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Changing the spiral:
Restoration effort of degraded land in Ethiopia, challenges and prospects, the case of Hadiya zone

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List of Acronyms

ADLI- Agriculture Development Led Industrialization
CSA- Central Statistics Authority
EPRDF- Ethiopian People Revolutionary Democratic Front
FDRE- Federal Democratic Republic of Ethiopia
FTC- Farmers Training Centre
HZCBD- Hadiya Zone Capacity Building Department
HZFEDD- Hadiya Zone Finance and Economic Development Department
MDG- Millennium Development Goal
NGO- Non Governmental Organization
PSNP- Productive Safety-Net Programme
UNCCD- United Nations Convention to Combat Desertification
UNDP- United Nations Development Programme
WOCAT- World Overview of Conservation Approaches and Technologies

Abstract

Land degradation resulted from man-made and natural causes lead countries to the environmental and socio-economic problems. Currently it is threatening lives of millions of people particularly in developing countries where the agriculture is the main source of subsistence and income. Now restoration programmes have been taking place in the areas where land degradation is severe problem. Countries, governments and other stakeholders agree on that restoration of degraded lands leads to alleviating the poverty effects in the countries under problem. The results of the restoration efforts, its contribution to address environmental problems and poverty aspects depends on the way how the actors of the restoration process involved in, their interest over the process and the extent to which the varying interest of these actors reconciled.

Relevance to Development Studies

Dealing with restoration effort as a means to address the issue of land degradation and the livelihood aspects of households, brings it at the core of development issue. The issue of land degradation, restoration efforts and the poverty alleviation strategies are the interrelated aspects that should be treated accordingly, and at the same time the core issues of development particularly in developing world. There are number of actors involved in the process of restoration of degraded land. This paper enables to discuss about actors in the restoration process as an issue addressing the rural development strategy from the point of view of role and interest.

Keywords

Land degradation, restoration, poverty, local community, government

Chapter 1
Introduction

Land degradation resulted from man-made and natural causes lead countries to the environmental and socio-economic problems. Countries, where agriculture is dominant source of subsistence and national income are currently facing severe problem of shortage of food and other agricultural produces due to land degradation. Now, restoration of degraded land has become a possible way of fighting land degradation and its effects.

In the countries like Ethiopia, the dominant cause for land degradation is human interference to the environment, which will lead to the natural loss of productivity of soil and natural vegetation. "The major causes of land degradation in Ethiopia are the rapid population increase, severe soil loss, deforestation, low vegetative cover and unbalanced crop and livestock production" (Girma Taddese 2001:815). The causes mentioned by Girma Taddese are rooted in population pressure in a sense that population pressure is the root cause that result in the other mentioned causes like deforestation, severe soil fertility loss and low vegetation cover. The problem resulted from man-made cause needs human intervention to avert the situation. As a result, there are restoration efforts taking place in the areas where land degradation is severe problem.

In Ethiopia, the recurrent drought over the last three decades threatens the livelihood of households. Eventually the restoration efforts have been started aimed in abating the effects of land degradation and securing food-self-sufficiency. However, in the country in general and in the study area in particular the integrated and coherent implementation of restoration programmes on degraded land has been started recently. Government as a key role player in the development process and local community members as main actors and beneficiaries are the main actors, involved in the restoration process with the minimal role of NGOs. The role and interest of actors' differs, and the difference in interest and role determines the restoration results.

Since the introduction of Ethiopian Peoples' Revolutionary Democratic Front in the country as the ruling political party after 1991, the development strategy has been changed to the Agriculture Development Led Industrialization/ADLI/. It is followed by two events. On one hand, it has followed by intensified land use which has impact on land resources, and the emphasis to conserve the land and other environmental resources to ensure the ADLI on the other. ADLI as a strategy sets out agriculture as a primary stimulus to generate increased output, employment and income for the people, and as the spring-board for the development of other sectors of the economy (Samuel, G. 2006).

However, the features of this strategy are mainly concerned with the commercialization and diversification of smallholder agriculture and intensive use of inputs to increase productivity of agriculture. It talks about also the employment opportunity, but how can this be achieved in the low-income country, and with the fact that there exist high population in need of farm land

in areas like Hadiya zone that this paper considers? How the government can solve the issue of uneven distribution of farm land and the equal access to land among the farming society? In fact, one of the aims of the government to insure rural development and land conservation is addressing the fair distribution of land for those who need to lead their life by farming (FDRE, Ministry of agriculture and rural development 2002).

This paper is aimed in investigating the problems related to restoration effort, the factors determining the results of the restoration process, the actors involved in the process and the link between restoration effort and poverty alleviation strategy. It is organized in to five chapters. The first chapter begins with introducing the skeleton of the paper, presents the background information of the study area in terms of its location, population number and amount of land with land use proportion. It also presents statement of the problem, relevance and justification of the study, objectives and research questions, and the methodology. In chapter two, the problem is framed in theoretical framework and main concepts defined. The concept poverty is defined in this part in terms of land distribution and the productive safety-net programme as a strategy to fill severe food gap. The institutional capacity, the government-community relation and the exclusive role of local community members in restoration process are discussed. Going through this chapter helps to understand how the problem is problematized in the theoretical framework. Chapter three, deals with data analysis and presentation of major findings. The findings mainly give emphasis on the factors and actors of the restoration process, the role and interest of the actors with particular focus on the uneven distribution of the land and its resources among the local community members. In the fourth chapter, the researcher presents discussion in line with the theoretical framework and major findings, and the arguments are built considering the issue of access and distribution of land, and interest of various groups involved in the process. The link between restoration effort and poverty alleviation is presented too. The last chapter deals with the concluding marks of the paper referring back to the findings presented in chapter three, discussion made in chapter four and the theoretical framework.

1.1 Background of the study area

Hadiya zone is geographically located in 7°3′19″-7°56′1″N and 37°33′14″-38°52′12″ E. It is one of the most densely populated parts of Ethiopia. Its population reaches 1243776 (CSA 2007). By 2010 based on the census report projection, it has increased to 1316962. Total area of the study is 3850 square km and the population density is 342/square km. More than 90% of its population depends on agriculture for subsistence. Considering land use, out of the total area, 69% is cultivated, 7% grazing land, 6% forest and bush land, 2% cultivable, 7.22% non-cultivable and 8.78% used for non-agricultural activities, settlement, marshy and swampy areas and rivers (HZFEDD 2008:103). Population pressure together with terrain topography and scarce cultivation land makes land degradation serious problem of the area, and agricultural produces vulnerable (ibid 104).

Regardless of the small proportion of the cultivable land in the study area, the population, particularly young population that demands the farm land is proportionally high. The statistical evidence from HZFEDD (2008:24) shows that there is high number of young population in rural areas with high demand for farm land. Considering only rural population, out of 1117298 total rural residents, found at the age of 0-30 or who need farm land are 839445 or 75 %, and from age range 15-29, 296086. If the arable land which is only 2% of the total study area is divided among the young rural population, found in the age range of 15-29, the ratio will be 3845/square km. Besides, the agricultural density of the area is 409/square km. This can tell us how the population pressure on land is high in the study area. See appendices B and C for detailed information on population.

As most of the highlands of Ethiopia, Hadiya zone is facing from land degradation. And there are restoration efforts taking place in the zone mainstreamed with poverty alleviation strategy. Zone, woredas and kebeles[1] have close responsibility in applying the restoration programme. As the decision making and resource administration power is decentralized, the governments of the zone and woreda are responsible to plan and implement the restoration programmes.

1.2 Statement of the problem

Land degradation is one of the most serious problems of the developing countries with its multifaceted effects. The decreased productivity of land, gradual decline of soil fertility, and vegetation cover are the major consequences of land degradation. As mentioned in Blay, D. et al, land degradation is one of the biggest problems in Sub-Saharan Africa, threatening the lives of millions of people (Blay, D. et al 2004:12). The authors mentioned the main consequences of land degradation which negatively affect human livelihoods and the environment as shortages of firewood and other wood, shortages of non-timber forest products, increased sediment deposits, floods and landslides, drying up of springs and water bodies, siltation of dams, increased incidence of water-borne diseases, loss of biodiversity, climate change and desertification. On the other hand, Chasek, et al mentioned that nearly three billion people in developing countries live in rural areas. But most of the land available to meet the current and future food requirements is already in production, and further expansion will involve fragile and marginal lands. As a result, the increasing scarcity of land forced farmers to apply intensive agriculture that in turn result in soil erosion, salinization, deteriorating water quality, and desertification (Chasek, et al 2006).

The possible mechanism to mitigate the problems resulted from land degradation is restoration. "Ecological restoration offers the prospect of

[1] Zone is the third administration level from top-down in Ethiopian government structure. It is further divided in to sub-administration levels, woredas. Woredas are further sub-divided in to kebeles, which are the lowest political administration units.

generating healthier relationships between people and the ecosystem in which they live", (Eric, S.Higgs 1997:348). In Ethiopia, there are restoration attempts on degraded lands aimed in abating the effects of poverty. The national government of Ethiopia realized the significance of environmental restoration specifically on deforested and degraded land after the 1973 and 1984/85 major famines struck the country (Aklilu A., et al 2007:456). At this stage, farmers were mobilized by government through "food-for-work" arrangements in building terraces and planting trees on degraded areas. After 1991, the economic policy of the country has been framed in Agriculture Development Led Industrialization (ADLI). The intensified use of land has become now the aggravating factor of land degradation and a turning point to start integrated restoration programmes. The implementation of restoration programme and the results expected out of it begins with identifying the problem, land degradation, the interrelated factors determining the process of restoration and the actors involved in the process.

"Deforestation and land degradation in Ethiopia, however, are impairing the forests and the land to contribute to food security and to provide other profits such as fuel wood and fodder" (Badege Bishaw 2001:7-8). As Badege Bishaw pointed out, in Ethiopia, population increases have resulted in extensive forest clearing for agricultural use, overgrazing, and exploitation of existing forest for fuel wood, fodder and construction materials which leads to land degradation and hindering the restoration process. On the other hand, Holden and Shiferaw mentioned that land degradation, poverty and food security are pervasive and interconnected problems in Ethiopia (Holden, S. and Shiferaw, B. 2004:31).

