

**ADDIS ABABA UNIVERSITY**  
**SCHOOL OF GRADUATE STUDIES**  
**COLLEGE OF DEVELOPMENT STUDIES (CDS)**

**Assessment of the Forest Based Livelihoods of Mejengir  
Community and Trends in Forest Resource Utilization: The Case  
of Godere District, Gambella Regional State**



By: Kassahun Kelifa

June, 2008

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Assessment of the Forest Based Livelihoods of Mejengir  
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of Godere District, Gambella Regional State

A Thesis Submitted To the School of Graduate Studies of Addis  
Ababa University in Partial Fulfillment of the Requirements for the  
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(Rural Livelihoods and Development)

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June, 2008

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BY

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## ACRONYMS

CSA	Central Statistics Agency
DFID	Department for International Development
EFAP	Ethiopian Forestry Action Plan
FAO	Food and Agricultural Organization
FOSA	Forestry Outlook Studies in Africa
GO	Governmental Organization
GPNRS	Gambella People's and Nationalities Regional State
ILO	International Labor Organization
NGOs	Non governmental organizations
NR	Natural Resource
NTFP	Non timber forest product
PFM	Participatory Forest Management
RCS	Regional Conservation Strategy
RFAP	Regional Forestry Action Plan
SNNPRS	Southern Nations, Nationalities and Peoples Regional State
UNDESA	United Nations Department for Economic and Social Affairs
UNDP	United Nations Development Program
WBISPP	Woody Biomass Inventory and Strategic Planning Project

## **Abstract**

*This thesis has tried to analyze some salient aspects of forest based livelihoods with special emphasis on trends in forest utilization, access to forest resources, and the diverse livelihood strategies pursued by the local community. The study was conducted in Godere Wereda of Mejengir Zone (Gambella Regional State). From nineteen kebeles in the Wereda, three were purposively selected on the basis of some key justifications such as severity of deforestation, availability of illegal settlement and investment and expansion of agricultural practices and relative physical accessibility. Simple random selection of household members using lottery method was employed proportional to the size of each study Kebele. Overall, 90 Sample households (20% of the total sample size) were considered for the study. So as to generate ample information, methodological mixes (combination of quantitative and qualitative data collection techniques) were employed.*

*The findings of the study show that Mejengirs are predominantly forest dependent and the forest is the principal livelihood assets from which they derive major share of their cash income and household consumption. Among the different NTFPs obtained from the forest, honey production was reported as an important livelihood activity performed by the majority. Nonetheless, the forest is facing serious encroachment due to some key social, economical and political factors. These factors include: illegal investment and settlement, commercial logging, expansion of agriculture and fire (shifting cultivation). This has, therefore, brought about profound negative effect on the livelihood of the people and resulted in reduction in quantity and quality of NTFPs (honey).*

*Regarding the mediating factors (structures and processes) that facilitate or restrain peoples' access to forest, the findings evidenced that culture, governmental laws and policies and private investors. Even if the local people have open access to forests, the study showed that they are confronted with diminishing (inadequate) forest resources not to achieve a desired and sustainable livelihood outcome. Thus, they were forced to steadily shift to other livelihood portfolios rather than relying merely on collection of NTFPs. Not surprisingly, these portfolios of income are also dependent on the forests at least to some extent. It is due to the continued dependence on the forest that the community solicits for the interventions of the government and NGOs so as to have secured access to sufficient forest resource.*

*Overall, the study substantiated that unwise forest utilization pattern in the area resulted in undesired (negative) livelihood outcomes in which households are confronted with unimproved livelihood, reduced income, increased vulnerability and unsustainable NR use.*

*Accordingly, it is recommended that concerned stakeholders need to exert paramount effort to improve the livelihoods of the community in a sustainable manner. This can be materialized by promoting pro poor policies and legislations that emphasize on, among others, creating alternative livelihood sources and designing sustainable and participatory forest utilization, management and conservation scheme.*

## **Organization of the Thesis**

The entire thesis has eight chapters. The first section deals with the introductory part, the problem and objectives of this particular study. The second chapter presents background of the study area, socio economic characteristics of the Mejengir population and the methodology employed in the research undertaking. The theoretical and empirical literature review and the conceptual frameworks utilized to analyze the problem are presented in the third chapter. The fourth chapter discusses the findings of the research vis-à-vis background characteristics and livelihood sources of the sample households. Trends of forest utilization and issues of access to these resources are described in the fifth chapter. The nexus and or linkage of livelihood strategy to access to forest are examined in the sixth chapter whereas chapter seven deals particularly with the salient aspects of livelihood outcomes and natural resource sustainability. Finally, the eighth chapter of the thesis gives conclusion and recommendations.

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background

Over the past two decades, environmental and development concerns have converged, with the increasing interest in both tropical forests as an important ecosystem, and in the wellbeing of people who live in or near them. The importance of forests and non timber forest products (NTFPs) to the quality of life and even survival of very large numbers of poor rural people in tropical developing countries now seems indisputable (Ruiz Perez and Arnold 1996, as cited in Byron and Arnold 1997). Nevertheless, the number of people who in some way rely on the forest for survival or livelihood inputs is difficult to assess, and estimates vary widely (Byron and Arnold, 1997). For example, it has recently been estimated that one quarter of the world's poor depend directly or indirectly on forests for their livelihoods (World Bank, 2000).

In Ethiopia, like many agrarian countries, forest plays significant role in the livelihood systems of rural households in particular and the national economy in general. According to Tadesse and Ararsa (2004), local communities near or around forest areas get different non-timber forest products (NTFPs) for their livelihoods, some of which are even of greater importance for the economy of the country.

Despite these crucial roles of forest resources in sustaining the livelihoods of the poor, deforestation has recently become a major concern for developing countries (Julia and Douglas, 1985). In Ethiopia, most of the remaining forest cover is found in the Southwestern part especially in Wellega, Illubabor, Jimma , Kaffa, Sheka ,and Bench Maji Zone. The forests in these areas have been under heavy pressure during the last two decades due to conversion to plantations, settlements and agricultural land. Likewise, expansion of coffee plantation, settlement and agriculture expansion, commercial logging, fire and local wood consumption were identified as the major causes of deforestation of Mejengir forest (Tadesse and Feyera, 2006). The increasing trend of converting forest areas to plantations, therefore, remains to be the biggest threat to the forest biodiversity and the local livelihoods (Tadesse, 2007).

Vulnerability is closely linked to access to resources because these are the principal means by which people reduce their vulnerability. For rural livelihoods which are reliant on the natural resource base (such as the forest), denying access to the resource alone can significantly deteriorate the status of those who are already worse off and therefore rely more heavily on forest resources (Dubois, 2002). However, it is also worth noting that quantity and quality of these assets also makes a big difference to the viability of rural livelihood strategies (Ellis, 2000). In this regard, Warner (2000) explicitly states that the poor is the one who benefit most from being able to continue to have access to forest products, but may be faced with a diminishing resource (because of factors such as population growth or restriction on access to resources) and a declining capacity to exploit it. Apparently, therefore, forest based local livelihoods are undermined not only due to lack of access to forest resources but also the reduction in the extent of these resources.

Currently, the focus of rural households' supply of some "forest" products is steadily shifting from the forest to the farm in many places (Byron and Arnold, 1997). Similarly, in Godere *Wereda*, the tradition of forest based livelihood and shifting cultivation is being converted to sedentary agriculture (Tadesse and Feyera, 2006). According to Dubois (2002), this shift is caused primarily due to the decline in the productivity of natural resources. This kind of shift (diversification) helps to lessen the vulnerability of the poor to food insecurity and livelihood collapse; it can provide the basis for building assets that permit individuals and households to construct their own exit routes out of poverty; and it can improve the quality and sustainability of natural resources that constitute key assets in rural livelihoods (Ellis and Allison, 2004). Therefore, livelihood strategies are continuous attempts to modify and adjust these asset combinations in the pursuit of better outcomes which may be more or less sustainable (Satge et al., 2002).

Overall, unsustainable trend of forest utilization profoundly affects the livelihoods of those people who draw up on this resource and according to Warner (2000) sustainable use of natural resources is critical to sustainable livelihoods.

## 1.2 Statement of the Problem

As an importation livelihood asset, forests play an important role in the livelihoods of most rural and urban communities, as source of timber and non timber forest products (NTFP), beside environmental services (Tadesse and Feyera, 2006). So far, the common NTFPs identified are honey, forest coffee, spices, bamboo, fuel woods and charcoals such as horticultural crops, palm and wild fruits. Some of the NTFPs have market while the rest do not (Assefa, 2007).

Likewise, the Mejengir forest is the home of the largest groups of the forest dwellers in the country, the Mejengir. Since time immemorial, the Mejengir people have been living in the forest; depending on the forest for subsistence and shelter. The Mejengir have always relied on forests as a source of livelihood. Honey production, hunting, gathering of wild fruits and nuts from the forest have been their occupation and mainstays (Tadesse and Feyera, 2006). Contrary to these important roles of the forest to the local people, the Mejengir forest is being cleared and degraded at an alarming rate due to several key social, economic, and political conservation challenges (Ibid).

In this regard, many literatures assert that continued deforestation is a major threat to the forest biodiversity as whole and local livelihoods of forest dependent people in particular (FOSA, 2003, Girma, 1998, Tadesse and Feyera, 2006). Similarly, in Godere *Wereda*, the destruction of forest is leading to loss of biodiversity, and ecological and socio-economic crisis. This is mainly due to the reason that the southwestern highlands in general and the study area in particular have a strong comparative advantages in timber production and with in the forests are found important forest products, such as wild coffee, spices and honey and also wild life (Wood, 1993). Given the favorable resource base of Mejengir Zone, there are various user groups (peoples and organizations) who have interests in the resources (especially the forest). These forest users include not only the local communities and indigenous ethnic groups but also central government, private investors, non-local ethnic groups who have moved in to this region, communities outside the region who depend on some of the region's resources (Wood,1993).

Even though the status of conservation and demarcation is not known, Godere *Wereda* has one registered state farm: Teppi Coffee Plantation (4250 Ha) and many private coffee farms (1300 Ha) (WBISPP, 2000). Besides, the Mejengir forest have been hosting hundreds and thousands of migrants /settlers/ from the other parts of the country for a number of years and still accepting a significant number of new ones. For these groups, the forest is the frontier of agriculture and coffee plantation expansion (Tadesse and Feyera, 2006) and as a result it is disappearing at an alarming rate due to the above mentioned human induced factors.

Apparently, the imprudent trend of forest utilization has a profound effect on the livelihoods of the rural community and the future existence of the forest resources (Tadesse and Feyera, 2006). As a highly dependent people on forests both for its direct and indirect uses, Mejengir community is suffering from the adverse consequences of diminishing forest which has severe level of devastation on their livelihood. It is from this complex socio-economic context and perspective that the trends in forest resource utilization, the challenges to forest based livelihoods, diverse livelihood options and access to forests need to be examined and analyzed.

Any livelihood attempts to capture not just what people do in order to make a living, but the capability to build a satisfactory living , the risk factors that they consider in managing their resources and the institutional and policy context that either helps or hinders them in their pursuit of a viable or improving living (Ellis and Allison, 2004). With regard to the livelihoods, however, the key questions are what key mediating factor play a pivotal role in the local community's access to forests and how does trend of resources utilization (deforestation) and diverse livelihoods interact?. The wider definition of livelihood given by Ellis (2000) emphasizes on the point that access of individuals or household to different types capital (natural, physical, human, financial and social) opportunities and services. For comprehensive analysis of trends of resource utilization, Scoones (1998) provides the following checklist questions: what are the trends in terms of availability of different types of livelihood resources? How are different capital assets being depleted and accumulated, by whom? What are the trends in terms of access? What livelihood resources are being created through environmental economic and social change? As a matter of fact, these issues are central to this particular research.

In a nutshell, this study aims at assessing the critical mediating factors affecting people's access to forest resources, trends in changes and conditions of these resources, challenges of forest based livelihoods and diverse livelihood possibilities of the Mejengir community.

### **1.3 Objectives of the Study**

#### **General Objective**

- Investigate the situation of forest based livelihood systems of the Mejengir community and examine the key mediating factors that play role in accessing forest resources.

#### **Specific Objectives**

1. To assess and identify factors that affect people's access to forest resources.
2. To examine trends in change and conditions of the forest resource utilization.
3. To explore the interactions between diverse livelihood possibilities and access to forest resources up on which they, to a greater or lesser extent, depend.
4. To assess challenges of the forest based livelihood of the local community.

### **1.4 The Research Questions**

1. What are the important factors that affect the local community's access to forest resource?
2. How do forest resources utilized and what changes happen on the resource during the past ten years?
3. What does the interaction between access to forest resources and diverse livelihood possibilities look like?
4. What are the challenges of forest based livelihoods of the Mejengir community?

## 1.5 Significance of the Study

Forests are important natural capital. Past development efforts have primarily built on natural capital, however, equal attention has not been paid to how these assets such as forests are used in combination with other natural assets and other livelihood assets to sustain livelihoods. This has resulted in gaps in our understanding of the contribution of forest products to sustainable livelihoods and thus poverty reduction (DFID, 1999). Besides, the existing literature is quite unsatisfactory for developing an understanding of the types of relationships that exist between tropical forests and the people who currently use them, benefit from them and frequently protect and manage them (Byron and Arnold 1997). This, therefore, calls for the importance of drawing valuable lessons on the diverse issues related to forest based livelihoods.

The study area, *Godere Wereda*, the forest resource is facing serious encroachment from commercialized perennial crop production like coffee plantations, illegal forest logging, agricultural expansion and settlements which are social, political, economical and environmental in their very nature. This emerged as potential threats to the forest based livelihoods of the local Mejenigir community. Hence, it was found to be legitimate to examine the interconnected forest related facts that positively or negatively attribute to the livelihood systems of the community.

For sustainable livelihoods and proper utilization of forest resources, the smallholder farmers, the public, policy makers, bilateral and multilateral donors, researchers and other development agencies need an adequate empirical evidence and information. Under the wider umbrella of forest based livelihoods, therefore, reflecting on issues of access to forest and their nexus with diverse livelihood strategies is of supreme importance.

Moreover, it was believed that local as well as international NGOs interested in promoting rural development in the study area would also benefit from the findings of the study.

Last but not least, researchers and students who would like to stimulate further study of similar problems in other areas will be among those actors who may benefit from the findings of this study.

### **1.6 Scope and Limitations of the Study**

This particular study focuses on critical issues related to trends of forest resource utilization, access to forest resources, and other salient issues pertinent to forest based livelihood. Moreover, it assesses the nexus between access to forest and diverse livelihood possibilities. First of all, the study is limited to selected *Kebeles* of Godere *Wereda* of Mejjengir Zone, GPNRS and the findings will be specific to the contextual settings the case areas.

It is obvious that the dynamics of forest based livelihoods and the issues entailed in it are wider in their component. Besides, the livelihood framework focuses on different assets, access issues, livelihood strategies and outcome. In this paper, however, it may not be possible to assess and address all the issues due to limited time and other resources. Secondly, the paper is limited to some imperative and selected indicators of some components and livelihood resources.

Furthermore, several technical constraints and challenges were encountered while undertaking this study, especially during data collection. Time spent in the field, about 28 days, was not adequate to collect and gather all the necessary data from selected households and informants located at different places. Physical inaccessibility and scattered settlement pattern of some sample households in natural forests also hindered the researcher not to find anticipated respondents.

Despite all the above mentioned limitations, this research study is expected to be helpful in providing information on forest based livelihoods and to carryout similar studies in other areas of comparable socio-economic settings.

## **1.7 Research Methodology**

### **1.7.1 Research Design**

According to Creswell (2003), the nature of research problem most often dictates the methodology of the study. This particular study aims at examining and investigating various interconnected issues vis-à-vis critical livelihood asset (the forest resource), factors inhibiting or facilitating access to these assets, and nexus between livelihood diversification and resource utilization. Hence, this study calls out for the application of 'Mixed Methods' (or Mixed methodology or methodological mixes), which contain elements of both the quantitative and qualitative approaches (Tashakkori and Teddlie, 1998) and most social scientists are also recognizing the limitations that are inherent in a single approach which could be neutralized by combining both qualitative and quantitative methodologies (Degefa, 2005). Such methods were also helpful to find adequate information and to get individual, group and institutional views (Yeraswork, 2000:296).

### **1.7.2 Sample Size and Sampling Methods**

The prime focus of the study was forest based livelihood which is being carried out by Mejengir community living in Godere *Woreda*. The *Woreda* has 19 *Kebeles* in which most of them are covered by forest canopy and the people living in these kebeles use forest as a main Source of livelihood.

