poor are selling their own and their child's labour as a livelihood strategy. This shows the poor are desperate for they don't have many choices.

In the highlands, the livelihood strategy of the rich is based on mixed farming, fattening, grain trading and apiculture. The middle class are depending on mixed farming, petty trading and fattening. However, the poor are selling labour, contract out land and undertake shared rearing of small animals, which is peculiar to this agro-ecology.

In the midlands, the rich people depend on mixed farming (*livestock and crop production*), contract in land for crop production, livestock and grain trading, and establishing woodland plantation. The middle class depends on crop farming, woodland plantation, petty trade, and engaged in safety net programme. The poor in this agro-ecology lead their lives through small animal rearing, selling labour, contracting out land and taking part in the safety net programme, which is peculiar to the midlands.

When we analyse the livelihood strategy based on different agro-ecological zones, there are some differences and communalities. Land renting is one of the livelihood strategies for the rich people in higher-highlands and highlands, whereas, in midlands buying of land is used as livelihood strategy.

The rich people in higher-highlands and highlands practice fattening as a livelihood strategy. Moreover, the rich practice Woodland farming as some of the livelihood strategies in highlands and midlands.

The poor people in higher-highlands do not depend on crop farming as their livelihoods strategy. In highlands and midlands though it is small in size, they use crop farming as one of their livelihood strategy.

Grain trade, mixed farming, and land renting are common livelihood strategies for the rich across agro-ecological zones.

Selling out labour is one of the livelihood strategies common to the poor across all agro-ecological zones. They opted for this because they have no or limited access to productive assets such as land. All development organisations need to work hard to avail variety of choices so that they can engage themselves on a productive work that will enable them to meet their livelihood objectives. One among many possibilities are: understanding their priorities and interest and train them in particular skill, identify mechanism to support them through provision of start-up financial capital on revolving credit basis.

In general, we can comprehend from the table 10 above that different economic categories of the community used a range of combination of activities as their livelihood strategy to meet their livelihood objectives. However, the poor are not making any progress because they are

not working for themselves for they don't have resources to invest on what they think is productive. It is an area to critically think about and be part of the solution.

## **HOUSEHOLD SURVEY**

Discussions at household level was organised to discuss about livelihood issues with households that have different economic backgrounds (poor, middle, rich). This was designed to tap information, which could not be obtained from key informant's discussion at the Kebele level. The discussions were made with all members of the households. 42 households were randomly selected from all sample kebelles representing the three agro-ecological zones and each household was visited and thorough discussions were conducted with all household members at their respective homes. The discussion focused over some key issues such as Demography, Assets, Food security, Expenditures.

## **V. CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 Conclusions**

The study showed that community members equally face the impact of disaster; however, all economic groups are not affected equally. Different groups apply different coping strategies to minimise the impact. The poor is unable to resist the impact, unless otherwise assisted by external body. They do not have asset reserve for livelihood security. Hence, they either wait for food aid or migrate out to sell their labour and look for wild plants.

The rich and the middle level groups strive to cover their food gaps by selling their small animals and changing their consumption patterns in terms of frequency and amount. In addition, the rich will turn to its savings and buy food from the market to feed the household.

Based on the discussion with the community, the study concluded that resilience to such shocks depends on the type of crop they have during the crisis. If farmers have Barely and Lentils at the time of such Shocks, then they have confidence to cope with the shock. The main crops that grow at higher- highland agro-ecology are Barely, Pulses, Lentils, Beans, Horse beans and Linseeds. The community highly depend on the production of Barley and Lentils. Hence, these are very important food and cash crops for higher-highlands.

Farmers in this agro-ecology sell out only 10% of the total production. These show that the farmers living in higher-highlands have no marketable surplus. Income from the sale of low proportion of crops is used for basic household expenditures, clothes and taxes. The study concluded that the farmers are forced to sale the produce to meet the basic household expenditures and pay taxes.

Data collected from key informants illustrate that there is a real market opportunity in terms of getting higher price for their produce by waiting for about 4-5 months until the prices get high in the market. However, they have no means to get cash to meet the basic household expenditures. The study concluded that it is possible to intervene at this point and support farmers in minimising the seasonal price fluctuation, which ultimately affect the income, and discourages production, by organising means to link them with financial institutions.

The study also showed that economically poor sector of the society produces food enough only for three months. This means that they have 7 months of food gap, which is filled through food aid. The middle level groups produce food crops, which are enough for seven months, hence, they have 3 months food gap, which they fill through purchases and food obtained by engaging in productive safety net programmes. The rich are producing enough for the family for the year. The food gap for poor is severe; they highly depend on their labour and wild plants and pushed by the government to go for resettlement and they were not allowed to take part in the productive safety net programme. In addition, the trend analysis of the survey work shows that the length of the hungry period is increasing since the last ten years.

In the highland agro-ecology, the main crops grown are Barely, Wheat, Teff, and Horse beans. The crops are grown largely as food crop and only small amount, like higher-highlands, highlands sell out only 10% of the total production to cover the cash need for clothing, medical care, and petty household expenditures.

The prices of crops in highlands also vary through the year. The prices rise between February and August and declines between September and January.

