Natural Resource Degradation and Its Impact on the Livelihood and Inter-group Relation in Godere *Woreda*

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ACRONYMS

AAAS:	American Association for the Advancement of Science.
CSA:	Central Statistics Authority
EFAP:	Ethiopian Forest Action Program
EPRDF:	Ethiopian People's Revolution Democratic Front
FAO:	Food and Agricultural Organization of the United Nations
GDP:	Gross Domestic Product
GPNRS:	Gambella People's National Regional State
MoE:	Ministry of Education
POPIN:	Population Information Network of the United Nations
SNNPR:	Southern Nations, Nationalities and Peoples Regional State

GLOSSARY

Local terms	English equivalents
Beya	Spear
Berha	Lowlands (below 500 meter above sea level)
Bori	Old field (left to fallow)
Depo	A house
Gase	Equipment used for digging
Gedi	New field (cleared for first time)
Gol	River side field
Gutere	Elderly people selected for marriage negotiation
Iddir	Self-help institution
Kate	Mulched field
Kebele	The lowest government administrative unit
Kodafac	Beads
Kola	Lowlands (below 1500 meter above sea level)
Kutur	Pig
Mein	Type of marriage
Molu	Antelope
Nyaki	Abduction
Nyume	Sesame field
Pale	Grain storage
Pali	Land leasing practice
Pas	Axe
Pur	Clearing
Tajen	Locally brewed beer
Wai	House
Wawan	The act of marriage
Woina-dega	Midlands (1500-2000 meter above sea level)
Woreda	The government administrative unit above kebele
Zone	The government administrative unit above woreda

ABSTRACT

The continual encroachment of immigrants that occurred during the past political regimes, in particular the massive state-sponsored resettlement scheme of the 1980s, agricultural expansion for cash crop production and wood based investment, has brought about complex changes in the socio-cultural, economic, and ecological conditions in the area. Apart from severely constraining the interactions, the encroachment pressure has been adversely affecting the livelihood and resource management strategies of the local Majangir people, who are practicing shifting cultivation, gathering, hunting, and honey collection. Aiming to address population-resource-conflict linkages, the study conducted among the Majangir at Goshni area of Gambella regional state, southwest Ethiopia. The study attempted to analyze the major causes of land and forest resource degradation, the impacts of resource degradation up on the livelihoods of the local people, the differing strategies of livelihood and adaptive resource management and those factors that affect societal interactions and potentially contribute and trigger resource-based dispute/conflict in the study area by looking in to the events of resource-based disputes among stakeholders involved in resource utilization and management.

The study argues the population resource degradation linkage and analysis in the Majangir context proves a reflection of several factors. The population growth, mainly due to immigration due to several development interventions, has brought and exerted pressure on the available forest resource base of the area. In addition, the growing demands for cash crop (coffee) production for national and export trade had motivated expansion of local small-scale investment which demanded forestland clearance had aggravated forest depletion and degradation. Besides, lack of informal institutions in resource distribution and management of scarce resources coupled with absence of policy framework further aggravate the problem. The Majangir responded to the problem differently. Some intensify fallow lands through adoption of cash crops, while others lease or sell their land to other party and move to marginal lands. Population pressure coupled with market influence has induced differing interest/values over resources. The resource-based relation among different stakeholders in the area is predominantly characterized by competition and disputes at various levels. Recorded events of resource-based disputes, especially intra-ethnic disputes among the Majangir mainly based on competition to gain an immediate financial return from the resource while among the settlers disputes revealed competition to gain a long term return by owning more resources and maximize household income. Based on the resource-based dispute details described, the study, beside on going competition over scarce resources, recognizes other socio-economic and institutional factors work together in aggravating and inducing resource-based disputes in the study area. Despite the prevalence of disputes, existing coexistence of stakeholders is mediated through the informal and formal institutions.

Key words: Population pressure, Resource degradation, Scarcity, Conflict, Majangir, Southwest Ethiopia

Chapter 1

Introduction

Ethiopia with its geography ranging from below sea level to one of the highest mountains in Africa, hosts rich variety of flora and fauna (MoE, 2003). One of the geographical regions having rich flora and fauna resource base in the country is the southwestern region. The southwest, as compared with other ecological regions in the country, is endowed with rich natural resource (it refers to renewable resources). Regarding the resource base of the region and its comparative potential for agricultural development in the country, Wood writes;

> By Ethiopian standards, southwest Ethiopia is extremely rich in terms of natural resources. It can be seen as one of the last resource frontiers in the country. The keys to this resource wealth are the high and reliable rainfall and the forest cover. The soil and rainfall give the south-west highlands a very considerable agricultural potential for a wide range of crops, including coffee, while the reliability of crop yields is high unlike in some other parts of the country (Wood, 1993: 54).

The south-west region inhabits different ethnic groups with varying cultural background. Their socio-economic systems and livelihood strategies also differ accordingly based on the ecological niche and environment they had adopted. Among others, one of the indigenous ethnic groups inhabiting the southwest region is the Majangir society. The Majangir, dominantly living in Godere woreda/Majangir zone, are found in Gambella Peoples Regional State.

The Majangir's production system is based on shifting cultivation and hunting and gathering of food products from the forest. As their livelihood strategies entirely depend in the surrounding environment and natural resources within, it has a paramount value and meanings to them. It is therefore central to their survival and existence. These days, however, the surrounding natural environment and the resource base that their livelihood is dependent on became victim of depletion and degradation due to several reasons. The increasing trends in natural resource degradation at an alarming rate have impacted on their way of life and subsistence strategies in many ways. The traditional values they

attributed to their surrounding natural resources are being changed and affected their interaction patterns with groups that inhabit in their settlement area.

1.1.The research problem

Research into the links between population factors and the environment is relatively young and undeveloped, and still riddled with controversy. Documentation of population-environment linkages has all too often consisted of a simple listing of population trends (e.g. population pressure, consumption, technology) side-by-side with environmental trends (e.g. pollution, degradation, depletion) on the assumption that one is the direct cause of the other (AAAS Atlas, 2004). Currently, the population-environment debate, beyond explaining differential responses by communities, has extended to conceptualize inter-group interactions in terms of resource utilization. With the increasing conflict trends observed in terms of intra-and inter-societal conflict and conflict between nations, subsequent researchers continued to debate on population, resource and violence linkage. Ongoing debate concerns the extent to which environmental abundance or scarcity contributes to underlying causes of conflict (Environmental Library Council, 2005).

Shifting cultivation is one of the socio-economic systems of rural Ethiopia. They occupy a vast territory and comprise only 0.5 per cent of the population (Fecadu, 1990: 205). The general absences of population pressure in the area where shifting cultivators inhabited have been misinterpreted as 'no mans' land. Accordingly, Gebre (2001: 209) stated that "Places inhabited by shifting cultivators were misrepresented as unoccupied areas, wastelands, or virgin lands that can be used for settlements and/or large-scale farms". In addition, he noted that the plight of the host people has been overlooked by resettlement researchers (ibid: 18).

Rapid depletion and degradation of land and forest resource in the Majangir settlement is largely attributed to the increasing trends in population pressure due to the introduction of various development interventions in the area. The population pressure brings about increasing demand for agricultural land, wood for construction purposes and energy

supply that exceeded the regeneration of forest to replenish itself. The expansion of large-scale agriculture and the resettlement program had impacted the natural forest resource base and livelihood strategies of the indigenous inhabitant population in several ways.

Ecologically, it exacerbated further degradation resulting in future human vulnerability to impoverishment and poverty by declining productivity of the land. In terms of the human aspect, land and forest degradation had resulted in the displacement and resource marginalization of the local people leading to scarcity of those resources. In response to scarcity of land and shorter fallow period the Majangir household adopted and practiced shared utilization of land which was unknown before. The introduction of land leasing often leaves concerns both from intra and inter-ethnic contexts. Among the Majangir, the practice bring about disruptions of marriage and family ties and eroded the customarily accepted ways of resource utilization. Accordingly, it exacerbated grievances and tensions between individuals and groups involved.

Although Stauder (1971: 2) noted that there are no organized, corporate local or territorial groups among the Majangir and they have not been threatened over their lands; and they have never organized to defend their territories, incidences of disputes or conflict over resources and territory become a recent phenomenon. The changing value, perception and growing scarcity of land and forest resources among the Majangir, therefore, affect their interaction and be a potential cause that trigger conflict in the area The research therefore intends to explore the causes of land and forest degradation and associated impacts on the traditional livelihood strategy of the indigenous Majangir society by looking into customary resource utilization patterns and their adaptive responses which would potentially induce resource based disputes/conflict in the study area.

1.2. Objective of the research

General objective

The general objective of the research is to analyze and explore causes of natural resource degradation and the socio-economic and cultural impacts of natural resources (land and

forest) degradation on the livelihoods of the Majangir and existing interactions among different stakeholders in the utilization and management of resources in the study area.

Specific objectives

Specifically, the paper intends to address the following specific objectives

- To explain existing land use pattern and observed changes in resource utilization in relation to resource degradation among the study population
- To identify factors that causes and contributes to the ensuing natural resource (land and forest) degradation in the study area.
- To explain the impacts of natural resources degradation on the livelihoods of the Majangir.
- To identify plausible and potential conflict inducing factors, that are associated with degradation and resource management.

1.3. Research questions

- What are the major causes of land and forest resource degradation?
- What are the impacts or effects of resource degradation upon the livelihoods of the local people?
- What are the factors that affect societal interactions and potentially contribute and cause resource-based dispute in the area?
- Who are the stakeholders in resource utilization and management and what are the contexts of resource-based interactions exists in the area?

1.4. Research method

A combination of different research techniques was employed to obtain qualitative firsthand information. Observation in the field, in-depth interview with key knowledgeable informants and focus group discussions methods were used as a primary tool and review of related literature on the subject was made as secondary data. Prior to

the start of information gathering, preliminary visits were undertaken to select the research sites, understand general features of the area and identify key informants. Within the study area 14 key informants selected from the study community and government employees. The research was conducted in two phases of field visits covering a total of sixty three days.

In-depth Interviews

The in-depth interviews were designed to gain in-depth information from key informants (selected from among the settlers, the Majangir and government employees). A wide range of issues was covered through intensive interviews. The main themes included the Majangir's customary land use and resource utilization pattern, and their livelihood strategies, what factors affected the land and forest resources of the area, what changes were observed among the Majangir in terms of livelihood strategies and adaptive mechanisms, how do such changes impacted their interactions with other groups living in the area, how do differential adjustment affected their internal social organizations, what major social changes observed due to the exposure with other groups, incidences of disputes and factors that contributed in aggravating resource based disputes.

In-depth interviews among settlers was carried out to obtain information regarding their economic activities, interaction with the Majangir, the manner they responded to the problem of resource degradation, experiences and causes related to resource-based disputes. In-depth interview with government employees aimed to obtain information regarding the extent of land and forest degradation, causes and effects of degradation, measures and interventions carried out to prevent further degradation in the area.

Focus group discussion

Four focus group discussions were conducted with elders and community members. The purpose of the discussion was to understand how informants discuss and argue on communal concerns. Discussant comprises individuals from different background. Elders, women, youth and local officials partake in the discussion. Three of the meetings were held with pre-arranged appointments while the other was conducted with randomly

selected individuals attending funeral ceremony. In the discussion attempt was made to obtain contexts of interactions, observed changes and impacts of land and forest degradation in terms of both environmental and social aspects of the study people.

Observation

In the research site events and activities were observed and recorded in the village, market place, agricultural fields and social gatherings. The technique helped the researcher to see existing relations and interaction among people from various walks of life and gain wider understanding of social life of the study community.

Literature review

Relevant secondary data from written accounts of several scholars were made right from the inception of the proposal to the final write up of the final thesis to gain the general contexts of resource degradation in Africa and in Ethiopia and grasp theoretical frameworks with regard to the links between population, resource and conflict. Regional government's written documents were also reviewed to see the conditions of natural resources in the region and the study area in particular to see major changes occurred through time. Official judiciary and police records were taken into account to grasp the types and causes of resource-based disputes/conflicts reported through time.

1.5. Significance of the study

Ethnic group relations and natural resource management has been a subject of study by professionals from different background. However, according to Barth (1969), in most of the studies much attention have been given to the difference between cultures, and their historic boundaries and connections, the constitution of ethnic groups, and the nature of the boundaries between them, have not been correspondingly investigated (ibid: 9).

Inter-ethnic interaction over natural resource use is very complex. Its nature, intensity and forms of expressions are determined by various factors; patterns of interaction of the groups, the socio-economic statuses and the context in which they make contacts, and the pattern of group migration to the contact. (Okwudiba, 1998: 22)

Conflicts over land and natural resources, in most instances, occur when people tend to claim and compete over its use. In this regard, the issue of land and natural resource among the shifting-cultivators, which is central to their survival and existence, deserves a clear understanding in studying inter-ethnic relationships with bordering ethnic groups.

The land and natural resources, which in most cases are referred to as 'no-mans' land by outsiders, has a paramount value and meaning to them. Understanding the value and meaning associated to land and natural resources within the given socio-economic, cultural and environmental contexts of contact urges due consideration to ameliorate potential causes of ethnic conflict.

Thus, this research, besides the need to fulfill the academic requirement for the MA degree in social anthropology, could bring additional insight in understanding the population, environment and conflict linkage by exploring correlating factors that explain the existing situation in the case of the Majangir shifting cultivators of southwest Ethiopia.

1.6.Organization of the thesis

This thesis consists of six chapters. The first chapter presents the introduction, the research problem, significance of the study; research questions research methods, limitations of the study and organization of the paper. The second chapter addressed some theoretical considerations raised by scholars with regard to the linkage between population and environment issue. Contesting views of successor advocates was presented by portraying practical evidences forwarded in the debate. In the literature, the thesis provides the general contexts of natural resource degradation (land and forest) in Africa and also discussed causative factors. It also described the effects of natural resource degradation both in terms of environmental or ecological and human population aspects. Natural resource scarcity and its nexus with violence and conflict were discussed.

The third chapter presents a brief discussion about the study population; Location and Population, the Physical Environment including Soil and Vegetation, Climatic condition, Altitude and Topography. The social Structure of the study community has been discussed by looking in to the family and household, the social organization of division of labor and work practice, marriage and kinship system. An over view of the economic system and the contexts socio-cultural interactions existed were presented.

Chapter four mainly provides major incidences and/or factors that profoundly exerted pressure on the resource bases of the study area that were believed and remarkably contributed for the deterioration and depletion of land and forest resources in the region. Following that, the chapter provides information on associated effects and impacts of the resource degradation both in terms of the environmental/ ecological condition and the indigenous human population aspects. In addition, it discussed strategies adopted by the local people in response to the problem.

Chapter five discusses the major implications of resource degradation in terms of resource use/management and interactions existed in the study area. The chapter highlighted the different stakeholders involved in the utilization and management of resources in the area. Having looked at this, it presented historical background of disputes by taking events of resource-based disputes. In addition, it analyzes the types of disputes and major correlates of dispute inducing factors that were responsible in aggravating the problem. Furthermore, the chapter addresses existing institutions that are involved in resolving and managing resource-based disputes/conflicts. Finally, the paper, in chapter six provides summary of the research findings and conclusion.

Chapter 2

Theoretical Perspective and Literature Review

2.1. Theoretical perspectives on population, environment and conflict links:

2.1.1. Population-Environment Perspective

Various perspectives have been developed which link population and resources. The pioneering perspective (the Malthusian or Pessimists Perspectives) was the idea of population pressure by Thomas Malthus. Malthus argued that population grows at a geometric rate, because it will multiply continuously, subject only to biological constraints. Accordingly, Kneese (1989) pointed out Malthus's position as follows:

> Thomas Malthus was less optimistic about the future of humankind and argued instead that it was ultimately going to be impossible to bring about permanent improvement in the quality of life. He took the pessimistic view that population tends to grow faster than food supply: Food production increases arithmetically 1-2-3-4-... while population increases geometrically 2-4-6-8 (Kneese, 283).

The pessimists are firm believers that population growth is the independent factor contributing to environmental degradation, and have a negative outlook regarding future resource availability and environmental conditions. Their theory, based on classical economics, suggests that sustainable output is not capable of keeping pace with rapid population growth. Accordingly, they argued that, environmental degradation results from an increasing population pressure on a fixed natural resource base in order to maintain or increase the population's standard of living.

Based on the premises of the Malthusian's theory, advocates of Environmental Malthusianism emerged in the recent population-environment debate. According to Hardaway (1999);

> This Malthusian perspective, as well as research by natural scientists, has formed the basis for today's Environmental Malthusianism, in viewing of the relationship between population and the environment. Environmental Malthusianism broadens the scope of the traditional Malthusian argument which suggests famine and disease as consequences of population growth, and evaluates the environmental risks of the population explosion (Hardaway, 1999: 15).

In the study of population- environment links, the pessimists had explained different cases around the world where population growth and pressure over resources resulted in degradation. According to Jolly, the pessimistic theory of population and environment is frequently applied to developing countries. In this regard he wrote that:

> It has been argued that many developing countries become stuck in what is known as a "Malthusian trap." The argument is that many developing countries become locked in the middle of their demographic transition, which is characterized by high birth rates and low death rates. This stagnation causes the country's population growth to increasingly stress the carrying capacity of the environment. The result is a "vicious cycle," in which population growth and environmental degradation continue to simultaneously cause one another (Jolly, 1994: 69).

Furthermore, researchers (Richard Hosier (1984), A.S. Mather (1989), Paul Harrison (1993) , attempt to present empirical evidence linking population or population growth with environmental degradation. They indicated that, population pressure is correlated with low wood availability; forest reduction, reduced indigenous trees, loss of biodiversity and deforestation. Engelman (1997: 26) also pointed out that "much of the world's population growth is occurring in regions where there is very little potential for adding to farmlands, such as India, Pakistan, China, and Ethiopia".

The effect of population growth on renewable resources degradation is associated with increasing consumption demand such as fuel wood. Myers explained the casual link between population growth and demand for fuel wood as follows:

> As of 1992, 1.4 billion people obtained their fuel wood by cutting it at a higher rate than it could be replaced by natural growth. By the year 2000 it is expected that this number could rise to over 2.4 billion. Should population growth create a situation in which the number of collectors exceeds the self-renewing capacities of forests, the result will be a rapidly dwindling stock of firewood, being exploited by an increasing number of collectors, eventually becoming entirely depleted (Myers; 1993: 117).

The other population-environment perspective that viewed population pressure in rival to the Malthusian's was that of the Optimists perspective. One of the pioneer advocates of this perspective is Ester Boserup. In opposition to the pessimist's argument that population pressure causes degradation and scarcity, Boserup contended that population growth and resource scarcity are the sources for innovation which will spur economic growth. As the number of people within an area of land rises, the demand for production

on that unit of land increases. This need for increased productivity leads to the adaptation of a new technology or an intensification of land use.

Boserup also suggests that as resource becomes increasingly scarce; technology is adapted which will use a more abundant input (i.e. labor) more intensively. Under this argument, rapid population growth will actually spur economic development. While the intensification of land use may result in environmental degradation such as erosion, Boserup contends that the use of simple technologies such as fertilizer can prevent this degradation (Jolly, 1994: 64).