"Rehabilitation is seen as the most viable way of mitigating the effects of land degradation" (Blay, D. et al 2004:12). As mentioned in Bedru, et al to tackle the continuous deterioration of natural resource base in Ethiopia, environmental conservation and rehabilitation efforts were started in the 1970s with the particular focus on the forest deteriorating high land areas (Bedru, et al 2010).

Recently government has taken initiative to run the restoration programmes on degraded lands through integrated community participation. Due to the government political structure, power and resource are decentralized and restoration programme is supposed to be integrated in development plans of each administration level to contribute to the goal of the government on environmental conservation.

At the beginning of 2009, the survey conducted by department of capacity building of Hadiya zone shows that there is variation in performance of the restoration programme among woredas. The department considering rate of afforestation, construction of terraces to protect soil erosion and other physical and biological mechanisms to increase productivity of land as parameters, tried to show the existing situation of woredas in the survey report (HZCBD 2009). There are 'successes' and 'failures' in restoration results in the area. 'Success' of the restoration programme is defined by the rate of reforestation and built terraces on degraded land. And the failure is defined by the rate of deforestation and degree of intervention by local community members to the land under restoration

However, the effects of land degradation have been prevalent since long ago as there has been exclusive dependence of the people for their subsistence on the land and its resources for farming, grazing, and wood and charcoal extraction. Therefore, always tension exists among agricultural development, poverty alleviation and population pressure. And restoration effort of degraded land that needs further investigation to identify the (f)actors and the extent to which they affect the restoration results becomes the interest of the researcher.

1.3 Relevance and justification

Restoration as a counter response to land degradation is significant action to address environmental problems. As land degradation is threat for many countries and millions of people, restoration is possible solution to implement in the areas where there are severe negative consequences of the problem particularly to address the issue of livelihood at household level and maintain the ecology. Developing countries with the fast growing population and increasing needs for food and other primary resources exert pressure on the land and cause land degradation.

Currently land degradation is becoming not only the economic problem of most developing countries but also ecological problem which has impact on desertification and (micro) climate change of the countries under the problem, and contributing to the global climate change. The effects of land degradation threaten economies of many countries, and its ecological impact goes from the small scale affecting local ecology to the large to be manifested on global climate change and desertification.

As an attempt to change the spiral, the restoration efforts have been taking place in many countries where land degradation is threat of lives of people. Ethiopia is one of those countries facing from land degradation and trying to change the spiral through restoration efforts. The study area as a focus of the researcher is one of the severely affected areas by land degradation and practicing the restoration programmes. However, there were no researches conducted in the area about the restoration efforts considering the failures and successes of the programme and less has been done in identifying the determinants of the restoration efforts, and the role and interest of actors involved in the process. Therefore, this paper tries to identify the determining factors of the restoration process, the role of actors and their interest in the process in the area under consideration. The relevance of this paper goes to its attempt to identify these interwoven relations among the factors and actors surrounded the restoration effort.

1.4 Objective and Research question

1.4.1 Objectives of the research

This research paper tries to achieve the following objectives:

- It tries to identify the determinants of the restoration effort of degraded land in Hadiya zone.

- It sees the role of actors and their interest in the restoration process and
- It tries to identify the relation between restoration effort and poverty alleviation aspects in Hadiya zone.

1.4.2 Research Question

What factors affect the results of the restoration process of degraded land in Hadiya zone, Ethiopia, what are the actors involved in the process and how are their different interests reconciled?

Under the above main research question, this paper tries to answer the following sub-questions:

1. What factors hinder restoration effort of degraded land in Hadiya zone?
2. What determines the meaning and success of the restoration of the degraded land in Hadiya Zone?
3. How are the government and local community working together towards the problem?
4. What interest do the actors have in the restoration process?
5. How is the restoration effort linked with poverty alleviation?

1.5 Methodology

This research is mainly qualitative in nature with some quantitative techniques in resource allocation case. Comparative analysis between two woredas of the study area has been made to identify the determining factors, and the reasons behind success and failure in restoration process of the degraded land. The two woredas selected for comparative analysis are Sorro and Shashogo. Sorro woreda is taken as better in restoration process and results than Shashogo woreda based on informal discussion made with key informants working in agriculture and rural development department of Hadiya zone.

1.5.1 Sources of Data

In this research, the researcher mainly used primary data which are obtained through interview and field observation. As the nature of the research requires detailed information through field observation, the researcher conducted direct field observation in the areas where restoration programmes have been taking place in the selected woredas. It was must to use secondary data from official documents in the case of resource allocation analysis to the restoration effort. Resource in this case includes both financial and human resources.

1.5.2 Methods of data collection and analysis

As the research is explanatory, the researcher used interviews as the main method of data collection. To make the data comprehensive; individual and group interviews were employed. In individual interviews, key informants form agriculture and rural development sector working in the natural resource development and conservation work process from zone and woedas have been involved. Field observation is also important method, involved to gather data that compliments interview. Very limited statistical analysis is also used in the case of resource allocation in the past seven years for the restoration effort of the degraded land in Hadiya zone. An individual and group interview with 20 farmers selected through purposive sampling from two woredas of the study area has been conducted. The composition of the interviewees is from different age groups, sexes, and of land holding consideration. To make the sample representative the researcher uses different social groups in the kebele; youth farmers, model farmers, female farmers and farmers with less land.

Key informant interview has been held with the agriculture and rural development experts of the zone and woredas working on the natural resource development and conservation work process. In the key informants, interview three experts from zone, and three from each woreda have been involved. Coordinators of the natural resource development and conservation work process are part of the key informants.

To find out the resource share of the restoration programme in the Hadiya zone within the last seven years, statistical analysis is used from financial reports and human resource files of the offices of finance and economic development and agriculture and rural development. This technique is preferred because it enables to provide important picture of the restoration effort in relation to resource use for the programme in the study area.

Review of secondary sources of data to identify what other scholars, researchers and authors are saying or have established in similar/same studies on the same/similar subject matter are used for conceptual and theoretical framing of the paper.

To make the findings and arguments free from personal bias, the researcher uses triangulation of information gathered from different sources about the restoration process in the study area. The tendency of misinterpretation, exaggeration of restoration results and politicizing the restoration processes that were noticed during the field work have been settled through triangulation and careful interpretation of data.

Chapter 2
Theoretical Framework

2.1 General Overview

This chapter mainly deals with theoretical framework. The paper is framed in political ecology theory. Restoration effort as a process to deal with the land degradation involves the actors of the process, their interest over the process, the environmental resource and access to those resources. Therefore, to deal with this case, Political ecology is relevant theory particularly the work of Piers Blaikie and Harold Brookfield is considered in which they explained the chains of explanation in describing land degradation.

Their approach considers the relation among the groups who have relation to land; the managers of land and their direct relations with land, their relations with each other and other land users, and groups in a wider society who affect them in any way, which in turn determine land management (Blaikie, P. and Brookfield, H. 1987:27). The relation among the actors in the process of land use and management, and to the land itself, determines the fate of restoration effort and results. In this particular case, the writer considers the restoration effort as land management and the actors involved in the process of restoration are those who in one way or another contribute either positively or negatively to the process. The paper is framed in this approach in order to investigate how the actors involved in the restoration process and what related aspects affect the results of the process.

Political ecology as a viable approach to deal with restoration effort and its interwoven problems has number of aspects to be considered. For Blaikie and Brookfield (1987:17), the phrase "political ecology" itself, combines the concerns of ecology and political economy, and together this encompasses the constantly shifting dialectic between society and land-based resources, and within classes and groups within the society itself. On the other hand, Tim Forsyth defined political ecology from the point of view of Marxist debates about materialism, justice and nature in capitalist societies, with the view of achieving a fairer distribution of rights and resources (Tim, F. 2003:3). This tells us the fact that the existence of uneven distribution of resources, and the right and attempt to access these resources within the society determines the management of environment.

Blaikie (2008) mentioned that political ecology evolved to reformulate the understanding of society-nature relations. The relation between society and nature, the degree of interaction and the reciprocal effect to each other can be understood with the lens of political ecology. Usually society nature relation is exploitative in a sense that the society extracts resources out of the nature as much as possible. The relation among the society is based on maximizing their respective needs. The limited environmental resources, the limitless needs of human society and the scramble to exploit these resources are now the nexus between ecology and political economy. The issue of power relation is central

for political ecologists. Power relation plays in conditioning patterns of human-environmental interaction that encompasses material and non-material considerations. "What are the various ways and forms in which one actor seeks to exert control over the environment of other actor? How do power relations manifest themselves in terms of the physical environment? Why are weaker actors able to resist their more powerful counter-parts?" (Bryant, R. L. and Bailey, S.1997:39). The interplay among these actors determines the restoration process and its results.

In an attempt to investigate the problems related to restoration of degraded land, understanding the actors of the process, their interest and the problems that surrounded the process is crucial to consider in the course of investigation of the problem. Hence, the literatures reviewed in this chapter are mainly discussing with the issue of land degradation, restoration, determinants of the restoration process, actors of the process, and poverty alleviation strategy.

An attempt made in this paper to see the role of actors in the process of restoration and how it affects the restoration results touches the land degradation and restoration of degraded land simultaneously. The discussions about land degradation in this paper are not aimed in identifying the causes and effects of the process rather to see the actors and their role in the process of restoration.

Land degradation is worldwide problem with its acuteness in developing countries. "The fight against drought, land degradation and desertification is now an international priority, and our Strategy is the battle plan, signalling an ambitious yet pragmatic new departure in the life of our Convention"(UNCCD 2008:4) was the introductory speech by General secretary of the UNCCD on high level policy dialogue, Bonn 2008. Population pressure is given emphasis on the speech as the significant factor that is aggravating land degradation.