In order to carry out the study, three *kebeles* were purposely selected out of the 19 kebeles. These were Gelesha, Kumi and Dushi. These *kebeles* were selected based on a number of justifications. Firstly, the kebeles are those which are under intensive deforestation due to settlement and investment. Secondly, physical accessibility of the *kebele* as well as the sample households. Thirdly, the *kebeles* are those where agricultural activities are pronounced and the natural forest is relatively disturbed. It is, therefore, highly plausible that the *kebeles* under the study represent perhaps the causes of deforestation, agricultural land expansion, challenges of forest based livelihoods, diversified livelihoods in the area.

List of pure Mejengir households in each respective *kebeles* were prepared using documents and record books available in the *kebele* offices. Then, Simple random selection of household members using lottery method was employed proportional to the size of each study *Kebele*. Other ethnic groups were not included in the list as the scope of the study is limited to pure Mejengir households only.

Overall, 90 Sample households (20% of the total sample size) were considered for the study. Consequently, 28, 32, and 30 households were randomly selected from Dushi, Kumi and Gelesha *Kebeles* respectively.

**Table 1. Study Kebeles, Total number of pure Mejengir households in each Kebele and Sample households.**

Name of the <i>Kebele</i>	Total number of pure Mejengir households in the study <i>Kebele</i>	Sample households taken for the study
Kumi	160	32
Dushi	140	30
Gelesha	150	28
<b>Total</b>	<b>450</b>	<b>90</b>

Source: Field Survey, 2008.

### 1.7.3. Data Sources and Methods of Data Collection

For this particular study, both primary and secondary data sources were employed.

#### I. Primary Data

##### *Structured questionnaire Household survey*

The study was based mainly on sample Mejengir household cross sectional survey using pre tested structured questionnaire was organized in a logical order of presentation. Thus, the survey generated both qualitative and quantitative data which are pertinent to:

- ❖ Demographic and socio-economic realities, forest based livelihood, trends on the forest stocks and other salient points.
- ❖ Challenges and constraints of forest based livelihoods, the issues of access to forest resources and its nexus with various livelihood strategies, and fundamental factors mediating access.
- ❖ Other forest user groups, the major causes of forest degradation and the impacts of unsustainable forest utilization pattern on the well being of people in particular and the livelihood outcomes and sustainability as a whole.
- ❖ Above all, perception of Mejengir households towards illegal settlement and investment.

### *Focus Group Discussions*

Focus group discussion was also another qualitative method of data collection employed for this study. In connection to this, a total of six focus groups discussions were conducted in the three *Kebeles*. That means, two separate FGDs both for men and women groups were carried out in each *Kebele*.

In each FGD, the number of participants was with in the range of 7 to 10. Technical procedures and principles followed in these discussions were left to the researcher to elicit and raise issues for discussions and encourage active participation. To capture all the contents of the respective discussions held with the groups and to identify pertinent information, a tape recorder was used.

### *Key informant interviews*

In-depth key informant interviews were also carried out both with the local community as well as with concerned government bodies found at all level. First of all, one male and female community elders, in all the three *Kebeles*, were interviewed on some salient points related to forest based livelihoods and its corresponding challenges and the previous conditions of the forest resources. Secondly, the leaders of each respective *Kebele* were interviewed about,

among others, the settlement and investment patterns in their *Kebeles* and issues of access to forest resources. Lastly, comprehensive interviews were conducted with a total of six expertises: Four from Zonal and *Woreda* Agriculture and Rural Development Bureaus and local government officials and two from NGO personal (the Project Manager and the Forester). These Key informants are selected based on their experience role and knowledge of the socio-economic and cultural realities of the study area.

## **II. Secondary Data**

The principal objective of collection of secondary data and review of relevant documents was to back up and support the information gathered through primary data. In pursuance of this, therefore, the study utilized the following sources of secondary data:

- a. Books and journals, working papers, proceedings and reports of international organizations which are related to forest based livelihoods.
- b. Master thesis, PhD dissertations and various assessment studies on forest resources and socio economic realities of forest dependent people.
- c. Statistical publications and maps.
- d. Relevant documents at Regional, Zonal and *Woreda* levels as well as reports of the NGO operating in the study area.

### **1.7.4 Methods of data Analysis**

Regarding the analysis, the survey data was analyzed employing mainly descriptive statistics with the help of statistical package for social sciences (SPSS) and some statistical tests like frequency, chi square and cross tabulation. Furthermore, triangulation of evidences was carried out by making use of the information from focus groups and key informants.

The process of analysis was carried out by using qualitative description and descriptive statistics. The portion of data that was readily quantifiable (information from closed questions of the questionnaire) was discussed using tabulation and cross tabulation of variables with percentage values and other descriptive measures. Whereas, non-quantifiable data (information form open ended questions, key informant interviews, and focus group discussions) were

discussed through qualitative descriptions by using those information found on my note book and recorded cassettes while collecting the data.

## CHAPTER TWO

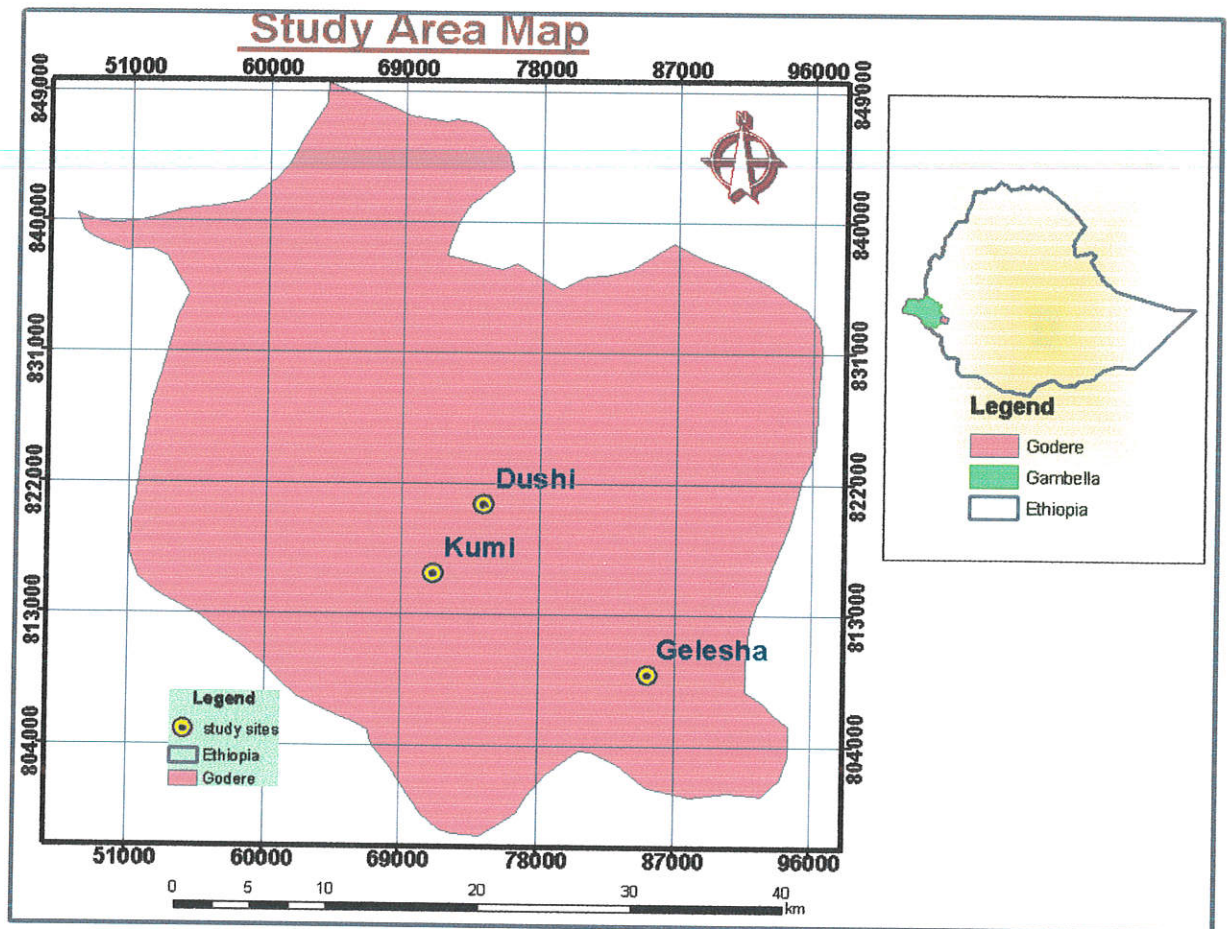
### BACKGROUND OF THE STUDY AREA

#### 2.1 Location, Geographic setup and Agro-ecology

##### *Location*

The study area is found in the Gambella Regional State, in Mejengir Zone, and is located at a distance of about 620 km southwest of Addis Ababa. The Mejengir Zone is bordering Oromia Regional State in the north, the Southern Nations Nationalities and Peoples (SNNP) Regional State in the South and East, Abobo in North West ,Gog and Jor in the West directions .(Figure 1) (Tadesse and Feyera, 2006).

*Figure 1. Location of the study area*



According to WBISPP (2000), the altitude of the study area ranges from 100-2500 m a.s.l and the total land area is 99,968 ha.

### *Agro- ecology and Climate*

The study area has a hot and humid type climate and the Gambella Regional State in general is marked on most rainfall maps of Ethiopia as being the wettest part of the country. Although there is no meteorological station in the vicinity of the forest, the mean temperature ranges between 18 and 24°C where as the mean annual rainfall is estimated to be around 1100 mm (Tadesse and Feyera, 2006). Rainy season lasts from March /April until November and this makes the area well suited for a wide variety of perennial and annual crops, including those with long growing periods.

### *Geographic setup*

The area is characterized by flat to gentle slopes, with some rocky steep and deep valleys along major streams on hills. A report from Tadesse and Feyera (2006) indicates that several small streams that join Gilo River, one of the main tributaries of Nile, drain the area. Main streams like Godere, Saki, Beko also mark the boundaries of the zone with its neighbors. Most of the streams are perennial and with quite high discharge of water but there is a growing concern among the rural communities that the amount of water flow is decreasing with deforestation.

As far as the soil type is concerned, Tadesse and Feyera (2006), once again, explain that the area is endowed with red brown to dark brown, of mostly dystric nitosols. Most of these soils are moderately acidic with a high cation exchange capacity (Murphy 1968 as cited in Tadesse and Feyera, 2006).

### *Land Use /Land Cover/ Types*

According to secondary sources in the Agricultural and Rural Development Office of the Woreda, the major land use /land cover/ types are forest, Agriculture, Grazing land, Settlement and Wetland, Infrastructure and Wasteland (Table 1). One can easily observe that large proportion of the area in the study *Woreda* are covered by forests (63%) and followed by agriculture (18, 96%).

*Table 2. Land use/ land cover /types in Mejengir Zone*

Land use type	Area (Ha)	Percent cover
Forest	63,226	63.29
Grazing land	142	0.14
Agriculture	18,960	18.96
Settlement	3,122	3.12
Wetland	500	0.50
Institutions/ infrastructures/	6,365	6.37
Wasteland	7,623	7.63
<b>Total</b>	<b>99,968</b>	<b>100</b>

Source: WBISPP, 2000

### *Infrastructures and Services*

Access to the study *Woreda* by road is so far only from the South Eastern side. The road from Tepi (A town 17 Kms away from the study area in SNNPRS) to Meti (The capital of Mejengir Zone) and further to the West and North West into the *Woreda*. This road is in good condition as far as the state plantation is there and it is kept open by and for coffee and other NTFPs transport. However, access to some villages is hardly possible as there is no road.

With regard to services, the *Woreda* has 24 schools (i.e. one high school and the rest are junior and primary schools) and six health institutions. Almost all the Mejengir villages are near a river or creek, but these are not safe sources of drinking water. Surprisingly, use of pit latrines is not known thus far (Smictht et al, 2003).

### **2.1.2 Socio Economic and Demographic characteristics**

#### *Demographic characteristics*

According the population census carried out by CSA in 1994, there are over 18 ethnic groups represented in Gambella Regional State and nearly as many languages. However, many of these are migrant workers on the large scale farms. The four main indigenous groups are Nuer (37%), Anyiwak (21%), Mocha (9%), Sheko (7%) and Mesengo (6%).

The population of the study area is predominantly Mejjengir and they are characterized by their scattered settlement pattern. Mejjengir are original inhabitants of the area and the naming of the administration zone represents the ethnic group. The population of the Godere Woreda is estimated to be around 86,184. As compared to other parts of the county, the population size is quite low. During the past years, the area has registered the highest rate of immigration of other ethnic groups and Mejjengir are outweighed by these immigrations and illegal settlements. Other ethnic groups include (probably in order of number) Amhara, Oromo, Tigray, Kaffa (Kafficho), Shakacho, Dizu and Raya (Oromo from Wollo) (Smichtt et al., 2003). The population density is estimated to be 49 persons per Kilometer square (WBISPP, 2000).

### *Economic characteristics*

Even if Mejjengirs are predominantly shifting cultivators, it is difficult to isolate Mejjengirs from the forest resources. In the region, for instance, forests provide a significant share of the livelihood options, energy sources, medicines, foods, industrial and construction materials and safety nets. The WBISPP (2000) estimated that wood provides some 98% of all energy consumed in the region. It is difficult to place a value on it as a very large portion of this wood is not traded.

There are some 2400 farm families of Mesengo people who practice a sophisticated system of weed mulching and forest fallowing. They live mainly (72%) in Godere *Woreda* below the Kafa highlands in the high forests on the escarpment and foot hills (Ibid).

The Mesengo (another locally accepted name of Mejjengir) subsistence system is based on the shifting cultivation of Maize and Sorghum and other traditional activities like hunting, gathering of wild fruits, nuts, fishing and beekeeping. Besides, there is little gathering of forest products and wild plants other than mushrooms, fresh greens a wild savannah, yam and wild coffee (only leaves and twigs, not berries). No livestock other than chickens are kept because of the high tsetse challenge.

The staple crops are Maize and Sorghum with some Taro and Yam (several species) and pumpkins. Meanwhile, crops cultivated for relish include Sesame Beans, Peas, Pumpkin and Taro leaves. Spices are grown to flavor coffee (a leaf infusion). There are also some recently introduced crops which include Sweet Potato, Cassava, Enset and Sugar cane but none is important whether as source of income or consumption for majority of the Mejengirs.

For the Mejengir people, NTFPs production is the main source of livelihood. In this regard, the major NTFPs include honey, bush meat, wild edible plants, medicine and recently coffee production (Tadesse and Feyera, 2006). Since time immemorial, beekeeping is found to be extremely important for Mejengirs and honey is the major source of income and household consumption. An individual family may own between 50 and 100 hives. The Mejengir recognizes about 40 species of forest trees and other plants as suitable sources of nectar. Currently, most of the honey production is taking place deep in the forest far away from the residential villages and beekeeping practices are still more of traditional.

In general, the conducive agro-ecology, the fertile soil and the wide coverage natural high forest provide the local community with diversified livelihood systems and strategies. Recently, coffee production is becoming an essential agricultural phenomenon and a vast majority of Mejengir households are shifting from forest based livelihood activities to farm. According to Tadesse and Feyera (2006), today, forest areas converted to coffee plantation cover more land than even the major food crops like Maize in the area.

## **CHAPTER THREE**

### **LITERATURE REVIEW**

#### **3.1 Theoretical Literature**

##### **3.1.1. Concepts of Livelihoods and Livelihood Strategies**

###### **Livelihood**

Livelihood refers to the capabilities, assets, including both material and social resources and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks maintain or enhance its capabilities and assets, while not undermining the natural resource base (Chambers and Conway as cited in Scoones, 1998:4). Ellis (2000:9) also seeks to build on this definition by bringing in a more explicit consideration of the claims and access issues and in particular the impact of social relations and institutions that mediate an individual or family's capacity to secure means of living:

*A livelihood comprises the assets (natural physical, human, financial and social capital) the activities, and the access to these (mediated by institutions and social relations) that together determine the living gained by the individual or household (Ellis 2000: 10).*

###### **Livelihood Strategies**

By definition, livelihood strategies are those activities that generate the means of household survival (Ellis 2000:40). These livelihood strategies have been classified according to different criteria. For instance, Scoones (1998) and Swift (1998) divide rural livelihood strategies into three broad types according to the nature of activities undertaken: agricultural intensification and or extensification, livelihood diversification and migration.

While discussing the strategies, Ellis (2000) explains the first type as the one that corresponds to continuing or increasing reliance on agriculture as a strategy, either by intensifying resource use in combination with a given land area, or by bringing new land into cultivation or grazing. The key asset here is land, and, for agricultural intensification, attention is directed towards the

institutions and organizations that facilitate technical change in agriculture. The second type, with in the restricted definition of diversification employed, directs attention to non-farm rural employment as a key policy issue. The third type directs attention to migration and remittances as a particular strategy adopted by members of rural households.