The other notable proponent of the optimistic viewpoint is Julian Simon. In harmony with Boserup argument that population growth and pressure leads to technological adaptation for effective resource utilization, Simon presented human response to scarcity and the contribution of population growth as follows;

> Human imagination and the exercise of educated skills can provide the innovation needed to sustain the environment and resource base in the wake of population growth and potential scarcities. In fact, population growth can actually be beneficial to the economy, and potentially to the environment. An increase in the number of people, while causing additional consumption, will add to the most crucial resource stock of all (Simon 1997: 98).

Although the effect of population growth on environment seem panic to the advocates of pessimists, for Simon resource scarcity due to population growth do not threaten societies. In his book, "The Economics of Population Growth", wrote that, "resource-scarcity should not be a concern. There is no need for the ethical debate over consuming resources today versus conserving them for future generations" (ibid: 99). He further explained the link between increasing demand and resource supply as follows;

> The supply of natural resources grows in response to an increased demand, which occurs as a result of both population growth and economic growth. The supply of natural resources is expected to increase indefinitely, and holds that the long-run outlook for natural resources is positive. Population growth, therefore, can actually augment resources in the long run, by increasing the absolute amount of knowledge in society (Simon; 107).

Like the pessimists, the optimists also provide three major types of evidence supporting their positions. Parker Shipton (1989) and Panayotou (1994) researches demonstrated that increases in population density resulted in output raising innovations, control soil erosion, improve water catchments, increase food production, and improve overall environmental awareness and conservation measures.

2.1.2. Perspectives on Resource-Conflict linkage.

In today's world, human pressures on natural resources are increasing, while many resource bases are deteriorating or being depleted, creating an increased potential for competition and conflict between nations or groups within societies. The question of whether and how environmental change leads to violent conflict has received a great deal of scholarly attention in recent years (Ehrlich et.al, 2000: 2). The thematic issue behind the two perspectives, according to the Environmental Literacy Council (2005), is concerned the extent to which environmental abundance or scarcity contributes to underlying causes of conflict.

In addressing the resource-conflict links, existing debates by scholars have been divided into two distinct camps, between those who emphasize scarcity and grievance and those who primarily worry about resource abundance or greed. The first perspectives theorize the causal pathways linking environment and violent conflict and gathering evidence that the environment has played a role in several cases.

A major reference point in this debate is Thomas Homer-Dixon. Like other neo-Malthusian scholars, Homer-Dixon sees population growth closely linked to the potential scarcity of renewable resources and that scarcity leads to increased inter-group competition and such competition can take the form of violent conflict. In his analysis of the nexus between resource scarcity and violent conflict, Homer-Dixon identified two kinds of particularly important interaction: resource capture and ecological marginalization. Leif Ohlsson (2001) defines the concepts of resource capture and ecological marginalization as follows:

> Resource capture occurs when powerful groups within a society recognize that a key resource is becoming scarcer (due to both supply and demand pressures) and use their power to shift in their favor the regime governing resource access. This shift imposes severe structural scarcities on weaker groups.
>
> Ecological marginalization occurs when grave inequality in resource distribution joins with rapid population growth to drive resource-poor people into ecologically marginal areas, such as upland hillsides, areas at risk of desertification, and tropical rainforests. Higher population densities in these vulnerable areas, along with a lack of the capital and knowledge needed to protect local resources causes local resource depletion, poverty, and eventually further migration, often to cities.

These interactions, being caused by resource degradation due to demand-supply scarcity, they further aggravated structural Scarcity which is manifested through differential power relation. The result of increased environmental scarcity, according to him, is either migration/expulsion, or decreased economic productivity, which, in turn, weakens the state so that ethnic conflicts, coups d état or deprivation conflicts result (Homer-Dixon, 1999:3). In addressing the resource scarcity-conflict linkage, Goldie (1994: 3) also noted that, "the intractable threats of climate change, ecosystem degradation, and continuing population increase likely exacerbate resource scarcity and increase the potential for violent conflict".

In the context of resource scarcity, competition over utilization and management of resources would induce and aggravate incidences of disputes and conflict. Furthermore, whenever competition assumes power imbalance of contesting groups, the probability of scarcity-induced conflict became inevitable.

In his paper, "Natural Resource Scarcity and Rural Conflict in Ethiopia.., Tesfaye (2004:1) argued that, "there are numerous cases of environmental induced grievances, disputes and conflicts in different parts of the country. Conflict is an outcome of a long process and occurs particularly where competition for access and control of scarce environmental resources operate". However, his analysis did not dare scarcity solely ignite conflict. He expressed his position and pointed out several other factors that work together in inducing and aggravating conflict in rural Ethiopia as follows:

> There is probably unanimity in the literature that competition for scarce natural resources induces armed conflict. However, it is not my reading that competition for scarce resources necessarily translates into armed conflict. Conversely, armed

> conflict does not necessarily occur where there is competition for natural resources. The likelihood of scarcity-induced conflict arises where there are conflict-aggravating conditions: population mobility, societal heterogeneity, poor socio-economic integration and heightened vulnerability to poverty and survival, uncertainty in property rights, weak institutions to manage scarce resources and prevent conflicts, deficient governance and legal framework. Although most of these factors prevail in most of the scarcity-induced conflicts, the set of factors are location-specific (Tesfaye, 2004: 10)

In rival to the above perspective that focuses resource scarcity and conflict linkages, others argue that resource abundance causes and generates violent conflict. According to the Environmental Literacy Council (2002),

> A number of violent conflicts have erupted, in part, over the abundance of resources. In several African nations, lucrative mineral resources - oil, diamonds, and other strategically important minerals - have fueled ongoing conflict. Sierra Leone, Congo, Liberia, and Angola have all experienced horrific civil wars in recent decades, and a major factor in those wars has been over diamonds. All four countries have been devastated by warfare due primarily to predatory governing elites using their control over the resources to enrich themselves and outfit armies used to maintain their command.

Although most people believe that scarcity caused by environmental depletion or degradation is behind most conflict linked to natural resources, the reality of the matter is that many times conflict is ignited not by a real scarcity, but by structural scarcity within a state. Structural scarcity is when a resource or its benefits are abundant within a state, but inequitably distributed amongst the state's population. As we saw from the World Bank report, the unequal distribution of resources or wealth is one of the biggest indicators of a potential conflict (Tetreault-Rooney, 2004:16).

2.2. Review of Literature

2.2.1. Land and Forest Degradation in Africa

Natural resources are the bases for long term development. They form the basis of all human activity and determine the livelihood strategies of people and technology used to harness a particular niche they depend on. Therefore, they constitute the natural capital and the essential inputs to both subsistence economies and the most advanced technological societies.

These days, however, the global natural resource base is alarmingly depleted and degraded. Over exploitation of resources, increasing population pressure and climatic changes have invariably resulted in natural resources degradation and further leading to resource scarcity. Despite the fact that, natural resource scarcity has become a global phenomenon and concern, the problem of land degradation has been pronounced among the developing countries.

> Many African countries have already lost a significant quantity of their soils to various forms of degradation. Many areas in the continent are said to be loosing over 50 tones of soil per hectare per year. This is roughly equivalent to a loss of about 20 billion tones of Nitrogen, 2 billion tones of Phosphorus and 41 billion tones of potassium per year. Serious erosion areas in the continent can be found in Sierra Leone, Liberia, Guinea, Ghana, Nigeria, Zaire, Central African Republic, Ethiopia, Senegal, Mauritania, Niger, the Sudan and Somalia. Millions of hectares of grazing land and rangeland are also threatened with degradation- in the arid north, the semi-arid south, and the Sudano-Sahelian countries and in the drier parts of Cameroon, Ethiopia, Kenya and Nigeria (FAO, 1995).

In most rural communities of Africa, forest resource provides a wide range of functions. They are the principal source of rural energy, and provide medicinal and industrial products used in both the home and in small-scale industry. They often supply food and are the main source of building materials. However, according to FAO in 'Land and Environmental Degradation ...' like soil and land degradation, the continents' forest resources were increasingly depleted and degraded.

> Nearly 4 million hectares of this resource are now being deforested or degraded annually, largely in humid and sub-humid West Africa. The rate of destruction is alarmingly high in the Cameroon, in Côte d'Ivoire and in Nigeria. In most parts of Africa, the current trend cannot be continued indefinitely: in some places, deforestation rates exceed planting rates by a factor of 30:1 (FAO, 1995).

In short, the heart of the problem is that the natural resource base of Africa is being degraded and destroyed at a rate which will soon make food and agricultural production un-sustainable. Poverty, coupled with increasing population pressure, is the biggest single cause of this degradation. The rural poor, the overwhelming majority of Africa's citizens, destroy their own environment, not out of ignorance, but simply to survive.

2.2.2. Natural resource degradation in Ethiopia

The natural resources of Ethiopia's rural communities are the basis of their development. To improve standard of living, increased production from the natural resources is required (Wood, 1990: 187). One of the natural resource, which Ethiopia had been endowed with, was the forest resource base of the country.

Forest resources of the country have environmental, social and economical importance. In relation to the contribution of forestry to the national domestic product (GDP), FAO (1995) writes:

> In an agrarian society like Ethiopia, forestry can play significant role in economic development. The forestry GDP as a proportion of the whole economy and in relation to agriculture has been very low. The share of forestry in the GDP varied between 2% and 2.6% from 1971 to 1985 and declined to 1.9% between 1986 and 1987. The share of forestry in the agricultural GDP varied between 3.8% and 4.8% during 1971-1985 and declined to 3.7% in 1986 and 1987. If direct consumption of commodities such as fuel wood and charcoal and the indirect contributions of forests to watershed management and soil conservation as well as that of forest products utilized in other manufacturing and construction activities are considered in the calculation, the contribution of forestry to the total GDP and agricultural GDP will be much higher amounting to about 10% and more.

The other economic contribution of forestry is employment opportunity and employment generation for rural dwellers. The study by Ethiopian Forestry Action Program (EFAP) presented the contributions of forestry for the rural part of the country as follows:

> Most forestry operations are undertaken in rural Ethiopia and a large number of laborers are required for forest nursery operations, afforestation and for the construction and maintenance of roads. This is a major source of income for the rural people. People also profit from forestry employment through firewood, charcoal collection and sales, incense and gum collection. Fuel wood production is by far the largest employment generator accounting for nearly 50% of the total forestry employment, followed by afforestation contributing for about 34%. Forest industry employment amounted to about 2.2% of the total work force in the country and contributed 2.8% to employment in the agricultural sector in 1988/1989 (EFAP,1993:20).

Despite the fact that, the country's forest resource has a wide range of importance, the forest resource base of the country had showed significant decline through years. Quoting from Eshete and Ruden, Karna Hansson wrote about the statuses of forest coverage in the country as follows:

> Ethiopian forests are complex and diverse. The estimates of the extension of the different forest types today and in the past vary a lot. Estimates from 1994 indicates a present forest cover of 2,7% according to Eshete (1999), while Rudén (1991) says that natural forests cover 4% compared to 40% five decades earlier. Eshete (1990) also says that historical sources indicate that once more than 35% of the total land area was covered with closed forests. (Hansson, 2002: 15)

According to FAO (1995), the total area of natural forests in 1990 was estimated at 13.9 million hectares and later reduced to 13.6 million hectares in 1995 with an annual rate of depletion of 62,000 hectares. If the trend continues with no change, the forest area will be reduced to less than 7 million hectares by 2020. This means that the area available for timber production will be reduced. It is expected that past deforestation rates will continue and that about 1.2 million hectares of forests and other secondary forests will be converted to other land uses mainly arable land and perennial crops by 2020. Most of these conversions will take place in the South and Southwestern part of the country. Natural forests are likely to continue to be converted to other land uses and protection of these areas will become increasingly difficult.

Table 1: Forest resources of Ethiopia

Natural Forest Types	Forest available for wood supply (000) hectares	Forest not available for wood supply (000) hectares
Closed high forest	1,761.261	2,641.903
Wood land	2,000	3,000
Shrub land	5,062.610	7,593.915
Bush land	4,889.866	7,334.799
Bamboo	187.866	281.798
Riverine/Riparian forest	194.866	292.328
Plantation	255.214	
All forest types	14,182.835	20,891.431

Source: Ethiopian Forestry Action Program (EFAP) 1993

The above figures witness that, in many parts Ethiopia the natural resource base are being currently depleted at an alarming rate. According to Bekele (1993) today, only a few

scattered and relatively small areas of forest remain, largely confined to inaccessible steep hill slopes, escarpments and mountains far from motorways mainly in the Southwest and south-central parts of the country.

Table 2: Forest Reduction

	Original Extent of Forest	1950's	1990	2000
Ethiopia	65%	16%	2.7%	2.2%
Highlands	90%	20%	?%	5.6%

Source: Leonard Berry (2003:4)

2.2.3. Causes of land and forest resource degradation

As discussed earlier, the natural resources base (land and forest) is being depleted and degraded at an alarming rate. Various forms of degradation attack that resource as a result of both natural and human-made factors. The two causative factors, having their own role for the degradation, also complement one another and aggravate further deterioration and degradation.

> For instance, in the case of erosion, the direct cause is the action of water or wind. That action is enabled by a series of conditions, both human-made (deforestation, ploughing slopes etc.) and natural (steepness, soil texture etc.). In the case of salinization, the direct cause can be the intrusion of saltwater in groundwater reserves, and overuse of freshwater the enabling factor; or, the direct cause can be the mix of excessive irrigation and insufficient drainage, with aridity an enabling or accelerating factor (POPIN, 1995:10).

As resource degradation is caused due to interactive actions of several factors, it is hard to pin point a single factor in explaining the process of resource degradation. Accordingly, Blaikie and Brookfield (1987: 12), argued that:

> It must be clear at this stage that land degradation is the result of many factors some outside human control and that it is "futile to search for a uni-causal model of explanation". It is probably impossible to argue satisfactorily that one of the main categories of factors is generally decisive. For one thing, the variability of situations at the local level is too great to support any generalization. For another, population change, social factors and technological factors are interlinked, so that it is impossible to assign them autonomous effects (POPIN, 1995: 24).

In Ethiopia, several factors had been contributing to the increasing resource degradation. According to Ministry of Education (MoE), notable factors behind the problem were higher resource dependency and population growth. MoE, in presenting the condition of the resource and associated links to population growth, stated that,

> Despite some efforts, the state of environment has degraded due to higher dependency on natural resources and high population growth. With the increase in population, and subsequent increase in the demand for fuel wood, timber and grazing grounds, forest areas in Ethiopia has been diminishing at an alarming rate. (MoE, 2003: 89)

Tegegne in his writing entitled 'Population and Renewable Resources in Ethiopia' adhered that, of all the different causes, the impact of population on environment looms large because in many countries there is an imbalance between the growth and distribution of population on one hand and the natural resource endowment on the other. In Ethiopia, such imbalances are quite evident as the rate of population growth and uneven distributions of population destruct the renewable resources such as land, forest and water (Tegegne: 1995: 88).

The escalating trends in population increase obviously create pressure up on available natural resource base. According to Belay (1995:36), "population pressure refers not only to the imbalanced growth of population and food production but also to the stress caused by growing population on resources". Among other factors, he argued that population pressure is one of the most frequently cited factors of land degradation. In conceptualizing the links in assessing land use, and man-environment interaction in Ethiopia, he wrote:

> The land resource which forms the basis of economic sustenance is degrading and loosing its productivity very fast. On the one hand, the population that depends on the land resource is increasing very rapidly. As anywhere else the causative factors of arable land degradation, in Ethiopia, are highly complex, interactive and interlinked.... Of all the factors, however, the rapid growth rate and the resulting large number of population are exerting the most severe stress on land and causing accelerated degradation of the resource in Ethiopia (ibid: 37-8)

In a similar manner, Tegegne described the casual link between population growth and the extent of its effect on the environment as follows:

> the rapid deforestation and depletion of forest, estimated at a rate of 150,000-200,000 hectares annually, was a result of population growth that required more arable land, the practice of shifting cultivation, the establishment of commercial plantation particularly coffee and tea in the western highlands are some of the underlying causes for such high deforestation (Tegegne, 1995: 98).

Another feature of population dynamics that play an important role in resource degradation is urbanization. The growth of urbanization which is associated with population increases had also affected forest resource variously. Besides forestland clearance for population settlement and availing basic social infrastructures, urbanization brought increasing demand for wood resources for household construction and fuel wood energy consumptions.

> The other cause of destruction of the vegetation cover is its overuse by households, mainly from fuel wood collection. To cover vital energy needs, most households in developing countries resort to "free" gathered biomass fuels, including crop residues and animal dung but, most of all, fuel wood. When the annual use of wood exceeds the sustainable yield of wooded areas, forests and woodlands are gradually destroyed. This in turn triggers or accelerates soil erosion (FAO, 1983).

The impact of population growth on fuel wood consumption in the vast areas concerned is direct, since energy needs are essentially proportional to population. Around 1980, FAO estimated that about 2 billion people (or ¾ of the population of developing countries at that time) depended on biomass for their daily energy consumption. But close to 1.4 billion of these could not meet their requirements without compromising future fuel wood supplies, and it was expected that the number would increase to 3 billion (2.4 billion in rural areas) by the year 2000 (POPIN, 1995: 14).

Table 3: Fuel wood demand and supply projections

Year	Projected demand for fuel wood (000)	Projected sustainable supply (000)	Deficit in m^3
2000	58,403	11,225	47,180
2004	66,250	10,593	55,657
2008	74,967	9,895	65,072
2011	81,812	9,378	72,434
2014	88,899	8,844	80,055
2020	100.0	7,744	92.3

Source: EFAP (1993)

The other factor that exerted and contributed for resource degradation is the agricultural farming system and practice adopted by a group and patterns of resource utilization. Owing to a particular livelihood strategy and topography of the land under utilization, there exist incidences of vulnerability to resource degradation. According to (Blaikie and Brookfield, 1987), the extension of agricultural practice in to sloppy and marginal lands due to population growth, subjected these areas to the high level of damage. Such practice is a common phenomenon in situations of "land hunger" (high population density vis-à-vis arable land) where Ethiopia being perhaps the best known. Unequal land distribution can worsen those pressures notably. Furthermore, Tegegne (1995) indicated that the agricultural practice of shifting cultivation has been one of the factors that contributed forest degradation in Ethiopia.

Similarly, Rajiv R. and Upadhya (1999), in 'Ecological Problems due to Shifting Cultivation' presented the implications of farming practices of shifting cultivation on the tropical forest resources as follows:

> More than 6% area under tropical forests was converted to shifting cultivation between 1980 and 1990 across all tropical countries. About 10% of forest land was converted to shifting cultivation in Asia during the above period. On the basis of data given in FAO and other sources, it is estimated that each year approximately 1.9–3.6 ´ 10^6 ha land of primary close forests, 3.4–40 ´ 10^6 ha land of secondary close forests, and 6.9–21.9 ´ 10^6 ha land of secondary open forests are being lost due to shifting cultivation (Rajiv et.al,1999: 3).