On the other hand, the report presented by Director of environment and energy bureau for development of UNDP on high level policy dialogue, Bonn 2008, mentioned as farmers to feed the growing people of the world, their agricultural activities are driving forces of land use, land change and degradation. Farmers are considered as guardians of land and landscape and the most important agents for land management and restoration (ibid: 10). This is one of the indications of the main actors in the centre of the restoration programme. The interaction of land users to the land and the intensity of land resource exploitation determine the results of restoration efforts.

As stated in Stuart, K. Allison, ecological restoration is an intentional activity that initiates or accelerates the recovery and sustainability. Frequently the ecosystem that requires restoration has been degraded, damaged, transformed or destroyed as those direct or indirect human activities, (Stuart, K. Allison 2004). In this case, understanding the ecological history and its status is relevant to deal with restoration process and the results of the process is dependent on the understanding of the history, and knowledge of what is currently happening to the whole process.

Restoration can be increasing the soil fertility and reconstruction of abandoned natural vegetation. "Rehabilitation of degraded land and

monoculture plantation should focus on the improvement of soil fertility and reconstruction of the species composition of a reference natural forest" (Kobayashi, S.2007:1599). It can take different form depending on the problem of the area and its nature but the basic goal is the same in any case, changing the spiral of the existing situation.

The restoration effort is not easy process as the problem of land degradation is resulting from various and complicated factors that can aggravate the problem and feeding other related environmental problems. And the reliance of grassroots for their subsistence on the environment is another challenge as mentioned by Bryant, R. L. and Bailey, S. (1997). Bryant and Bailey argued that the combination of extreme poverty and limited or non-existence access to fertile agricultural land, plus other environmental resources, result in few opportunities for poor grassroots to escape their dependent circumstances.

Is restoration complete recovery of the degraded land? "Conservation has traditionally been a reargued measure to prevent further degradation rather than a means for increasing resources or natural capital" (Robert H. Hilderbrand, et al 2005). For Robert H. Hilderbrand, et al, expecting complete restoration on human time scale is unreasonable, even when full recovery may eventually occur.

In Ethiopia, rehabilitation starts with area closure that involves the protection and resting of severely degraded land to regenerate its productive capacity (WOCAT 2007:317). There are two types of area enclosure practices in the country. The first one involves closing of an area from livestock and people so that natural regeneration of the vegetation can take place. And secondly, it comprises closing off degraded land while simultaneously implementing additional measures such as planting of seedlings, mulching and establishing water harvesting structures to enhance and speed up the regeneration process (ibid: 317).

In an attempt to change the spiral, there should be various ecological aspects to be considered. The level of success of restoration is determined by the extent to which various aspects of the ecology are considered. "Failures to achieve clarity on moral and cultural considerations will hinder the ecological restoration's potential to generate healthy relationships between the people and the land, (Eric, S.Higgs 1997:339). According to Eric, good ecological restoration entails negotiating the best possible outcome for a specific site based on ecological knowledge and the diverse perspectives of interested stakeholders; to this end as much process as product oriented.

Bedru, et al discussed the multi-criteria decision analysis to community forests in northern Ethiopia. Continuous deterioration of the natural resource base has become a serious threat to both ecosystem functions and economic production of Ethiopia. To combat these problems national level environmental conservation and rehabilitation efforts were started in the 1970s with particular focus on the forest deteriorating highland areas (Bedru, et al 2010:1294). As the authors mainly pointed out the environmental rehabilitation and conservation interventions by both governmental and non-governmental organizations alike are focusing mainly on installing biophysical measures or structures and pay less attention to the socio-economic and institutional side of

the problem. This had led to poor performance of many of the environmental reclamation programmes in Ethiopia.

2.2 Determinants of the restoration effort: Main concepts

In this part, main concepts are defined in relation to the restoration of degraded land and in the context of the area under consideration. There are number of factors that can be assumed as determinants of the restoration programme. The prevalence and intensity of each factor determines the results of the restoration programme. Poverty, institutional capacity, government-community relation and the exclusive role of local community members as the central actors of the restoration programme are some of the aspects defined and reviewed based on different literatures.

2.2.1 Which aspects of poverty to be considered?

In this paper, poverty is defined in terms of land distribution, availability of basic needs, particularly food for households and the attempt of inclusion of 'poor' people in productive safety-net programme to fill the food gap. Restoration efforts of degraded land and poverty have two-way causation. The prevalence of poverty and its extent determines the results of the restoration process. In the rural life, poverty is defined in terms of land distribution and land productivity. Rigg discussed poverty in relation to land distribution where livelihoods are fundamentally founded on agriculture, poverty is a product of resource failures and inequalities, and central to this are the distribution and productivity of land (Rigg, J. 2006:190).

In the study area, poverty is assumed as one of the determinants of the restoration efforts and results. In this case, poverty should be understood in terms of land holding and the specific activities in which people are engaged in to generate their subsistence on one hand and the inclusion of 'poor' people in the productive safety-net programme to fill the food gap on the other.

Land degradation resulting from deforestation happens due to the interaction of various actors with their environment. According to Jose Antonio puppim de Oliveira (2008), while discussing the case of eastern Amazon, landless people are one of the actors of the deforestation process. In this case, landlessness contributes to land degradation as landless people are forced to be engaged in the forest exploitation to generate their subsistence from conquest of farm land and sale of wood and charcoal.

Land is central to the rural development as a principal natural capital and for earning living. Land distribution matters the restoration effort. As mentioned in Clover, J. and Eriksen, S. in the political ecology and social justice paradigm, exploitative relation of production and inequitable distribution of resources, in particular land is at the root unsustainable development. Poverty is here a product of unsustainable development (Clover, J. and Eriksen, S. 2009:55). The authors suggested the redistribution of the land to the poor to achieve sustainable development.

Access to land is still at the centre of agricultural development. "Access to land is an important issue for the majority of Ethiopian people who, one way

or the other, depend on agricultural production for their income and subsistence" (Samuel G. 2006:3). On the other hand, one of the key issues of current Ethiopian government is reducing irregularities in land distribution among farming society primarily to achieve agricultural development. As mentioned in rural development policies, strategies and tactics, in Ethiopia, ensuring the fair distribution of land for those who need to lead life by farming is one of the key issues to achieve proper land conservation (FDRE, Ministry of agriculture and rural development 2002).

The more the people have access to land to produce their subsistence the better the restoration results will be and the less the people have access to land and its resources, the more rush to cut the forest and contribute to the restoration failure, is the first assumption considering land distribution as one aspect of poverty definition.

Beside to land holding, productive safety-net programme as poverty alleviation strategy is considered as determinant of the restoration effort. In Ethiopia, as poverty alleviation strategy, the poorest of 'poor' people are beneficiaries from fund allocated by federal government for that purpose in the productive safety-net programme to fill the food gap. Local government is responsible to select the poorest of 'poor' people to be included in the programme.

Productive safety-net programme has been started to be implemented in Ethiopia after 2005. "Starting in 2005, the Government of Ethiopia and a consortium of donors implemented a new form of safety-net: the Productive Safety-Nets Programme (PSNP)" (Daniel, et al 2008:3). According to Daniel, et al, the PSNP operates as a safety-net, targeting transfer to 'poor' households in two ways. On one hand, it is transferred through public works and on the other as a direct support. Public works, the larger of the two programmes, pays selected beneficiaries 6 birr/day for their labour on labour-intensive projects designed to build community assets. Direct support, in the form of cash or food transfers, is provided to labour-scarce households including those whose primary income earners are elderly or disabled in order to maintain the safety-net for the poorest households who cannot participate in public works.

The productive safety-net programme which has been implemented in the country since 2005 revised every five year. The revision is aimed in ensuring the beneficiaries level of food-self-sufficiency during the time they are part of the programme. The beneficiaries are supposed to be food-self-sufficient within the five years using the aid. Therefore, this aspect of poverty is assumed to contribute to the better restoration results in two ways. First, the beneficiaries are expected to contribute their labour for the restoration process. And secondly, those who become food-self-sufficient through the aid within the five years will interfere less to the land resources particularly forest. The more people included in the productive safety-net programme, are able to be food-self-sufficient and involved in restoration programme through labour delivery, the successful will be the restoration effort is the assumption of the researcher.

2.2.2 Institutional Capacity

The goal of capacity building in Ethiopia is creating institutional capacity in order to achieve the intended development goals. According to the FDRE capacity building strategies and programmes document (2002), the government has given emphasis on building capacity of the three pillars of development: government with its leading and coordination role, local community as the main actor of the overall development plan and the private sector to make active participant in the development process.

If someone considers the causes contributed to the failure of previous reclamation efforts in the country, can come across with number of factors. One of these factors as mentioned by Leach and Mearns, as determinant of the reclamation process in Ethiopia was inadequate scientific and technical knowledge, and the implementation was not holistic, top-down approach and usually missing the significance of the local interest and knowledge (Leach, M and Mearns, R 1996:187).

In this literature, capacity is reviewed as institutional capacity where, people and institutions engaged in restoration programme are required to be capacitated to achieve restoration goals. Capacity building includes training and allocation of human resource, and other resources in the restoration programme, and the overall establishment of the system working in the restoration programme.

In the case of Ethiopia, capacity building of sectors as a strategy to achieve development goals through an integrated manner is recent phenomenon, event of less than a decade. Therefore, dealing with institutional capacity as one of the aspects determining the restoration results has found to be reasonable. Explicitly speaking in the country capacity building particularly training in higher education institutions is carried out by central and regional governments whereas employing the trained manpower is the responsibility of the local governments as power and budget are decentralized to do so. Beside to trainings in higher institutions, there are efforts to build capacity of grassroots/farmers through short term trainings like in the FTCs.

At the wider scale, it could be difficult to conclude that the more trained man power leads to better restoration results. At the same time, underestimating the role of trained man power in the restoration programme could be imperfect. It is all situational that may hold true in some specific situations and may not in others. On the other hand, trainings through improved skills can contribute to the restoration programme given that there is better management of manpower.