Conclusively, the pattern of vulnerability (or opportunity) of individuals or households is reflected in the portfolio of assets and the activities which are undertaken to derive a livelihood. The resilience of a given social unit will depend on the success of these activities. The asset status of households, mediated by social factors and exogenous trends or shocks, results in the adoption and adaptation overtime of livelihood strategies. In a nutshell, livelihood strategies are dynamic; they respond to changing pressures and opportunities and they adapt accordingly (Ellis, 2000:40).

### **3.1.2 Forests Resources, The Rural Poor and Forest-Based Livelihoods**

Over the past two decades, environmental and development concerns have converged, with the increasing interest in both tropical forests as an important ecosystem, and in the wellbeing of people who live in or near them. For millions of people living in forest environments, the forest forms such a dominant part of their physical, material, economic and spiritual lives that its importance is not most appropriately described and assessed in terms of the individual products or services that the forest provides (Byron and Arnold, 1997).

Arnold (1998), in examining the contribution of forests to sustainable livelihoods of the rural poor, defines forests “to include all resources that can produce forest products. These can comprise woodland, scrub land, bush fallow and farm bush, and trees on farms, as well as forests.”

A growing number of scholars and practitioners recognize and emphasize on the crucial role played by forests as main sources of livelihood (Byron and Arnold, 1997, Arnold 1998, DFID 1999). According to Yihnew (2002), forest ecosystem makes an important contribution to the livelihood of the rural people in a variety of ways such as beekeeping practices, shade for

coffee, commercially valuable spices, fuel wood and timber. Apart from the rural demands, he also discloses the tremendously increasing urban demand for both wood and non-wood forest products such as honey, coffee, and spices.

It is well recognized that there are different types of forest resource users with considerable variation depending on the nature of the relationship to forest and forest outputs, the importance of the forest outputs in the livelihood system in question, and the likely impacts to change. In this regard, Byron and Arnold (1997) identified several dimensions of such typology, reflecting different aspects of their role and importance:

- *Participation in forest output activities.* Reflecting the frequency of timing of use of forest products, and the extent to which household labor is allocated to these activities.
- *Role of forest products in household livelihood systems.* Their importance as share of household inputs, and in meeting household livelihood strategy objectives.
- *Impact of reduced access to forests.* Does the forest serve as a [critical] economic and ecological buffer for its users, or are there alternatives, such as trees outside forests or non-forest/tree sources of needed inputs and income?
- *Likely future importance of forest outputs.* Do users face a growing or declining demand for forest outputs; or the potential for expanded or decreased involvement in production and trade in forest products (relative to alternative).

*Table 3: Some sets of criteria for assessing the importance of/degree of reliance on forest outputs (with illustrative example)*

<b>Criterion</b>	<b>Indicator</b>	<b>Example</b>
<b>Participation in forest output activity/Labor allocation/</b>	Year round	Full time activity/ e.g., Carpenter, Trader, employee/ or continuous part-time component of house hold activities.
	Periodic	To fill seasonal gaps or to exploit seasonal availability
	Temporary	By new farmers establishing farms.
	Occasional	A buffer in hard times, meeting one off costs/ e.g., Marriage/
<b>Role in livelihood systems</b>	Central-Fundamental	Forest dwelling hunter-gatherer and subsistence/true shifting cultivation/population.
	Major important	Substantial share of household inputs; important supplementary role/seasonal income, dietary inputs;/basis for livelihood

	<p>Minor but significant</p> <p>Risk limitation</p> <p>Declining</p>	<p>enhancement /e.g., more profitable activity/</p> <p>Improves palatability of diets: opportunities/windfall sources of inputs or incomes.</p> <p>Subsistence and economic buffer in hard times: "safety net/last resort" source of income, diversifies household input base</p> <p>Items falling out of household consumption patterns; unprofitable activities being abandoned as better alternatives become available.</p>
<b>Impact of reduced access to forest</b>	<p>Critical</p> <p>Sever</p> <p>Modest/transitional/</p> <p>Minimal/none/</p>	<p>/Threatens the existence of a community in its present form/</p> <p>/Causes serious worsening of livelihood situation at least temporarily/ e.g., forest foods, income, in time of extended drought or other calamity time/major activity based on forest law material.</p> <p>Can switch to source outside forest/bush fallowed/ or can switch activity or product</p> <p>/Users already moving away from involvement with forest products/ e.g., no longer competitive or better alternatives now available.</p>
<b>Likely future importance of forest outputs</b>	<p>Could increase</p> <p>Changes in structure: use concentrated on fewer products</p> <p>Declining, but still important as buffer</p> <p>Not important</p>	<p>(Or at least stay as important as at present) due to no better options/for income, low skill, stagnant economy/ or depletion of non-forest raw material" dependence" on forest products</p> <p>Growth in use of selected products/providing opportunities for using others; or domesticated and non forest resources become more important.</p> <p>In earlier still unstable stages of evolution to a higher income, more</p> <p>As emergency relief /avoidance measures still not adequate</p> <p>Users phasing out/most/forest product activities; forest sources no</p> <p>Longer competitive; domesticated sources or substitutes; or better livelihood alternatives.</p>

Source: Byron and Arnold, 1997.

In any case, however, it has recently been estimated that one quarter of the world's poor depend directly or indirectly on forests for their livelihood (World Bank, 2000).

### 3.1.3 Access to Forest and Livelihood

As noted earlier, natural resources such as forests are fundamental assets in rural livelihoods and users of these resources need security of access. A growing body of literature evidenced that different people have different access to different livelihood resources (Byron and Arnold, 1997, Scoones, 1998, Ellis, 2000). According to Scoones (1998), for instance, access is dependent on institutional arrangements, organizational issues, power and politics. In other words, social relations, institutions and organizations are critical mediating factors for livelihoods because they encompass agencies that inhibit or facilitate the exercise of capabilities and choices by individuals or households.

By definition, institutions are the social cement which link stakeholders to access to capital of different kinds to the means of exercising power and so define the gateways through which they pass on the route to positive or negative [livelihood] adaptation (Davies, 1997 as cited in Scoones, 1998). Ellis (2000) illustrates the nexus between institutions and access to resources by using land tenure. Land tenure institutions, for instance, comprise such determinants of access to land as the ownership structure at particular moment (possibly highly unequal), whether this ownership is defined by private freehold title or by customary rights of access, the existence or not of a market in land, the various tenure contracts that may enable non-owners of land to gain access to land, the social mechanisms for resolving land disputes, and so on. These institutions are also dynamic, continually being shaped and reshaped over time. They are, thus, part of a process of social negotiation, rather than fixed 'objects' or 'bounded social systems'.

Organizations, as distinguished from institutions are 'groups of individuals bound by some common purpose to achieve objectives (North, 1990 as cited in Ellis 2000). Ellis (2000), once more, gives some examples of organizations. These include, among others, government agencies (e.g., Police Force, Ministry of Agriculture, Government veterinary services), Administrative bodies (e.g., Local government), NGOs, Associations (e.g. farmers institutions), and private companies (firms). Institutions (in North's terms the 'rules of the game') therefore are distinguished from organizations (the player), the interplay of both being important in the livelihood framework (North, 1990 as cited in Scoones, 1998).

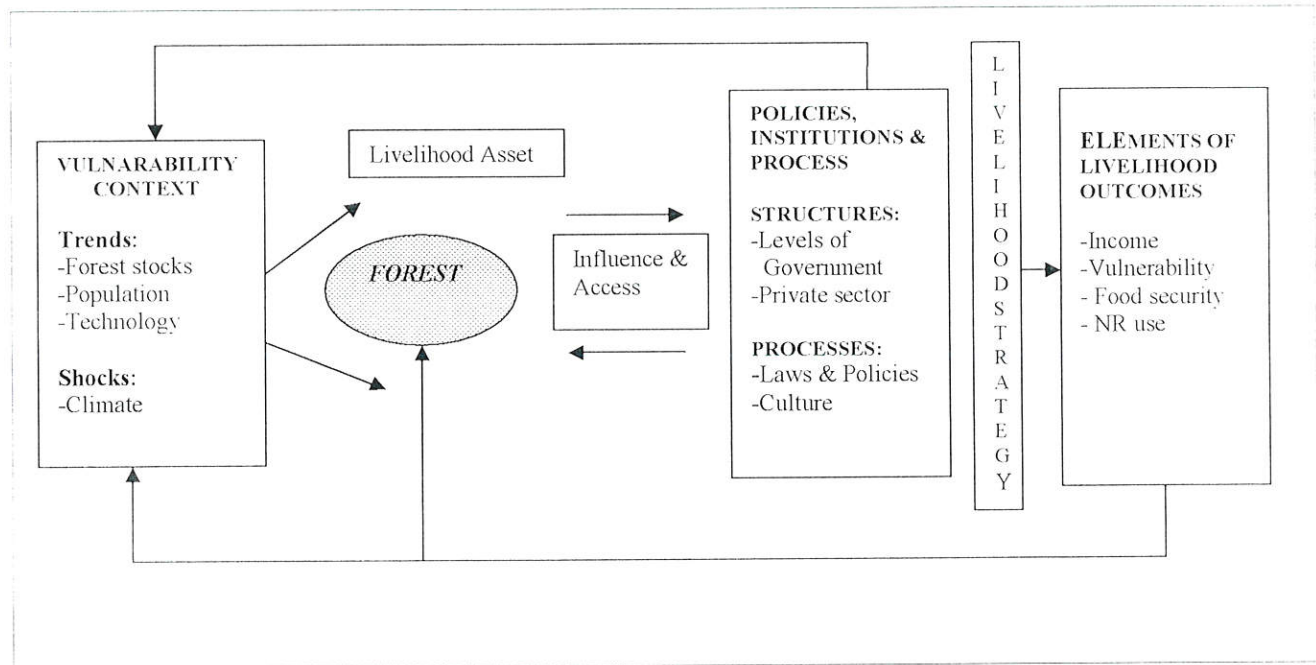
### 3.1.4 A Framework for Livelihood Analysis

A number of agencies (e.g. CARE, UNDP, Oxfam and FAO) have adopted a livelihoods approach and make use of livelihood frameworks. For the purpose of this study, however, the DFID sustainable livelihood framework has been used as a key point of reference. According to Satge et al (2002), the framework is informed by certain core concepts:

- It is people centered in the sense that it advocates that:
  - Development policy and practice should flow from an understanding of the poor and their livelihood strategies.
  - The poor should directly contribute to determining development priorities and be able to influence the institutions and processes that impact on their livelihoods.
- It is holistic in that the framework encourages analysis that cuts across different sectors and recognizes a range of actors and influences as well as multiple livelihood strategies and outcomes.
- It is dynamic in that it tries to understand change over time and complex interplay between different actors.
- It starts from an analysis of strengths rather than needs and problems.
- It looks for and makes the linkage between ‘micro’ and ‘macro’ levels.
- It is concerned with sustainability in all its dimensions: - social, economic, institutional and ecological.

Figure 2 depicts the sustainable livelihood framework being used by DFID and the various components of the framework are discussed as follows.

*Figure 2: Analytical and conceptual framework depicting interaction of various livelihood components.*



#### A. Livelihood Asset

Livelihood assets are described as stocks of capital that can be utilized directly, or indirectly to generate the means of survival of the household or to sustain its material well-being at different levels above survival (Ellis, 2000). Besides, the livelihood assets available to the household represent the basic platform upon which the household livelihood may be built (Scoones, 1998). He further categorizes livelihood assets or capitals as follows:

- *Natural capital* – forests, land, soil, air, water etc...
- *Economic/Financial capital* – cash credit/debt, savings and other economic assets, including basic infrastructures and production equipment and technologies.
- *Human capital* – the skills, knowledge, ability to labor and good health and physical capability.
- *Social capital* – the social resources (networks, social claims, social relations, affiliations, associations).

Beside the above-mentioned livelihood capitals, some scholars like Ellis (2000:32) add another dimension of the assets: namely physical capital. Physical capital, hence, comprises of assets

that is created by economic production processes. Buildings, irrigation canals, roads, tools, machines, and so on are physical assets (Ibid).

### *B. The Mediating Environment*

All livelihood models acknowledge the role and importance of the mediating environment. Apparently, different people clearly have different access to livelihood resources. This is dependent on institutional arrangements, organizational issues, power and politics (Scoones, 1998).

The DFID model divides these external forces into 'transforming structures and processes' or 'policies, institutions and processes' – e.g. (levels of government, private sector, laws, policies, culture, and institutions) and the 'vulnerability context' described in terms of shocks (e.g. civil and climatic), trends (e.g. Resource stocks, population, technology, politics and economics) and seasonality (Carney, 1998).

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Ellis similarly distinguishes between the modifying influence of 'social relations, institutions and organizations', and the contextual 'trends and shocks'. In making these distinctions however, he suggests that the nature of social relations (e.g. gender, class, age, ethnicity), institutions (e.g. rules and customs, land tenure, markets in practice) and organizations (e.g. associations, NGOs, local administration and state agencies), will be predominantly endogenous to the society within which the household operates. While the category of trends (e.g. population, migration, technological change, relative prices, and macro policies, national and global economic trends) and shocks (drought, floods, pests, diseases, civil war) would principally cover exogenous factors (Ellis, 2000).

Generally, it is important to notice that household will have different and varying degrees of access to and thus different portfolios of assets based on the mediating factors listed above (Ellis, 2000).

### C. *Activities and Livelihood Strategies*

As already discussed earlier, livelihood strategies are composed of the various activities undertaken by the household to generate a living and are patterns of behavior adopted by the household because of the mediating processes on the household assets. Alongside the livelihood strategies discussed by Ellis (2000), Scoones (1998) and Swift (1998) have delineated and highlighted the following:

- ❖ *Agricultural intensification /extensification*:-These strategies mainline continued or increasing dependence on agriculture either by intensifying resource use through the application of greater quantities of labor or capital for a given land or by bringing more land in to cultivation or grazing.
- ❖ *Livelihood diversification*: - Diversification here may be to broaden the range of on-farm activities or to diversity off-farm activities by taking up new jobs.
- ❖ *Migration*: - It may be voluntary or involuntary as a critical strategy to secure off farm employment. It may rely on and/or stimulate economic and social links between areas of origin and destination.

### D. *Livelihood Outcomes and Sustainability*

Sustainability is a widely utilized but problematic concept that recurs in discussions about environmental resources and human livelihoods. In other words, the concept of 'sustainable rural livelihoods' is increasingly central to the debate about rural livelihood, poverty reduction and environmental management (Scoones, 1998:3). As Carswell *et al* (1997:10) reveal: "definitions of sustainable livelihoods are often unclear, inconsistency and relatively narrow. Without clarification, there is a risk of simply adding to a conceptual muddle..." Difficulties with the concept of sustainability arise from its objectives (what is it that is deemed desirable to sustain?), the level of scale to what it applies (species, ecosystems, biological zones, social systems, the plane?), and its objective or subjective character (does it describe the objective conditions for the persistence of certain attributes, or desirable outcomes that ought to be promoted according to widely agreed subjective goals?) (Ellis, 2000:124).

Notwithstanding the existing debates about livelihood sustainability, this particular study will utilize the definition that was suggested by Chambers and Conway (1992):

*A livelihood is sustainable when it can cope with and recover from stresses and shocks and can maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base* (Chambers and Conway, 1992 as cited in Scoones, 1998).

The desirable outcome underlines the livelihoods of a negligible proportion of relatively well-off peasant households, who have been in a position to accumulate assets over several years. Better access to assets enables such households to offset other structural constraints to be able to cope with vulnerability. For the rest of the members in the community there have been undesirable outcomes, in the sense that they survive under vulnerable livelihood situations. Poverty and food insecurity are the undesirable outcomes. These, in turn, hinder the sustainable use of environmental resources (Degefa, 2005). For livelihoods or livelihood outcomes to be meaningfully sustainable in the context of larger socio-economic systems, then account must also be taken of the wider distributional issues (e.g., with in and between households, and across generation). This follows from notions of sustainability that were first counseled by the World Commission on Environment and Development (Brundtland, 1987) and subsequently endorsed and elaborated at the 1992 Earth Summit. Sustainability of livelihoods rests on several dimensions, including environmental, economic, social, and institutional. Generally, Livelihoods are sustainable when they:

- are resilient in the face of external shocks and stresses;
- are not dependent up on external support (or if they are, this support should itself be economically and institutionally sustainable)
- maintain the long term productivity of natural resources;
- do not undermine the livelihoods of or compromise the livelihood options open to others (Ashby and Carney, 1999 as cited in Dubois 2002).

In a nut shell, it is worth important to know that the concept of sustainability, embracing both livelihood and natural resources like forest, is complex and problematic but according to Degefa (2005) outcomes need to be seen in the light of both desirable and undesirable.