Despite the implications of agricultural practices of shifting cultivation system upon forestland, the practice which involved the clearance and removal of vegetation cover induces and further accelerates soil erosion.

In general terms the major cause of deforestation is rapid population growth due to immigration of people to the area, which leads to an increase in the demand for crop land, wood for fuel and construction. Lack of viable land use policy and corresponding law also aggravated the rate of deforestation. New settlements in forests are increasing from time to time and hence resulted in the conversion of forested land into agricultural and other land use systems. At present, the few remaining high forests are threatened by

pressure from immigration and agricultural investments who are converting the moist evergreen mountain forests into other land use systems such as coffee and tea plantations.

2.2.4. Effects of resource degradation

The over rising problem of natural resource (land and forest) degradation had brought several environmental and ecological damages that reinforce further resource degradation. Forest resource degradation has exerted a wide range of environmental and ecological changes and implications. According to Bekele (1993), the effect of forest degradation was explained as follows:

> One of the most visible consequences of deforestation is soil erosion, which is a big problem in Ethiopia with its changing topography. The wind speed is reduced in the tree canopies and with bare soil stronger winds contribute to soil erosion. The problems with erosion and soil degradation increase with higher population density (Bekele, 1993:13).

Erosion risks depend both on natural conditions and on land use patterns. The climate (especially rain intensity), slopes, vegetation cover, and nature of the soil are important. With regard to land use, any human activity which entails the removal of the protective vegetation cover (forest, shrubs, grass etc.) fosters erosion; so do improper measures such as ploughing along slopes.

In addition to its effect by increasing soil vulnerability to erosion, deforestation/forest clearances affects the vegetation cover which in turn affects and change the climatic condition of an area and the global climatic condition at large leading to growing desertification. According to FAO estimates, "319 million hectares of Africa are vulnerable to desertification hazards due to sand movement. The assessment of land degradation in Africa also suggests that large areas of countries north of the equator suffer from serious desertification problems. For example, the desert is said to be moving at an annual rate of 5 km in the semi-arid areas of West Africa (FAO, 2005).

Besides, the effects of deforestation have a wider impact upon the flora and fauna of a region. Deforestation not only removes the trees, but also leads to the loss of other

renewable natural resources, such as wildlife products such as fur and skin. In addition, forest degradation entails economic implication of a region.

> Tropical forests can also be of important economical value through eco-tourism that can generate foreign income. Deforestation decreases the possibilities to develop such an industry. Another much talked about consequence is the loss of biological diversity. Tropical forests are usually very species rich with many endemic species. Extinction is irreversible and means the loss forever of unique genetic information (Sponsel et al. 1996: 22).

A) Displacement of indigenous people:

Land and forest degradation has also impacted the rural communities and the local indigenous people in many ways. Their socio-cultural and economic conditions were negatively affected owing to the increasing pattern in resource degradation. On less frequent, but dramatic occasions, land degradation forces population displacement. Hundreds of thousands of hectares have to be abandoned each year being too degraded for cultivation or even grazing. This may mean that the population which depended on those areas for subsistence must seek other lands to settle on.

Population growth combined with land degradation and other environmental changes, as well as economic factors, can lead to mass migrations, which can themselves engender tensions between groups. Poverty and marginalization interact with these problems and often contribute to further environmental degradation. Marginalized groups who are denied access to resources may resort to conflict if their needs are not adequately addressed by their society, and such dissension may be intensified by ethnic differences (POPIN, 1995:15).

Furthermore, forest degradation entails socio-political consequences. Among the more serious human aspects of deforestation is its connection with warfare and other forms of violence. Deforestation is, at least in part, linked to security problems not only in Ethiopia, but also in many other countries such as Guatemala, Haiti, El Salvador and India (Sponsel et. al. 1996:23).

2.2.5. Ethnic interaction and Conflict:

Inter-ethnic relation is dynamic. It can take several forms and change over time. The patterns of contact between the groups also vary depending on the socio-economic and cultural contexts of the groups in contact. In his discussion of inter-ethnic relations, Okwudiba stated the following:

> Often inter-ethnic relations in Africa fluctuate between cooperation, competition and conflict. The interaction is very complex. This complexity of the historical relations among ethnic groups makes it difficult, at any time, to predict the course of the evolution of those relations (1998:4).

For him, the concept conflict is referred to as "contradictions arising from differences in interests, ideas, ideologies, orientations, perceptions and tendencies. These tendencies exist at all level of society, individual, group, institution and nation, as well as interpersonal, inter-group, inter-institutional and international relations" (Okwudiba, 1998:5). He further argued that, the inability or failure to accommodate and resolve contradictions in society through arrangements and procedures that eliminate their negative effects and maximize their positive effect is problematic about conflict and its explosion in to violence.

2.2.6. Natural resource use and Ethnic interaction

Inter-ethnic interaction in a given socio-economic system and patterns of natural resource utilization may take several forms. According to Okwudiba (1998), "its nature, intensity and forms of expressions are determined by various factors; Patterns of interaction of the groups, the socio-economic statuses and context in which they make contacts". According to him, depending on the ecological niches that different ethnic groups are adapted, ethnic-interaction may take the following forms:

> Where two or more ethnic groups are in contact, their adaptation may entail the following forms; Occupy clearly distinct niches in the natural environment and be in minimal competition for resources, monopolize separate territories, in which case they are in competition for resources, provide important goods and services for each other, occupy reciprocal and therefore different niches but in close interdependence. These alternatives refer to stable situations. But very

commonly, one finds a fourth main form: where two or more interspersed groups are in fact in at least partial competition with in the same niche (Okwudiba, 1998:6).

2.2.7. Land and violent conflict

Land is a very strategic socio-economic asset, particularly in poor societies where wealth and survival are measured by control of and access to land (David and Brown, 2005: 5). "The fact that land can be simultaneously valued as a commodity, natural resource, habitat, cultural setting and aesthetic amenity complicates the land use decision-making picture. Any land use change can affect any one of these values and result in community conflict over that use" (George et.al, 2002:.4).

In his examination of rural ethnic conflicts trends in Nigeria, Samuel (1998: 44) indicated that land was the core element in the conflicts which began as local conflicts but widen to embrace the full alliances of ethnic kin. He further argued that, the agrarian question, as central as it is, has to be connected to the broader economic, political and social relationships and it must be rooted in historical accounts to understand the changing patterns of inter-ethnic relations that embrace the entire spectrum of conflict and cooperation.

The value that people attached to land can change over time and determines the complex social relations of production and people. Werbner described it as follows:

> The value land has even in a single society are often highly diverse and free of fluctuation. Moreover, the various ways that people conceive of and order areas of social space and locality directly affect what land represents as real estate. This relation varies, because some socio-spatial conception change in meaning more readily than others, when there is change in the density and distribution of population, or change in the organization of settlement and production. However, the meaning they give to such a scheme and the use they make of it depends, crucially, on various moral premises and current understandings of public and personal interests-all of which may be the subject of much disagreement (Werbner, 1998:62-63).

The other dimension, in which competition over land and natural resource emerges, can be government interventions in development projects and resettlement programs that demand the relocation of people from their place of origin to other places. In most instances, people will be resettled in places that are regarded as under-populated and have potential resources, for resettlers make a living. Such competition over resources tends to lead to conflict among the resettlers and the indigenous people living in the area.

> In many countries, government sponsored resettlement schemes have led to conflict among the "settled" as well as between the settled population and the original inhabitants. These types of conflict have occurred in Tanzania, Nigeria, Mozambique and Angola. In Mozambique, land disputes between immigrant charcoal burners and local farmers and grazers have caused violence and property damage (David and Brown, 2005:12).

In Ethiopian context, resettlement programs executed in the past had witnessed disputes. These events of disputes, in one way or another, convey the fact that the program resulted in encroachment and alienation of the local people from their place of origin. As a result, the program had been challenged and resisted by the local people and at times the local peoples' reaction further went beyond resistance and confrontations to incidences of dispute and conflict.

In a keen look at the case of self-organized and state-sponsored migrants in the country, several researchers (Assefa (1999), Chernet (1988), Gebre (2001), Wolde-selassie (1997)) come up with findings where cases of dispute and conflict between indigenous and migrant populations at resettlement areas. In their research findings, they portrayed that the execution of the resettlement program had encroached territorial occupation of the indigenous inhabitants, which resulted in a loss of ancestral land, land fragmentation disrupting farming system and practices which worsen the living condition of the local indigenous population. In most cases, the local indigenous inhabitant showed resentment and resistance to the influx of migrant population. Accordingly in its long term effect, they argue that, the local people expressed their resentments and objection by posing security threats to the immigrants and new comers leading to disputes and conflicts.

Chapter 3

The Study Population: The Majangir

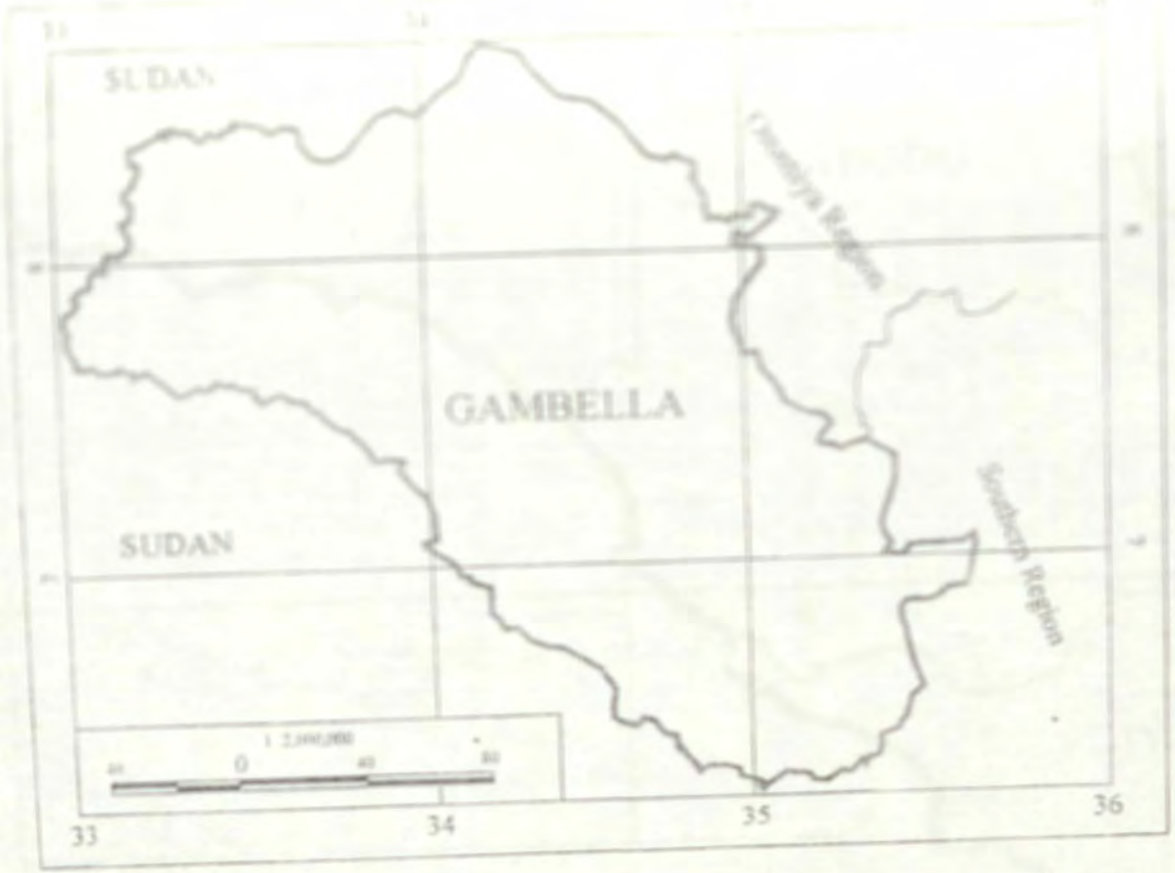
3.1. Location and Population

The Majangir, one of the five ethnic groups, are found in the Gambella Regional State, southwestern part of the country, Ethiopia. Gambella Regional State is located at an appropriate geographic coordinates of 6°20'N- 8°30'N latitude and 33 10'- 35 50'E longitude. It is sub-divided in to three administrative zones namely; the Annua, Nuer and Majangir zone (GPRNS, 2003).

According to Stauder (1971), "the Majangirs' are sparsely settled throughout a large area, roughly 4000 square miles, of thick forests on the Southwest edge of the Ethiopian plateau. The extent of their settlement runs from North of the Baro river near Dembidollo, southwards to the Guraferda Range, the Erbu (Arbuca) River and other tributaries of the Akobo" (Stauder, 1971:1).

The Majangir zone, having only one woreda, namely Godere, is again sub-divided in to 31 kebele administrations. According to the 1994 population and housing census result, "the major ethnic groups of the population of Gambella region are found to be 39.7% Nuer, 27.5% Annua, 7.7% Amhara and 6.5% Oromo. Among the rural population of the region 45.5% are Nuer, 25.7% are Annua, 6.9 are Messengo (Majangir) and 5.9 are Amhara (CSA: 1995:2).

The Majangir, of the five indigenous ethnic groups that inhabit in the region (Annua, Komo, Majangir, Nuer and Opo), constituted the third in population size. The Majangir dominantly live in Godere woreda/zone and to some extent in Gambella and Abobo woredas mostly in the periphery of forestlands. The census result, based on the counted plus estimated population size, indicated that the total population of Godere special woreda is 32,232 of which 14,789 were female (CSA: 1995:14).

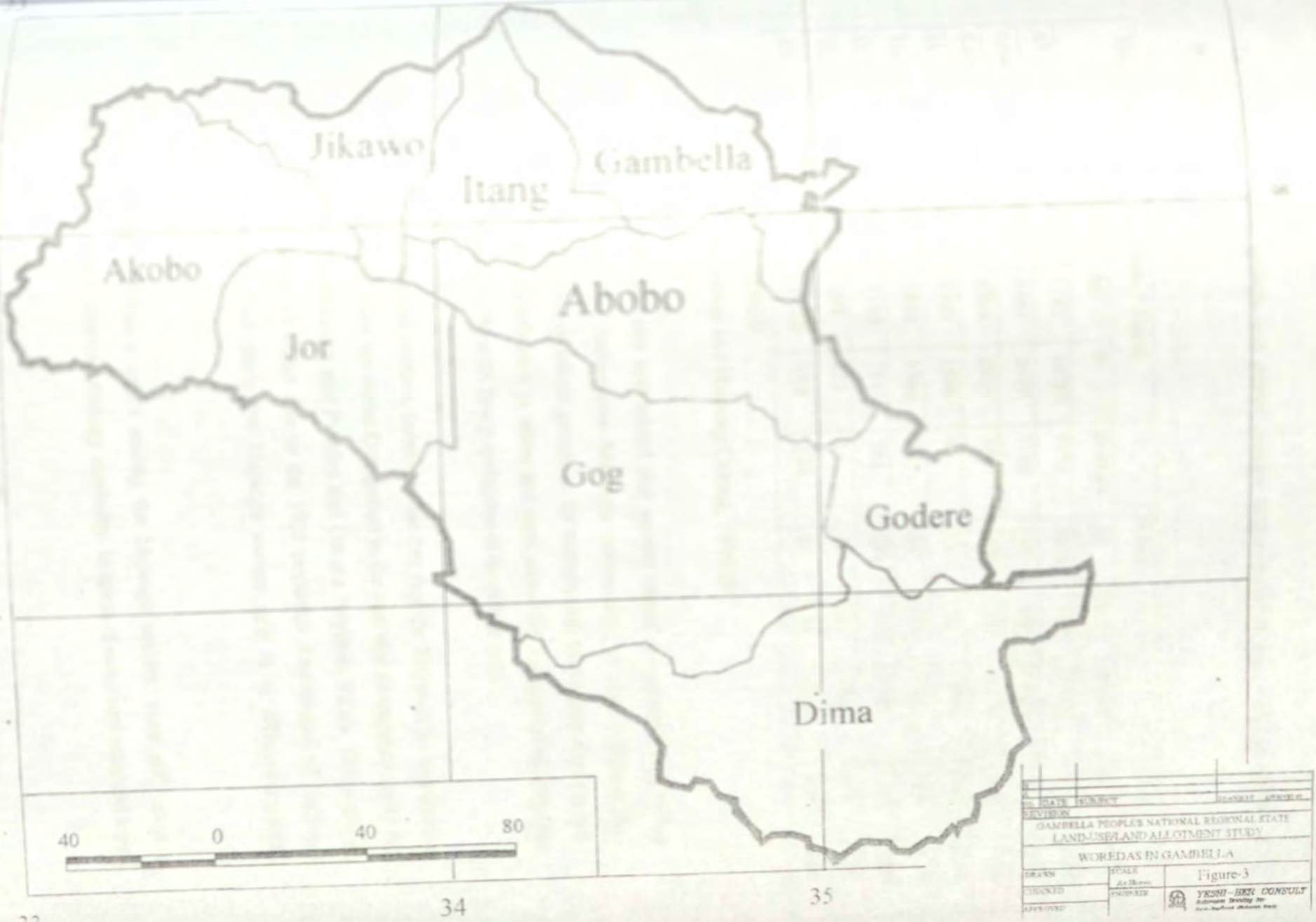


NO.	DATE	SUBJECT	DRAWN BY	APPROVED
REVISION				

GAMBELLA PEOPLE'S NATIONAL REGIONAL STATE
LAND-USE/LAND ALLOTMENT STUDY

LOCATION MAP

DRAWN	SCALE: As Shown	Figure-1
CHECKED	ENDORSED	YESHI-BER CONSULT
APPROVED		Surveying Drawing for Land-Use/Land Allotment Study


Jikawo
Gambella
Itang
Akobo
Abobo
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40
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GAMBELLA PEOPLES NATIONAL REGIONAL STATE
LAND-USE/LAND ALLOTMENT STUDY
WOREDAS IN GAMBELLA
Figure-3
YESSH - IKR CONSULT

Table 4: Five ethnic groups and ethnic groups with population size: Godere special woreda.

Ethnic group	Urban + Rural			Urban			Rural		
	Both sex	M	F	Both sex	M	F	Both sex	M	F
All person	32232	17483	14789	3173	1676	1497	29059	15767	13292
Amara	7891	4444	3447	1746	980	766	6145	3464	2681
Kaffa	6699	3764	2935	386	175	211	6313	3589	2724
Mocha	3083	1493	1590	83	33	50	3000	1460	1540
Mesengo*	7618	3858	3760	49	28	21	7569	3830	3739
Oromo	4050	2159	1891	761	368	393	3289	1791	1498
Tigraway	1026	599	427	14	11	3	1012	588	424
Others	1865	1126	739	134	81	53	1731	1045	686

* Mesengo refers to Majangir

Source: The 1994 Population and Housing Census, 1995:36

From the above table, one can understand that several ethnic groups are living in the woreda together with the indigenous Majangir community. It also indicates they constitute the second populous ethnic groups in the woreda next to Amhara ethnic group. In terms of population distribution in urban and rural areas, the Majangir predominantly live in the rural areas (99.3%) with few populations in the urban areas.