The major shocks related to crop production and productive assets in the midlands are hailstorm, floods, pest and animal diseases, and erratic and shortage of rains. These shocks result in six months of hungry period for the majority of people living in Ayata, Harawebello and Asgedo kebelles. The hungry period is between May and October.

Based on discussion made with key informants the study concluded that the poor people in the three kebelles face 6-8 months of food gap whereas the middle level social groups face three months. They fill the gap either through purchase or food aid/PSNP. Thus, the challenge lies on the poor and lower middle level groups of the population.

## **5.2 Recommendations**

The following are some of the key recommendations for future consideration.

The household survey result demonstrated that farmers in the study area need cash income badly between March and September to cover school fees, taxes and address food gaps. It tallies with the hungry season (April-October) if they manage to keep their produce for some time and sell them when the price is high they may overcome the problem of food shortage to some extent. However, people living in the study area do not have access to any financial service institutions that encourages saving and provide credit services to minimise distress sale of agricultural produces. This could be one of the areas that need in-depth investigation before deciding to intervene.

Due to the landscape problem farmers in higher-highlands and highlands focus more on small animal rearing than crop production. This could be an entry point to start economically viable and ecologically sound intervention to support the meagre income of farmers struggling to make living out of crop husbandry from ecologically fragile agro-ecological zone.

The study also revealed that informal institutions are sustainable and has inherent strengths to mobilise and direct the community without any problem at any place in time. So, they can be considered engines of development if they are well recognised and given the opportunity to take part in the process of development that concerns them.

Access road is one of the major challenges for the people living in higher-highlands and highlands in general and the poor in particular to achieve their livelihood objectives. So, they need to be supported to build access roads. This is one of the top priorities for the community in terms of addressing market problem, production constraints and communication barriers.

The community owned forests were transferred to the state. This decision triggered conflict between the community and Local Administration. The use of this resource remains a challenge that needs serious action. The best way to address this issue is to take time and thoroughly discuss the issue with all stakeholders and find ways that community members will be part of the benefit. Hence, being together with the community, lobbying and advocating to initiate discussion with all concerned is crucial.

If concern has a plan to work in livelihoods, further work is required to develop more effective methodologies for analysing policies, their effects on livelihoods and how the policy

makers can be influenced by what happens at local level in order to have pro-poor policy. Without giving due consideration for this, sustainable livelihood programmes will not at all meet its objectives.

Selling out labour is one of the livelihood strategies common to the poor across all agro-ecological zones. They opted for this because they have no or limited access to productive assets such as land. All development organisations need to work hard to avail variety of choices so that the poor can engage themselves on a productive work out of agriculture that will enable them to meet their livelihood objectives. One among many possibilities is: understanding their priorities and interest organise training programme in particular skill, and identify mechanism to support them through provision of start-up financial capital on revolving credit basis to start something out of agriculture on the basis of the interest and capability of the target group.

### Ends.

**Annex 1:** Population of Dessie Zuria Woreda by Kebelle and Agro-ecology

	<b>Kebelle</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
<b>1</b>	<b>Higher - highlands</b>			
1.1	Tebasit	3726	3958	7684
1.2	Gelsha	3112	3232	6344
1.3	Guguftu	3019	3206	6225
1.4	Cherecha	2678	2950	5628
1.5	Attent mesberia	3570	3867	7437
1.6	Kry grdel	3245	3452	6697
1.7	Dejawele	3146	3310	6456
1.8	Asgori	7108	2772	9880
1.9	Adey	3584	4148	7732
	<b>Sub total</b>	<b>33,188</b>	<b>30,895</b>	<b>64,083</b>
<b>2</b>	<b>Highlands</b>			
2.1	Degamote	2326	2335	4661
2.2	Derba	1785	1674	3459
2.3	Ayata	4619	3969	8588
2.4	Begede	2988	3042	6030
2.5	Gelbite	2740	3357	6097
2.6	Antomechella	4050	3800	7850
2.7	Attan mesk	2356	2561	4917
	<b>Sub-total</b>	<b>20,864</b>	<b>20,738</b>	<b>41,602</b>
<b>3</b>	<b>Midlands</b>			
3.1	Kellina	2254	2131	4385
3.2	Abso kotu	3779	3476	7255
3.3	Harawebello	4152	3408	7560
3.4	Kedijo Jerkero	3773	3196	6969
3.5	Kedijo Sattiro	1265	1328	2593
3.6	Kedijo	2936	2884	5820
3.7	Tied gebeya	4548	2577	7125
3.8	Berara	2954	2827	5781
3.9	Asgedo	2936	2884	5820
3.10	Kola mote	2633	2979	5612
3.11	Berara Jerjero	1837	1749	3586
3.12	Allemkko	4894	5301	10195
	<b>Sub total</b>	<b>37,961</b>	<b>34,740</b>	<b>72,701</b>
<b>4</b>	<b>Lowlands</b>			

<b>4.1</b>	Ilu	4392	3292	7684
<b>4.2</b>	Mitigrar	2261	1692	3953
<b>4.3</b>	Nebar ager	4518	3455	7973
	<b>Sub total</b>	<b>11,171</b>	<b>8,339</b>	<b>19,510</b>
	<b>Total</b>	<b>102,635</b>	<b>95,295</b>	<b>197,930</b>

Source: Agriculture and Rural Development Office, 2005