## 3.2 Empirical Literature

### 3.2.1 The Forest Resource and Its Dependents

Forests, being one amongst several possible sources of livelihoods and means for the poor, play indispensable roles in the support system of our planet (Dubois, 2002). Villagers' dependence on the forest is manifold: beyond utilization of forests for livelihood aspects it includes social, ecological, cultural and psychological aspects. People living in forest environments and practicing hunting, collecting and Swidden agriculture (shifting cultivation) draw heavily on forest products not only for subsistence but also for income from forest produces (Shepherd, Arnold and Bass, 1999)

It is very difficult to be very precise about the proportion of the poor depending on forest resources because "dependence" can vary according to circumstances and how livelihood patterns evolve over time (Dubois, 2002). Quantitatively speaking, however, researches done by different scholars point out that an estimate of one million to over one billion people depend on the forest for their livelihood (Pimentel *et al* 1997, Lynch and Talbot 1992, WCFSD, 1997 as cited in Byron and Arnold, 1997). A detailed statistical figure from World Bank (2001) indicates that 1.6 billion people in the world rely heavily on forest resources for their livelihoods of which:

- 60 million indigenous people living in the rain forest of Latin America, Southeast Asia and West Africa depend heavily on forest.
- 350 million people living in, or next to, dense forests rely on them for subsistence or income.
- 1.2 billion People in developing countries use trees on farms to generate food and cash.

In addition to the above mentioned forest dependants, more than 2 billion people rely on forests for fuel wood (for cooking and heating) (UNDP, UNDESA and World Energy council, 2000), more than 10 million people in developing countries depend on forest for real jobs; to which one should add between 30 and 50 million informal jobs in the wood industry (ILO, 2002) and 70-90% of people in developing countries depend on natural products (mainly forests) as the

only source of medicine (FAO,1996). The key question here is, however, “What percent of the world’s poor depend on forest and trees for their livelihood?” In this regard, World Bank (2000) estimated that one out of four of the world’s poor depend directly or indirectly on forest for livelihoods.

In Ethiopia, like many agrarian countries, forest plays significant role in the livelihood systems of rural households in particular and the national economic development in general. Specially, local communities near or around forest areas get different NTFPs for their livelihood, some of which are even of greater importance for the economy of the country (Tadesse and Ararsa 2004).According to Girma (1998), the forest, woodlands and cultivated lands collectively provide as much as 75-90% of Ethiopia’s rural population’s requirements for traditional medicine especially medicinal plants for their primary health care.

In spite of the significant roles of forest to rural livelihoods, the country as a whole and the forest dependent peoples in particular are suffering from the outcomes of deforestation. Although the past extent of forest cover is debatable, the 1990 Ethiopia Forest Action Plan (EFAP) also estimated forest cover to be only 2.7%. Most of the remaining forest cover of the country is found in the southwestern part especially in Wellega, Illubabor, Jimma, Kaffa, Sheka, Bench Maji Zone, and Gambella (Godere District). The forests in these areas have been also under heavy pressure during the last two decades due to conversion to plantations, settlements and agricultural land (Tadesse, 2007). To be precise, during the past 30 years alone the Southwestern parts of the country have lost over 60% of the forest cover (Tadesse et al, 2002).

There are a number of arguments on the causes of deforestation. Million (2001), among others, argues rapid population growth which leads to an increase in the demand for crop and grazing land, wood for fuel and construction, and lack of viable land use policy and corresponding laws as the major causes of deforestation. He also adds that new settlements in forests, which are increasing from time to time, resulted in the conversion of forested land in to agricultural and other land use systems. In support of Million, Allen and Barnes (1985) argue that climate, agricultural expansion and commercial logging as the major causes of deforestation. At present,

the few remaining high forests are threatened by pressure from investors who are converting the moist evergreen montane forests in to other land use systems such as coffee and tea plantations.

The severity of deforestation in southwestern parts of Ethiopia, according to Wood (1993), is mainly attributed to the fact that the Southwestern highlands have a strong comparative advantage in timber production and with in the forest are found important forest products, such as wild coffee, spices and honey and also wild life. Besides, the current economic importance of the area is the result of its coffee production that accounts between 40-45% of the country's total coffee production (Ibid). At this point in time and in the days to come, therefore, the increasing trend of converting forest areas to plantations remains to be the biggest threat to the forest biodiversity and will have a profound effect on the livelihood of those who depend on the forest resources (Tadesse, 2007).

### **3.2.2 Challenges of Forest Based Livelihood**

An analysis of the constraints and challenges confronting the NTFP sector in particular and the forest based livelihoods in general can be distilled in to the following categories: Livelihoods, Resource sustainability (access), Finance, Marketing, Policy and Institutions, Public awareness and Training (Lyndon, 2005). However, for the purposes of expediency, the literature particularly focuses on issues related to natural resource (or forest) access.

A number of scholarly works (Yihnew, 2003, Byron and Arnold, 1997, Scoones, 1998 and Ellis, 2000) emphasize on issues of access to forest as a critical factor for the viability and or success of livelihood strategies. According to Byron and Arnold (1997), for instance, many users are progressively restricted in their choice to resources available in bush fallow and farm bush on lands over which they have some measure of individual control and to resources they can create by growing trees on their farms. Thus, where people have had relatively unrestricted access to forests, forest foods and forest products, income are often particularly important for poorer groups with in the community (Ibid). Reduced access to forest sources of the products they need is consequently often reducing the ability of small farmers, landless households and others among the poor to continue to participate in forest output activities. In many places,

therefore, the focus of rural households' supply of some "forest" products is shifting from the forest to the farm (Byron and Arnold, 1997).

In favor of the above, Ellis and Allison (2004) evidenced that access by the poor to natural resources including land, forests, water, fisheries and wildlife as an essential prerequisite for sustainable poverty reduction. Ironically, however, landless people in rural areas are particularly vulnerable, because without secure access to land and other natural resources, they can have more difficulty obtaining food, accumulating other assets and recovering after environmental and economic shocks or misfortunes (Ibid).

Another academic contribution from Wily (2000) recognizes the importance of access to resources for which the rural people place more importance in controlling access to what they see as the forest resources key to their livelihood than to trade this for more income from these resources. Above all, however, it is of supreme importance to be sentient that the quantity and quality of such assets makes a big difference to the variability of rural livelihood strategies (Ellis, 2000). In relation to this, Warner (2000) points out that the poor is the one who benefit from being able to continue to have access to forest products, but they may be faced with a diminishing resource (because of factors such as population growth or restriction on access to resources) and a declining capacity to exploit it. Regarding the importance of the amount of livelihood assets, she further states that those people with more assets have a greater range of options and an ability to shift emphasis in their livelihood strategies.

Generally, access to resources, assets and entitlements together give people the capabilities to pursue livelihoods strategies that may have direct material as well as more individually subjective objectives (Dubois, 2000) and, especially, denying access to natural capital alone can significantly deteriorate the status of those who are already worse off and therefore rely more heavily on forest resources. That's why access to natural resources remains critical sometimes even more so as a result but the linkage between access to natural resources and livelihoods are more complex than had previously been taken in to account (Ellis and Allison, 2004).

### **3.2.3 Livelihood Diversification**

Diversification is, by definition, a complex process and it calls for more research to be done to understand why it is happening and what effect it is having on rural poverty and natural resource management. Livelihood diversity results in complex interactions with poverty, income distribution, farm productivity, environmental conservation and gender relations that are not straightforward and sometimes counterintuitive and are contradictory between alternative pieces of case study evidences (Ellis 1992:2). The definition given by Ellis (2000:15) can suffice the whole scope and concern of this study.

*Rural livelihood diversification is the process by which rural households construct an increasingly diverse portfolio of activities and assets in order to survive and to improve their standard of living (Ellis, 2000:15).*

Carswell (2000) delineates the contextual variations with regard to reason for diversification of activities, the degree of conscious choice exercised by actors and the effects that they have on the household. According to his study, for instance, in the Southern parts of Ethiopia, different factors such as market access play principal role by way of inhibiting or facilitating the process of diversification.

Conversely, a growing body of literature isolates that the declining productivity of natural resource such as forest has been a key factor pushing people out of agriculture and in to non-farm based activities. Implicitly, differentiated access to resources, necessary to diversity livelihoods, gives rise to different ways in which richer and poorer households diversify their livelihood. It is, therefore, impossible to form a simple typology of diversification (Carswell, 2000).

### **3.3 Policy and Legal Frameworks**

Poverty eradication will obviously remain the most critical development priority for all the countries in the Sub Saharan Africa. Considering that industrial development is likely to be slow, people will continue to depend on natural resources to meet most of their needs. In particular, such dependence will be very high among the poor whose access to other assets is limited.

Forestry's contribution in alleviating poverty may focus on providing goods and services for the poor and improving employment and income opportunities. Although interventions in the forestry sector cannot solve the problems of poverty in its entirety, continued dependence of the poor on forest resources would require that forestry addresses this issues directly or indirectly (FOSA, 2003).

The Federal Government of Ethiopia recognizes the economic and social values of forests and supports their conservation and management for sustainable use. However, there is no comprehensive federal policy that covers either land use or forest management. Proclamation No. 94/1994 that was issued to provide for the conservation, development and utilization of forest resources is currently serving as the forest policy statement of the country (Million, 2001). The proclamation has a strong element of forest protection, but doesn't spell out the villagers' rights to use the forest clearly. The proclamation makes timber processing by villagers an illegal undertaking and introduces an element of uncertain legality to forest gathering operations such as beekeeping, collection of wild coffee and spices. This is in a direct conflict with traditional forest use practices (Yihenew, 2003).

Despite the fact that the proclamation has been issued thirteen years ago, it did not help much to relieve the challenges of forest dependent people and their livelihoods as well as the pressure from the forests, probably due to the absence of enforcing mechanisms. According to Million (2001) the current capacity of the sector is constrained especially at the regional level due to the absence of an appropriate management structure, the inadequate allocation of budget and high level of encroachments for expanding agricultural land and illegal settlements.

The Gambella Regional State Government has also devised development policies and strategies. The two main development planning initiatives of relevance are the Regional Conservation Strategy (RCS) and the Regional Forestry Action Program (RFAP). The RCS will provide the umbrella policy and strategy framework covering 11 sectoral and 11 cross-sectoral areas concerned with natural resources and the environment. The RFAP will focus on the forests sector, both from the supply and the consumption sides. Both will articulate the region's

priorities for sustainable development, conservation and managements of the region's natural resources (WBISPP, 2000).

In spite of the government's endeavor to conserve the forest, encroachment into natural forest areas is widely reported. Not surprisingly, the forest resource in Mejengir Zone continues to be seen and utilized as village common. According to Yihenew (2003), this complex situation is a consequence of mismatch between government policies, implementation capacities and grassroots realities. Forest related laws tend to provide little security to forest dependent peoples (Colchester, 2006). For various reasons, rural communities often have difficulties in getting their rights of ownership, access and use in forests regularized.

Therefore, the essential question for any government or development agency anxious to help those called 'forest dependent' is: What would one do? (Byron and Arnold, 1997). In this regard, Million (2001) suggests the importance to conduct the valuation of forests and its impacts on key policy issues such as the poverty reduction, food security, and income generations. In the entire process, therefore, reconciling the state's position as an overall resource owners and the villager's concern for security of forest use right is an important issue (Yihenew, 2003).

### **3.5. Research Gaps**

The ecological and livelihood importance of the forest resources has widely been recognized in the books and journals reviewed in this paper. Even if people have access to these resources, it became evident that sufficient amount of these livelihood assets is required to pursue an optimal level of livelihood. The reliance on forest resources, in general, is dynamic and changes from place to place depending on socio-economic and cultural settings of a given. Even if there are many academic literatures are written on poor forest dependent people, it was hardly possible to find one which is specific to the Mejengir community. Therefore, it was found to be relevant to assess the changing nature of the forest based livelihoods of this community by analyzing the interaction of various components of the sustainable livelihoods framework in figure 2.

## CHAPTER FOUR

### BACKGROUND CHARACTERISTICS OF THE FOREST BASED MEJENGIR COMMUNITY

This chapter discusses overall socio-economic characteristics of the forest based Mejengir community with especial emphasis on their livelihood sources, the crucial asset (capital) on which they, to a greater or lesser extent, depend and challenges of livelihood confronted by households. Parallel to these, some essential background information vis-à-vis sex, educational status, number of family and the conditions and amounts of land holding of the sample Mejengir households will also be analyzed under this topic.

Almost all the three study *Kebeles* in the *Woreda* are exclusively homogeneous in that other ethnic groups like Kefa, Sheka, Oromo, Tigre and Raya reside in the *Kebeles*. Besides, in the there are a number of private investors who are engaged in the production of spices, coffee and other timber and non timber forest products. Accordingly, the ninety sample households are purely Mejengir and were randomly selected from the respective *kebeles*. Therefore, the data analysis and discussion presents the collective results of the three *Kebeles*.

The gender profile of the sample respondents show that females were 21.1% whereas males were 78.9%. With regard to their age distribution, the lion share of the respondents (67.8%) were adults with in the age range of 26-41. Among the total sampled households, majority of them (74.4%) were married while there were some polygamy cases (6.7% of the total households). In spite of the limited educational services in the *Woreda*, 40% of the respondents were from grade 1-4, 35.6 % from grade 5 – 8 and 13.3% and illiterate.

*Table 4: Educational status of sampled household heads*

<b>Educational status</b>	<b>Frequency</b>	<b>Percentage</b>
Illiterates	12	13.3
Grade 1-4	36	40
Grade 5-8	32	35.6
Grade 9-10	7	7.8
Grade 11-12	1	1.1
Certificate	2	2.2

Source: Field survey, 2008

The religious category of the sampled households was that all were (i.e., 100 %) protestants. This was mainly due to the pioneering missionary roles of Mekane Yesus church before the introduction of any religious teaching. With respect to the family size of sample households, most respondents have 5-7 and even more numbers of household members i.e. 60 %. As it will be discussed latter, the increase in number of household members is among the factors that attributes to the loss in the forest cover (genetic biodiversity).

*Table 5: Number of household members of the sample population*

<b>Number of members of the household</b>	<b>Frequency</b>	<b>Percentage</b>
None	7	7.80
2- 4	29	32.2
5-7	29	32.2
> 7	25	27.8
<b>Total</b>	<b>90</b>	<b>100</b>

Source: Field Survey, 2008

Regarding the land holding size of the sample households, most of the respondents i.e., 38.9% have more than 3 Ha of land, followed by the response from 25.6 % of the sample household who have 1-2 Ha of land. The average land holding size for all the sampled households were 1.95 Ha (Table 6). It should be noticed that these amounts of land are only for agricultural land that are meant for crop production. The forest land owned by individual households is a kind of

open access and households used to hang their beehives on culturally inherited or passed forest trees. According to Melaku (2003), this kind of “property” regime is a situation where no one holds rights to a resource, and nobody is excluded or they are “owned” and used by all, but cared for by none.

**Table 6: Land holding size of Sample households**

Amount of Land (Ha)	Frequency	Percentage	Average land holding size (Ha)
0.5-1	20	22.2	= 1.95
1 -2	23	25.6	
2-3	12	13.3	
>3	35	38.9	

Source: Field Survey, 2008

### **Livelihood sources**

As it was stated earlier, livelihood strategies are composed of activities that generate means of household survival (Ellis, 2000). In the study *Kebeles*, occupation of sample households differs from one another based on the livelihood assets available to the sample households. In this regard, the majority of the sampled households (i.e. 97.8%) get their livelihood from agriculture where as 2.2 % are engaged in non-agricultural and other activities. Under the wide umbrella of agriculture, therefore, 57.8% of the sample households are engaged mixed farming which is an amalgamation of both the crop production and animal production (Table 7). On the other hand, 40% of the respondents are dependent on agro-forestry and mixed farming

**Table 7: Agricultural activities performed by sample households.**

Types of Agricultural activities	Frequency	Percentage
Mixed farming	52	57.8
Mixed farming and agro-forestry	36	40
Crop production and agro-forestry	9	10.0
Animal husbandry and agro-forestry	2	2.2

Source: Field survey, 2008

Tables 7 clearly illustrates that most of the sample households have diverse portfolio of income. The reasons for diversification and the types of diverse activities performed by sample household will be discussed in the later chapters.

Regarding economic characteristics of the sample households, the survey has tried to generate relevant information on the major sources of household income. Accordingly, 45.6% of the sample households in the three *kebeles* are getting their cash incomes from activities such as sale of cereal crops, sale of coffee and spices and sale of honey.

Particularly, honey is the major source of revenue for most of the Mejjengir people since time immemorial (Tadesse and Feyera, 2006). From table 7, it can easily be perceived that 86.6 % (83) the sample households are dependant on sale of honey for their income. As far as forest based income sources are concerned, 96.7 % of the total sample households are dependent on NTFPs (i.e. sale of honey, coffee and spices, and sale of fuel wood).