With in the same ecological context, however, one can find the Majangir in neighboring Regional States. Part of their territorial Occupation in the past was demarcated under the Southern Nations, Nationalities and Peoples and Oromia Regional States. This regional difference, which came to effect due to the 1991 territorial demarcation of Regional States in the country, had made the Majangir society split in to different regional administration.

Although regional difference exists among the Majangir society, there still exists a cultural, ecological and adaptive strategy similarity. In terms of some socio-cultural traits,

indeed, there exists diffusion of some cultural traits (like linguistic and marriage practices). Regardless of regional differences, the Majangir often frequently meet each other. However, splitting them into different Regional States would incur challenges upon their livelihood and right over the uses of land and forest resources which historically were believed to be their belongings.

3.2. The Physical Environment

3.2.1. Soil and Vegetation

According to the Land Use and Allotment Study amended draft report (2003), various major categories of land cover has been identified, namely, cultivated land, forest land, wood land, bush land, shrub land, grass land, bamboo, wet (marsh land), and others. The forest areas are mainly found on the eastern and southeastern part of the region on high altitude areas where there is good rainfall distribution.

The total area of the Majangir zone/woreda is 192,200 hectare. In terms of its soil classification, more than 80 per cent of the total area is sandy loam which is deep up to one meter depth. The remaining consist clay and sandy soil which is found in areas nearer to the bordering low land parts. Sandy loam soil is fertile with high productivity as it allows high root penetration enabling air and water easily move. By its characteristics, however, sandy loam soil needs more water which makes it vulnerable to erosion.

With regards to its vegetation Godere woreda, compared with other woredas of the Regional State, is covered with remarkable forest vegetation. The amended draft report also stipulated that the vegetation is uniformly that of broad leafed rain forest characterized by large trees and moderately luxuriant undergrowth, lianas, creepers, mosses and ferns. With descending altitude (and less rainfall) trees are smaller and undergrowth less lush, until gradual conversion in to a radically different type of vegetation, savannah grassland with scattered trees and shrubs.

3.2.2. Climate, Altitude and Topography

The Regional State is characterized with different climatic features. Its average temperature and rainfall decreases from east to west (mountains to plain areas) depending on the agro-ecology of the area. Accordingly the average temperature is 17.5 'C and the mean annual rainfall is 2000 mm to less than 1000mm. The driest months with little precipitation are December to February where the temperature reaches up-to 45'C. The wet season is from May-October where 80-90 % of the total rainfall occurs and the temperature falls at absolute minimum of about 10'C.

Accordingly, the region is divided into three agro-climatic zones, namely *woina-dega, kola* and *berha*. Godere falls in the *woina-dega* agro-ecological zone of the region. The annual average rainfall of the woreda is 1350 mm which runs from the month of March to end of October. The annual average temperature of the woreda is 14 ° C during wet season while in the driest months it reaches about 32 °C

The Regional State is characterized by different topographic features. The eastern part is characterized by high mountains rugged terrain (about 10% of the area lies in the highlands at altitude of over 1500m). The upper reaches have peak-mountains and steep slopes the elevation of which is over 2000. These areas include the highlands of Godere and Dimma woredas (eastern part), east and northern parts of the Gambella woreda. Most of the intermittent rivers and streams originates from these areas and are directed to western direction. The Major streams and rivers in the woreda includes; Godere, Woki, Gelesha, Genji, Tenge and Fejeji rivers.

The central part which is characterized by undulating plain lies between an elevation of 500-1000m and is estimated to cover about 44% of the total area and includes most parts of Gambella, Abobo, Itang, south-eastern parts of Godere, eastern part of Jikawo and some parts of Gog and Jor woredas.

3.3.3. The study site

Of the *kebeles* under the Majangir woreda administration the research was done in one of the *kebeles* namely Goshini. The research site was selected on the ground that the problem of land and forest degradation was manifested and people from other ethnic groups were settled. The nearness and being a site of previous resettlement program in the region, allowed the Majangir settled there an exposure and contact with different categories of people.

The research site, Goshini, is far about 6 km away from the town of Meti. Along with the road (pathway) to Goshini, one can rarely see indigenous forest trees. Instead eucalyptus trees were planted adjacent to agricultural plots which are planted mainly for construction and commercial purposes. The topography of the area is endowed with rugged and sloppy lands, unless reached to the actual settlement where relatively plain land is available.

In the study site, the Majangir live together with people coming from other regions of the country and settled there due to the resettlement program and other purposes. These groups mainly came from the northern part of the country, namely Wollo and Tigray regions. These ethnic groups have different cultural and linguistic background with differing economic and livelihood strategies to that of the indigenous Majangir inhabitants.

3.3. Social Structure

3.3.1. Family and Household

The Majangirs' form of family is of extended family type. Parents live with unmarried children and married son with children. The domestic group, homestead, constitutes such extended family and is a basic unit of the Majangir. Whenever a young man gets married, the bride came to live with him in his parent homestead. Prior to the actual marriage performed, he built his own house (*wui*) and agricultural plot for his family. When a daughter is married, she usually leaves her family homestead and joins the husband's family and live there.


Abobo
Oromia
Gorg

The authority structure can be described as patriarchal as greater power is vested in the hands of the father/male household head. It is the husband or the father who provides leadership and decides on household issues. The family or household as a basic unit is responsible for production, reproduction and socialization of children.

3.3.2. Marriage system

The Majangir provides rules as to how one can get married. Marriage is customarily arranged between exogamous kin groups. A man can create affine bond through marriage only when she is out of lineal kin groups. Therefore, marital association between agnatic relatives is prohibited among the Majangir society. The act of marriage is expressed, in local term, as *wowum*, 'to marry'. The Majangir marriage system involves two marriage types.

The first type of marriage arrangement by the Majangir is locally termed as *mein*. In this kind of marriage the spouses reaches in consensus to marry each other and had pre-marital sexual relationship. Customarily, a young man built his own house (locally termed as *depo*) at a distant from his parent house where he met with his close relatives and his affine. His close friends usually made an arrangement whereby she met him and at times spend the night with him. By the time when the spouses know that the girl's parent became aware of their association (usually which takes long observation where she spend the night or she became pregnant), the girl disappear and hide herself at the spouse's house (*depo*) for about four days whereby the man prepared himself for marriage negotiation with her parent.

Although a man selects his spouses, parents/kinsmen make the customary premarital arrangement and make marriage negotiations with the family of the bride. Elders selected for marriage negotiation is called (*guteres*). In most cases of elders (*guteres*) involved in the marriage negotiations consists of the grooms uncle and close relatives who had strong relations with the groom's family. The selected elders (*guteres*) after making marriage negotiation, the bride price payment is done both in terms of cash and in kind. The bride

price amount is decided and received by the groom's father. Marriage transaction involves a one way transfer of items through a form of bride price both in cash and kind. After marriage negotiation, the bride pay 20 birr in cash and items like axe (*pas*), *gase*, beads (*kodujiac*), spear (*beyu*) for the groom's father.

The second type of marriage arrangement is abduction locally termed as *nyaki*. In this kind of marriage, the spouse together with his close friends abducts the girl while she is going to the river or forest to collect firewood. Abduction of the girl is made after she rejected the marriage appeal by the man. This kind of marriage arrangement involves the same marriage negotiation and transactions like the first marriage type. However, these days, such marriage arrangement is rarely practiced. Rather, church marriage is recently practiced following the introduction of Christianity in the area.

The Majangir follow a patrilocal residence whereby a son brings his wife to his parent's compound. The Majangir society is a patrilineally organized people. One line of descent, the male, is emphasized and most of the important institutions are built around consanguineal and affinal relations in homestead and village. Following the patrilineal descent, the Majangir rule of inheritance provides wider access to the male members. Properties like beehives, agricultural lands including fallow lands and forestland is transferred to his first son so that he could make use of the properties and sustain the livelihood of the household members. Married women from the household would gain support in kind at times of shortage that claiming for the right to inherit properties.

3.3.3. Division of labor and labor organization.

As an economic unit, among the Majangir intra-household division of labor is based on age and sex. Hence, family members are involved in the processes of agricultural production activities or related activities. Men were responsible for agricultural activities; clearing (*gur*), digging, weeding, harvesting) and construct *pale* for grain storage. Making beehives and extraction of honey from the forest is an exclusive responsibility of men.

The Majangir, beyond the participation of members of the household, calls for the participation of their neighboors, kinsmen and others, as needed, while preparing a particular field type. In most cases, *geuli* (new field) and *kate* (mulched) fields which demanded additional labor force for forest clearance. Before the date of mobilizing labor force, the wife prepared the local beer (*tajen*) in large amount so that it can accommodate the expected number of additional man power. Any interested Majangir can get involved in the work and enjoy the local beer and food served in the field. The amount of food and local beer that the household prepared determines the amount of labor which in turn limits the size of land cleared. *Bori* (old field), *nyume* (mulched field) *and gol* (river side field) types usually involved the participation of household members as clearing did not deserve huge labor.

Women beyond household chores prepared food and local drink (*tajen*) and served participants' who participated and contributed labor during forest clearance and land preparation. Women also took part in some of the agricultural activities like planting seeds, harvesting and transporting the harvest for storage. Children owing to their age and sex participate in the whole process.

3.4. The Majangir Economy: An Overview

3.4.1. Shifting Cultivation: Land use system and Land tenure

Shifting cultivation (also called slash-and-burn agriculture, horticulture, and swidden agriculture) is a system of production common in tropical forest environments and savannas, where clearing the land requires extensive labor (Gebre, 2001). In order to clear a plot of land for planting, the Majangir cut down and burn trees and shrubs before the beginning of the rainy season. They only clear secondary forest and trees with big ball diameters are avoided.

The Majangir, using a system of shifting cultivation, mainly cultivate crops like maize, sorghum and sesame. Depending on the fertility of the soil, plots were cultivated for a

few years (3-4). After planting for consecutive years, the plot will be abandoned or left to fallow so as to regenerate its fertility for extended period of time. The fallow period usually takes 10-15 years for soil regeneration and re-used potentially for cultivation of crops.

Among the Majangir, the decline and restoration of soil fertility is measured owing to the types of vegetations grown in the plot. When weed plants grow in the ongoing cultivated land, it indicates that the soil is losing its fertility and hence it will be left to fallow. The emergence of vegetations including shrub and small trees proved that the soil gained its fertility, where one can make use of the plot for plantation. By the time a plot is left to fallow, the household looks and clear a new field to cultivate by clearing a certain area of forestland.

Under the system of shifting cultivation, the Majangir have six different types of fields or plots of land. The first type of field (in local term) is called *gedi* or 'new field'. It denotes that the plot is cleared for cultivation for the first time by a household. The plot had never been cleared and planted before. Annually, each Majangir household makes *gedi* in to their cultivation by clearing off an area of forestland. Averagely, the land holding size of a household ranges from 1-2 ha of land. Land holding size of a household depends upon the number of household labor force involved or that the household managed to mobilize and involves during forest clearance and land preparation.

The Majangir select the new field or *gedi* based on several criteria. They prefer to clear a well-developed forestland for *gedi* preparation. In most cases, they prefer land equipped with secondary forest where big trees are abandoned as it entails the need for huge labor and time to cut. While preparing *gedi* field, the Majangir avoided land which is rocky, sloppy and bare land without forest because of its low fertility and inability to provide good harvest.

Gedi field preparation started in the dry season especially in November, before the rainy season comes. It is prepared by cutting trees and set fire on it and planted mainly with

sorghum or maize. Most of the time household settlement follows *gedi* field which is not far from water access and its nearness to the old fields.

The second field type is *bori or* 'old field'. This is a type of field left to fallow being cultivated for more than 2 years and lost fertility. A newly *gedi* field turned to be *bori* while looning its fertility and production. This field is cleared not from forestland but from secondary growth in its earliest stage in the land that was left to regenerate soil fertility. Usually, *gedi* and *bori* fields are located adjacently to each other as it allows the household for close supervision and guarding planted crops.

In comparison to the labor force needed to prepare *gedi* field, *bori* field incurred little human labor and time. It also demands less time to burn out as the vegetation cover cleared at its earlier stage. Households usually prepare both *gedi* and *bori* fields simultaneously for plantation and were planted with same crops. These days in the research sites, however, coffee is being planted in *bori* field.

The third type of agricultural field is *kate*. This field is located a bit distant from *gedi* and *bori* fields where household's settlement is found. Land preparation of *kate* field involves selection criteria. In this case, land with secondary forest, trees that are not fully grown to mature forest, are preferred. Unlike the *bori* field, *kate* can either be cultivated before as *gedi* or newly cleared from secondary forest. What makes it different from that of *bori* is the vegetation is matured than that of *bori* that involved clearance of the vegetations at earlier stage.

Kate being distant from household settlement and susceptible of attack by wild animals, it deserves close guarding. Men mostly spend their time protecting their crops from damage by establishing temporary house '*depo*' and spend the night there too. Some times, when needed, it involved settlement shift of the family. *Kate* field preparation mostly begins in August and September and is planted with maize and *suri (local term for a sorghum variety)* together.

The fourth one is *nyume* or 'sesame field'. This type of filed usually is located adjacent to the *kute* field which is prepared to plant sesame. The Majangir select a land which had been cultivated before and has been infested with grasses for *nyume*. *Nyume* field is therefore a land that would not be used for *kute* and *bori*. Nyume field is prepared and planted in October. The other type of field, which is not involved in the shifting cultivation cycle, is called *gol*. This plot is located at the across the river side. Gol field is prepared in the dry season and planted with maize.

These days, following the introduction of Christianity, churches locally termed as '*sembete gode*' own land under the church denomination. The Majangir, who are settled in the nearby church and are attendants of the church are expected to contribute labor during cultivation and harvesting. Products harvested for the 'church land' will be redistributed for consumption for participants and attendants of ceremonies during church congregation.

3.5.2. Food Collection: Hunting and Gathering

In addition to cultivated food products, the Majangir subsistence relied on hunting and gathering of animals and wild edible plants. There is however, little gathering of forest products and wild plants. The Majangir collect plant species like mushrooms, fresh greens (the weed Bidens Pilosa), a wild savanna yam and a wild coffee (only leaves and twinges, not berries) and edible fruits from the forest which locally termed as *goboy*, *bahagy* and *gomi*. They also practice hunting few wild animals like pig (*kutur*), antelope (*molu*) for meat to supplement their diet.

Women are usually engaged in gathering wild plants and fruits while men collect honey and hunt animals from the forest. For the Majangir, bee keeping was the underlying economic activity. Honey for them constitutes the highest value and major source of household income. It is part of their tradition that they relay on the number of trees and beehives is considered as wealth indicator among them. Each household, therefore, strive to own number of bee hives as much possible. In addition to the bee hives they possess,

they extract/collect wild honey from the forest. Honey from wild bees in the forest is considered as communal. Any individual has free access to extract the honey. However, the individual who first identify has a full usufruct right over the extracted honey.

3.5.3. Market activities

As discussed earlier, the Majangir production system was subsistence in type and devoted for household consumption without considerable agricultural surpluses. It is therefore insufficient to fulfill basic household needs and demands. To satisfy daily necessities and other material needs, the Majangir frequently interact with their neighboring ethnic groups, mostly, in terms of trade and market.

The main marketable item for the Majangir was honey. In addition, they bring some agricultural products like sorghum, tobacco, fruits and few handmade crafts (cups) made of clay to the market. These days, the Majangir also sell some farm animals, particularly goats and chickens and used to offer coffee to the market. In a close look in to the town of Meti, where the market erected, on can observe that there existed several service giving shops, restaurants, drinking houses and shops manufacturing household furniture from wood and others. However one can hardly find that either of the services was owned by individual Majangir. This shows that trade among the Majangir people was preeminently limited to other farm products as source of household income.

3.5. Ethnic interaction and relations with other groups

3.5.1. Relation with the centre

The Majangir had interacted with their neighboring ethnic groups through trade and market. However, in the past their relation and interactions with the central government was minimal. According to Straube, "except for the coffee-growing areas around Teppi where highland Ethiopians have settled among the Majangir, the national government has not established administrative or police post within Majangir land and the Majangir society continues to function largely independently of interference from outside

authority" (Straueder, 1971: 5). The Majangir interaction and relations with outsiders was a recent phenomenon. In this regard, Sato wrote:

> It seems clear that the 1960s was a prelude to 'Majangir modern history' with the introduction of the American Presbyterian Missionaries started their work among the Majangir. Outsiders' interaction, however, was much pronounced deepened after the Derg took over power....The socialist revolution occurred in 1974 and the Emperor was deposed. Among the main policies of the Derg villagization program had the greatest influence on the Majangir society. It began at the end of 1970s, when an administrator arrived at his post and implemented the policy (Sato, 1997: 567-8).

Currently, the Majangir are regarded as one of the representative ethnic groups of Gambella Regional State. However, their habitat was divided in to three regions: Gambella, SNNPRS and Oromo (ibid: 569). As the ecological condition of the Majangir settlement is quite different from the other groups in the region, Godere became the woreda administrative center, which most recently developed to a zonal administration center being recognized as the Majangir zone.

3.5.2. Relation with other groups

Inter-societal relations can be created and cemented through various means and contexts or areas of interaction. For instance, inter-societal relation can be created and explained in terms of their interaction through trade/market, marital arrangement, labor association, bond partnership and mutual exploitation and management of resources.

The area in which people interact can explain the contexts in which they make contacts and determine mode of interaction inherent to their psychological and emotional makeup. Therefore, depending on this, societal interactions manifest several forms. Cooperation, and competition are, some among others that explain contexts of interaction. The context of the Majangir interaction with neighboring people can also be viewed and discussed based on the above framework. The paper, therefore, addresses and explains inter-group interactions focusing on the area of market/trade, socio-cultural contexts and some aspects of resource utilization.

3.5.3. Market exchange

One of the areas where interaction between groups or people of different origin takes place is the market system. As in any other places, market involves two functions. Primarily, having an economic value, market places serve as a center for commodity exchanges and transactions are made. Secondly, serving as a medium whereby people establish and develop social ties or friendship bonds through time. This holds true for market interaction in the study area.

The market place where valuable commodities and items exchanged is located at the center of the town of Meti. The market erects once in a week (Sunday) from 10 a.m. to 4 p.m. The Majangir, residents of the town and rural kebeles, merchants from Tepi etc attend the market day and exchange agricultural products and different household needs and necessities. The medium of exchange in the market is birr. People sold what they brought and buy items of their need. People usually bargain over the cost of an item until they reached in to an agreement.

The Majangir offer the market with honey, fruits, tobacco, chickens, coffee and hand made crafts like pots. Merchants avail agricultural materials, household furniture, clothes and others. Shops and restaurants in the town provide services for attendants in need. The market interaction is of a symbiotic (give and take) sort of relation based on personal interest of and individual and agreed consent to make an exchange between the two parties involved.