Eugene discussing the role of science and society in the ecological restoration argued that the institutions of higher education where majority of young adults are enrol in has a potential to affect the restoration process in many different ways like governance, waste recycling, personal relationships, corrective actions, etc. as any other sector(Eugene R. Turner 2005:172).

Bringing the concept of institutional capacity to this paper's context, it refers to the agriculture and rural development sector and the people, who are working in this sector. Similarly, the definition of capacity for this particular case is about the sector as a whole; the peoples' skills and level of training, the

sectors coordination capability, number of experts hired in the sector and amount of budget allocated to the restoration programme.

Considering institutional capacity as a determinant factor of restoration effort, the assumption of the researcher is that the success in restoration is measured by number of experts hired in the natural resource development and conservation work process, amount of budget allocated and effective coordination of respective woreda offices working in the restoration programme.

2.2.3 Is Government or local Community, prominent in the Restoration Process?

In this sub part, the role of the main actors and the way they are integrated in the restoration programme is reviewed in the context of the study area. Currently in the restoration process, the government-community relation to work together is considered as a better approach to deal with the degraded lands. Each actor has its own significant role in contributing to the programme but there is at the same time distinctive role of each actor. What government-community relation implies?

As mentioned in Richard J. Hobbs and Viki A. Carmer, restoration is an interventionist activity that agents of the process work in the area of the problem considering the existing situation. Restoration is by nature, largely an interventionist activity. In the light of recent conceptual developments in restoration ecology, different types of intervention have been discussed that are used in restoration and then consider these activities in the context of on-going rapid environmental change (Richard, J. Hobbs and Viki, A. Carmer 2008:40). What does intervention means? Here the role of the government is discussed for its being in forefront of the restoration programme particularly in decision making on key issues required for the success of the programme.

Better institutions and environmental policies are mentioned in Richard J. Culas as important instruments to foster sustainable forest resources and economic growth. "Improvements in institutions for secure property rights and better environmental policies can thus significantly reduce the rate of deforestation without hindering the level of economic growth" (Richard J. Culas 2007:429). As the restoration effort is aimed in alleviating poverty and the initiative has been taken by the government to mainstream the restoration programme with poverty alleviation strategy; the planning, coordination, resource allocation and successive participatory evaluation are expected to be carried out by the government or at least with its substantial role.

The participatory approach in any development programmes is crucial in current development debates. Eugene R. Turner discussed the importance of the inclusivity of all society to build strong restoration programmes than a narrowly supported programme (Eugene R. Turner 2005:171). Eugene further stated the importance of involvement of the society in the restoration as a great way to restore not only the environment but also the society. To restore the society implies here the threat to the society if the ecology is beyond the resilience and restoring the ecology is indispensable from the society in the surrounding ecology.

For Blaikie and Brookfield, government involvement with substantial funding for compensation to cultivators, and/or with the political means of mass mobilization has better chance for achieving the results of conservation (Blaikie, P. and Brookfield, H. 1987:34). Mass mobilization in this sense is participation of the society in the restoration programme and implies participation in planning, implementing and evaluation of the restoration process. On the other hand, as mentioned in Sinha, sustainable rural development agendas in many cases rely on 'local community participation' that is potentially a deep political process aims to transfer the control over resources and decision-making to groups which have so far been excluded from such control (Sinha, Subir 2000:202).

In Ethiopia there has been restoration programmes at different times of which most of them were implemented by the government and at least by the dominant role of the government at the centre of the restoration programmes. The pre 1991 evidences about the restoration shows failures of the process, as they were carried out by the government and failed due to lack of proper care from the community living in the area under restoration. Currently community participation in any aspect of development programmes become central and at each administration level the government encourages the local community participation in planning implementation and evaluation of development programmes. In fact, only mere exaggeration of participation as effective approach may not contribute to the better restoration results.

2.2.4 The exclusive role of local community members

Community is a vague term that can be defined differently in different situations. Some define it spatially as groupings of people who physically live in the same place. It can also be defined considering socio-cultural aspect as social groupings, which derive a unity for a common history and cultural heritage, frequently based on kinship. Considering economic aspect, some define community as groupings of people who share interests and control over particular resource. A given community can attain at least either of the criteria while living in a given area or sharing common resource. "Communities can be functionally defined in several ways e.g. through representative structures, area, common interest, ethnicity, affinity, resource user groups or land use" Barrow, E., and Murphree, M. (1998:4).

At the centre of the restoration programme, community has an exclusive role to deal with the problem in a sense that their relation and the degree of cooperation to each other determine the results of the restoration effort. Community based conservation is one of the approaches in community based natural resource management mainly in common property arrangements. But in most cases, it is about the communities' active participation in the natural resource conservation process given that there is the facilitation role of the government. To the contrary, there is romanticized consideration of the common property arrangements. Behind the agitation of the community's participation, there must be careful consideration in finding out the potential users of the land and their interest. Leach and Mearns (1996:169) "in relation to land there is a tendency to romanticize the common property arrangements

without serious effort to find out whether they are locally preferred by potential users and non-users, whether they complement individual land rights which may have already established, or whether they are feasible within the local socio-political realty".

From the personal experience of the researcher, in the study area, there are cases in which the community members get together and set rules to govern the commons they share, and those who violet the advantage of commons will be sanctioned according to the rule they set and other social sanctions under the local community organizations called 'Iddirs'. As defined by Dejene, Iddirs are community-based organizations/burial associations established on the bases of neighbourhood, ethnicity, sex, and work place with the primary purpose of providing financial, material and moral support in times of death for the bereaved members and/or their families (Dejene Aredo 1993:39). Although, 'iddirs' are initially organized by the members of the local community to help each other in the time of death, they are currently influencing the governance of commons at the local level through social sanctions. Any violation of the commons in the community members is treated through 'iddirs'. Here the assumption is that the degree of participation of the local community members in the restoration process and their sense of belongingness determine the restoration results in the study area.

Chapter 3
Data Analysis and Presentation of Major Findings

In this part, major findings are presented based on data collected through interview and field observation. In the first part of this section, the overall picture of the study area is presented based on the key informants' interview and field observation. Part two is dealing with the comparative analysis of the two woredas in order to identify the challenges and prospects of the restoration programme in the study area.

3.1 Restoration effort in Hadiya zone

Land degradation is severe socio-economic problem in Hadiya zone which resulted in reduced productivity, loss of natural vegetation and recurrent drought in the zone. The major cause of land degradation is human interference. According to key informants from Hadiya zone agriculture and rural development department, among many factors, deforestation for expansion of farm land and overgrazing are prominent causes of land degradation in the zone. Though land degradation is common in both communal and individual lands, it is more severe in communal land.

Due to population pressure, there is expansion of farm land and grazing land to the marginal and less productive areas which aggravate land degradation in the area. Land degradation takes place both in dry and wet seasons of the year. However, it is more severe in rainy season through erosion. The study area's slope contributes to the run-off the top soil in rainy season. On the other hand poor land management contributes to the land degradation and achieving better results from the restoration effort of the degraded land has become difficult in the zone.

According to the key informants, the overall impacts of land degradation in the zone are; reduced productivity both crop and livestock, shortage of wood for fuel and construction, shortage of water, poor soil fertility, gradual loss of vegetation cover, recurrent drought and migration of people to urban and semi-urban areas due to reduced productivity. The problems resulted from land degradation and fast growing population of the area forced to implement the integrated restoration programme of degraded land in the study area. The government, local community and NGOs are actors in the restoration programme in the zone.

Land degradation as a problem and restoration programmes as solution to mitigate the impacts of land degradation are phenomena of recent decades in the study area. Mr. Adebacho Watchiso, coordinator of the natural resource development and conservation work process in Hadiya zone agriculture and

rural development department has over thirty years' experience in the restoration of degraded land in the study area as he explained during personal communication. According to Mr. Adebacho (personal communication)[2], the marked implementation of restoration of degraded land can be traced back to 1986 in the country in general and in the study area in particular. But the history of integrated implementation of restoration programme in the zone has less than a decade.

Identifying the prominent actor of the restoration programme in the study area was one of the aspects to be assessed in this paper. Almost for all of the interviewees, government and local community members are the prominent actors of the restoration programme in the study area. For the interviewees, the role of government is seen as prominent because government is responsible for problem identification, resource allocation for restoration programme, mobilizing local communities through local political leaders, capacity building through medium and short term trainings, and creating conducive environment for NGOs participation in the restoration programme. On the other hand, local community members have indispensable role at the centre of the restoration programme as the main actors and the primary beneficiaries of the process.

The researcher has tried to identify the role of local communities living closer to the area where restoration has been taking place. The responses from interviewees shows that people living very close to the plot of land where restoration is taking place are more responsible than others who are living far away. They are more responsible because of two reasons: on one hand, they suffer more than others do from the problem and on the other hand, they are number one beneficiaries from the restoration programme in the short-run.

In an attempt to investigate the hindering factors of the restoration effort of degraded land in Hadiya zone, numbers of reasons have been identified as obstacles of the restoration programme. Lack of 'awareness' of the main actors (local community members) of restoration process about the restoration results and the overall impact of land degradation, and lack of capacity to implement the restoration programme in the way that can contribute to the better restoration results are the major ones that the interviewees mentioned. Key informants define capacity as an institutional capacity that can determine the restoration result. Level of education, number of professionals working on the area, financial/material availability and technology are some of the aspects of institutional capacity.

This paper is aimed in identifying how the hindering factors are being treated in the study area. What the interviewees have explained is that there has been institutional shift from fragmented implementation to integrated implementation of restoration programmes in the zone. Political leaders, local community members and stake holders are highly integrated in implementing

[2] The people quoted in this chapter are key informants and the quotations are based on personal communication. The detailed profile of these key informants is attached on appendix-A

the restoration programme. The integration starts by planning the programme and implementation, and evaluation of the progress and results of the restoration programme.