*Table 8: Sources of cash income for sample households.*

Sources of income	Frequency	Percentage
Sale of cereal crop	1	1.1
Sale of cereal crop, coffee and spices and Honey	41	45.6
Sale of cereal crops, coffee and spices, Honey and fuel wood	5	5.6
Sale of cereal crops, coffee and spices, Honey and horticultural crops	3	3.3
Sale of cereal crops and Honey	9	10
Sale of Cereal crops, Honey and horticulture	5	5.6
Sale of cereal crops and horticultures	1	1.1
Sale of coffee and spices	1	1.1
Sale of cereal crops and others	1	1.1
Sale of coffee and spices	1	1.1
Sale of Coffee and spices and Honey	13	14.4
Sale of Coffee and spices, Honey and horticultural crops	2	2.2
Sale of Honey	4	4.4
<b>Total</b>	<b>90</b>	<b>100</b>

Source: Field Survey, 2008

The starting point of the livelihood framework is the assets owned, controlled, claimed, or in some other means accessed by the household. It is well recognized that different livelihood activities require various kinds of livelihood assets. Because, assets are the building blocks upon which households are able to undertake production, engage in labor markets, and participate in reciprocal exchanges with other households (Ellis, 2000). Among the available livelihood assets, 87.8 % of the sample households reported that forest resources are vital for the majority of their livelihood activities. Similarly, the study done by Tadesse and Feyera (2006) also indicated that the forest is the primary source of income for many indigenous communities like the Mejengir people.

Besides, the role of forest as a vital livelihood asset for the local community was emphasized in the focus group discussions held in Kumi, Gelesha and Dushi in the following manner: *Mejengir and the forest are two sides of the same coin because the forest has been our home and we have always relied on the forests for honey production, hunting, and gathering of wild fruits, taro, yam and grasses for house constructions. So, the forest is the only available resources on which we depend for our entire livelihood.*

Asked to rank the various advantages derived from forests, significant proportion (83%) of the sample respondents rated honey as the major benefit obtained from this resource. In order of priority of importance, however, 41.1% of them reported that forest is useful for drawing a combination NTFPs mainly honey, wild coffee and spices and fuel wood.

The overall analysis of the survey response indicates that sample households depend on the forest resources primarily for honey production which is followed by a number of wood and non-wood forest products. These include, among others, fodder and grass, house construction materials, fuel wood, wild coffee and spices and timber.

In almost all the focus group discussions, it also became evident that forest has diverse use value for the community as it provides different kinds of NTFPs of varying importance that are critical for the sustenance of households. Specifically, honey, the main source of revenue and

household consumption, was found to be the key benefit obtained from the forest in the surveyed villages. Besides, taro, wild nut, bush meat, wild coffee and spices, grasses and timbers were also recognized among the diverse benefits drawn from the forest resources. In support of the survey responses, some informants have also expressed similar views on the manifold benefits of forests ranking honey as the prominent one.

There are, however, several essential factors which are delineated as those affecting the amount and quality of honey produced by the Mejengirs. In this regard, 94% of the respondents identified forest degradation as a critical and potential threat to the forest resource as a whole and the production of honey in particular. In the same manner, Tadesse and Feyera (2006) witnessed that the increasing forest reduction is affecting the local livelihood of the Mejengir people. On top of that, 32.2 % of the sample households have replied that a combination of factors, principally, change in weather condition (increase in temperature and decrease in the amount of rainfall) and forest degradation are the main reasons behind the reduction in quantity and quality honey production. It should be noticed that change in weather condition and forest degradation are indistinguishable in that one is the cause of the other and vice versa.

Overall, the respondents indicated that the reduction in honey is attributed to various environmental, technological, economical and social problems which include diseases and pests, lack of modern and improved agricultural technologies and rudimentary ways of production.

Furthermore, the informants from the study villages showed that diminishing forest resources is the most important rationale behind the decline in production of honey and other salient NTFPs. At this point, it is important to state the statement uttered by an old man from Kumi village:

*Honey has been the only product from where I get cash income and feed my family. Before ten and twenty years, I used to produce a significant amount of honey because the forest tree is near my village and the bees are around. In recent years, however, the forest resources are diminishing at an alarming rate and the bee*

*colonies are moving to other areas where flowers are available. As a result, both the amount and quality of honey also declined.*

Focus group discussants also witnessed that forest degradation is the core reason for the decline in production of honey and other NTFPs. The change in weather condition is also stated as key reason as it forces bee colonies to move out from the villages. Lack of appropriate and modern beehives and accessories was also reported as another reason because most of the local community is still dependent on traditional beehives made of wood logs.

Experts from *Woreda* Agriculture and Rural development office and the project forester have also similar opinion as that of the respondents of the survey questionnaire and the informants in that they emphasized on diminishing forest resource and unimproved production ways as the fundamental reasons for the decline in production of honey.

In this chapter, generally, it became apparent that the livelihoods of the vast majority of the local community are dependent on agriculture as a whole and collection of non-timber forest products (NTFPs) in particular. Particularly, honey production is identified as the most important livelihood activity that generates the lion share of cash income for many households. Among the natural capitals available to the households, the forest resources in the area play indispensable roles and have got manifold benefits in the life support of Mejjengirs. Contrary to the crucial roles of non-timber forest products (especially honey) both as primary sources of consumption and cash income, forest degradation, change in weather condition (desertification), and rudimentary production methods have become the key challenges behind the normal pursuance of forest based livelihood activities. These factors have also contributed to the reduction in quantity and quality of honey that has been produced by the local community.

## CHAPTER FIVE

### TRENDS OF FOREST RESOURCES UTILIZATION AND ACCESS TO FORESTS

In the preceding chapter, it became vivid that the forest resource is recognized as the most important livelihood asset (natural capital) on which majority of the local community relies on. It is the objective of this section to discuss and analyze trends of forest utilization, changes and conditions of the forest resource, main forest user groups other than Mejjengirs, underlying causes of deforestation and its impact on the livelihood of sample households. In addition, issues related to access to forest resources and factors that mediate (inhibit or facilitate) household's access to these resources are among the salient points discussed in this section.

Regarding trends of livelihood resources, Scoones (1998) gives a checklist of the following key questions so as to produce appropriate information for the analysis of livelihood resources. The prime focus of this section is, therefore, to explore the trends of forest resource utilization and issues related to access to this capital by raising the following general questions:

- ◇ What are the trends in terms of availability of forest resources?
- ◇ How the forest resource is being degraded, and by whom?
- ◇ What is the link between access to forest and deforestation?
- ◇ What does the trend in access to forest resources look like and what are the key mediating factors that facilitate or hinder the local community's access to these resources?

#### **5.1 Trends of Forest Resource Utilization/Changes and Conditions /**

Although the past extent of forest cover is debatable, the 1990 Ethiopian Forest Action Plan (EFAP) estimated forest cover to be only 2.7%. During the past 30 years alone, the southwestern parts of the country have lost over 60% of the forest cover (Tadesse et al., 2002).

Like many parts of the country, Godere forest and its valuable products are falling at an alarming rate. Not surprisingly, the survey responses from 98.1% of the sample households and information from focus group discussants substantiate the fact that the forest resource in their respective villages has significantly reduced during the past ten years (Figure 3). Some of the

informants from the community further told that the forest resource has started to decline fifteen years ago and the rate of decline is increasing from time to time. According to these sources, the past decade is the one in which the area has hosted significant number of illegal immigrants and coffee growers as well as registered sever rate of deforestation.

**Figure 3: Newly cleared forest lands for Maize and Sorghum (Left) and coffee plantations (Right) in Kumi Village.**



Source: Field survey, January, 2008. (Photographed by the Author)

As discussed earlier, forests are one of the crucial natural capital on which different groups of people rely for various purpose. In southwestern part of Ethiopia, for instance, these forest users include not only the local communities and indigenous ethnic groups but also central government, private investors, non-local ethnic groups who have moved in to this region, and communities outside the region who depend on some of the region's resources (Wood,1993).

In Godere *Woreda*, likewise, 84,4 % of the sample households reported that the various levels of government, investors, immigrants from different parts of the country as those using the forest resource for various purposes. Besides, from the group discussions and in depth interviews with the community elders and *Kebele* officials, it became comprehensible that there are also, apart from the local community, other forest resources users like state and private investors (both legal and illegal) and illegal settlers form other parts of the country. This is mainly due to the reason that the southwest highlands, including the study area, have strong

comparative advantages in timber production and with in the forests are found important forest products, such as wild coffee, spices and honey and also wild life (Wood, 1993).

Even though forest resources officially belong to the government, a number of people utilize forests without having legal rights to get access to these resources. This study has also revealed the different factors that facilitate access of other user groups to the forest endowments of the area. Accordingly, the response from 61.1% of the sample households substantiate that most illegal settlers and investors get rights of utilizing forest lands through purchase from the respective *Kebele* administrations or renting from the local community. Meanwhile, the remaining 38.2% stated that other forest users access forest lands through official permissions from the local government. Regarding this, Tadesse and Feyera (2006) pointed out that the local *Kebele* administrations sale forest land to illegal coffee growers where in merchants, city dwellers and government employees began coffee plantations.

In the focus group discussions it emerged clear that the *Kebele* administrators sell forest lands to illegal settlers, illegal investors and dwellers in nearby towns rather than controlling it and sustaining it for the present and future generations. Furthermore, most discussants articulated the access of other user groups to forests in the following manner:

*It was not sometimes clear as to who is allowing other user groups to forest lands in but we always notice people coming to our villages and undertaking various agricultural activities. Recently, however we have come to know that Kebele officials and the government are behind this. For instance, the big Teppi coffee plantation farm is state owned and we know federal government is the one who allowed the organization to utilize forest lands. But the rest illegal settlers and investors get use rights sometimes from the Kebele officials and at another time from the Wereda officials.*

Furthermore, an informant from Zonal Agricultural and Rural development office explained the situation as follows by comparing with the existing government forest policy:

*Forests are properties of the federal and regional government. To protect these resources from illegal utilizations, the local government has assigned forest guards. However, there are reports regarding the sale of forest lands to outsiders by Kebele administrators which is contrary to the existing forest laws and policies. In this regard, the local government is trying its best to stop the situation and implement the policies and laws.*

Such conditions, however, are not only the outcomes of the gaps between planning and implementation of policies and legislations but also are results of inadequate follow up and monitoring of utilizations of forest resources.

Apparently, such an increased pressure on the forest resource brings about deforestation even if disagreements on the magnitude, causes and consequences of deforestation are common (Logo and Brown 1982 as cited in Julia and Douglas, 1985). Regarding the causes of deforestation, for instance, Gibson et al., (2000) argue that much of the Sub-Saharan Africa's natural resource base and ecological environment are deteriorating mainly due to high population growth and unsustainable consumption patterns. In the same manner, Million (2001) delineates rapid population growth, lack of viable land use policy and corresponding law, new settlements in forests and pressures from investors as major causes of deforestation.

In Godere *Wereda*, expansion of coffee plantation, settlements and agricultural expansion, commercial logging, fire and local wood consumption were identified as the major cause of deforestation (Tadesse and Feyera, 2006). Similarly, 81.1% of the sample households pointed out settlements (growth in population), agricultural expansions, commercial logging, and fire (for shifting cultivation) are the most prominent causes of deforestation in the study *Kebeles*.

The study also revealed the key actors behind the above-mentioned causes of forest degradation. In this regard, 72.4 % of the sample respondents explained that migrants, investors and the government as the key groups behind the deforestation. Whereas the remaining respondents showed that local community themselves are responsible for degradation as most of them employ fire to undertake the practice of shifting cultivation.

## 5.2 Consequences of Deforestation

In relation to the ultimate outcomes of deforestation, it is widely recognized that it has manifold consequences which range from local to global level. These include, among others, effects on the supply of wood fuels for household energy, soil and water resources, the quality of rural life, wood supply, hydrological balance, genetic resources and global cycle of carbon and other elements which are global and local in their nature (Julia and Douglas, 1985). In support of this, Tadesse (2007) disclosed that conversion of forest areas to plantations (forest degradation) is a main threat to forest biodiversity and local livelihoods.

In this study, too, many households (48.9%) identified consequences of deforestation which are directly related to forest based livelihood. These are: reduced NTFPs, reduced timber production, reduced fuel wood and number of wild animals (Table 9). Besides, the focus group discussions conducted in the three *kebeles* and in-depth interviews with community elders revealed the same view as that of the responses of the survey. Thus, it can easily be perceived that deforestation has tremendous effects on the forest based livelihoods of the local community because those livelihoods are significantly dependent on the quantity and quality of the livelihood capital.

**Table 9: Consequences of deforestation on different aspects of forest based livelihoods**

Types of problems	Frequency	Percentage
Reduced NTFP	1	1.1
Reduced NTFP and reduced timber production	1	1.1
Reduced NTFP reduced. timber production and fuel wood reduction	2	2.2
Reduced NTFP reduced, timber production , fuel wood reduction and reduced number of wild animals	44	48.9
Reduced NTFP, reduced timbers production and reduced number of wild animals	16	17.8
Reduced NTFP and reduced fuel wood	1	1.1
Reduced NTFP, reduced fuel wood and reduced number of wild animals	9	10.0
Reduced NTFP and reduced wild animal	10	11.1
Reduced timber production and reduced fuel wood	1	1.1
Reduced NTFP, reduced timber production and reduced number of wild animals	4	4.4
Reduced fuel wood and reduced number of wild animal	1	1.1
<b>Total</b>	<b>90</b>	<b>100</b>

Source: Field Survey, 2008

On top of the above-mentioned negative outcomes on livelihoods, the survey also generated relevant information on diverse consequences of deforestation.

The overall condition of the forest in the study areas, according to (91.1%) of the sample households, has reduced due to deforestation. Besides, the entire sample households (100%) showed that deforestation has reduced the number of species of forest trees.

As discussed earlier, honey production is the major source of income and household consumption for Mejengir community. Particularity in the study area, the practice is extremely dependent on forest resources. Where there is diminishing forest resources, honey production might not be a successful livelihood strategy mainly due to the reason that people will be confronted with inadequate forest trees to hang their beehives and the existing bee colonies also move to another areas in search of nectars. Similarly, majority of the respondents (98.9 %) have showed that the sever deforestation in their villages has resulted in reduced number of bee colonies (Figure 4).

***Figure 4: Beehives hanged on tree with no flowers (Left) and Traditional Beehive made of Woodlots (Right) in Dushi village.***



Source: Field survey, January, 2008 (Photographed by the Author)

Another negative impact of deforestation is reflected on fuel wood supply to the local community. Accordingly, majority of the sample households (93.3%) have evidenced that fuel wood has decreased due to the forest resource decline in the villages.

Natural high forests are endowed with various kinds of NTFPs (i.e., wild coffee, spices and the like) which support the livelihoods of poor forest dependent people. In the study area, researches indicate that the natural forest has got a good amount of wild coffee. Despite this fact, the majority of the respondents (91.1%) have reported that deforestation has resulted in the decline of the amount of wild coffee.

In general, 92.2 % of the sample households articulated that the overall use values of forests have decreased and 91.1 % recognized that household income as a whole has fallen down mainly because of the deforestation in all the study villages.

Table 10 summarizes the responses of the sample households to various consequences of deforestation.

*Table10: Diverse Consequences of deforestation*

Deforestation Consequences	Responses						Total
	Increased		Reduced		Not Changed		
	N	%	N	%	N	%	
Overall condition of forests	7	7.8	82	91.1	1	1.1	90
Number of bee colony	-	-	89	98.9	-	-	89
Wild coffee	2	2.2	82	91.1	5	5.6	89
Fuel wood supply	5	5.6	84	93.3	1	1.1	90
Number of forest species	-	-	90	100	-	-	90
Household income	2	2.2	82	91.1	5	5.6	89
Overall use value of forest	3	3.3	83	92.2	-	-	86

Source: Field survey, 2008

Asked regarding the future condition of the forest in the area, 94.4% (85) of the respondents replied that there will be more sever forest resource degradation if the current utilization pattern continues as it is. Similarly, focus group discussants in all the three villages have expressed similar opinion as that of the majority of the surveyed households in that the forest resource cover will decline in the near future unless timely corrective measures are employed.

Further, the past condition and the likely future of the forest resource were also described by a 46 years old man from Gelesha village in the following manner:

*I have lived in this village since my childhood. Previously, when there were no other ethnic groups and investors in the village, the forest was so dense. During the past decade, however, the forest completely reduced everywhere, whereas settlements and investments were intensified. So what do I expect the forest to be in the future while things are not changed? Absolutely, my response is it will collapse down with in few years and Mejengir will be left with bare hands.*

From the above discussions and analysis regarding trends of forest utilization, changes on forest and the condition of the forest, it is understandable that there is no forest resource/livelihood capital/ being accumulated for the local community to pursue a viable livelihood strategy as their livelihood base is diminishing everywhere in the villages. Generally, the causes of deforestation in Godere *Wereda* are attributed to key social, economical, and political realities that are being taking place in the area.