In addition to its economic function, the market allows people to dialogue on different issues while sharing the same services at a time in places like local beer drinking house, tea shops, restaurants and tobacco smoking place in the market. In some cases, there exist a close relationship between town merchants and individual Majangir which is developed through years of interaction based on client-ship (supplier and buyer).

For example, individual Majangir who produces cash crop like coffee tend to supply their product regularly to the same merchant in the town. This long standing relation evolved

to develop bond of friendship based on trust-ship. The situation is expressed in terms of extending hands to help others during the time of emergency. Whenever a Majangir faces financial problem, merchants to whom he supplies his product usually lend him money. Based on their mutual agreement, the Majangir pays back the amount he borrowed in terms of coffee during the time of coffee. Although parties consent entails merits or demerits, when market price increased or decreases between the times of receiving, they tend to maintain their prolonged relationships as it was compromising any fluctuation of prices.

3.5.4. Marriage:

One of the social institution in which inter-group relationship is marked and cemented is through marital exchange and arrangements made between groups. Marital arrangements and practices takes various forms based on the values and norms set by the particular culture of the society. Depending on the contexts of interaction between groups, inter-marriage prompted social cohesion.

Marriage arrangement, among the Majangir, is practiced among exogamous kins. While looking at the current marriage practice among the Majangir of the study area, there exist very few cases of inter-ethnic marriage arrangement, despite the fact that they had developed long history of interaction with their neighboring settlers. According to my informant, inter-group marital association with their Mocha neighbors relatively exceeds by far to that of marital association with the settlers. This is explained, according to the Majangir, in terms of their nearness in terms of living condition and existences of long historical interaction with the Mocha.

3.6. Social change

Since the introduction and establishment of government administration and succeeded resettlement program in 1984 that brought ethnic groups such as Amhara, Tigrians, Kembata, etc had exposed the Majangir society to create close relation and contact with the groups settled in their territory. The condition allowed the Majangir exchange some cultural traits and bond of friendship with re-settlers and town people.

One of the cultural traits that I found and interests me is the emergence of *idir* as a social institution among the Majangir. During my fieldwork in Goshni village, I happened to observe and became part of the event. While walking across the Majangir village settlement, I saw men gathered under a plastic shade while women were busy inside the nearby house. I asked my translator what was going there and he told me that someone has passed away and people gathered to express their sympathy to the family.

Being interested, I took the opportunity to observe the ceremony. We directly entered in to the shade and given a seat. Inside, all were men. Some slept and some were playing gebeta. After spending some minutes, we left saluting the deceased family where I invited two elderly people from the attendants for discussion. They described the event and the emergence of the *idir* as a social institution as follows:

> In our culture there had never existed such institution. In the past, burial ceremony is only attended by family members, kinsmen and close relatives. ...After the coming of settlers in our area, we observed that they have this institution to help each other by the time when one lost member of a family by death where people get together and chat spending at least for three days with the family. In those days, people served attendants with food and drinks. After several observations we learnt that it is a good practice as it shares the economic burden of the family as cost for serving attendants is covered by that institution. This protects the family from unwanted expenses. Then we the elders discussed and decided to form the institution. By now, there are three *idirs* in our kebele. We directly adopt all the procedure and conditions of establishment from our neighbors. We made a monthly contribution of 2 birr per month for each individual member. The *idir* covers all costs expended during the ceremony and individual members are assigned to serve and assist in labor.

Chapter 4

Natural Resource Degradation: Cause of and Effects on the Indigenous Majangir Community

Before examining the impacts of natural resource degradation on the indigenous population of the Majangir, it is important to present an overview of the natural resources (land and forest) conditions of the Majangir settlement area. This would help understand the contributions that the resource potentials of the region attracted and pulled development interventions and the contexts in which those interventions were executed.

The first section of the chapter deals with the major incidences and/or factors that profoundly exerted pressure on the resource bases of the study area that were believed to have remarkably contributed for the depletion of land and forest resources in the region. The section also provides information on related impacts of the problem on the environment and ecological condition of the area and its implications for the indigenous Majangir.

Secondly, the chapter discusses the major implications of resource degradation upon the indigenous inhabitants in terms of customary land use patterns and observed changes in their subsistence and adaptation strategies in response to land and forest resource degradation.

4.1. The natural resource base of the study area: a bird's eye view

The southwestern Ethiopia, compared to other regions in the country, is "extremely rich in terms of natural resources and can be seen as, one of the last resource frontiers in the country" (Wood, 1993: 84). The region is endowed with high and reliable rainfall, fertile soil and forest cover. "The forest, by protecting the soil from erosion, has helped the red clay loams of the area develop to over two meters in depth" (ibid: 84). With regard to the region's agricultural potential and favorable environmental conditions and economic advantage of the resource base, Wood writes:

Because of the environmental conditions, the south-west highlands have a strong comparative advantage in timber production. They contain approximately half of the country's remaining high forests which produce quality timber for furniture and the like.

Within the forests are found important forest products, such as wild coffee, spices, honey, and wildlife. The diversity of plants in the forests shows the extent of the bio-diversity in this region. These have been of considerable importance over the last two decades with the successful identification of coffee genotypes which are resistant to coffee berry disease.

The current economic importance of the south-west highlands is a result of its coffee production which accounts for between 40-45% of the country's total. Most of this coffee is produced by smallholders, although there are a small number of plantations which were run as state farms during the Derge regime. With coffee accounting for approximately 60% of the country's exports, the south-west highlands have an economic significance well beyond the 2.1% of the population which they support and the 1.8% of the national territory which they cover (1993: 85).

Godere, where the Majangir settled, is found in the southwest that is endowed with agricultural potential. Of the areas in Gambella, it is the only *woreda* located in the mid-agro ecologic zone where crop production is relatively largely practiced. Moreover, a sizable part of the woreda is covered with remnants of tropical forest. In addition to these, the rate of urbanization and the size and degree of human settlement is relatively higher than the rest of the *woredas* (GPRS, 2003: 154). Owing to the agricultural potential of the Majangir settlement, producing cash crops like coffee, spices for highland and national market and availability of forest resources for wood based industries, a number of firms had been and are currently exploiting resources which impact resource availability in the area.

4.2. Causes of land and forest degradation

In the past, the natural high forest had covered almost all areas of the *woreda* where the Majangir settled. According to the 1997 E.C report of the *woreda* Agriculture and Rural Development Bureau, of the total area of land (192,200 ha), 127,000 hectare of land of the *woreda* was covered by dense forest. However, in the last two decades, the high forest had been negatively affected due to several factors. The report also indicated that only 60,000 hectare of the land is covered with forest trees currently.

According to my Majangir key informants and focus group discussion participants, land and forest depletion and degradation in the area was mainly attributed to and associated with the introduction of the following development initiatives that were launched within the Majangir territory: State-sponsored resettlement, expansion of State and small-scale private farms and wood-based firms, labor force immigration and spontaneous settlers, agricultural farming practices, urbanization and lack of local/informal institutions in resource distribution.

4.2.1. State sponsored resettlement in the 1980's

In response to the 1984 famine, the government of Ethiopia had launched and implemented several resettlement programs in different parts of the country. Resettlement, as development option, by then was meant to address several ecological, economic and social issues. As Abula wrote,

> From an ecological perspective it was seen as a way to redress population imbalances and reduce population pressure in the highlands; from an economic standpoint it was believed that resettlement could help to increase productivity and make use of supposedly under-utilized fertile lands; and from a social point of view resettlement was seen as a way of providing land to those without it, to settle pastoralist, and remove unwanted urban unemployment (1990: 121).

In order to address the above objectives of the resettlement program, people from the drought-affected regions were resettled to the south and southwest region where arable land was plentiful. In so doing, by 1986 the government had resettled more than 600,000 people to three settlement areas. More than 250,000 went to Welega; about 150, 000 settled in the Gambella area of Ilubabor; and over 100, 000 went to Pawe, the largest planned resettlement in Gojam and largely sustained by Italian financial support. In addition, another 78,000 went to Kafa, Shewa, and western Gonder (Gebre, 2001:19).

The resettlement program involved three schemes, namely large-scale, low-cost and integrated schemes. All the resettlement schemes were prepared by clearing a large amount of forestland, although variations in the amount of land being cleared existed (Alemneh, 1990). In addition to the 1980's resettlement schemes, Gambella Regional

State hosted re-settlers from other parts of the country. Quoting from UNDP (1993), the Regional State draft land use/allotment policy indicated that "some 42,897 people settled in Gambella, Gog, Jor, Abobo and Godere *woredas*. Late in 1993 there were 13,000 settlers in Abobo with unknown number in Godere *woreda* "(GPNRS, 2004:44).

In Godere woreda, some households were resettled at Chemi *and* Goshni *kebeles*, which are far about 4 and 6 km from the administrative town of Meti. From the Majangir people perspectives in the research site, the in-coming of re-settlers in the area had negatively affected the environmental conditions of the area. The general situation of the resource in the areas and implications of the resettlement program, according to one informant, was as follows:

> Prior to the arrival of the re-settlers, both areas were covered with dense and intact forest trees. Following the incoming of the re-settlers, huge tracts of forest land were cleared and cut for different purposes. The major incidence of forestland clearance was for the preparation of settlement and agricultural land for the re-settlers. The demand for trees for construction of houses, and for fire (energy supplies) had also contributed for the depletion and destruction of the forest in the areas.

4.2.2. Expansion of state and small-scale private investment

The other factor that contributed for forest degradation in the Majangir area was the expansion of state and private farms and introduction of wood based industry in the area. According to experts from the *woreda* Agriculture Bureau, the reason behind the expansion of agricultural investment was the following:

> First and foremost, the agricultural potential of the area was attractive. This agro-ecological condition of the area which is free from a coffee beery disease, fertile soil, good rainfall and vegetation cover (for coffee tree shades and timber production) had made the area best suited for such investments on coffee and timber production. The other factor related to this was that the socialist government policy to intensify agricultural production for national and international exchange market had attracted government and private organizations to invest in the sector.

One of the organizations involved in large-scale agriculture was the Teppi Coffee Plantation Enterprise. The plantation was established by the government for the

production of coffee for export trade. The commencement of the coffee plantation had demanded the clearing and timming out of major forest species/trees with few exceptions of those species favorable for shading coffee plants. In addition, the Enterprise has been expanding its landholding size by passing its original territory and encroaching into adjacent forests. The practice had worsened forest degradation of the area. The Regional Land Use and Allotment Study draft paper portrayed the situation as follows:

> The Tepi Coffee plantation project apart from its initial holds of 4444 ha of land cleared incredible amount of forest land by the farm itself and its laborers living inside the project. On the average basis there is an encroachment of one kilometer to the natural forest from every direction of the coffee plantation. (GPRS: 154)

The document, based on the information from the *woreda* Economic Development and Social Service Office also indicated that "about 7090 ha of forestland was cleared by the coffee plantation in the years 1986 to 1994 Ethiopian calendar" (GPRS: 154). From the figures indicated above, one can easily understand that, the introduction of the project in the Region had affected the forest coverage by illegal clearing, an approximate area of two-fold from its initial stage with in eight years time.

The other mechanized industry, which was involved wood-based production, was Bebeka Timber Plant. It was a government owned industry producing timber for household and office furniture. Established during the Derg regime, the plant was situated in an area of dense forestland between two adjacent *kebeles*, namely Akashi and Goshni.

The Plant, based at Akashi *kebele*, used to cut down forest trees that were appropriate for timber production. Mother forest trees from selected species that were estimated to have more than 50 years of ages, were randomly cut. In the extraction of eligible tree species for timber production, huge machineries were deployed. In search of such types of tress, however, it destructed other undeveloped forest trees and species that are not appropriate for the production of timber.

Recorded data, which neither provides the landholding size of the Plant in its inception nor during the time of phase-out, was available. Alike the condition with the coffee

plantation, lack of such data make problematic to quantify and analyze its effect on the forest in the area. In addition to the Bebeka Plant, private firms were also engaged in wood production in the area (see the table below). Unlike Bebeka producing timber, others transported huge ball-diameter trees to Addis Ababa where timber and other products were manufactured.

Table 5: Wood-based firms in the area

No.	Name of the firms engaged in wood based products
1	Bebeka Plant
2	Hiji Ibrahim private company
3	Siyoum Bradgilgn private company
4	Compensato private company
5	Viniyer private company

Table 6: Forest trees cut by wood-based companies per cubic meter by year

Year	Amount of wood extracted in cubic meter
1987	5311
1989	5998
1990	3438
1991	3390
Total	18,137

Source: Woreda Agriculture and Rural Development Bureau (2000)

Table 5 and 6 present the names of companies that engaged in wood-based production in Godere woreda and the total amount of wood that was logged from the area per cubic meter and year by those companies. However, there is lack of reliable data with regard to their allotted landholding size of the companies. In addition, recorded data on the amount of wood extracted lack consistency. It only provides quantity of wood transported for four years only.

The introduction of these wood-based investments, as indicated above, had extracted considerable forest resource of the area. In addition, following the commencement of the industry in the area, illegal logging had aggravated forest clearance. Illegal logging had been widely practiced by individuals for the local market demand. The expansion of illegal small scale logging activity, using saw and manpower, as a source of income had negatively affected the forest resource. Once forests were opened up by logging action, people started agriculture by clearing the remnant trees and established settlement. Both legal and illegal logging had posed serious risk to the existing forests remnants of the region that were old-grown forests and remained ecologically intact over significant areas.

The expansion of illegal logging in the area, according to my informant, is related to the limited manpower which jeopardizes the Bureau's effort to mitigate the effects of illegal logging in the woreda. Although, the Natural Resource Conservation and Management Team under Agricultural and Rural development Bureau exist with a mandate to oversee natural resource issues, the problem still continues in the area. Strengthening the team with sufficient manpower and curb the problem deserve prior attention, the informant added that, the Bureau still suffer from limited human resource.

4.2.3. Labor force immigration and spontaneous settlers

The other aspect that had a paramount effect on the forest resource of the area is the increasing trend in spontaneous settlers and labor migrants. The coffee plantation, as it is labor intensive, demanded more human labor for land preparation, planting and harvesting production. As the supply of human labor in the area was minimal, the enterprise imported seasonal laborers from other places. In addition to its permanent workers that hold sizable arable land for the household, among the seasonal workers some remained there by their own and started agriculture. Such spontaneous settlers had also been observed in areas where people resettled by the government.

Although, available data on new influxes in the area hardly exists, according to my informants, the number of spontaneous settlers in the area has been tremendously increasing from time to time. Like the previous re-settlers, the increasing in the number of these spontaneous resettlers (self-initiated) demanded additional land for the household which provided pressure on the land and forest resources of the area. One elderly informant stated the situation and the process as follows:

> These days, several new faces were emerging and it become normal to observe a number of people residing in one house. In the first phase of their arrival the people work together on the previous settler's land. After some times, new arrivals after securing agricultural land and established independent residence, they called for family members to join and live. This, however, had not been the case some years before.

4.2.4. Agricultural farming practices and resource exploitation

Beside the negative implications of those development initiatives on the land and forest resource in the area, the agricultural system and practices of the Majangir and re-settlers had also caused and contributed to aggravate land and forest resource degradation. The Majangir subsistence system is based on shifting cultivation and hunting and gathering of forest products. This livelihood system demanded a periodical shift of agricultural field. Each year, households bring a new field for agricultural purpose. Land is cleared by cutting and burning trees and shrubs to prepare farmland. After certain period of time usually between 2-3 years of cultivation, households shift to a new area leaving it to fallow.

One of my key informant, non-Majangir, forester/agriculturalist and employee of the Agriculture and Rural Development Bureau, contended that the widely exhibited system of shifting cultivation in the area had affected the natural vegetation cover and creates an in-balance in the eco-system/environment. Accordingly, he regarded shifting cultivation as a threat to the natural environment of the region.

> By its nature, shifting-cultivation as a mode of subsistence demanded a vast area of land and mobility of people in search of agricultural land covered by forest. Clearance of forest and the long period for regeneration (10 + years) by every

household is a common practice. A household owns at least two separate agricultural lands, one around his homestead and the other a big tract of land far from his actual settlement/house. The size of land he owns in the second field type is unspecified. It only depends on the number of labor force he managed to involve during land preparation which is determined by the quantity of the local drink prepared to serve participants. The more participants he managed to accommodate, more land is secured by clearing forest land. The technique applied during forest clearance also another factor for deforestation. After clearing the forest land, they set fire in order to save time and energy. In most cases, the fire consumes and damages a vast area of forest area than the individual intends to clear. Since no techniques of controlling fire being applied, it usually goes beyond their capacity damaging huge forest areas. In addition to this, the fire people used while collecting honey during night time had been burnt and damaged the forest.

In accordance with the above discussed causes and opinions, the draft Regional Policy Document, 'Rural Land Administration and Use Proclamation', also clearly stipulated and figured out the extent and causes of resource degradation and the contribution of shifting cultivation practice in the region as follows:

> The Regional State currently is facing critical natural resource degradation and destruction owing to unwise uses of the resources. To this effect, about more than 40,000 ha and 46,000ha of forest land area is being destroyed at Bonga and Pugnido and Dimma area respectively due to south Sudan refugees. In addition, more than 400 ha of forest are destroyed by shifting cultivators and employees by mechanized farming institutions in searching for new arable land. Furthermore, more than 60,000 ha of forest destroyed annually due to fire set by farmers and others.

In addition to the shifting cultivation, experts argued that, the intensive farming practice of the re-settlers (farming rugged and sloppy land) had also contributed and made the soil vulnerable to erosion and aggravates land degradation in the future and further impact household agricultural productivity leading to household impoverishment and vulnerability to food self insufficiency and poverty. Although the Draft Policy Document and expert's argument reveals and consider shifting cultivation practice have had negatively affected the environment, the indigenous people perspective negate such views. The indigenous people perspective and critiques on the issue will be presented later.

4.2.5. Urbanization: the development of Metti town as center of government administration and market place

Metti is the centre and seat of both the Godere *woreda* and Majangir zone administration and is divided in to two *kebele* administrations. Metti, with a population of 5704 people, is the most populated *kebele* in the *woreda*. Metti is closer to the town of Tepi (one of the known coffee producing areas in the country) in SNNPRS about 14 kilo meters. Metti hosted people from different ethnic and occupational background. Metti also served as a market centre for people coming from different *kebeles* and neighboring town. While moving in and around the town, one can learn that the area was covered with forest trees after observing several trees with big-ball diameters cut some years before.

Having observed this, I went to one of my key informants, Ato Sharo Shanta, 78, living since the establishment of Metti. He told me the emergence and development of Metti as follows:

> The Majangir occupy vast territory covered with forest. There were few people settled in a distant and there were no other people (other than few people from Micha) settled in the area. It was during the Emperor regime, which effort were made to demarcate the border with south Sudan, that people started to settle in the area. In 1940 E.C Prince Asfaw Wossen bought a land with an approximate area of 1500 ha, which was densely forested and by then regarded as 'yezelan meret' (unutilized or unused land). Metti, following people's settlement emerged in 1950 E.C. After permission from the Prince, a market place was erected in 1951 E.C. Prior to Metti a small market centre was situated at a place called 'Teleku-metti', which is about 15 km east-ward. Following the market, the number of people increased, the market expanded and tax payment started. As the population increased, people construct houses by clearing trees and Metti goes growing. The first primary school was opened in 1964 E.C.