Identifying the role of productive safety-net programme on the restoration effort and its link to the programme as a means of fighting poverty in the study area is one of the aims of this paper. As it was assumed, the productive safety-net programme contributes to the restoration effort in two ways. The first aspect is that it contributes through labour delivery which can help the restoration effort and secondly it contributes indirectly through creating food-self-sufficiency that enables to achieve better restoration results in the area as the users of the programme eventually become food-self-sufficient.

3.2 Restoration effort in the two woredas: Comparison

In this section, the comparative analysis of the two woredas on restoration of degraded land is presented based on the information collected through interview and field observation. As the two woredas, are purposively selected among the ten rural woredas based on the information from key informants of agriculture and rural development department of the zone, as one woreda is better in restoration efforts and results than the other. The questions have been designed accordingly to each woreda in order to get proper information on the process of restoration with particular emphasis on hindering factors and role of actors.

In order to keep the consistent flow of presentation of major findings and lay foundation for arguments to be presented in chapter four, and make the paper clear to the readers, the researcher tried to categorize the presentation of findings in to five aspects that can fit with the research objectives and questions. Firstly, comparison is made between the two woredas based on the information gathered on factors hindering the restoration process in the respective woredas. Secondly, how the meaning and success defined in each woreda is presented. Third, the actors, and their role and interest in the restoration process are explained. Fourth, the government-community relation has been assessed. The last part of the presentation is dealing with the link between restoration effort and poverty alleviation.

3.2.1 Hindering factors

In the study are in general and the selected woredas in particular, the factors hindering the restoration effort goes to two main categories. Lack of 'awareness' among the members of local community about the land degradation and its impacts, and low level of capacity to implement the restoration programme are the main factors hindering the restoration effort in the area.

According to the key informants working in the department of agriculture and rural development, particularly in the natural resource development and conservation work process of Hadiya zone, the restoration effort of degraded land is progressive regardless of the hindering factors in Sorro woreda. To the contrary, Shashogo woreda is one of the rural woredas with difficulties in

restoration process and results. In an attempt to investigate the hindering factors of restoration effort and results in both woredas, different factors are identified from the information collected through interview.

In Sorro woreda, low level of 'awareness' of local community members is one of the hindering factors of restoration process. Key informants interviewed from this woreda put lack of 'awareness' in the first place of their explanation as the main hindering factor of the restoration process.

> "...lack of 'awareness' is one of the difficulties that we are facing in the process of restoration of degraded land" (Behailu Tariku).

The above quotation was to the question provided on the factors hindering the restoration effort. According to Behailu, coordinator of the natural resource development and conservation work process in Sorro woreda agriculture and rural development office, apart from low level of 'awareness', among the local community members, limited capacity is another prohibiting factor of restoration effort. Lack of skill and capital to invest on degraded land and amount of facility provided to the experts determines the level of success of the restoration effort.

Alike to Sorro woreda, in Shashogo woreda, lack of 'awareness' is the prominent factor hindering the restoration process.

> "...one of the biggest challenges contributing to the failure of the restoration process in this woreda is low level of community 'awareness'" (Tessema Awano).

In this woreda, restoration is very significant as there is severe problem of land degradation that threatens the food-self-sufficiency than other woredas in the zone. Because of the nature and intensity of the problem resulting from land degradation, the application of restoration programme has become now part of the poverty alleviation strategy. According to Tessema, coordinator of the natural resource development and conservation work process in Shashogo woreda agriculture and rural development office, as the source of the failure rooted in 'awareness' of the local community, the first major taken by the government was working on the 'awareness' creation and now it is possible to see the progressive sense of belongingness of the community members to the restoration process and better participation as compared to the previous years. However, the researcher prefers to see the lack of 'awareness' in terms of the interest of actors particularly the local community members considering the inequitable distribution of land and its resources amongst, that will come in chapter four in detail.

Looking the problem from different angle enables to see other hindering factors. In both woredas, population pressure is still aggravating the problem of land degradation. Due to increasing need for farm land, grazing land and wood, there is an intense pressure on land by people as there is high agricultural density in the area. Marginal lands and shrubs are now becoming under possession of farm and grazing lands. As a result, the restoration attempts are facing challenges. Increasing population and fragmentation of land have resulted in possession of farm land by clearing up the trees in spite of the topography and marginality of the land.

The main target of deforestation is to expand agricultural land. Why the farmers keep on expanding their farm lands? The key informants explained the reason from the point of view of securing their productivity. As the top soil has been washed away by erosion from time to time due to successive farming and poor land management, the fertility of the soil has been reduced and to secure this reduced productivity farmers keep on expanding their farm lands to carry out extensive farming.

The other aspect assumed as a determinant factor of restoration process in the study area was institutional capacity to implement the restoration programme. Institutional capacity as defined in previous chapter is the overall capacity of the woredas to implement the restoration programme in the areas affected by land degradation. This can be defined in terms of resource allocation both human and financial, for the natural resource development and conservation work process of agriculture and rural development office. The better the resource allocation leads to the better restoration programme was the assumption. Since it is comparative analysis between the two woredas, in order to see the role of experts, some statistical evidences of the last seven years on human resource allocation are presented in the following table.

Table1 Number of experts employed over the last seven years in Sorro and Shashogo woredas natural resource development and conservation work process

Woredas	Trained man power over last seven years						
	2004	2005	2006	2007	2008	2009	2010
Sorro	5	5	8	8	8	5	11
Shashogo	3	3	4	6	6	8	8

Source: woreda agricultural and rural development offices, July 2010

In both woredas, there is increase in number of experts from year to year. But there are more experts in Sorro woreda than Shashogo woreda over the last seven years. Although it was difficult to know to what extent the more experts have contributed to the restoration effort, during the personal communication with key informants, it was possible to know the role of experts especially on mobilizing the local community members at the grass root level and providing technical support to the restoration programme. In the study area, experts working in the woredas are responsible to work together with the local community members at the lowest political administration level, kebele.

The numbers of experts, shown in the table above are those who work in the office. The numbers of experts working in the restoration programme are determined by the number of lowest political administration level, kebele. The researcher purposefully considers the experts working in the office because the planning and coordination is carried out by the experts or with their technical support working in the office. The implementation of the restoration

programme and its results is determined by the number and commitment of the experts and the quality of the plan, and coordination quality of the agriculture and rural development office, which is obviously political role.

On the other hand, allocation of financial resource over the last seven years for the work process working on restoration is considered to see whether it has impact on restoration results or not in the selected woredas.

Table2 Recurrent budget over the last seven years in Sorro and Shashogo woredas

Woreda	Yearly budget allocation for restoration purpose						
	2004	2005	2006	2007	2008	2009	2010
Sorro	2720	2935	4800	10000	6200	8000	6000
Shashogo	-	4008	4876	4000	5200	5873	6600

Source: woreda finance and economic development offices, July 2010

In the above table, we can see the gradual increase of recurrent budget in both woredas. The aim of considering the recurrent budget is not to compare the success and failure in terms of the amount of budget each woreda allocated for the restoration purpose but on the basis of the progressive budgeting. Sorro woreda is with better restoration effort irrespective to fluctuating budget over the last seven years. To the contrary, Shashogo woreda is with 'poor' restoration results as it was seen during the field observation regardless of the gradual increase in budget over time. In this woreda, there are NGOs involved in the restoration process and budget mentioned in the above table is allocated only by government. More budget or better use is prerequisite for successful restoration programme? This will be discussed in chapter 4.

3.2.2 Actors

In this paper, actors are institutions or individuals who participate in the restoration process of degraded land. During the field work three actors were identified. These are local communities, government and non-governmental organizations. The aim of identifying the actors of the restoration programme is to know the main actor/s, and the role and interest of each actor in the process.

According to Behailu Tariku, in Sorro woreda, the main actors of the restoration programme are government and local community members. He has bolded the role of the government from the point of view of coordinating the overall process of restoration programme. In this woreda starting from planning and appropriate resource allocation, and mobilizing the local communities to participate in the restoration programme, government plays crucial role. On the other hand, community is indispensable in the process and there is a tight relation between government and local community in the

implementation of the restoration programme that can be seen as progressive compared to previous years.

In the case of Shashogo woreda, government and local communities are the main actors alike to Sorro woreda. In this woreda, there are NGOs participating in the restoration process unlike to Sorro woreda. According to the key informants from Hadiya zone and Shashogo woreda, NGOs involve in the restoration programme in order to support the role of government through provision of aids to the people aimed in filling food gap in the woreda, as there is relatively severe food shortage in the area.

> "...we use the aid from NGOs to the restoration programme which is even though targeted to be distributed for those who are facing from food shortage" (Tsegaye Geberewold).

According to Tsegaye, expert in natural resource development and conservation work process in Shashogo woreda agriculture and rural development office, local community members have prominent role in the restoration process as they contribute free labour and via productive safety-net programme.

In the case of these two woredas, government's measure on land use policy has positive role in the restoration process on both communal and individual lands. New land use policy enables the land users to use the land, which they are certified for, to secure their food-self-sufficiency. And it allows farmers to use the land to which they are certified for only, and obligates them to conserve that land. After the introduction of land certification policy, it has become possible to follow up properly the restoration process in the areas where the restoration is taking place. Land certification works for both individual and communal lands. People living near the plot of land which belongs to the common use, are certified for that land to conserve and wisely use the resources out of it. But what the researcher has seen during field observation is that the lands named under communal use are marginalized and degraded. Although there is an effort to restore that degraded communal land, there are challenges coming from landless young people emerging with need to farm land. Therefore, certification of land enables to manage the land under restoration providing the legal framework.