### **5.3 Access to Forest Resources**

Households have capabilities and access to range of assets which they use to carryout different livelihood activities. They are differentiated by relative wellbeing and their access to resources and power (Satge et al., 2002).

According to Dubois (2002), vulnerability is closely linked to access to resources (capital assets) because these are the principal means by which people reduce their vulnerability. It is access to resources, assets and entitlements that together give people the capability to pursue livelihood strategies that may have direct material as well as more individually subjective objectives. Byron and Arnold (1997) also confirm that reduced access to forest sources of the products that forest dependent people need is consequently often reducing the ability of small farmers, landless households, and other among the poor to continue to participate in forest output activities.

Among the surveyed households, 71.1% reported that they have access to forest resources whereas the remaining 27.8% showed that they are denied access to these resources. Access by majority of the respondents is primarily due to the common pool nature and open access to forest resources both by the local people and outsiders. Similarly, some informants and participants of the group discussions in the study *Kebeles* have the same opinion that they have unlimited and open access to forest resources in their villages.

There are a number of scholarly literatures regarding the critical factors that facilitate or inhibit people's access to various livelihood assets (Ellis, 2000, Scoones, 1998, Satge et al., 2002) and every livelihood approach pays due attention to these factors. In all livelihood frameworks, it is well recognized that the translation of a set of assets in to a livelihood strategy composed of a portfolio of income earning activities is mediated by a great number of contextual social, economic, and policy considerations (Ellis, 2000). In a similar manner, the DFID model divides these external forces into 'transforming structures and processes' or 'policies, institutions and processes' – e.g. (levels of government, private sector, laws, policies, culture, institutions) and the 'vulnerability context' described in terms of shocks (e.g. civil and climatic), trends (e.g. Resource stocks, population, technology, politics and economics) and seasonality (Carney, 1998). Thus, it is important to notice that household will have different and varying degrees of access to and thus different portfolios of assets based on the external mediating factors (Ellis, 2000).

In the case of the study area, the mediating factors were found to be the key that play a role in a household's or individual's access to forest resources. Accordingly, 62.4% of the respondents have delineated culture as an essential mediating factor that hinders or promotes households' access to forest resources (Table 11). However, 14.4% of the respondents reported that combination of government laws and policies and private investors. From the DFID livelihood model, it can be understood that culture is an institutional process whereas government, policies, laws and private investors are categorized under the wide umbrella of structural processes.

In the focus group discussions it became clear that the culture is the key mediating factor that hinders and or facilitates the local community's access to forest. They further stated the access issue as follows:

*In our tradition, we respect and listen to our village leaders and elders in every aspect and this is the culture and knowledge we inherited from our forefathers. They are the one who decide on the resources in the villages. Regarding forest, it is divided among our clans using natural features like rivers, valleys or hills as boundaries. Our culture, therefore, permits every Mejengir to use forests as well as to protect them. We are still hanging our beehives on forests trees which are inherited from our fathers. But from the past one or two decades onwards, our cultural forest ownership pattern started to change due to intervention of the government in forestland distribution. Now adays, those Mejengirs elected as Wereda, Zone and Regional government officials are the one who decide on the right to use forests and our tradition and culture has also goes with the reduced forest.*

All the Mejengir informants also stated the access to forest resources had been culturally and traditionally determined while in recent times the policies and laws of the government have become important mediating factors. According to one of the informants from the Kebele officials, it emerged that private investors also are the one who decide on the access to forest resources. Further, he explained the trend as follows:

*During old days, we abide to what the culture and tradition decides and forest distribution was decided by respected elders and clan leaders. For instance, the forest trees that I am currently using are found in 'Fejeji' (a neighboring village). I inherited them from my father and he also took them from his forefathers. After expansion of investment in the village, however, private investors also became decision makers. These investors have lots of money and they give some money as - bribery to some government officials of our ethnic group to rearrange the forest land distribution as per their interests.*

*Table 11: Transforming structures and processes affecting households' access to forest*

<b>Factors affecting access to forest</b>	<b>Frequency</b>	<b>percentage</b>
Government laws and policies	12	13.3
Government laws and policies and local institutions	2	2.2
Government laws and policies, local institutions and private investors	5	5.6
Government laws and policies , local institutions and culture	5	5.6
Government laws and policies and private investors	13	14.4
Government laws and policies , private investors and culture	2	2.2
Government laws and policies and culture	5	5.6
Local institutions and private investors	2	2.2
Local institutions , private investors and culture	7	7.8
Local institutions and culture	5	5.6
Culture	32	35.6
<b>Total</b>	<b>90</b>	<b>100</b>

Source: Field Survey, 2008

Though access to forest products is so widely important in enabling people to survive in a situation of poverty, the sets of livelihood activities may be less important in helping people escape from poverty (Byron and Arnold, 1997). So as to realize a desirable livelihood outcome, therefore, it is becoming evident that the quantity and quality of livelihood assets need to be examined using the same lens as that of access to forest resources. As Ellis (2000) precisely puts it the quantity and quality of such assets make a big difference to the viability of rural livelihood strategies. Warner (2000) points out that the poor is the one who benefit from being able to continue to have access to forest products, but they may be faced with a diminishing resource (because of factors such as population growth or restriction on access to resources) and a declining capacity to exploit it. Regarding the importance of the amount of livelihood assets, she further stated that those people with more assets have a greater range of options and an ability to shift emphasis in their livelihood strategies.

Here it is quite important to mention the response of a Mejengir woman in Kumi village:

*Access to forest is not a problem to me because I can enter in to the forest any time and do what I want to do because I have forest tree in 'Goshini' (a nearby village). However, it is not only Mejengir who have the right to use the forests but there also many highlanders and private investors who have migrated to the village. My problem is, thus, I am facing a big challenge to gain benefits from the forest as before and my family is confronted with the horrific consequences of the diminishing forest resource such as reduction in amount of honey, lack of Taro and wild coffee (particularly for 'Chemo' a local name to represent a leaf infusion process that serves as a traditional source of diet for Mejengirs).*

In a nutshell, it became evident from the discussions in this chapter that unsustainable and or unwise forest utilization trend has resulted in the reduction in extent of this important livelihood asset. Particularly, the past 10 years were the one in which sever deforestation and increased illegal settlement and investment in the area was noticed by the sample households. The main causes of deforestation in the study area are settlement, expansion of agriculture and coffee plantations, commercial logging and fire. Obviously, the reduction in the quantity of the forest resources has brought about tremendous impacts on the livelihood activities that rely on these resources. These include, for instance, reduction in quantity of NTFPs, reduced number of wild animals and insufficient supply of fuel woods.

Among the various factors that facilitate or restrain people's access to the forest resources of Godere Woreda, culture was identified as an important mediating factor which was traditionally employed by the local community. These days, government policies and laws and private investors have become the key factors that play decisive roles in peoples' access to forest resources.

## CHAPTER SIX

### NEXUS BETWEEN ACCESS TO FOREST AND LIVELIHOOD STRATEGIES

The prime focus of this chapter is to examine the linkage between access to forest resources and diverse livelihood possibilities which were adopted by households due to unwise trends of resource utilization. In this regard, the types of the diverse livelihood portfolios performed by the sample households, the underlying reasons for diversification, the extent of dependence of these activities on the existing forest resource are among the salient discussion points. Besides, the roles of the government and non-governmental organizations vis-à-vis securing local community's access to sufficient forest resources will also be presented in this section.

It was frequently mentioned that most rural livelihoods are dependent on the natural resources base at least to some extent (Scoones, 1998) and the quantity and quality of such assets makes a big difference to the variability of rural livelihood strategies (Ellis, 2000). Further, Dubios (2002) states the single most important factor in determining the success of livelihood strategies is probably access to sufficient capital assets, although the vulnerability context and the constraints and opportunities posed by wider institutional process also play a critical role. Generally, within the sustainable livelihood framework three broad clusters of livelihood strategies are identified. Scoones (1998) explicitly categorized these strategies as agricultural intensification / extensification, livelihood diversification and migration.

In the study area, likewise, people are engaged in diverse livelihood activities depending on the accessible and sufficient natural resources they have control over. Regarding availability of other alternative livelihood activities, thus, 93.3% of the sample households have reported that they have other sources of income apart from those which are dependent on the forest. On the other hand, the remaining 6.7 % confirmed that they do not have any alternative source of income other than those which are totally dependent on forests.

Accordingly, 93.3% of the sample households have witnessed that they are diversifying their income portfolio by way of shifting from forest based income sources (such as honey production) to other agricultural and off-farm activities. Particularly, they have indicated that

they are engaged in one or more of the following livelihood activities: pottery, petty trading, basketry, coffee production, annual crop production (Maize and Sorghum) and chicken production. From among these, many households 67.7% are engaged in coffee production (Figure 5). In combination, however, 21.1% are engaged in coffee production and animal husbandry (like Chicken). According to Tadesse and Feyera (2006), today, most of Mejengir people has started permanent agricultural practices, including coffee production in and around forests. Further, they witnessed that the traditional forest based livelihoods and shifting cultivation is being converted to sedentary agriculture mainly due to the influx of people from resource poor and degraded parts of Ethiopia which contributed to the loss of vast forest areas.

**Figure 5: Coffee farm in Gelesha village (Left) and newly opened forest land for Maize and Sorghum plantation (Right).**



Source: Field Survey, January, 2008 (Photographed by the Author)

Depending on the livelihood capital that the above mentioned livelihood activities require, it can be perceived that they are under the broad category of agricultural extensification. This strategy, according to Ellis (2000), is characterized by increased reliance on agriculture by way of bringing new land in to cultivation or grazing. In Mejengir Zone, the forest is the frontier for the success of activities related to agricultural extensification (Tadesse and Feyera, 2006).

The degree of specialization or diversification may relate to the resource endowments available and the risks associated with alternative options (Scoones, 1998). Similarly, the focus group discussants in the three villages made clear that the continued reduction in the forest resource is the core reasons behind decreased income and engagement in diverse livelihood activities.

Apparently, the former is related to decrease in resource endowments while the later is allied to the risks associated with the livelihood activities dependent on that particular resource.

The dependence of the above mentioned diverse livelihood activities on the remaining but diminishing forest resources was also found to be an important aspect so as to answer the question related to “ To what extent is the local community dependent on the forest resource?”. In this regard, Warner (2000) rightly puts the dynamic nature of forest reliance: Some populations or households are likely to move away from their present level of use of forest or forest products. Others will have a continued need to draw on forests. Yet others are likely to depend on them even more in the future. The trend is for those who are wholly dependent on forests to become less so; the forest will increasingly complement other livelihood activities. Those who currently depend on forest to complement agriculture, livestock, trading and wages will continue to do so, although the level of dependency and the dependency on specific products may change in response to availability of other resources and opportunities.

This study has also revealed that most of the alternative incomes generating activities being performed by the households are all dependent on the forest resource at least to some extent. Accordingly, 45.6% of the respondents showed that those other livelihood activities are highly dependent on the forest resources. Besides, 42.2% of the total sample households disclosed that the diverse activities being pursued by the households are dependant on the forest resources at least to some extent (Table 12).

Above and beyond, the in the FGD conducted in Dushi village, both men and women Mejengir participants expressed their views as:

*We don't have any other livelihood asset to perform other activities. For instance, we don't have initial capital or seed money to engage in petty trading activities. The only resource we have is this diminishing forest and the land (pointing towards the nearby forest) and all our activities are highly linked to them.*

They further affirmed their reply by giving relevant example with regard to the importance of forest (as a shadow tree) in coffee production. Not surprisingly, the

statement spoken by a community elder utterly exemplifies the strong relation ship between the Mejengir people and the forest:

*My live is related to the forest and I am totally dependent on it to get money and subsequently feed my family. If the forest is alive, therefore, I and my family are also alive. If its not, we will not survive.*

**Table 12: Peasants' perceptions on extent of forest dependency, Access to forest resources and alternative income sources**

Questions	Extent/Degree	Responses		Total
		N	%	
How do you explain the linkage between your household's diverse livelihood activities and their dependence on forest resources?	Highly dependent	41	45.6	N=85
	Moderately dependent	38	42.2	
	Less dependent	4	4.4	
	Not dependent	2	2.2	
How do you evaluate the linkage between access to forest resources and your diversified livelihood activities?	High Linkage	45	50	N= 86
	Moderate Linkage	27	30	
	Less Linkage	10	11.1	
	No Linkage	4	4.4	

Source: Field Survey, 2008

### **External Supports Needed to Secure Access to Forest**

A number of considerations arise over the more technical aspect of interventions to support people to optimize benefits from the forest they draw up on. Where forest products have an important supplementary and safety net roles, users need security of access to the resources (Byron and Arnold, 1997). Almost all forest dependent people require secure access to the forest resources near them so as to pursue of healthy and normal livelihood strategy. Because where local control and management capabilities are weak or have become eroded or broken down, external assistance is likely to be needed to strengthen and monitor resources sharing and management mechanism (Warner, 2000). Particularly, the role of the government and concerned development practitioners is of critical importance to ensure secured access to forests.

Asked whether sample households need external support and assistance for securing access to forest resources or not, lion share of the respondents (98.11%), except a single person, indicated that they need assistance from those concerned GOs and NGOs operating in the area.

However, in designing programs to provide support to small forest productive activities, it is important to recognize that there are different potential target groups with different needs and opportunities (Byron and Arnold, 1997). This implies that the support to be given by the government and NGOs should be comprehensive and should encompass supports like financial, training, material and legal protection. Correspondingly, in the study area, the sample households have indicated that there is a critical need for the supports so as to have secured access to forest resources and eventually sustain their forest based livelihoods. For instance, 20% of the respondents disclosed that they need training support whereas 18.9% require a combination of material, trainings and legal protection (Table 13).

In relation to this, group discussants and some key informants emphasized the need for training and legal protection from the side of the government and NGOs operating in the area. Because, the former kind of support enhances the human capital while the later ensures the local community's secured access to forest resources in their areas. Parallel to this, a project forester scrutinized the knowledge and use right gaps of the local community and suggested the following interventions:

*If we, both the government and the NGOs, really aspire to improve the forest based livelihoods of the Mejengir community, our efforts should gear towards securing access to sufficient forest resource by way of trainings and legal protection.*

**Table 13: Kind of support solicited to ensure the local community's access to forest Resources.**

<b>Kinds of support</b>	<b>Frequency</b>	<b>Percentage</b>
Financial and material support	3	3.3
Financial , material and training supports	10	11.1
Financial, material , training and legal supports	6	6.7
Financial and training supports	3	3.3
Financial , training and legal supports	10	11.1
Material and training supports	3	3.3
Material , training and legal support	17	18.9
Training support	18	20.0
Training and legal support	14	15.6
Legal support	5	5.6
<b>Total</b>	<b>89</b>	<b>98.9</b>

Source: Field Survey, 2008

Overall analysis of the survey response indicates that there are supports which are being given to the local community in their effort to sustain forest based livelihoods. However, from in-depth interviews with project forester and experts of the *Woreda* Agriculture office, it became apparent that there are attempts to secure access to forest resources by way of trainings (on sustainable forest based livelihoods) and legal protection (by implementing Participatory forest management practices). Not surprisingly, it was revealed that the supports hitherto been given were not sufficient and are not comprehensive so as to combat the challenges faced by the local community. In the interviews, therefore, it was aspired that there is need to deliver comprehensive and strengthened support for the forest based Mejjengir community. It is from this view point that majority of the sample households (67.8%) indicated the need for further and strong assistance both from the government and the non governmental organizations in the local community's effort to secure access to sufficient forest resources. In this regard, it is worth noting that the considerable effort local people make to secure access to forest resources is a direct consequence of the importance of these resources to their household economy (Yihene, 2003).

Even if supports are necessary and mandatory for the local community, the future outcome should also be analyzed thoroughly so as not to encourage dependency of the local community on the external support from NGOs and government bodies. In this regard, the sample households in the study area have different response on the outcome of the supports being given. For instance, according to the response from 65.6 % of the sample households, the support is promoting self reliance and self dependence. The rest 31.1%, however, argue that the supports are accelerating dependency on the external support to access sufficient forest resources and secure forest based livelihoods.