Pursuant to the development of infrastructures, social amenities and residential area that a particular town deserves, existing forest trees around the town were cut down and removed. In line with the expansion of the town, people from other parts of the country came to settle and live as government employee, merchants and the like. Since then, the population of Metti has been increasing and the size of the town by then stretched from its origin to its present station.

Favored by its favorable agro-ecological conditions of the area, merchants in the town and other people progressively engaged in coffee production which demanded forestland clearance in the vicinity of the town. These days, small-scale coffee farms overwhelmingly addressed all rural *kebeles* of the *woreda*.

There were many factors contributing to deforestation in the Majangir. Some of the factors are more important than others while some were more important in the past than they are today. From the foregoing discussions, the causative factors were attributed to different but interrelated factors that complement ongoing forest depletion and degradation. The first factor is associated with the growing and increasing trend in the size of the population due to increasing number of migrants. The introduction of development interventions by the name resettlement and agricultural expansion necessitated the incoming of people from other parts of the country and increased the population size.

The population growth, mainly due to immigration, in effect brought and exerted pressure on the available forest resource base of the area. The commencement of those initiatives, primarily, had increased the demand for arable land for agriculture both for resettles, organization engaged in agricultural investment and their employees. In addition, coupled with the search for land, the urbanization process by attracting people involved in service delivery increased the demand for wood for construction purposes and fuel energy that resulted in the clearance of forests.

The other factor that contributed to the problem was the influence of the market system. The introduction of large scale coffee plantation engaged in cash crop (coffee) production for national and export trade had motivated and flourished local small-scale investment in coffee production. Household farmers and merchants from the town, looking at the growing marketable demand for coffee started to look for additional new forestland which further aggravated forest depletion. Furthermore, the introduction of wood-based industry for timber for household furniture for local and national market had induced the expansion of illegal logging activities. All these population and consumption linked

factors generated resource degradation by escalating demand for the resource while the existing resource supply base of the area get diminished as the demand exceeded the time of regeneration of forest supply replenished.

The other factor, which experts and professionals mostly argued and regarded as improper farming practice, that contributed to the problem was shifting cultivation mode of subsistence of the indigenous Majangir. Owing to the low population size of the Majangir having a vast territorial occupation and shifting cultivation as a livelihood strategy, the carrying capacity of the resource base was self-sufficient.

Under shifting cultivation system, the Majangir did not clear land having well developed forest. Secondary forestland with bushes and undergrowth are preferred while preparing land for agriculture. The fallow technique applied is also one aspect where forest is left to regenerate its vegetation cover and fertility. The notion, however, emanated from a failure to understand the socio-economic system clearly and disregarding those factors that enshrined the carrying capacity of the resources. Rather, what aggravated the problem was on going competition over resources and the migration of the Majangir towards areas of available forests in response to population pressure within their territory and maintains their subsistence strategy that highly depended and associated with forest resources.

> In tropical forests in general and in tropical rainforest in particular shifting cultivation is and has been very important. According to Sponsel et al. (1996) shifting cultivation is, under traditional circumstances, the only type of farming that has proved sustainable in the long term in tropical rain forest ecosystems. When traditional practices are used at moderate or low population densities, they are usually consistent with the regenerative capacity of the forest. However, when conditions change, for instance from subsistence farming to cash cropping, or due to an increase in population density, shifting cultivation can contribute to deforestation. (Sponsel et al. 1996: 24)

The other factor that contributed to resource degradation was the absence of regional legal/policy framework over land use and distribution. Like shifting cultivators in other parts of the country, shifting cultivators in the Gambella region, had been denied of their right to access and control over land. The manner in which those state development

interventions (resettlement, agricultural expansion) had been executed disregarded the socio-economic system and hardly incorporated the opinions and consent of the local/indigenous people.

Due to the prevailing connotation and misconceptions, upon land under shifting cultivators' territory, and absence of such legal policy framework ensuring their rights, the Majangir settlement and territory had been subjected to territorial intrusion and encroachment by those development interventions that resulted in resource degradation. In analyzing the resource potential of the region and identify plausible causes and extents of natural resource degradation, the draft policy document revealed that absence of regional policy document and legal framework to implement was a major factor that aggravated the problem. The draft document stated it as follows:

> Despite the fact that several community based and participatory natural resource management and conservation interventions were made so far, efforts did not meet the objectives and bring change to the desired level. In addition, the absence of technical body vested with the responsibility to administer and allocate land to beneficiaries, witnessed inefficient utilization and depletion of natural resource base of the region. On top of this, absence of policy document on 'Land use/allotment and Administration' becomes the first and foremost factor behind the problem.

During the research period, it was found out that shifting cultivators receive policy attention by the Regional State. The Regional State is currently in a process of adopting Regional Land Use and Allotment Policy. Preparing the draft policy, according to my informant and a focal person from Regional Agricultural and Rural Development Bureau, representatives from the local community, experts and professional working in the region, were incorporated from the initial stages of the preparation of the document. In addition, an external consultancy firm, having a responsibility of conducting preliminary field research, facilitating public dialogue through different workshops, took part in the whole processes of designing the draft policy.

Although the document seems at an early age and yet to come in to intervention level, it recognized and incorporated the different socio-economic systems that exist within the

Regional State. Unlike in the past, the inclusion of the different socio economic systems will have paramount significances in mitigating further degradation, promoting efficient and effective utilization of available resources for societal and regional development.

4.2.6. Lack of institutional arrangement in resource distribution

In societies, there are institutions that govern the behavior and actions of individual members, provide with rights and duties. In relation to natural resource management, Elizabeth (2001) defines institutions as follows:

> Institutions are organizations, but they also include the rules and regulations that determine access to natural resources. They define the access that a group has to natural resources, and they also define who has rights within that group. Institutions determine who makes use of which resources. Individuals, groups and organizations are not all situated equally in relation to resource use, and institutions define their differentiated access and use. Above all, therefore, institutions are about power. They define who are using the resource (and who is not) and the extent of that use (Elizabeth, 2001:4).

These institutions can be formal or informal. For example, in Ethiopia, formal institutions could include state-organized Peasants' Associations and Service Cooperatives, and state legislature determining access to land and water. They are institutions backed up by official legislature. Informal institutions include kin networks, local cultural administrative structures (such as the Boorana 'traditional' organization), customary rights to resources, and indigenous practices of grazing and use of forests (Elizabeth, 2001:4).

In the Majangir context of resource management, the use of informal institution except lineage membership is minimal. Natural resources are communally owned. Member of a particular clan/lineage has the right and free access to use the resource. Although communal ownership of resources is recognized by the Majangir, there is also no informal institution that is mandated with distribution and management of resources. According to Majangir informants, the manner and pattern in which individuals access to natural resources is explained as follows:

Previously, there was forestland which were unoccupied. Any Majangir was entitled to occupy and cultivate his own plot by clearing forest that was not occupied before. Individuals are free to use un-cultivated land by going a distant with in his lineage territory. No one dictates him where to look for land for cultivation, unless he demanded forestland in neighboring lineage territory where he looked for permission.

The absence of such institution has aggravated resource degradation. Individuals using their right to free access of resources started to involve in illegal selling forestland. Currently, by the pretext of leasing, illegal land selling (resulting from population growth through immigration and increasing demand for land) is widely practiced among the Majangir. In addition to the lack of informal institutions in resource distribution and management, the other aspect which needs articulation is the Majangir's historical contexts of reaction over incidences of resource degradation and encroachment.

According to Stauder (1971), the Majangir reaction to any territorial intrusions by outsiders was passive, to flee than to defend their territory. He also noted that this was because of lack of organized central political institution, dispersed patterns of settlement and their inherent traditional perception the resources are abundant constituted their action to migrate to other unoccupied places than confront the situation.

The absence of such organized central political institution in the Majangir that determine individual's right to and access over forestland has induced competition among members of a lineage to lease or illegally sell forestland which is recognized under communal property. Besides, lack of organized central political institution to protect communal property from external forces which demand collective action of members, absence of informal institution in resource distribution and management has also been contributing factor for the resource degradation of the area.

4.3. Effects of Natural Resource degradation

Forest resources of a region have a diverse ecological and environmental importance. Vegetation affects the climate in several different ways. It maintains and balances the climatic condition of the area and the region at large. Forests also serve as a living

storehouse of biodiversity. Reduction in the structural diversity of the resource inevitably results in the extinctions and detrimental effects upon the flora and fauna which had a life-sustaining effect to human beings.

In this regard, the rapid depletion and degradation of land and forest resources, in the Majangir area, due to the above reasons had tremendously affected both the ecological and environmental conditions of the area and indigenous inhabitants' and the of the study area in several aspects.

4.3.1. Ecological/environmental implications of degradation

A. Soil erosion vulnerability

Forests in upland water catchments areas stabilize soil on sloping land by breaking the impact of falling rain and binding soil structure in their extensive root systems. Forests also regulate water flow by soaking up moisture and releasing it in a controlled, regular supply. Deforestation often disrupts the hydrological cycle, causing year-round water flows in downstream areas to be replaced by destructive flood and drought regimes. Water that has not passed through the slow forest "filtration" process also tends to be more impure; drinking water supplies for downstream communities then require additional treatment. In addition, irregular water flows seriously disrupt supplies to urban populations and irrigated farmland.

Soil erosion rates increase sharply with logging, though removal of ground cover, rather than canopy cover, appears to be the chief determinant of erosion. According to a summary of 80 erosion studies, erosion rates under slash-and-burn agriculture in the tropics are 10 times higher than in natural forest. In plantations where weeds and leaf litter have been removed, erosion is more than 100 times as great as in natural forest. Soil is also exposed to wind and rain, therefore, increasing erosion. Loss of root structure can cause landslides and crop losses; silt raises riverbeds leading to floods; siltation on inland water bodies and coastal areas; depletion of biotic species inland and in the coastal areas; and, loss of forest biodiversity (FAO:1983)

Although quantifiable data is not available with regard to the rate of soil erosion, experts argued that the problem of soil erosion was not threatening. For them, this was so the existing traditional farming practices (using hoe) and adoption of permanent planting of cash crops helped the soil maintain its structure. However, with the continued rate of deforestation, cultivation of sloppy and marginal lands and declining fertility of the soil, the problem would be devastating. In accordance with the experts view, the draft Regional land use policy indicated that:

> In the Majangir settlement area there is a risk of soil erosion in areas where there is land pressure, especially people have settled from other region and land occupied by Mocha nationalities. In these areas, there is an increasing loss of soil fertility owing to the continuous tillage. Furthermore, in Godere *woreda* where there are resettlers, sloping land are cultivated which are no more used as communal land (GPRS, 2003: 33).

In general, from the Majangir informants' perspective, natural resource degradation has affected the environmental and ecological condition of the area. Information from the focus group discussion reveals;

> In the past, the area we are living in receive good amount of rainfall. It rains almost throughout the year. We did not experience shortage of rain. It is recently that we come across with shortage of rain in our area and we come to understand that it is because of the degradation of forest. In 1998 we faced crop failure due to rainfall shortage and increasing temperature. Most of our sorghum and maize fields dried out before giving yield. As a result we could not manage to harvest the expected amount of yield. Subsequently, most Majangir households were given relief of food items

B. Growing deforestation leading to desertification

The other effect of forest degradation in the area is climatic change which aggravated deforestation and further induces desertification. Associated with the decline in the coverage of forestland in the region, the climatic condition is getting changed, getting hotter than ever before in the Majangir experience. People contended that the weather condition is to be as that of the neighboring low land, saying it is about to be turned to a desert in the near future, if continued with depletion of the forest with such pace. According to the expert form the rural development bureau, desertification is significantly increasing in the area. The problem is apparently much pronounced while

moving to wards the west, were settlements which are adjacent to the low land. The expansion of the problem was explained in different ways.

The first, for him, is that the declining of coffee production. The amount of coffee produced in some places showed decreasing trends than in the past. The decline in the amount of coffee production is largely attributed to the increase in temperature affected the characteristics of the soil to preserve moisture that is necessary for coffee to bear fruits. The second condition that explains the problem is the fall in the volume of Water in the rivers and streams. From time to time the water level gets declining, which can aggravate further desertification. For example, the amount of water discharge of Waki River is declining. If continued, the problem will create shortage of potable/drinking water for the people.

Besides, the ongoing forest clearance around Yeki *kebele* which is adjacent to Abobo woreda where the biggest dam for irrigation (Alwero Dam), has impacted the amount of water entering the dam, causing decline in the water level of the dam. If the situation left to continue, the deforestation by causing high rate of soil erosion and flooding will reduce the volume of water it accumulate. This in turn, involves two concerns. First, the reduction in the volume of water will hamper the capacity that the dam intended to irrigate will decline. Secondly, in the long run the dam will be unable to discharge and become out of use, which entail the loss of huge amount of currency invested to construct the dam.

4.3.2. Effects on the indigenous people

Besides its environmental and ecological implications of deforestation on the natural resource base of the area, immigration of people from other parts of the country for several reasons witnessed and had exerted pressure on the resource base and aggravates land and forest degradation. Furthermore, it has also impacted the socio-cultural, economic and aspects of the way of life of the indigenous Majangir inhabitants.

A. Displacement, Dispossession and resource isolation

One of the impacts that the Majangir society experienced in their history is displacement and migration. Land dispossession and displacement of the indigenous people is much attributed to the allocation of land for private investments and state sponsored resettlement program carried out in the area of the Majangir territory since the 1950's and onwards.

Besides, the increasing trends of immigration by spontaneous settlers and small scale-private (not licensed) agricultural expansion of cash crop (coffee) production by highland settlers in the nearby town of Metti has increasingly contributing for the problem. In all the cases, the increasing demand for arable land, fuel and construction materials have exerted a disastrous effect on the existing forest resources in the region.

Due to the executions of several development programs within their traditional territory, they used to migrate to other places where non-Majangirs' are settled and forest resources are available for their subsistence. According to my informants, most of the Majangir currently living at Gouhni came from other places in the eastern side. The informant explained the Majangirs' experiences and territorial occupation as follows:

> Long before the area we occupy a vast territory of land. It was covered with dense forest. The forest provides us with food for our daily consumption and exchange in the market with people of other groups to satisfy our material needs. From time to time however the resources are decreasing. As we depend on the forest for our living, we were forced to change our settlements to other forest areas.

Generally, the Majangir attributed that their displacement was due to the increase in population density in their settlement area and territory. The general situation, with reference to their past experience, of displacement and migration pattern is explained by an elderly as:

> Previously, some years before (20 and more) we lived separately down the gorges. It is rare to see people from different ethnic groups having a settlement with the Majangir community. We only met those people in market places where we took honey to exchange and buy materials we need. These places were very far from our home and settlement areas. In preparing new agricultural land and extracting forest resources, our people frequently shift their settlements and travel long distance. One might shift his place when he think that his agricultural products from his land is declining whereby he decides to move to other forest areas and clear a fertile

land for his agriculture. In those days where we move from one place to the other, we had never met other people who settled in the forest other than a Majangir. These days, however, it becomes common experience to see people from other ethnic groups, who are totally different in terms of language and culture. The incidence is much pronounced around small towns, settlement areas and large-scale agricultural sites. The number of people coming to our area had increased tremendously through years. Due to such incidences, we were allegedly forced to migrate to the western areas where forest resources are available.

B. Decline in forest products and traditional supplementary activities

The Majangir socio-economic system depends on the forest resource base for sustenance. Within the forests are found important forest products, such as wild coffee, spices and honey, and also wildlife. They hunt animals and gather wild fruits and collect honey from the forest. The disappearance of the forest resource for them is largely is associated with their existence. One Majangir elder explained that "if there is no forest, there is no honey and from where one can get money to pay tax".

The Majangir, in the past, used to supplement their diet from what they hunt and collect from the nearby forest. Many informants noted that the traditional subsistence strategy, hunting and gathering of forest products, that supplement their agricultural production has declined due to the widespread deforestation activities.

The Majangir had a long tradition of exploiting edible wild plants mushrooms, fresh greens, a wild savanna yam and a wild coffee (only leaves and twinge, not berries) from the surrounding natural environment. The clearance of forest for agricultural activities reduced the indigenous peoples' traditional access to such wild edible plants. Following deforestation, these days, the Majangir practiced little gathering of forest products and wild plants by traveling long distances away from their permanent settlement. Strongly, most Majangir informants concern revolves around the declining production of honey collection with deforestation. One of my elderly informants stated the effect of forest depletion on beekeeping as follows:

> Bee colonies which were abundant before in the nearby forest are now become a rare phenomena unless on travels long distance to the west where forest is found. The situation has forced Majangir men consume and waste their time for

other purposes. Collecting honey and hanging bee-hives in such distance usually take a man about three days, spending the night there. In addition, the volume of honey extracted from a beehive or collected from wild bees is getting declining as tree species were diminishing due to deforestation occurred in our area.

In general, the introduction of development schemes and associated causes of forest degradation beyond displacement and land dispossessions has weakened both social and economic significance of the customary subsistence strategies of hunting and gathering/collection which was embedded to their culture and tradition.

4.4. Changes in land use pattern and adaptive/livelihood strategies

4.4.1. Introduction and adoptions of new crops

In a close analysis of the Majangir mode of subsistence, some adoptive strategies were observed among households in the study areas. Customarily, the Majangir mode of livelihood, shifting cultivation, and hunting and gathering, is of subsistence in type. Except honey, having primarily marketable value for the Majangir economy, food production through a system of shifting cultivation do not yield surplus than household consumption level. They mainly cultivate maize, sorghum, sesame. No livestock other than chickens are kept because of the high tsetse fly challenges in their surrounding.

The ramifications of land and forest depletion and degradation that resulted in scarcity of those resources, decline in agricultural productivity and restricted movement in search of forest land, the Majangir residing near the administrative town, Meti, moved towards to a sedentary settlement type. The situation has encouraged or induced the adoptions of different fruit trees and cash crops. Fruit trees like mango, banana, papaya, sugar cane and coffee were adopted and produced by households in the study area.

These newly adopted fruit trees and crops, beyond household consumption are gaining market value as a source of household income to subsidize other household needs and demands. In the market days in the town of Meti which is held twice a week on Sunday and Tuesday, one can openly observe the Majangir carrying those fruits and cash crops for market transaction.

In my stay in the study areas, I happened to observe that the Majangir rarely own livestock. Very few households adopt cows, goats and chickens. Although, according to my informants, the ecological conditions of the area do not favor livestock production the number of goats and chickens showed improvement from time to time.

4.4.2. Sedentarization

The other aspect in which resource degradation impacted the indigenous people was the development of sedentary settlement. The Majangir socio-economic system provides access for periodical movement and shift of household settlement in lieu of a shift in agricultural fields when found necessary. Following resource degradation and scarcity, the Majangir tend to move towards sedentary lifestyle and settlement. They particularly settled in forestland near to towns. In the research site, being closer to the town of Meti, one can find Majangir household settlements abundantly side by side with highlander settlement.