Local communities as actors of the restoration programme have integrative and exclusive roles. According to Behailu Tariku, Gedeon Tagese and Mihretu Erjabo, all from Sorro woreda, currently local communities are contributing in two ways for rehabilitation programme. Firstly, they are becoming active participants in the restoration process in planning and implementation. And secondly, they are taking the responsibility of the land under restoration by setting the rules to govern the process of restoration through local community organizations called 'idirs'. 'idirs', are community based organizations, created by local community members to help each other in time of death, are now serving as legally powerful organizations that can govern the interest of commons at the local level by imposing punishment on those who violate the rules set to achieve the goal of restoration programme.

3.2.3 Meaning and Success

In the study area the meaning and success of restoration is defined by the actors of the restoration process. As mentioned in the previous part, the main actors of the restoration process in Hadiya zone are local community members, government and NGOs. Therefore, the meaning and success is not given based on some scientific criteria, to this particular case rather by the actors of the restoration process by considering relative change to the land as compared to its previous status taking the reference of last six and seven years particularly in terms of vegetation cover, built traces and degree of recovery through vegetation cover.

According to the key informants, understanding the meaning and success of restoration programme starts with identifying the problem of land degradation and understanding its impacts on socio-economic aspect of the respective woredas. From the explanation of interviewees, it is possible to say that the impact of the land degradation is understood by the actors of the process and they began to act accordingly. Among the Six key informants and twenty purposively selected interviewee farmers, all agree on the impact of land degradation in the woredas which is reduced productivity of land.

As explained by the interviewees, if the land is in the status of gradual decrease in vegetation cover and gradual removal of top soil through erosion, then it has to be treated as degraded and restoration programme should start to be implemented. Usually in the study area, implementation of restoration programme begins with identifying the land as degraded. On the other hand, success of restoration effort defined by the actors in terms of vegetation cover and its consistency for not less than three years without interference of human actions.

In the selected woredas, on the communal lands fencing the degraded land and applying the restoration programme through community mobilization is the main approach. However, as there have been challenges coming from different angles of the local community members due to varying interest, there have been ups and downs in the implementation of the restoration programme and achieving the desired goals. Regardless of these challenges, there are attempts to restore the degraded land in the study area.

In Sorro woreda, the main means of rehabilitating the degraded land is by planting ecologically significant trees mainly indigenous to the area. Regardless of ecological significance, these trees have low economic value to the local communities. According to the key informants, eucalyptus tree is highly needed by the people for its economic value, and people prefer to plant this tree on both individual and communal lands. On the other hand, experts working in the area of natural resource development and conservation are working on 'awareness' creation among the local communities on the ecological significance of the indigenous trees. Figure1 below shows the attempt to restore the degraded land through planting ecologically significant trees in Sorro woreda. As explained by key informants before 5 year the area was degraded and barren but now covered by vegetation mainly trees.

Fig.1 'Better' restoration result. Picture taken from Sorro woreda Shera Kebela during field observation, Communal land, July 2010

According to the interviewees even though it has a short history, restoration effort is promising in Sorro woreda particularly in communal lands. As the writer of this paper had a chance of looking at three sites where the restoration has taking place in this woreda, there is a sign of quick recovery of the degraded land through vegetation cover. Interviewees from government office and farmers explained that working hard on restoration of degraded land is part of fighting poverty. The link between restoration effort and poverty reduction in the woredas will be presented shortly.

The implementation of restoration programme in communal land of Shashogo woreda has similar feature with Sorro woreda. Ecologically valuable trees are given priority irrespective to their immediate return to the local community members. But in short term, local community members can generate benefit from sale of grass. According to Tessema Awano, the community living around the area where restoration is taking place are beneficiaries from recovery of the degraded land as they can use at least grass for their cattle and roofing their houses for cheap price and particularly members of the local community living close to the land where restoration is taking place are given priority.

Fig.2 'Poor' restoration result. Picture taken from Shashogo woreda, Alage Kebele, July 2010

In this woreda, there are efforts to restore the degraded land through fencing and planting trees on degraded land. But what was seen during the field work is that the lands under restoration process are still need to be invested on more. As it is shown in fig.2, the area which is identified as degraded was completely barren and rocky five years ago, according to Tessema. The area is dominantly covered by grass. There are few trees planted in the area which can prove that if more trees were planted better vegetation cover could be expected. Comparing the restoration effort and results in Sorro and Shashogo woredas, considering soil property and other natural factors important for vegetation growth constant, the areas under restoration process in Sorro woreda are better in vegetation cover than observed in Shashogo woreda.

During the field observation, the researcher could see the efforts made to create boundaries of the area under restoration through stone fencing (see figure 3 below). As compared to the Sorro woreda, the rate of recovery of degraded land particularly through vegetation cover mainly trees is slow in Shashogo woreda.

Fig.3 Stone fencing. Picture taken from Shashogo woreda, Bonosha kebele., July 2010.

As the restoration is aimed in combating desertification and its impact, it is implemented on both individual and communal lands. Individual land in this context is the land used for agricultural purposes. Here the restoration takes place through building small traces across the farm lands, which is targeted in breaking the direct down streaming erosion and protecting the top soil. The figure 4 below shows how individuals apply the erosion breaking mechanisms on their farm lands and how they try to control erosion.

Fig.4 Erosion breaking traces on individual lands, picture taken from Sorro woreda, Shera *Kebele, July 2010*

3.2.4 Government- community relation

Government-community relation is one of the aspects considered as determinant of restoration process to know the role of each actor in the process. The relation is explained in terms of participation in the restoration effort. The interviewees from the two woredas have explained that there is progressive integration between government and local community members as compared to previous years.

The local government is responsible to mobilize the community members and other stake holders in the restoration programme. At the same time, there is a better perception towards participatory implementation of restoration programme in order to assure the sustained achievement of the desired restoration results. To achieve these goals the local government set the short and long-term benefits to the local community members.

In short term, there are benefits for community members that come from sale of grass and using the grass for their cattle through cut and carries system. As a result, the members of the community living near to the land where the restoration programme has been taking place are active participants and better contributors to the programme than others who live far away from the area. Therefore, government has a facilitation role to make the local communities central role players of the restoration programme. In other words, there is no imposition from government on local communities apart from coordinating and helping in decision making.

On the other hand, during the field observation the researcher noticed that there were cases like no signals of restoration are observed. The plot of land similarly degraded to the other plot of land shown in fig.1 five years before, is still barren. The area shown in fig.5 below is in fact located between two lowest political administrative units, kebeles and equally accessible by the two parts of the community members. It seems a buffer zone between these two kebeles because of its marginality. At the same time, one can see the ambiguity of right over the land among the members of local community of the two administrative kebeles as it is open to both parts. In this case, local government's role seems to come in the forefront of the restoration programme, in deciding on how to implement the restoration programme on such land and on how to make the local communities active participants on the restoration programme.

Fig.5 Degraded land with no restoration attempts. Picture taken from Sorro woreda, Hankota kebele: The boundary between two kebeles, Odda and Hankota, July 2010

> "... the area identified by government as severely degraded and where there is implementation of restoration programme has been taking place, is under quick recovery than other plot of land which is facing from land degradation" (Behaliu Tariku).

From this quotation, we can say there must be the role of government in the forefront of the restoration process to achieve the desired restoration results in the area.

It was possible to see the role of government and society separately during the field work. The interviewees explained the role of government as viable in

planning, resource allocation and monitoring and evaluation the progress of the restoration programme. The role of community members on the other hand can be seen as active participants in planning, implementation and evaluation of the restoration programme. The farmer interviewees agree with the significance of their participation and coordinative role of the government to achieve the goals of restoration of degraded land.

3.2.5 Restoration effort and poverty alleviation strategy

Currently restoration of degraded land through water shade development is the country's emphasis area that is targeted as a means of combating the effects of poverty. According to the key informants from the Hadiya zone agriculture and rural development department, restoration of degraded land has become the issue of alleviating poverty in the zone. Every attempt towards food security is related to working on restoration of degraded land.

How is the restoration effort linked with poverty alleviation effort in these selected woredas? Interviewees from the selected woredas have similar explanation on how the restoration of degraded land and poverty alleviation effort are linked. Restoration effort and its results have equal attention and value on both individual and communal lands. Therefore, the effort begins with mobilizing the local communities to work on restoration programme to achieve poverty alleviation goals.

> "....restoration on communal lands is aimed at maintaining the ecology in the long run and on individuals' land it is targeted to bring back the productivity of land as it has been currently threatened by removal of top soil by erosion" (Behailu Tariku).

Therefore, the restoration effort is mainstreamed with poverty alleviation effort in two ways in the woreda. Firstly, there is an attempt to make local communities participate in the restoration process through free labour delivery and is currently practical that everybody in the community must deliver free labour for the restoration programme. Secondly, the productive safety-net programme, which is aimed in filling the food gap in the country as mentioned in the first of this paper, is highly contributing to the restoration effort. According to Behailu, the labour of community members, included in productive safety-net programme is currently possible to invest on restoration of degraded land in the woreda. The productive safety-net programme is aimed in achieving the poverty alleviation strategy. People included in this programme are those who face severe food shortage. According to the key informants from the zone and woredas, more than 80% of the labour of these people, included in productive safety-net programme is legally possible to use for the restoration programme. Only about 15 % of the users, who cannot participate or deliver their labour due to age and health condition, receive the aid directly. In other words, productive safety-net programme is serving as an incentive to mobilize the local community members to participate in restoration programme. As mentioned in Aklilu A., et al 2007, in the pre-1991 political regime ('Derg', committee in English), there were "food-for-work" arrangements to mobilize the local people to participate in rehabilitation

programmes. And there were failures due to the inconsistent delivery of the incentives. It was the point of discussion with the key informants on whether the same history will repeat in case if the incentive from government cut at some point in time.

However, the key informants tried to differentiate between the "food-for-work" arrangements of previous decades and the current productive safety-net programme in a sense that there are efforts to create 'awareness' among the community members on the significance of the restoration efforts and its results, and there is a situation where the local community members are made to be beneficiaries of the return of the restoration results. Hence, these efforts are expected to contribute to the better restoration results. Both Sorro and Shashogo woredas have similar attention towards the poverty alleviation strategy, which is working hard on restoration programmes through water shade management approaches.