To wind up, majority of the sample households have reported that they have diverse livelihood portfolios which can either be categorized under agricultural intensification/extensification and or livelihood diversification. Not surprisingly, these activities, in one way or another, are dependent on the diminishing forest resource and it continues to be an integral asset for the livelihoods of Mejengirs. It is from this point of view that the local community solicits for strong assistance both from governmental and non-governmental organizations operating in the area so as to have secured and sustained access to forest. According to majority of the surveyed households, the support areas aspired by the community include: training and material supports and legal protections.

## CHAPTER SEVEN

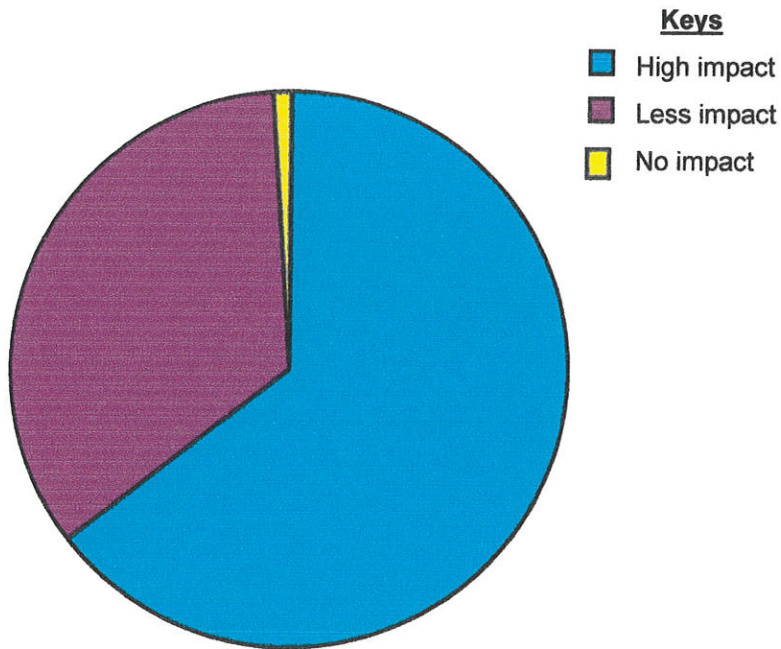
### LIVELIHOOD OUTCOMES, SUSTAINABILITY AND CURRENT FOREST UTILIZATION PATTERN

The main focus of this section is to scrutinize the various elements of livelihood outcomes that originate from the trend of resource utilization and pursuance of diverse livelihood activities and strategies. In this regard, impacts of current forest utilization pattern on the income and livelihoods of sample Mejengir households, issues of vulnerability and natural resource use are the main areas of discussion. Moreover, perceptions of the local community regarding the forest utilization pattern in their villages and the proposed solutions suggested by the sample households will be discussed subsequently.

The different livelihood strategies have different livelihood outcomes, and they may be more or less sustainable. More desirable livelihood outcomes vary from household to household but ~~increased wellbeing is usually a high priority. When a household is able to achieve desired~~ livelihood outcomes, this has a positive impact on its assets and capabilities (its assets and capabilities improve). When livelihood activities have undesired outcomes, these have negative influence on households assets and capabilities (Satge et al., 2002). Livelihood outcomes and sustainability are highly dependent on the condition of the natural resource/ livelihood capital/ put in place to pursue a given livelihood strategy.

As part of the sustainable livelihood approach, the study also analyzes the current forest utilization pattern vis-à-vis livelihood outcomes on the poor Mejengir households. Due to the scope of the study, it was found to be realistic to examine the core livelihood outcomes stated in the DFID Sustainable livelihood approach model. Among others, livelihood outcomes related to increased household income, reduced vulnerability, improved food security (improved livelihoods) and more sustainable natural resource use will be central to the subsequent discussions.

*Figure 6: Outcomes of forest utilization trend on the livelihoods of sample households*



Source: Field Survey, 2008

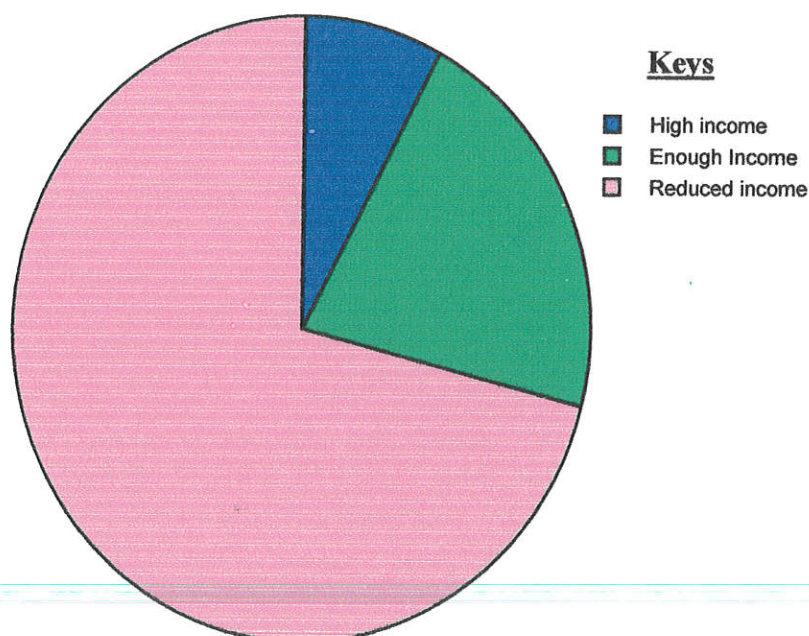
### **Income**

Although income alone is insufficient as a criteria of poverty, increased income is clearly relevant to the economic sustainability of a given household. According to Warner (2000), earnings from forest are often important as a complement to other income. For instance, income from forest products is often used to obtain inputs for other activities that contribute to livelihoods: to purchase seeds, hire labor for cultivation or generate working capital for trading activities.

Regardless of the above mentioned importance, the study done by Tadesse and Feyera (2006) disclosed that there is a significant reduction in the amount of honey production (the major source revenue for the local people) due to the reduction in forest cover and forest species

Likewise, majority of the sample households (70%) reported that their income has reduced due to unwise forest utilization pattern in their respective villages (Figure 7).

**Figure 7: Outcomes of forest utilization trend on household income**



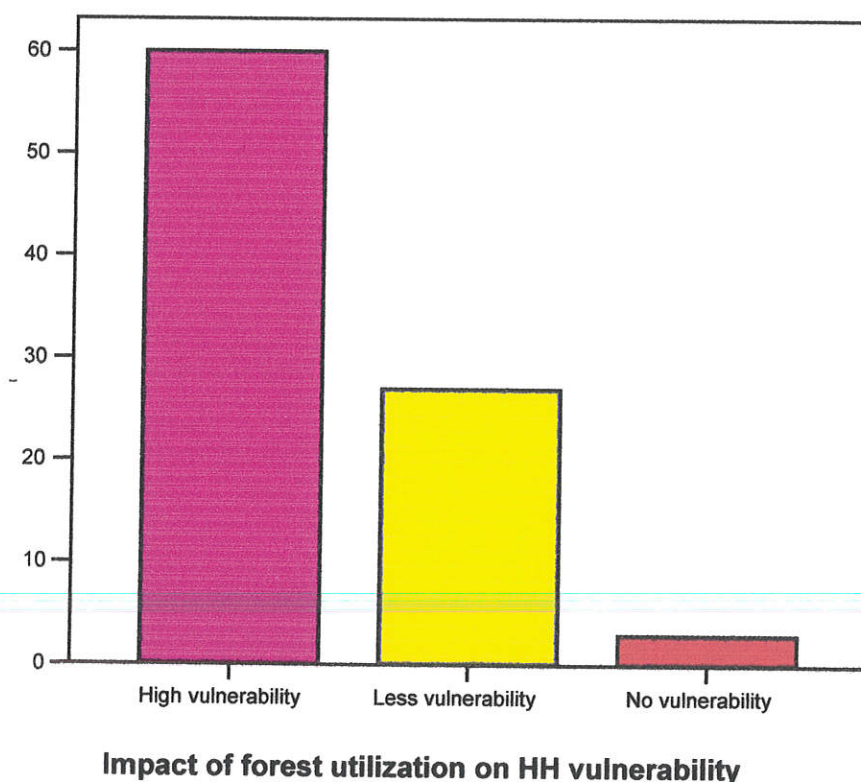
Source: Field Survey, 2008

### **Vulnerability**

Reduced vulnerability is another salient element (dimension) of a positive livelihood outcome. Poor people live precariously, with no cushion against adversity. Forests and trees stocks have an important role as a reserve on safety net, providing both subsistence and income in times of crop failure, shortfall, unemployment or other emergency or hardships, or to meet exceptional needs (Warner, 2000). In light of this, Ellis (2000) sorts out most vulnerable households as those that are both highly prone to adverse external events and lacking in the assets or social support system that could carry them through periods of adversity.

Asked about the degree of their vulnerability to shocks and stresses, the response from majority of the sample households (65.6%) illustrate that there is high and increased vulnerability due to the sever deforestation taking place in their villages (Figure 8).

**Figure 8: Outcomes of forest utilization trend on household vulnerability**



Source: Field Survey, 2008

### **Natural Resource Use**

Rural livelihood strategies are often heavily reliant on the natural resource base (Scoones, 1998) and sustainable use of these resources is critical for sustainable livelihoods. More sustainable use of natural resources has a direct impact on the improvement of natural capital (Watson et al., 1998 as cited in Warner 2000). In the same vein, it can easily be recognized that various cause of deforestation (illegal settlement, illegal logging, agricultural land expansion etc...) are interrelated with unsustainable forest use. Tadesse and Feyera (2006) have revealed that there is sever forest deforestation in Godere *Woreda* primarily owing to expansion of coffee plantations, settlement and agricultural expansion, commercial logging, fire and local

wood consumption. As a result, such kind of forest utilization pattern is becoming a menace to sustainable utilization of forest resources in the area. In this regard, the majority of the response (93.3 %) of the survey substantiate the present forest resource utilization pattern has resulted in unsustainable use of the forest resources (Table 14).

*Table 14: Outcomes of forest utilization trend on natural resource use.*

Questions	NR Use	Reponses (%)
How do you explain the impact of current forest utilization pattern on natural resource use?	Improved utilization	6.7
	Unsustainable utilization	93.3

Source: Field Survey, 2008

Table 15 gives a brief overview of the responses of sample households to the various elements of livelihood outcomes.

*Table 15: Responses to the different aspects of livelihood outcomes (N=89)*

Questions	Degree/Extent	Responses	
		N	%
How do you evaluate the impact of current forest utilization pattern on the livelihood of your household?	High impact	57	63.3
	Less impact	31	34.4
	No impact	1	1.1
What happened to your household's income as a result of the current forest utilization pattern?	High income	7	7.8
	Enough income	19	21.1
	Reduced income	63	70
How do you evaluate the extent of your vulnerability to shocks and stresses as a result of the current forest utilization pattern?	High vulnerability	59	65.6
	Less vulnerability	27	30
	No vulnerability	3	3.3
How do you explain the impact of current forest utilization pattern on Natural resource use in your village?	Improved utilization	6	6.7
	Unsustainable use	84	93.3

Source: Field Survey, 2008.

In a nutshell, overall analysis of the survey data demonstrates that forest degradation has brought about profound impacts that are negatively affecting the wellbeing of individual households who rely on the forest in particular and the local community in general. Therefore, to ensure sustainability, economic, ecological and socio-cultural dimensions of forest use must be addressed with equal emphasis (Tadesse and Feyera, 2006).

### **Perception of the Local Community on Forest utilization Pattern and Suggested Solutions**

Every livelihood model puts people at the center and they are the main stakeholders to directly contribute to determining development priorities and influencing the institutions and process that impact on their lives (Satge et al., 2002).

In the study area, the local communities have revealed various kinds of opinions regarding the trends of forest resource utilization and socio-economic conditions of other user groups. Some people argue by saying that the current trend of forest utilization is not important for improvement of livelihoods whereas others do not. According to majority of the surveyed households (84.4%), the current trend of forest utilization is not important for the improvement of their livelihoods. The remaining 15.6% revealed the current forest utilization pattern is important for improved livelihood. The difference in the responses happened mainly due to the variation in the extent of household's dependence on the forest resources because, even among Mejjengirs, some are dependent on these resources for timber production while others for non-timber forest products.

Similarly, in-depth interviews with the experts from the *Wereda* Rural and agricultural office and project forester indicated that such contradicting views regarding the importance of forest utilization pattern emerged due to some underlying reasons. For those who are totally dependent on NTFPs the reduction in forest has tremendous impact whereas for those people who derive their livelihood from timber production the current pattern of forest resource utilization seems to benefit them. Besides, a community elder from Gelesha expressed his view as follows:

*Previously, I was secured about my livelihood because the forest resource is there for me. But now, I am not because you see settlement and investment everywhere in the villages and the forest is diminishing. Some of the Mejegirs are benefiting from such kind of forest utilization pattern because as they already shifted from honey production to timber making. But I am completely dependent on the forest and the current trend of utilization is affecting me badly.*

Regarding the potential solutions for the improvement of forest based livelihoods, the sample households have reacted differently by giving a single and a combination of solutions. Accordingly, 33.3% sample households believe that participating in diverse livelihood activities is the key potential solution to halt the negative impacts of diminishing forest resources and offset the risks associated to it. On the other hand, 17.8% of the respondents suggested that restricting access of other user groups to the forest resources in their respective villages as a key solution. In combination, however, 17.8% of the sample respondents proposed that securing the local community's access to remaining forest resources and participating in diverse livelihood activities are the solutions to improve livelihoods. Meanwhile, the remaining respondents proposed one or combinations of the available options as a solution. These are: restricting other user groups' access to forest, diversifying livelihood options and ensuring local community's access to these resources (Table 16).

The focus group discussions in the study *Kebeles* indicated that participation in different income generating activities which of high return and less vulnerable to shocks are the likely solution for improvement of livelihood. In addition, they called for the strong intervention of the government to take corrective measures on the current trend of forest utilization and secure local community's access to these resources.

Some of the informants from the community elders suggested restriction of other users' access to forests and performing different livelihood activities other than those dependent on the forest are the probable solutions. Particularly, one of the informants in Kumi *Kebele* explained his view as follows:

*I am totally dependent on the forest; my livelihood is deteriorating, however. I am not happy in the availability of those settlers and investors in my village because I am not benefiting from anything either from the settlements or the investments. Rather, I lost what is better for my family, the forest. So, the government should take immediate action so as to restrict other user groups from using the forest.*

Experts of the *Wereda* and Zonal Agricultural and Rural development offices have reacted to the issues by considering the existing government laws and policies regarding the forest. For instance, the *Wereda* expert articulated the issue as follows:

*From the forest law and legislation of the country, it is well understood that forest is property of the government and every citizen has legal use right in a manner that will not undermine the extent and value of the resource. In the *Wereda*, the forest is diminishing and consequently traditional livelihood systems of the *Mejengir* in particular and the forest biodiversity as whole are being challenged. To solve these problems, the government and other concerned bodies should device policies and strategies that will improve the lives of the local forest dependent community by way of creating alternative livelihood options and possibilities. Besides, there should be practically applicable forest conservation, management and utilization policy so as to protect the forest from further degradation and sustain the livelihoods of the people.*

**Table 16: Suggested solutions to improve the livelihood of the people.**

Solutions	Frequency	Percentage
Restricting other user groups' access to forest	16	17.8
Restricting others user groups' and securing local community's access to forests	2	2.2
Restricting others user groups' and securing local community's access to forests and diversifying livelihood options	10	11.1
Restricting others user groups' to forest and diversifying livelihood options	7	7.8
Securing local community's access to forest	7	7.8
Securing local community's access to forest and diversifying livelihood	16	17.8
Diversifying livelihood options	30	33.3
<b>Total</b>	<b>88</b>	<b>97.8</b>

Source: Field survey, 2008.

Concerned stakeholders and development policy makers should, therefore, promote active participation of the people and understand the realities of the poor and their livelihoods strategies while developing policies and strategies that are geared towards sustainability. Similarly, Warner (2000) suggests that such interventions and strategies should pay attention to equity considerations both between and within stakeholder groups, to rebuilding social capital and minimizing the transaction costs to user groups.

Generally, in this section, it became clear that the current forest utilization pattern resulted in undesired livelihood outcomes such as reduced income, increased food insecurity (unimproved livelihood), increased vulnerability, unsustainable natural resource use and above all profound effect on well being of the surveyed households. The local community has also suggested some relevant solutions so as to mitigate the above-mentioned challenges in particular and improve their livelihoods in general. According to the majority of the respondents, diversifying livelihood options and restricting illegal access to forests are suggested as relevant solutions.