The adoption of new crops especially growing cash crop (coffee) and other fruit trees with exchange value indicates a sign of permanence in the Majangir settlement pattern. Besides, the emergence of *idir* as a social institution base on membership of people in particular village settlement also shows the adoption of sedentary lifestyle which demanded active and timely participation of members.

4.4.3. Land leasing practice

With the growing population pressure for arable land by outsiders, the customary land use pattern, leaving land to fallow for certain extended years, is getting changed. These days, it become inherent that individual Majangir who owns fallow lands begun to rent out fallow fields to settlers, spontaneous settlers and town people for cash crop plantation. In local terms, *phalli* refers the land renting or leasing practice.

According to the information gathered during a focus group discussion held at Goshni village, the emergence of the practice of *phalli* and the rationale behind the practice was stated as follows:

In previous days, we did not know and exercise such land leasing practice, *phalli*. Customarily, we used to leave the land *gedi* (after being cultivated for three consecutive years) to fallow until it regenerate its fertility. The time to regenerate its fertility depends on the types of vegetation growing in the field, which on average took 3-5 years or more. The land, after regeneration, is owned by the individual who organized labor, cleared and cultivated previously. In our customary rule, that individual has the right to transfer to others in need for some periods upon to his permission and agreement. In those days, transferring land to use for someone had been made with full knowledge and permission of the owner. Transferring land to others in terms of money was totally unknown in our community. Currently, however, renting land (in most cases a *bori* field), which is left temporarily to regenerate its soil fertility, became a common practice in our village and even among people in other villages.

The land leasing practice (*phalli*) involves time dimension over using a particular land base on the parties' agreed time frame. The land is rent either temporarily for a fixed period or permanently transferred. In both cases, parties involved reached into an agreement about the amount and kind of payment that land contributor is supposed to gain. In the case of contractual agreement on temporary basis, there existed two conditional approaches following different payment systems. In both cases the Majangir (land owner) did not contribute any labor than land and gained the agreed amount either in cash or kind. The proportion and timeframe of leasing land depends on the parties' agreement and therefore differs from individual to individual.

The first type of temporary or contractual agreement involved proportional sharing of agricultural products. The Majangir only contributes land while the individual partner contributes all agricultural inputs and labor needed. The Majangir (land contributor) in this case, gained half of the agricultural products being divided between the land contributor and the partner. In most cases, the contractual agreement in such case will take a prolonged time (not less than 5 years) and sometimes for unspecified times.

The other form in the temporary contractual agreement to use the land involves money as medium of transaction than agricultural products. In such case, land is leased for a certain period, for not more than 2 years. Mostly, people agreed on monetary basis, where the land contributor hardly gained agricultural products than money. This kind of contractual land leasing practice evolved to the conditions of permanent leasing practice.

The permanent land leasing practice is a condition where the Majangir (land owner) transfer a total land user right to his partner. The practice is done informally where both individuals with the presence of selected elders involved. One elderly informant, whom permanently leased their holding, explained the process in the following way:

> The negotiation is made far from the village, in the nearby forest and the amount of money is agreed on with the presence of witnesses from both sides. Usually, in the initial phase of the agreement, parties agreed for temporary contract with a given amount of money for a fixed period. With in that context, parties may reach to the second phase of agreement whereby 'ownership' or user right over the land be transferred from the land owner (Majangir) to the other. The two parties, before the total transfer of user rights on the land additional payment will be made. So as to ensure his user right transferred, the land buyer demand written testimonial of their agreement signed by both.

Although the land policy of the State ensures land as a State property, informal land leasing and transaction on permanent basis is being made with consensus of parties involved. After an agreement is made, the buyer make his user right over the land formal after official registration is made under the local administration and pay tax accordingly thereby protect his rights from further claims by any individual. What is interesting is that, official registration is done using the individual Majangir rights to transfer his and his descendant's property as the culture and rule of inheritance permits him to do so.

Several Majangir currently lease and/or sell fallow agricultural field (*bori*) and un-cleared forestland to others and migrate to other places. Informal leasing and selling of land become a common practice and continue to encompass selling forestland which the local and Regional government recognize and reserve as State property. In most cases such forestland is sold for town business men for cash crop farming. Several governments' forest reserve is currently appropriated by farmers. This has also induced tension among those business men and government workers working in the areas of forest conservation and protection.

Owing to the underlying causes of resource degradation, the forest resource had been depleted and degraded. The problem had affected both the environmental/ecological conditions of the area and the local community in various ways. In spit of the effect on

their livelihood strategies, the Majangir, however, reacted and responded to the problem in different ways.

Some Majangir households started to intensively cultivate cash crops like coffee on fallow land that were left to regenerate and increased their household income. Intensification of production by substituting agriculture with other strategies like animal husbandry did not came to effect or other livelihood alternatives. The Majangir still depend on traditional subsistence methods with primitive agricultural technologies as it used to be before, than adopting improved agricultural technologies.

Other households, unlike those intensify fallow lands, resorted to migrate to other areas where there still exist available forestland reserves and some tended to cultivate marginal and sloppy lands after leasing their old fields/farm plots. Although people tend to express their agreement as lease for an extended period, the actual practice reflects selling of a land. The practice of selling land was and is widely practiced among the Majangir. Although it is rampant in areas where settlers are found, the situation is expanding to the rural Majangir settlements/*kebeles*.

Chapter Five

Natural Resource Utilization, Management and Correlates of Resource-based Conflicts

In the foregoing chapter, the thesis have discussed the major causes of natural resources (land and forest) degradation associated impacts on the ecological conditions of the study area and the major implications of resource degradation on the indigenous inhabitants in terms of customary land use patterns and observed changes in their subsistence and adaptation strategies under the realms of land and forest resource degradation.

This chapter's discusses patterns of resource utilization, management among different stakeholders, types of resource-based disputes/conflict events observed through time and presents factors that contributed for the problem in the area. In addition, although it was beyond the intention of the research, it also looks in to the existing formal and informal mechanisms of resource-based dispute settlement and management of conflict.

5.1. Stakeholders involved in natural resource utilization/management

Several stakeholders are involved in the utilization and management of natural resource in the area. The primary stakeholders in local natural resource management are the indigenous Majangir inhabitant who primarily rely on subsistence agriculture system through using and practicing shifting cultivation, hunting and gathering of forest resources and peasant households resettled in the area who mainly rely on agricultural practices, comparatively employing improved agricultural technology, using oxen-plough for cultivation of crops for consumption and cash crops for market. Among these stakeholders, there are differences in household landholdings.

In addition to the community's coming to the area through government-sponsored and spontaneous resettlement in the past, due to the expansions of commercial agriculture, external agents have joined in resource utilization and management in the area. Therefore, they have also been important stakeholders in the resource management and utilization. These includes large scale coffee plantation/farm, small scale private investors

involved in the cultivation of cash crops (coffee) for market exchange, a timber producing plant and licensed private loggers.

In addition to the local and external agents, the local and regional government has also been involved in the management of natural resources in the area. The government had also introduced and owned forestlands by demarking wide ranges of land to preserve the remnants of forestland and protect further degradation and maintain the flora and fauna of the region. In addition, to combat the effects of forest resource degradation, the local and regional government had launched reforestation program. The local and regional government bureau is mandated and responsible to carry out and monitor the entire program of reforestations, control and prevention of forest resources in the Region. Besides, the *woreda*, *kebele* and Regional administration are also involved in land redistribution and allotment for local small-scale and large-scale private investment.

The national government policies implemented so far also been part of resource utilization stakeholder in the area. During the devastating drought that occurred in the 1980's in the country, Derg government had announced the resettlement and villagization program for drought affected people from the highland parts of the country to areas where agricultural land was available. It also introduced farmers' cooperatives in different parts of the country.

According to Taddesse, (2000: 117), "beginning in late 1985, as part of its plan for 'rapid rural transformation' and greater control over peasant farmers, Mengistu's military government aimed to implement a villagization program throughout the country, except in the war-torn regions of Eritrea and Tigray". The purpose of villagization is explained as follows:

> Villagization, according to Ethiopia's former military government, was a multi-purpose scheme whose central objective was to introduce a systematic land use and/or recovery program through collective and coordinated efforts. Its aims were to move peasant farmers into villages where it would be easier to provide them with basic social and infrastructural services... It was also said that the villagization program would enhance extension services to peasant farmers and that this would enable them to raise agricultural production and productivity. Villagization was also

given an important role in strengthening peasant security and self-defense, reducing rural-urban disparities and raising the consciousness of peasant farmers. In general, the government considered villagization a panacea for solving Ethiopia's rural socio-economic, political, and environmental ills (Taddesse, 2000: 118).

These programs, following a top-down approach, were executed without consultation and consents of the local people. Beside the failure of most of the programs in attaining the desired objectives of the program, it affected the environmental condition of areas where programs were executed.

The Agricultural-led Industrialization Policy of the EPRDF government has encouraged and attracted investors and private companies to be involved in commercialized agriculture and production of cash crops for national and international markets. The ethnic based classification and regional government demarcation that was introduced by the EPRDF government in 1991, has taken a remarkable size of the natural resource base of the region. Parts of the resources where the indigenous Majangir community utilizes and claimed for were given and demarcated under the responsibilities of neighboring regional state. In this regard, the national policies under the two successive governments (Derg and EPRDF) were intrusive with respect to land and forest resource of the region in general and the indigenous inhabitant's settlement in particular.

Table 7: Land holding size of Private Investment Companies in Majangir zone/settlement

Name of the company	Investment Sector and production item	Land holding size	Remark
Teppi Coffee Plantation	Agriculture	7090 hectare	The Plantation, from its initial land holding (4444 ha) further illegally encroach into adjacent forestland of 2646 ha.
Bebeka Wood-based industry	Timber production	Unknown	The project made to phase out in 1997 by the *woreda*
Palm oil plantation	Agriculture	On progress	

Table 8: Government reserved forestland

Plantation area	Plantation period	Area planted/hectare
Gelesha government forest area	1986	4 ha
Gubeti government forest area	1998	16 ha

Table 9: Nurseries established and area of Land planted with forest trees by the government's forestation program

Name of the nursery	Year of establishment	Capacity of the nursery	Types of forest trees	Number of tree seedlings distributed
Akashi	1985	500,000	Grashia, Wanza, Eucalyptus, Kerero	3,000,000
Gubeti	1998	600,000	Grashia, Wanza, Eucalyptus, Kerero	150,000

Source: Zonal Agriculture and Rural Development Bureau (2005)

Despite the fact that, the worreda Agriculture and Rural Development Bureau intends to demarcate more than fifteen government forest reserve areas, it managed to do so only for two forest reserves namely, Gelesha and Gubeti government forest area. The remaining are not yet demarcated and reserved. Most of the intended forestland for reservation is encroach by farmers. Farmers, without the knowledge of the bureau, cultivated coffee inside the forest.

Although several efforts have been made to protect further encroachment, the practice continued and become impossible so far for the bureau to implement the demarcation process. This was mainly due to the fierce confrontation between the bureau staff and the farmers where in some incidences it involved dispute and attempts of physical abuse. The farmers resisted for any order by the bureau to evacuate, as they already invested money, time and labor for cultivation. After discussion they were made to resume with their

existing land holdings and not to further encroach to adjacent forest. However, farmers still continue to push inside adjacent forest and expand their field size.

5.2. Conflict background and events of resource-based disputes

In his ethnographic monograph written in 1971 entitled " The Majangir: Ecology and Society of the Southwest Ethiopia", Stauder (Stauder, 1971) noted that the total population of the Majangir is estimated at less than 20,000 and were sparsely settled throughout a large area, roughly 4000 square miles, of thick forests on the Southwest edge of the Ethiopian plateau (Stauder, 1971:1).

With the low number of population and covering huge amount of territory, the area that the Majangir community was settled, there was no pressure on the natural resource base (land, forest) of the area. Therefore, the carrying capacity of the resource with their mode of subsistence had been self-sufficient to provide them with their subsistence demand.

Besides, according to Stauder (1971: 2) "the absence of foreign territorial pressure against the Majangir, have been an important condition for their society and had not been threatened over their land". This, however, does not mean that they have had peaceful relations with others. They have been victims of external forces at different times in the course of their history. "Frequently up until the 1930s and even in some instances afterwards, the Majangir were raided for women and children by bands of Galla (Oromo), Amhara, Anuak, Shakko-Gimirra, and (rarely) Sudanese Arabs. (ibid:142)

In addition to the slave raid, the Majangir had been disposed from their land and settlement by spontaneous settlements of highlanders and government intervention in agricultural development scheme in the region.

> Since the 1950's, with the introduction of coffee as a large-scale cash crop near Teppi, some Majangir in this area have been dispossessed of their lands by Amhara, Galla and other highland peoples operating behind the authority of the Ethiopian government. But this displacement of Majangir in one as yet small area has not affected the general situation of the tribe in regard to its natural resources (Stauder, 1971).

Despite the fact that Stauder noted, the Majangir's reactions to such intrusion on their land had been to flee not fight; their passive reaction would not maintain/guarantee peaceful interaction. Tensions between local and external natural resource management priorities have escalated over the past few decades. However, the way conflicts have been played out and the parties concerned have changed through time. Following territorial intrusion through several development intervention, resettlement program and Regional State boundary demarcation during different regimes in the country, they had experienced several events of disputes/conflicts within their territorial occupations.

Although, one can hardly find recorded data over disputes over natural resources in the previous regimes, elderly people from the Majangir community and early settlers in the Majangir settlement contended that there were few incidences of disputes and conflicts at times between neighboring ethnic groups. One of my renowned elderly informant expressed events of dispute as follows:

> In the past (referring the 1950'S of the Emperor regime), incidences of dispute were not frequent. Some events were observed between Majangir and neighboring ethnic groups (namely Annua) due to different reasons. Primarily conflict arouse while the Annua attempted to loot agricultural products and Majangir women crossing their territory in to the Majangir villages. In addition to this, there were also some cases of disputes/conflicts over resource by the time when the Annua people encroach the Majangir territory in search and extraction of Gold at a place called Kori. Although dispute over resources were an occasional incidences and were negligible in the past (especially over land), disputes over land became a recent phenomenon.

Table 10: Events and types of Resource-based disputes/conflicts in Godere

Event of dispute	Consequence	Outcome
A Majangir women carrying children appealed to the Woreda Council	A Majangir household head (her husband) sold the family's old field to a settler without their consent and leave for other place	Portion of the field with its plantation given back to the women and her family
Claiming for forestland between kinsmen of a Majangir and settler household.	It broke out when the Majangir household's kinsmen claimed for their right to inherit their ancestral land while the settler household claimed their legal backing (official testimonial) to his land holding rights as they are paying government taxes over the use of land, although he informally leased/bought the land on permanent basis.	Having legal certification as tax payer, the land buyer made to compensate by paying additional money
Family kin disputed over land after they rented land from the kebele in group for investment	After the group received the land and individually started cultivating their share, two of them (brothers) disagreed over territorial demarcation.	Coffee trees were destroyed Warehouse and houses built for workers was dismantled by one party One worker highly injured and attempt was made to kill the son of a person The case further referred to police and court to examine the crime act The kinship bond between the two families discontinued and suspect possible attack/injury among family members
Violent conflict between political parties (Shako-Majangir)	Disputes that led to group conflict during the 1991 Regional State's demarcation claiming Tiggi town be part of Majangir administration	People were killed Houses burnt
Conflict between two Majangir kebele administration over territory	Each bordering kebele administrations allocated a particular forestland to highlanders requesting land. Each kebele claimed that it belonged to their territory	
Demarcation of forestland for implementing Sustainable Participatory Forest Management project by Mekaneyesus Church in two selected kebeles	The two bordering kebeles, where people belonged to different Majangir clan, where the project intended to implement participatory forest management program claimed that particular plot of forestland to their belongings	The two bordering clan members were about to get in to conflict, unless Mekaneyesus staffs together with woreda administration mediate the case which is yet left open. As a result, Mekaneyesus abandoned executing SFFM project fearing it will provoke inter-ethnic conflict

Event of dispute	Consequence	Outcome
In 1997 the highland settlers expressed their resentment to the government officials by parading to the town of Metti	The Majangir at Goshni attempted to attack settlers claiming the land belonged to them and urge the highlanders leave their place of origin accusing them for forest degradation in the area	Tense conflicting environment existed where both groups armed with "panga" confronted each other while some group of highlanders' parade to report the case to the woreda/zonal administration. The administration after fierce dialogue with both groups managed to settle for the time being
The Teppi coffee plantation extended its farmland around bordering territorial occupation	The coffee plantation enterprise and farmers settled around claimed their territory had been encroached by the farmers and the enterprise and vice versa.	Farmers forced the plantation workers and at times the plantation guards forcibly evacuated the farmers from their claimed territory. Forest trees were cut by either group to expand territory. In some cases farmers looted coffee berries which for them was planted in their territory
The Woreda Agricultural and Rural Development Bureau intended to demarcate government forestland areas	Several farmers who started cultivating coffee inside the intended government forest reservations resisted to abandon their plantation although ordered from the bureau	Confrontations existed between government workers and the farmers Except two, the bureau failed to demarcate the remaining forest reservations. To date, several forestland which was supposed to be demarcated were and are encroached and being cleared by farmers and small-scale investors
The Bebeka timber plant executed its project by extracting forest trees for timber production	While started cutting forest tree Majangir inhabitants resisted and confronted with the workers	The Plant forced to stop cutting trees and also fallen trees by the Plant were prohibited to be loaded by the community After fierce consecutive dialogue the Plant was forced to close the project and phase out from the Majangir area

Table 10 provides events of dispute in Godere woreda of Majangir zone. Those samples represent some cases of the resource-based disputes that arise in the area and recorded at the Security and Justice Administration Sector of the woreda Council. According to head of the Sector, the majority (about 80%) of the cases that are appealed by clients are disputes related to land and forest resource.

From the above events of dispute, one can understand that several agents in utilization and management of resources partake in the ongoing disputes. Actors involved in the disputes include household farmers, kebele administrations, government office and Plantation enterprise. The central issue behind the consequences of disputes relay on agents' possessions claim over a particular land, forestland or territory. Among the consequences that maneuvers ongoing disputes between agents include; absence of clear demarcation between kebele administration, increasing illegal selling of land by the guise of leasing mainly among the Majangir which after some times resort to claiming for return by family members, lack of clear boundary demarcations of Enterprise possessions and attempts to expand their possessions without the approval of concerned authority, allocating unspecified forestland (without defined holding size) and at times simultaneously allocate land for two parties, lack of clearly defined role and power of the kebele in resource distribution

The outcome of the disputes also takes several forms. Disruption of affinal ties, social attachment eroded leading to distrust and suspicious relationships and interruption of development intervention. Although there are few cases the leads to physical attack or violence, in some cases people resort to take action by cutting planted seedlings and looting crops, dismantle individuals property (house, halls), attempt to physically injure individual workers and family members. Cases also reveal that events have experienced at small-scale level between small groups of individual. However, the 1997 incidence at Goshni between Majangir and settlers confirm the possibility where incidences potentially develop to take violent form and result in conflict.