Still the issue of uneven distribution of land among the local community members as an obstacle to the restoration effort and results could not come on the table throughout the entire discussion with the key informants. But they mentioned that the scarcity of farm land for those who need the land and there exist the uneven distribution of land among the local communities as it is negatively affecting the restoration efforts. This is one of the main arguments, which the researcher wants to make in chapter four.

Chapter 4
Discussion

In the previous chapter, main findings were presented in relation to the restoration effort of degraded land in Hadiya zone. Based on the interview and field observation, the researcher tried to put the findings in to five groups (hindering factors, actors, meaning and success, government-community relation, and restoration effort and poverty alleviation strategy) in order to identify the determining factors of restoration effort, the actors and their interest in the process, and the link between poverty alleviation and restoration effort. In this chapter, the findings are discussed in line with the theoretical framework and major findings. The writer prefers to bring the discussion to this part because it is logical to bring it here in order to build arguments and link the presentation of major findings with the theoretical framework.

In order to understand better and be able to identify the determining factors of the restoration effort and process, looking at the factors contributing to the land degradation is relevant. As mentioned by different authors, the cause of land degradation is population pressure. All the factors indicated together with population pressure are in one way or another related to interference of people to the land and its resources. Among the major causes of land degradation, increase in population number or human interference is prominent cause (Girma Taddese 2001, Badege Bishaw 2001, UNCCD 2008, Stuart, K. Allison 2004).

In the study area, population pressure is mentioned as main cause of land degradation. But the key informants explained that regardless of the population pressure, achieving restoration goals is possible given that there is 'awareness' about the impact of land degradation and benefits of restoration process among the people living in the area where land degradation is severe. In other words, in the study area lack of 'awareness' is mentioned as contributing factor to the land degradation and hindering the effort of restoration. However, the issue of 'awareness' should be seen from different angles. Though the local community members are equally aware of the effect of land degradation, they may not equally be interested in contributing to the restoration programme. The researcher argues that instead of addressing the issue of 'awareness', reconciling the different interests of the local community members and trying to address the issues of accessibility and fairness of land and its resource distribution rather helps to achieve better restoration results. Because inequitable resource distribution particularly land is crucial in determining the restoration effort as discussed in chapter two of this paper citing the work of Clover, J. and Erikson, S. 2009. On the other hand, the Ethiopian government also identified the importance of addressing fair distribution of land for those who need to lead their life by farming (FDRE ministry of agriculture 2002).

The overall target of restoration effort must be creating the healthier relationship between people and land where they live that Eric S. Higgs (1997) argued about. The writer of this paper agrees with Eric in a sense that when the different interests of the local community members reconciled, the relation

among each other will be healthy and their relation to their environment healthier.

Once the land is identified as degraded and if the restoration programme is started, then people around the land consider their right to that land is limited and resistances from different angles of the local community members arise to challenges the achievement of the restoration goals. The underlined idea of the informants falls in the existence of varying interests among the local community members though they address in terms of 'awareness'. Appreciating the idea and agreeing on the importance of 'awareness' creation, the writer argues that the willing to participate in the restoration process and contribute more to the process is highly determined by the interest of the actors that can be originated from the right to access the land resources and the distribution of return from the restoration process.

In Ethiopian restoration history, failures were experienced in the past due to the mere interventions aimed in installing the biophysical measures or structures and paying less attention to the socio-economic and institutional side of the problem (Bedru, et al 2010). What the researcher came across during his field work in the study area was an attempt towards learning from the history of the previous restoration programmes which were resulted in failure noting to the argument in the previous paragraph. 'Awareness', 'awareness', 'awareness'... the bolded word during the entire discussion with the key informants. As the pre 1991 restoration efforts were failed due to the mere intervention of the government without proper consideration of the interests and roles of local community members seemingly. Although the word 'awareness' came again and again during the discussion, the researcher still wants to see the way how the previous restoration efforts tried to reconcile the interest of different groups in the process. In fact, the pre 1991 restoration programmes in the country were more centrally governed and driven as compared to present restoration efforts.

To bring one more discussion point back from the above paragraph, let's consider the explanation of Blaikie and Brookfield (1987) that they discussed the relation between the land users and land, the governors of the land and land users, and the groups among themselves in the community that determines the land management. One thing that can be seen about the restoration effort in the study area is that the pre and post 1991 approaches. In pre 1991, the land was under public control whereas the post 1991 land managers are both government and community. And the restoration programmes were centrally planned in the post 1991 Ethiopia but at present, the restoration programmes are more participatory. The different approaches at different times, pre and post 1991 might brought the difference in restoration results. But the interesting point here is the extent to which the actors of the process are integrated and how their interests reconciled determines the results of restoration. The issue of participation will be discussed later in this chapter when the government-community relation is dealt.

Low level of capacity both institutional and individual is another factor that hindering the restoration effort. Leach and Mearns (1996) discussing the case of Ethiopia pointed out that inadequate scientific and technical knowledge

affected the results of reclamation efforts in the past. As stated in previous chapters, capacity in this paper refers to the individuals working in the restoration programme, institutions both government offices and communities as collectives and other resources required for the restoration purpose.

Initially it was assumed that the number of experts working in the restoration programme and amount of budget allocated to the programme determine the results of the restoration. But during the field work, the availability of technical inputs and the technical level of the people particularly farmers engaged in restoration programme is considered as an additional determining factor. This aspect is deliberately considered because there are farmers training centres (FTCs) which are almost in all lowest political administration level, kebele to work on training farmers in order to achieve agriculture development, basically aimed in increasing productivity of the farmers through improved skills and introduction of new technologies and inputs.

Are FTCs contributing to the restoration programme through developing the skills of farmers? Little role of the FTCs can be seen in the area contributing to the restoration process though it is aimed in achieving the development goals or better off farmers at the grass root level from the increased productivity of their land via provision of better inputs and improved skills through trainings. But it is possible to understand from the objective of the FTCs, that the implementation can contribute to the restoration programme through developing skills on how to apply on the restoration programme. Although the current contribution of FTCs for restoration programme is low, there is a potential of using this centres to achieve better restoration results.

Considering the number of experts and amount of budget, in the study area, there is gradual increase both in number of experts and amount of budget. The writer would like to give clue to the readers on the consideration of this aspect, which he did not consider numerical comparison between the two woredas because the number of experts and amount of budget is determined by the number of lowest administration levels, kebeles, in other words it depends on population number. In fact, Sorro woreda has more kebeles than Shashogo woreda and more experts too. But, the number of experts in office is almost proportional to the number of kebeles in each case. Currently, in the study area every kebele has one professional person working on the natural resource conservation. The comparison is based on the incremental situation in both human and financial resources particularly allocated by the government. In the case of human resource, in both woredas one can see gradual increase over the last seven years. Therefore, it could be perceived that the increase in number of experts contribute to the restoration programme in the study area. But it is not possible to say that Sorro woreda is better in restoration results due to more experts than Shashogo woreda because considering the number of kebeles of both woredas, the number of experts is proportional. It could rather be said that coordination capability of the sector working on the restoration programme makes a difference.

Beside to human resource it is possible to make discussion on the bases of the financial resource. In both woredas, there is relative increase in budget

from year to year over the last seven years except the slight fluctuation in the case of Sorro woreda. Is more budget or effective use required for successful restoration? On one hand, there was fluctuation in budgeting in the case of Sorro woreda, but better restoration results as seen during the field work and in Shashogo woreda, there is still demanding situation to work on restoration regardless of the relative consistent gradual increase in budget and contribution from NGOs unlike to Sorro woreda on the other. Hence, effective use matters than putting huge amount of resource on the restoration programme.

Dealing with actors in this paper is mainly to identify the main actors and their interest in the process of restoration. The main actors are government and local community members. But there is the role of NGOs contributing to the process either directly or indirectly. As it is comparative analysis between two woredas, the writer tried to identify the actors and their respective role. In both woredas, the government and local community members in terms of the role and interest are hardly differentiated. Both have prominent role where as in Shashogo woreda there are NGOs involved in the process unlike to Sorro woreda. Being other factors constant, regardless of fewer actors involved in the restoration process, Sorro woreda is with better restoration results than Shashogo woreda.

What interests do the actors of the process have in the area? The interest of the actors in the restoration process, their relation with each other and the land determine the results of the restoration process. Blaikie, P. And Brookfield, H. (1987), discussed that the relation among the group who have relation to land, the managers of land and their direct relation with land, their relation with each other and other land users, and groups in a wider society who affect them in any way can determine the management of land. Who gains from particular arrangements and relations, and what motivates why and how the complicated situations are treated. This is the central point of consideration and frame of this paper.

In this particular case, the actors; government, local community members and in some cases NGOs, and their relation to each other and the land determine the results of restoration of degraded land. Who manages the land? Is the interest of the government achieving the sole goal of the restoration as its aim is fostering the poverty alleviation strategy? According to the key informants, achieving the restoration goal is the interest of the government. Government believes that achieving restoration goals will lead to achieving poverty alleviation strategies, which is one of the millennium development goals (MDGs) that the government is working to achieve in 2015.

To point out the interest of the main actors in the process considering the ownership of the land is feasible. The 1994 Constitution of the Federal Democratic Republic of Ethiopia proclaimed that 'Land is a common property of the nations, nationalities and peoples of Ethiopia and shall not be subject to sale or to other means of transfer' (FDRE constitution article 40 sub-article 3). In this sense, government has an interest of protecting the land from sales and transfers that might result in abuse of land by few at the expense of many who will eventually be disadvantaged from the whole process.

When it comes to the local communities, interest can be seen from different angles. Do all local community members equally contribute to the restoration process? What interest do they have in the process?