## CHAPTER EIGHT

### CONCLUSIONS AND RECOMMENDATIONS

#### 8.1 Conclusions

The thesis has a prime objective of assessing the conditions of the forest based livelihoods of Mejengir community and the trend of forest resource utilization in the area. Besides, examining the mediating factors that affect access to forest resources and the diverse livelihood portfolios were also among the specific objectives of the study. A sustainable livelihoods framework, adapted from DFID, was employed to conceptualize and analyze the social, political, economical and cultural arenas entailed in the forest based livelihoods of the community.

The socio-economic condition of forest user Mejengir household members under the study is generally based on subsistence agriculture which is entirely obtained from harvesting of forest products and production of cereal crops. The household members are characterized by their considerable dependence on the forest resource so as to undertake different livelihood activities such as honey production, collection of fuel woods, and coffee and spices productions. Among the various benefits derived from the forest, honey is rated as the prime and major source of household revenue and consumption.

Nonetheless, it became clear that the revenues obtained from honey in particular and other NTFPs in general are being undermined due to key social, economic and political challenges which are directly related with the forest resources. Among others, expansion of coffee plantations, illegal logging, agricultural expansion and fire (the nature of shifting cultivation of the local community) are found to be the principal causes of deforestation. In connection to these human induced causes of deforestation, illegal settlers (migrants) from other parts of the country, illegal investors, the local and regional government bodies and the local community as well are delineated as key actors behind the entire process of deterioration of such an important livelihood base.

The study has revealed that people's dependence on different livelihood assets (such as forests) is influenced by:

- The vulnerability context which is described in terms of trends (deforestations, settlements and or population growths, technological changes and politics)
- A range of institutions and processes that mediate access to the different livelihood resources. In the study area this is described in terms of culture, levels of government, laws, policies and institutions.

Another key aspect in the study is issue of access. The findings of the study show that forest based livelihood activities are affected not only by the access to the forest resource but also by the quantity and quality of the resource available to the household. Regarding the factors that facilitate or restrain access to these resources, culture, government laws and policies and private investors were identified as the most important factors. The former is an institutional process whereas the rest are categorized under the wider umbrella of structural aspects.

The findings of the study also substantiate that there has been significant forest degradation during the past decade because forest has been and is being used as the starting point and frontier of agriculture, settlement, and coffee plantation expansion. Such kind of trends in resource stocks resulted in undesired livelihood outcomes and negative socio-economic consequences whose cumulative effect is reflected in the reduced wellbeing of the local community.

The study indicated that Mejengir are engaged in different livelihood strategies in general and some alternative livelihood portfolios in particular, so as to halt the adverse effects of reduction in resource endowment and risks associated to it. Not surprisingly, these livelihood portfolios are still dependent on the remaining but diminishing forest resources at least to some extent as there is no other sufficient livelihood assets available to the community.

Even if external support (both from the government and NGOs) to secure access to sufficient forest resources are strongly aspired by the community, it was found that these assistances were

inadequate to address the mounting needs of the community. For upcoming interventions, the community identified the following areas of support: training, material and legal protection.

The findings confirm that the current forest utilization pattern has brought profound effects and negative impacts on the key elements of livelihood outcomes. For instance, the trend of forest utilization has resulted in increased food insecurity (unimproved livelihood), reduced income, increased vulnerability and unsustainable natural resource use. Therefore, it can easily be observed that the overall wellbeing of the local community is undermined by the severe deforestation taking place in the area.

Forest dependent people like Mejengir community are confronted with undesired livelihood outcomes and unsustainable livelihoods because the forest alone cannot sufficiently provide all the varied livelihood outcomes that these people aspire. Such complicated situations, with no doubt, call for combination of appropriate solutions that gear towards improvement of forest use rights of rural households as well as accelerating the emergence of better livelihood systems not only because these solutions contribute to natural resource base sustainability but also they add values to sustainable livelihoods.

## **8.2 Recommendations**

The following recommendations are suggested based on the findings reflected in the discussions.

- Where forests continue to be central to livelihood systems, local people are or should be the main stakeholders and actors. Thus, addressing their needs on a sustainable basis should be the principal objective of any forest management effort and this should be reflected by way of ensuring security access over these resources.
- In a situation where there are multiple forest users on a given area and indigenous community calls for security of access over these resources, there should be a legal structure and arrangement to share the resources among the several user groups as equity is one of the core values of any development undertaking. However, it is quite

important to formally recognize the forest use rights of the local people even if forests are owned solely by the government.

- So as to ensure sustainable resource management and eventually improve forest based livelihoods, different participatory forest conservation schemes should be devised and put in to effect. For instance, Participatory Forest Management (PFM) can be applied or implemented based on the socio-economic and cultural settings of the area.
- The dependence on single category of livelihood asset (for instance, the forest) increases vulnerability to risks and cannot provide positive livelihood outcomes that the community aspires. Because, combining various livelihood assets is recognized to be the fundamental prerequisite to achieve a positive livelihood outcome. Hence, households must mingle the resource or asset endowments that they have access to and control over.
- Moving out of diminishing forest product activities of declining use values should be given precedence as such kind of trend on the resources results in marginal and unsustainable livelihoods. Particularly, providing support to activities of higher return or less arduous alternatives could contribute to the emergence of improved livelihood systems. In other words, supports should be given to the community to move into more rewarding livelihood strategies (activities) rather than seeking to boost productivity in forest activities of low potentials. It is, however, of supreme importance to understand that any kind of support empowers the local community and ultimately enhances self reliance.
- Ad hoc settlement practices have most likely been the major intimidations to the forest resources in general and the traditional livelihood patterns of the Mejengirs in particular. In the last couple of decades, due to the spontaneous government strategy, several settlement activities have been established inside and around forests. Nearly all settlements were not well planned and often contributed to sober ecological tribulations such as deforestation. Thus, apart from the federal one, the regional government should have its own settlement arrangement to put an end to illegal settlements in the forest areas.
- Agricultural intensification (such as coffee plantation and agricultural land expansion) is the most predominant livelihood strategy that is being carried out by different groups

of people living in the area. The more agriculture and investment will expand, the more the forest degradation will be. Thus, there is a need to practice agricultural intensification as a rural development optional strategy. Because it will reduce the human influence on forests lands as well as it will improve the productivity of the land thereby, improve the livelihood of the rural community.

- Support should be given to the indigenous community so as to build their capacities and empower them accordingly. The support areas should include: intensive training, material support (such as modern beehives) and legal protection to ensure access to sufficient forest resources. It is worth noting that these supports, in any way, should promote and encourage self reliance to realize sustainability of development endeavors.
- Lastly, detailed research and assessment should be carried out to explore the entire relationships between the local people and the forest they use and .limitation to and potentials of their livelihoods. In light of this, there should be lucid national policy and legal framework that gives top precedence to the well being of these forest dependent people and improvement of their traditional livelihood patterns (forest based livelihoods). Full political commitment and legislative patronage at all governmental administrative levels (Federal, Regional, Zonal, *Wereda*, and *Kebele*) should also be the point of focus.

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1. Investment
2. Settlement
3. Mejengir's Production system (shifting cultivation)
4. Commercial logging
5. Government policy
6. If other, specify \_\_\_\_\_

32. What do you think are the major reasons for forests resource depletion that have been depleting them?

Reason	1. Yes	2. No	Rank	By whom (Investors, state farms, Government, Settlers...)
Expansion of farm land				
Fuel wood cutting and charcoal burning				
Livestock grazing				
Unauthorized NTFPs collection				
Human encroachment /for poles, timber etc/				

33. If the current situations are not changed, do you think there will be further forest Degradation?

1. Yes
2. No
3. I don't know

34. If yes to question number 33, what will be the expected impact on the Household's livelihoods?

1. \_\_\_\_\_
2. \_\_\_\_\_

#### **/Interaction between Diverse Livelihood Possibility and Access to Forest Resources/**

35. Are there any other means of livelihoods for your household, other than honey?

1. Yes
2. No

36. If yes to question 35, which of the following non-farm activities are performed by the household members?

1. Petty trade
2. Collecting and selling fuel wood
3. Bamboo craft
4. Basketry
5. Weaving
6. Pottery
7. If other, specify

37. Does your alternative livelihood activities dependant on the forest resources?

1. Yes
2. No

38. How do you explain the degree of dependency on forests?

1. Highly dependent
2. Less dependant
3. Partially dependent
4. Not dependant

39. If the answer for question '38' is (Not or less), why? (Maximum of two Responses)

1. \_\_\_\_\_
2. \_\_\_\_\_

40. To what extent do the access to forest resources and the livelihood diversification linked?

1. Highly
2. Moderately
3. Less
4. Not linked

41. Why did you diversify the sources of your household's livelihood?

1. \_\_\_\_\_
2. \_\_\_\_\_

**/External Support for Securing Access to Forests/**

42. Does securing access to forest need external support?

1. Yes
2. No

43. If yes, what type of support (put according to priority)

1. Financial
2. Material
3. Training
4. Legal support
5. Others, Specify \_\_\_\_\_

44. Is the current level of support you are getting from the government adequate?

1. Yes
2. No
3. I don't know

45. Are there other NGOs that support your effort to secure your forest based livelihood?

1. Yes
2. No

46. If yes for question number 4, list them down.

1. \_\_\_\_\_
2. \_\_\_\_\_

47. Is the assistance given so far by the NGOs adequate?

1. Yes
2. No

48. Does the assistance create self-reliance or dependency?

1. Self-reliance
2. Dependency

**/Livelihood Outcomes and Current Forest Resource Utilization/**

49. To what extent is the current forest resource utilization's affected the livelihood of the people?

1. Strongly
2. Less impact
3. Not affected

50. How do you explain the extent of effects of the current forest resources utilization on the income of the household?

1. More income
2. Enough income
3. Less /Reduce/income

51. How do you perceive the degree of vulnerability of the households due to the current forest resources utilization?

1. Increased vulnerability
2. Reduced vulnerability
3. No vulnerability

52. To what extent does the current forest resources utilization affect the sustainable use of the Natural resource base?

1. More sustainable use
2. Unsustainable use

53. What are the negative outcomes of forest degradation in the area? (Please rank them accordingly).



## Annex – 2

### Checklist for Focus Group Discussions

#### General Questions

1. How do you explain the relationship between your forests based livelihood activities and current forest utilization?
2. What are the key challenges with regard to forest resources and who you think are responsible actors for deforestation?
3. How do you explain access to forest resources? What are the key factors that play a role in your access to these forest resources?
4. What are the consequences of the lack of access to forest resources on your livelihood activities? Are there any other livelihood activities that came as a result of the current forest resources utilization? Do you believe that forest resources will be and continue to be the key livelihood assets?

#### Specific questions

5. What is the extent of your right to access forest resources?
6. What are the key factors that affect your access to resources? (Their strengths and Weaknesses).
7. How do you explain the effect of your access to forest on the forest based livelihood?
8. Is this access lead to creation of other livelihood means?
9. What are your diversified livelihood systems? Are you getting enough income from those livelihood activities?
10. Who are other forest resource users in your village? How do you evaluate their forest resource utilization?
11. How do you evaluate the role of the government in people's access to forests?
12. How do you evaluate the impact of access to forest resources on the livelihoods of the people in terms of Income, Educational and health?
13. Does forest utilization by others posing a problem on your income, access to Education and health?
14. What do you think are the factors that promote or hinder an individual's access to forest resources?
15. What do you think are the solutions that will correct the current forest utilization?
16. What are the pros and cons of the current forest utilization pattern on livelihoods?
17. How do you explain the Role of the Government in securing your forest-based livelihood?
18. For what purpose do you utilize forest? To what extent are your dependence on forest Resources? Does this dependence affected by access to Resources?
19. What do you do with the income you get from forest based activities? Is the income enough to cover all your household needs?
20. What are the key factors that affect your forest based livelihoods? What are the solutions you have adopted so far? Do you think those solutions are the only ways and the best means?

### Annex-3

#### Interview Guide for Key Informant's Interview

Semi-structured interview for generating data on assessment of the livelihoods systems of the forest based Mejengir community.

Name \_\_\_\_\_  
Name of *kebele*/ PA \_\_\_\_\_  
Date of Discussion \_\_\_\_\_  
Title of Respondent \_\_\_\_\_  
Name of organization \_\_\_\_\_

1. How do you see forests as the sources of livelihoods among Mejengirs?
2. What do you think are the basic challenges of forest based livelihoods?
3. What are the trends of forest utilization in this area for the past ten years? And what was the major livelihood activity of the Mejngirs during these years?
4. What does the forest utilization pattern look like? Are there other users? Is availability of these groups affecting the livelihood systems of Mejengir community?
5. Are there investors working in the area? What do you think are the factors that attract investors & outsiders to the area?
6. How do you explain the community's access to forest? What are the key issues that affect their access? What about access of forest by other?
7. Does the Government encourage forest-based livelihoods? How?
8. Why do Mejengirs diversify their livelihood activities?
9. Do you think the current investment and settlement is a threat to the livelihood systems of Mejengirs?
10. Do you think the rural people have access to different social services like education market, health & Infrastructure? Does it have any contribution to rural development? What are their contributions to forest based livelihoods?
11. Do you think the rural Mejengir communities benefited from the Investment & Settlement in the area especially in relation to employment, education & health? What about the government's benefits?
12. Do you believe that the issues of lack of access to forest created Vulnerability of livelihood systems? What solutions should be implemented to tackle the problem?
13. What should be done in the future to improve the condition of forest resources utilization in a sustainable manner? How do you tackle the problems related to lack of access to forests to promote a sustainable forest based livelihood, increase in income, and reduced vulnerability?

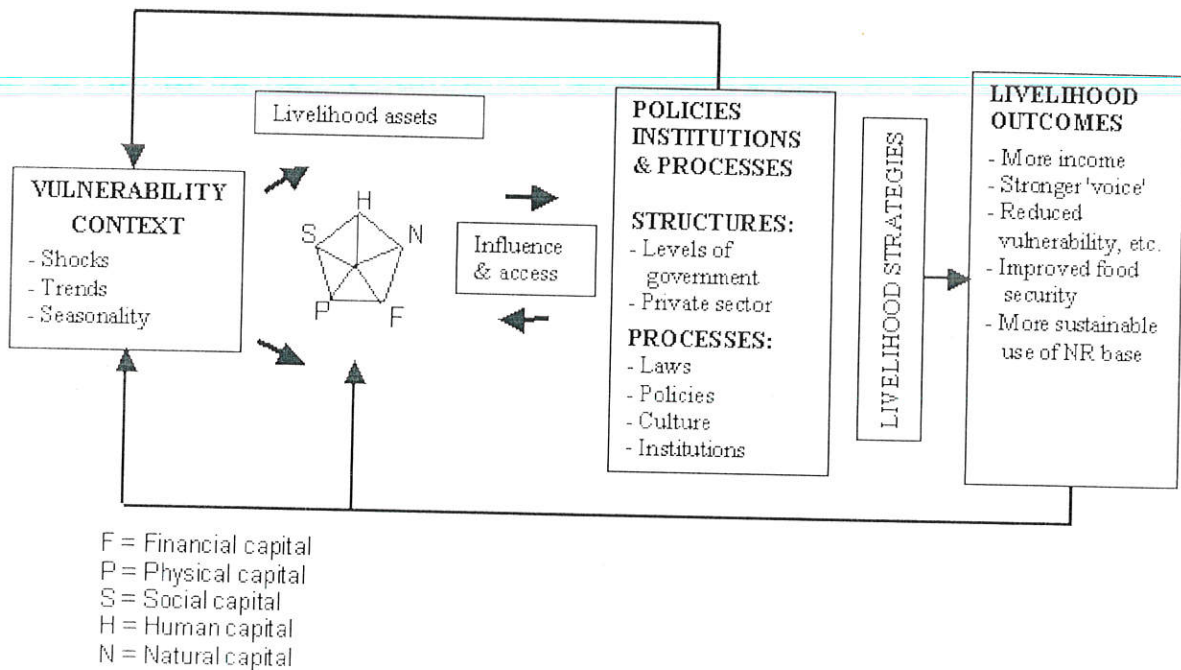
## Annex-4

### Interview guide for Zonal and *Wereda* Agricultural and Rural Development Office and NGO expertise

1. How do you explain the forest and the livelihoods of the local community?
2. Does the local community have secured access to sufficient forest resources? If yes, what were the roles of your organization in securing access to forest and improving livelihoods?
3. Does the forest face any encroachment by outsiders (non-Mejengir forest users)? If yes, what were your responses and corrective measures?
4. How do you evaluate the trend in forest utilization during the past decade? Who do you think are main actors behind the deforestation?
5. Does the reduction in forest cover have any impact on the livelihoods of the indigenous community? If yes, what interventions should be adopted to halt the situation?

## Annex-5

### DFID Sustainable Livelihoods Framework



Source: Baumann, 2002

## Declaration

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

Declared by:

Kassahun Keltef  
K.K.

Candidate

Confirmed by:

\_\_\_\_\_  
\_\_\_\_\_

Advisor