5.3. Factors that Aggravate Resource-based disputes in the study area

Based on the above events of disputes that were observed and cases that were appealed by different stakeholders involved in the management of resources in the area, this sub-section tries to address the major causes of disputes over natural resource management, the extent where local natural resource uses by different sections within the community come into conflict and the extent to which community values regarding resources differ from that of the external interests.

5.3.1. Resource scarcity and growing competition over resource

Natural resources are used for different purposes such as cultivation, grazing, tourism, conservation, urban development, etc. In meeting societal needs and demands, decisions are made on how to make use of a particular land. In a region where heterogeneous ethnic groups with differing subsistence strategies inhabit, land use decision often complicates inter-ethnic interactions. In most cases, competing values over a resource induces conflict. According to the draft policy paper, this holds true in Gambella region.

The introduction of leasing land on permanent basis often leaves concerns both from intra and inter-ethnic contexts. Primarily, people permanently lease or sold fallow land, which if far away from the household settlement, informally based on individual secrete. Such informal individual contractual agreement hardly offers family members with the state and terms of agreement where they are customarily endowed with the right to inherit and claim for. Secondly, it offers those financially strong partner influence local government officials to gain official recognition to pay tax. The situation has witnessed the disruptions of marriage and family ties producing grievances and further exacerbated tensions among groups. The absence of legal framework to protect shifting cultivator's right to land and mediate such cases complicates the ongoing problem.

In spite of such facts, the land leasing practice continued encompassing government's recognized forest reserves. Unlike fallow lands, that is leased by the individual user and transfer right, communal forestland or government owned forest areas are being leased by

influential leaders and officials assuming their power and inheritance rights. In most cases such forest lands were given for town business men for cash crop farming. This has also induced tension among those business men and government workers working in the areas of forest conservation and protection.

5.3.2. Changes in values, perception and control of and ownership of natural resources

Besides being a resource base, people have different attitudes, perceptions, aspirations, and taboos related with land in which they depend on. In line with these attitudes, it is customary to hear personified names of land among the Majangir. It is also common that a certain territory of land and forest is attributed to someone designating his first arrival in the area, settled and lived there for a period of time cultivating by clearing certain forestland plots.

Traditionally, this vested an individual Majangir with a right over the use of resources under his territorial denominations and transfer to his descendants through inheritance right or transfer to other people, in most cases, for use for certain period of time up on his approval. Any use of a particular land which is traditionally owned by an individual without approval to use will induce conflict over it. Hence decision over the use of land is regulated by the particular right that the individual is vested through which is recognized by his arrival in the area and the labor he expend in preparing land for agriculture.

The traditional land tenure system in Majangir was communal control of land and forest land having territorial dimension based on lineage or clanship. Individual of a particular lineage/clan is entitled to have access and control over these resources. Private usufruct right emanates from households labor force investment in clearing and planting a particular plot of forest land for the first time. When land was left to fallow until it regenerate its fertility, the usufruct right still belonged to the household who used to cultivate the land before. Private usufruct right turned to communal ownership when the fallow land turned or covered with natural forests.

households within the lineage group and territory cultivated independent plots of land. The size of the plot of land a household possess was determined by the amount and number of labor force that the household managed to deploy and mobilize during forest land clearance. The Majangir's customary laws provide individuals and households with the right to clear new forest land and pass on to descendents as long as they remained within the lineage territorial denomination.

The customary law also guarantee the right to pass usufruct right of fallow land. Transfer of usufruct right, however, demanded a full consent of the individual or household of the first or prior occupant of the land. Once fallow land turned to forest, other lineage members could have a full right and access to make use of it with out prior permission from the first 'owner' of the plot.

Following the introduction of formal government administration at local level, the arrival of resettlers in and around the study area, the role of these customarily laws doomed to decline. The local administration is vested with responsibility of land distribution and allocation of land. Besides, the forest area demarcation by the government office not only affect their access and control over ancestral land but also denied their customary usufruct rights over fallow land within the demarcated forest.

5.3.3. Decline in agricultural productivity, growing economic disparity and inequality between the indigenous inhabitants and immigrants

The economic conditions of the Majangir and re-settlers showed a gap as their livelihood strategies differ. The Majangir socio-economic system employed traditional and simple agricultural tools, using hoe to dig and plant seeds. With restricted movement of the Majangir to secure additional new fertile forest land, shortened fallow period, productivity of their plot is invariably diminishing. Unlike the Majangir, the re-settlers practiced mixed farming system. In relative terms, they employ and adopted an advanced mode of farming, using plough animals in some instances.

The agricultural production priorities and preferences that they relay on can explain the growing economic disparity between the groups. Although some Majangir households in the study area are progressively adopting the production of cash crops, they dominantly stress agricultural production for household consumption like sorghum, maize. Using mixed farming system, the re-settlers cultivate mainly cash crops in addition to products for household consumption. They also had additional holdings either temporarily or permanently secured from individual Majangir household that were fallowed. Some family members are also engaged in wage employment in small-scale farms of town business-men. The economic conditions of re-settlers enabled them secure additional land.

The effect of degradation is also related with the decline of agricultural productivity. Referring to their customary agricultural practice and the impact of degradation in food production is explained by the Majangir informants as follows:

> Our customary farming practice involves a periodical shift of agricultural fields. One can have several fields to cultivate and produce food for the household. However, due to the growing deforestation which results in land scarcity, we could not keep our farming practice by moving to places where fertile forestland is available. Being restricted to cultivate a fixed plot for consecutive years, the amount of agricultural product we harvest is declining

The Majangir hardly employ the use of fertilizer to improve the fertility of their agricultural plot. The absence of livestock production in their livelihood strategy influenced the use of organic fertilizer. Animal dung is not used by the Majangir to maintain soil fertility, nor provided with chemical fertilizer by the Agricultural Bureau.

In few instances, however, I observed that some Majangir farmers use biological mechanisms in order to maintain soil fertility by inter-cropping leguminous plants inside fields planted with sorghum and maize. In addition to the introduction of inter-cropping, according to my informant from the woreda Agriculture and Rural Development Bureau, efforts are being made by extension workers to help farmers practice weeding (which was not practiced by the Majangir in the past) and crop and row spacing to improve agricultural production.

The other condition that exemplifies and denotes the existing economic differentiation, as I observed, is the type and conditions of residential units the group possesses. In the study site, most immigrants own a residential house with corrugated iron sheet roofing while Majangir household reside in a house with grass roofing. Looking in to the construction materials used for the residential units, one can definitely imagine there is a clear gap in the amount of money that the household invested to make a house with corrugated iron sheet roofing by far surpass the cost for constructing grass roofing. Furthermore, the furniture and equipment that the household's own variably indicates and confirms difference in economic status.

5.3.4. Absence of legal frame work and policy over land use

The rural socio-economic system of Ethiopia comprises three distinct groups: a sedentary population engaged in peasant agriculture and animal husbandry, pastoral nomads, and shifting cultivators (Fecadu, 1990: 205). These socio-economic systems are entirely dependent on natural surroundings for their subsistence. Therefore, the natural resource base is a crucial determinant of their survival and development and has a paramount value to them.

Shifting cultivators occupy a vast territory and comprise only 0.5 per cent of the population (Fecadu, 1990). Owing to the low population density in the areas of shifting cultivators' settlements, their territories were misrepresented as unoccupied areas, wastelands, or virgin lands (Gebre, 2001). One of the regions that are being inhabited by shifting cultivators is the Gambella Regional State. In Gambella Regional State, there are five types of farming systems. These include, crop production, fishing system, mixed farming system, shifting cultivation and mechanized farming system (GPRS, 2003).

All development interventions being implemented and executed with such premises and contexts had resulted in resource deprivation and displacement of the indigenous inhabitants during different political regimes in history. In the absence of the policy framework to implement distribution and allocation of resources, the competition over scarce resources among the different stakeholders leads to dispute and conflict.

> As land becomes scarce, it is desirable that rights to land are specified and enforces, and mechanisms are in place to manage land related disputes and conflicts. Failed or incomplete institutional response to meet demands for land rights contributes to dispute and conflict. Land related disputes and conflict arise, for example, where there is denial of access to scarce land, legal uncertainty over multiple claims over land and property, insecurity of tenure, and encroaching on protected areas. (Tesfaye, 2004:8)

In viewing incidences of disputes, the different cases among stakeholders demonstrate that the increasing incidences of dispute are related to issues of territory, multiple claims of a particular forestland, encroachment of reserved area, illegal land selling by individual Majangir, claims for ancestral land and the like. On top of all, there is no clear cut role and responsibility among hierarchal government institutions vested with the amount and extent of power with regard to resource distribution.

Besides its contribution for the ongoing resource degradation in the study area, lack of institutional arrangement and policy framework that govern allocation of resources adversely complicates the resolution and management of cases of disputes. In bridging the gap, the effort made by the Regional State to adopt policy over resource distribution and allocation of regional resources is believed to prevent further degradation and management of resource-based disputes.

5.4. Resource-based disputes/conflict and resolution processes

5.4.1. Types of Resource-based dispute/conflict

From the above events of disputes and information from the *Woreda* Council Security and Justice Administration Sector, observed events of resource based disputes in the area; one can identify several types of disputes.

A) Intra-ethnic disputes

Intra-ethnic disputes refers to those events among individuals of the same ethnic background (Majangir-Majangir) and also by taking their place of origin, disputes between immigrants, though belonged to different ethnic background, was also categorized under intra-group (settler-settler) disputes.

According to land related disputes reported to the security and justice administration section of the *woreda* council, intra-ethnic disputes among the immigrant community by far exceeded that of the Majangir. Among those few reported cases of disputes over land, it was linked with the settlers who bought land from Majangir person. Mostly, family members and descendants were claiming for their ancestral land. However, at times wives came to claim their inheritance share to remaining family members. If such claims, although are rare, increased in the future, the probability of intra-ethnic disputes (between exogamous kin groups having affinals through marriage) among the Majangir would be inevitable

B) Inter-ethnic disputes

The other type of disputes in the area was inter-ethnic disputes referring those disputes between individual with differing ethnic and origin background. Although this type of disputes was found to be minimal, two events witnessed that there is a probability that other dispute types will provoke it. The 1997 incidence of dispute at Goshni between the Majangir and resettlers provided the potential that inter-ethnic disputes might happen in the future where the problem of forest degradation continued with its current status which endangered the mere existence and survival of Majangir community especially future generation. Such type of incidences, as observed during the event, had also political sentiments within.

C) Disputes between *kebele* administrations

The third dispute type in the area related with resources was dispute between ***kebele*** administrations. The *kebele* administrations competed over forestland that lied adjacent to and around the territorial boundary. Such type of dispute has been frequently experienced between bordering *kebeles*. In some cases, there were also disputes that transcended regional boundary. Bordering kebele administration 'Yeki-Jenki" of SNNPRS and "Yeki-Gengebot' of GPRS had accused each other for territorial intrusion by inhabitants.

D) Dispute between farmers and enterprise

The fourth type of resource-based disputes, which frequently observed, was disputes between individual and or group of farmers and the management of Teppi coffee plantation enterprise.

E) Disputes between government bureau and household farmers

Events of disputes over resources had also been experienced between governmental bureaus and farmers. Such type of dispute was experience while a government bureau mandated to execute rural development activities, namely Natural Resource conservation section under the Agriculture and Rural Development Bureau, attempt to demarcate government forest areas.

Resource-based disputes have showed an escalating trend in the Majangir settlement area. According to the *Woreda* Security and Justice Administration head, the majority (more than 80%) of the cases appealed by clients is land or forest related cases. Despite the fact that cases or events of dispute take several forms and between and among different stakeholders, the central issue is land.

Examining the events of disputes and related information on the issue, dispute between local and external stakeholders over natural resources are based on different interests and values. In case of disputes between primary stakeholders (farmers both local people and resettlers), compete over resources to maximize household income by gaining more land. However, most of the claims raised by the indigenous Majangir rest on gaining an immediate return from resources; i.e. to get some amount of money by selling fallow or forestland rather than to cultivate.

In case of the resettlers, disputes arise following the competition to own more resources and thereby maximize their long term benefit they acquire by cultivating and producing coffee. Peasant households are most concerned about sustaining their livelihoods through strategies in which owning additional fertile land so as to increase household income, whereas external actors perceive communal forestlands as wasted, unoccupied or

underdeveloped and attempt to own additional resources and maximize profitability at the expense of the remnant resources.

The above cases of events of disputes over forestland can be attributed to the following causative factors where the majority of the cases relied on the question of territory. The problem had been raised between household farmers, bordering *kebele* administrations, farmers and enterprise, *kebele* administration and enterprise owing to the following reasons; absence of clearly demarcated territories between *kebele* administrations, expansion of illegal selling of land (which mostly practiced by individuals from Majangir which necessitated the Majangir forcibly expel the land buyer), absence of clear demarcation by the private enterprise who claimed illegally land beyond their legally given area and un restricted power of the kebele administration who appeal for land and lack of clearly defined holding size.

5.4.2. Resource-based disputes and institution involved in conflict resolution

As there are different stakeholders involved in the management of resources, disagreements, complaints and disputes are managed using different institutions. Primarily it depends on the type of dispute or parties involved. Whether the conflict is intra or inter-ethnic, between government organization and community, or between the local community and large scale agricultural firms or their employees might dictate the institutions that take part in the resolution process. Responses to the resolution process differ based on the type of institution involved.

In dealing with resource-based disputes in the area, both informal and formal institutions, in one way and another are involved. The informal institution involves selected people mediate the case, which are referred to as elders. Elders to mediate the case are represented on condition that they are believed to mediate the case neutrally (where parties needed mutual consent on participants) and people nominated by disputing parties represented who have knowledge about the issue. Disputing parties are expected to obey the decisions made by the elders or might take the case to formal institution where either party feel inconvenient over the decision by the elders. In this case, the informal

institution has no legitimate background to enforce decision other than parties good will
added to obey or not.

The other type of institution taking part in dispute resolution is the formal institution. Based on the types of disputes, hierarchial government institutions involve in the process. These includes; *kebele/woreda* administrative officials, Police and the court system. The formal institutions have much more power to pass decisions and ensure its application and even pass decisions. In cases where disputes appeared between bordering Regional States, disputed kebele administrations participate in handling the case. In such case, local people from both *kebele* will be part of the process.

Chapter 6

Conclusion

The study of natural resource degradation and scarcity concentrate on population and environment linkage. The debate yet remained controversial and open for argument as both views justify their position by presenting practical cases and evidences from different parts of the world. However, these days, researchers tend to argue that both ideologies had contributed to the existing knowledge which are reflected in their particular case findings and advise to consider both views while analyzing population-environment issues. The researcher in analyzing the interaction of population and environment (referring land and forest resources) of the study area and associated effects upon the study population and the strategies adopted in response to land and forest degradation and scarcity illustrated the fact that points that raised by the theoretical perspectives of population and environment linkage seem instrumental in understanding the Majangir contexts of degradation and adaptive strategies.

Likewise to that of the pessimists' view of population-environment link, resource degradation and scarcity in Godere *woreda*, being a recent phenomenon can be explained in terms of increasing of population pressure as underlying causes of resource degradation. Due to the ensuing of development program in the Majangir territory including the resettlement of highlanders, expansion of agricultural and wood based industries that pulled labor migration and other self-initiated settlers accompanied by urbanization had increased the population number of the area. All these circumstance has brought an increasing demand for arable land, wood for fuel and construction with the existing forestland resource.

In a pernicious way, the degradation of land and forest resources of the area had adversely affected both the ecological conditions and the indigenous human population. In environmental and ecological terms, the depletion exacerbated further degradation of the top soil by increasing soil vulnerability to wind and water. Soil erosion as the same time aggravates decreased soil fertility resulting future human vulnerability to

impoverishment and poverty by declining productivity of the land. In addition, forest degradation contributed to increasing trends in climate change leading to expansion of desertification. Besides, forest degradation wiped out the biodiversity (flora and fauna) of the area which some species were sources of supplementary food source for the indigenous inhabitants. Furthermore, the effects of population pressure and degradation had induced the displacement of the indigenous people.

At the same time, the Majangir response to the problem of degradation and scarcity of resources reflect the perspective advocated by that of the Optimists view. Majangir households start to intensify fallow fields by adopting cash crops and fruit trees to increase household income. The adoption of new crops including coffee as supplementary sources of income by the members of Majangir community showed that they came to understand resource scarcity which made them resort to the adoption of those crops in to their socio-economic system. The adoption of such economic strategy, however largely emanates from the exposure of the Majangir with the socio-economic systems of their neighbors rather than emanating from within their culture. The Majangir culturally consume coffee leaves than the berries for consumption, which is still maintained and practiced currently.

The Majangir exposure to people with different socio-economic and cultural background has not only reflected in terms of economic adaptability, but also in their social organizations. Prior to the arrival of other ethnic groups in their area, the Majangir community lack any central political authority than few religious leaders, and institutional support is largely based around homestead and kin groups. The emergence of *Iddir* as self-help institution among the Majangir confirm the significance of cooperation among members when suffering from hardship or emergency. As the institution involves leadership responsibilities, it might further develop and assume authority in dealing with community concerns including issue of resources which they were lacking in the past.

The tendency of the indigenous people inclination to substitute scarce resources with others, which is advocated by the Optimists, does not guarantee the existing reality in the

Majangir context. Intensification of production by substituting agriculture with other strategies like animal husbandry and other livelihood alternatives did not came to effect in response to resource scarcity. The Majangir still depend on traditional subsistance methods with primitive agricultural technologies as it used to be before, than adopting improved agricultural technologies. They hardly involve in trade as an opportunity to gain household income.

Regarding the association between resource scarcity and violence and conflict, the concept of 'structural scarcity' by Homer-Dixon seems also functioning. The land leasing practice, which currently becomes a widespread phenomenon among the Majangir was a reflections of the existing household economic power imbalance. The practice favored and enabled settlers to own big plots because of their strong financial position. Some Majangir households resort to cultivate marginal and sloppy land by the guise of leasing land. The practice, in effect has resulted in family disintegration and resource marginalization among the Majangir.

Population growth, besides its devastating implication over scarcity of renewable resources, can be be analyzed and explained in terms of its ramifications upon societal or group interactions. The resource-based interaction among different stakeholders in the study area indicates the prevalence of incidences of disputes. The differing value that stakeholders, involved in resource utilization and management, attach to scarce resources fuels competitive values leading to increasing trends in dispute.

In analyzing and identifying potentials for resource based disputes, the study come up with the following conditions: Population growth and pressure, economic disparity resulting in resource control by the powerful, the absence of legal instrument and poor infrastructure development especially in terms of agricultural input and technology provision aggravates grievances and disputes that potentially lead to violent conflict in the future. The understanding of those historical developments within the indigenous people and adaptive responses towards resource scarcity that frame contexts of societal interaction will help release tensions.

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Cattles owned by Majangir household

Coffee planted by Majangir