Considering the area under restoration one can find people with different interests, some want to expand their farm land, some want to graze their cattle and some others still want to extract wood and charcoal to make their subsistence. Therefore, all these groups have different interests towards the land and its resources around their localities. The result of the restoration process is highly dependent on the degree of the reconciliation of these varying interests. On the other hand, given that there is participatory restoration programme, the contribution to the process of restoration from these various groups varies as it depends on the benefit they generate from the process of restoration or losses due to this process. During the field work as explained by the key informants, people next to the land under restoration are favoured to use the immediate return of the process like grass for their cattle and roofing houses and thus they are encouraged to participate in the restoration process through labour delivery and taking care of the land under restoration.

Here we can see the complicated property regime where part of the community members are subjected to use the return of the restoration process and others not, and there are some resources which are subjected to use but some are not. "Resource regimes are institutional structures, distributing access to resources and regulating their use", (Arild, V. 2007:624). The whole process in the study area is governed by the office of the agriculture and rural development of respective woreda and the local community members or at least by the 'active participation' of them. As long as there exist uneven distribution of the return from the restoration process, realizing the consistent restoration results will be questionable.

In Ethiopian restoration history, there were cases where people were mobilized through incentive based approaches where local community members were mobilized through 'food-for-work' arrangements to participate in restoration programme as mentioned in Aklilu, et al (2007). It has been proved to be failed obviously due to the inconsistency of the incentive. The current approach, which is aimed in enabling the local community members to use from the results of the restoration process, seems to be appropriate in creating sense of responsibility among the community members. So long as the land under restoration provides return to the local community members, they will clearly develop sense of responsibility given that there is fair distribution of return amongst.

But there is a tendency of unevenness in restoration efforts and results that the areas identified as degraded by the local government and communities are recovering whereas similarly degraded land but not identified as degraded are still barren. In this case, the extent to which the main actors (government and local community members) of the restoration process integrated determines the results of the restoration efforts.

In the restoration effort and process, the success and failure defined regarding to the effort and results. What is success in restoration? Who defines it? And what are the parameters? The definition of success in restoration is context specific that can be understood depending on the existing situation of

the ecology, the process and activities of restoration, and the immediate results of the restoration process. As discussed in I.A.E. Atkinson (1994), restoration is an interventionist activity by human beings that should only scaffold the natural regeneration capability of nature. The intervention must not mean substituting the natural regeneration of the nature. Usually ecological restoration begins with revegetation, involves re-establishing a plant cover of some kind: indigenous, exotic, or mixed. In some other cases, the success can be measured by considering the soil property and its fertility level.

In this paper, success of the restoration process is defined by the actors of the process, local community and the government. Particular parameters are planted trees and built traces in the area under restoration and physical recovery of the area through vegetation cover. What was noticed during the field work from the interviewees and personal observation was that the area with better vegetation cover mainly trees, and traces and fences built around the land under restoration is with sign of success. Beside to this, community members in the woreda with 'better' restoration results particularly living closer to the land under restoration, have a sense of responsibility to the process of restoration as could be seen during the discussion.

As mentioned in the previous paragraphs, government and local community members are the main actors of the restoration process and the relation between these actors determines the degree of success of the restoration effort. Considering the government-community relation, it is possible to discuss how these actors are integrated to work on the restoration programme on one hand and to see separately the exclusive significance of each actor in the process on the other.

As far as the prominence of the government and local community is concerned in natural resource conservation particularly forest management, there are various viewpoints forwarded by different authors. Some argue that protected areas are more effective when decision making and management adapts a more exclusionary approach towards local communities. Others still argue that protected areas are more effective when local communities participate in decision making regarding conservation and resource management. Again most agree on that the protected areas alone do not guarantee effective conservation and integrating human populations as management actors is needed to achieve effective conservation (Edward A. Ellis and Lucina Porter-Bolland 2008).

It is not the interest of the researcher to separately look at the role of government neither of the local communities. Rather he considers the way how the local government and local community members are integrated to work on restoration of degraded land. At the same time, the researcher hardly noticed the exclusive role of the main actors independently. But he agrees with the argument made by Leo Charles Zulu (2009) while discussing the politics of scale and community-based forest management, the case of Malawi, the importance of devolution of forest management authority to local communities considering three locally important conditions; boundary demarcation, rule formulation and dynamics of external facilitation. The author further explained the importance of devolving management authority and resource right to local communities for community based resource

management quoted from Agrawal (2005), as these approaches are expected to yield more 'penetrating, inclusive, locally relevant, inexpensive, and efficient environmental governance, and ecological and social improvements in a more equitable manner, than top-down approaches'.

In the study area, the government-community relation is seen in terms of taking part in planning, implementation and evaluation of the restoration process. As it was noticed during the field work there is a situation where both local government and community members are developing the attitude of participatory management of environment. Therefore, neither local community members nor government is exclusively important for the successful restoration results. Each of them has indispensable role and the more they work together and integrated, the better restoration results will be is the writer's position.

The last part of this chapter will focus on the link between restoration effort and poverty alleviation strategy. As the writer tried to discuss in the previous chapters, poverty in this specific case is defined in terms of the subsistence and inequality in land holding. Poverty alleviation strategy implies the government development strategy aimed at reducing food gap among the 'poor' people through different approaches. The researcher preferred to consider two aspects of poverty in order to see the link between the restoration effort and poverty alleviation strategy. Firstly, integrated and participatory implementation of restoration programme on degraded land through free labour delivery is considered as important means of combating poverty. Secondly, besides to the free labour comes from the whole local community members of working age, people with severe food shortage become beneficiaries of productive safety-net programme and they deliver labour for the restoration process. As explained by key informants, the users of productive safety-net programme are people who cannot not feed themselves properly particularly with less land to produce their subsistence and with the land of poor fertility due to erosion. The severity of the poverty is rooted in uneven distribution of land and its fertility level. Therefore, there is an effort to implement the restoration programme on both individual and communal lands aimed at recovering the productivity of the land through trace building and tree planting. Can this goal be achieved without addressing the unequal distribution of land?

As it was seen during the field work, the effort to achieve better restoration results seems effective, but there are challenges due to uneven distribution of land and its resources among the local community members. Another point of discussion can be raised here. How this trend can be consistent to keep in achieving these restoration results in the long run? And what if the incentive discontinue at some point in time? Is the productive safety-net programme incentive for local 'poor' people to mobilize them in the restoration programme? To the key informants it is incentive which is with different implementation approach when compared to the previous 'food-for-work' arrangements. It works alongside with creating 'awareness' among the users from the whole process of restoration and distributing the return out of it. We can appreciate the effort to make the productive safety-net users participate in the restoration process and would agree with the attempts to

create 'awareness' but considering the issue of accessibility, and distribution of land and resources is more relevant to achieve better restoration results. The argument here is in line with work of Clover, J. and Erikson, S. (2009) that they discussed land distribution matters the restoration results. In the same way, Rigg, J. (2006) discussed that poverty is rooted in unequal distribution and productivity of land. Moreover, the issue of land accessibility or providing alternative jobs for the young population who are already the largest share of the total population of the area is crucial in addressing the poverty issue and effective restoration programmes. On other words, looking for the alternative jobs for rural youngsters, understanding and reconciling the interests of the local community members, and addressing the accessibility of the land and its resources matters most to achieve restoration results.

Chapter 5
Conclusion

Land degradation is nowadays threatening millions of people in the world particularly in developing countries (Blay, D., et al 2004). Its impacts range from affecting livelihoods of the households at a small scale to the globally detectable environmental problem, climate change that can eventually affect socio-economic aspect of the world at large. Its effect and impact is determined by the degree of interplay between the people and the environment particularly land, and to the extent to which the land resources are exploited and the way how they are exploited.

Now taking action towards land degradation has become crucial issue of our time (UNCCD 2008). To avert or at least reduce the impacts of land degradation and its effects at a substantial level, restoration of degraded land is considered as important way of dealing with the problem. In the course of action, numbers of aspects should be considered in dealing with restoration effort as a solution to avert the problems resulting from land degradation. The relation among the groups in the community, their relation directly to land and other land users, and groups in wider society determines the results of land management (Blaikie and Brookfield 1987). As this paper tries to answer, the questions related to the determining factors of restoration efforts, what actors involved and why they are interested in involving, and how the restoration effort and poverty alleviation strategy are linked to each other, the following concluding marks can be drawn.

First, in an attempt to identify the hindering factors of the restoration effort in the study area, varying interest of the local community members towards the land under restoration and lack of capacity to implement the programme are the major ones contributing to poor restoration results. Differing interests among the local community members is rooted in uneven distribution of land and related resources. As discussed in chapter three, in the study area some community members show interest in contributing to the restoration process and some others are reluctant as they want to access the land for extraction of fuel wood and charcoal, use as grazing land, and some others want to expand their farm land and contribute little to the process. The repeatedly mentioned 'awareness' as hindering factor of the restoration process and its results is argued in this paper for the fact that though there is better 'awareness' about the impact of the land degradation, the willingness of various groups in the community with varying interest, that is still rooted in uneven distribution or access and right to the land and its resources determines the results of restoration. Beside to this, in the study area, lack of capacity as hindering factor refers to the financial and technical capacity of the actors of the restoration programme. Contextually the technical level of the immediate users (farmers) of the land needs to be improved on how to protect the land from erosion and needed to be provided with important materials to be used in the construction of traces, as it could be understood from the discussions made in chapter four.

Secondly, in the study area it is possible to see the main actors of the restoration process. Government and local community members are the main actors. In some cases, there are NGOs involved in the process. It is hardly possible to see the exclusive role of the main actors in the restoration process, that both government and local community members are equally important to achieve better restoration goals. In the case of the study area as it was seen in the area where there are better results of the restoration programme, both actors are equally important in the process. At the same time the areas with better restoration results are those where both government and local community members integration is better. Therefore, each actor has indispensable role in the restoration process. Again, the success and failure of the restoration effort is defined by these actors in terms of the vegetation cover, built traces and the extent of human intervention to the land under restoration.

Finally, it is safe to say restoration effort and poverty have two-way causation. Poverty has impact on the success of the restoration programme as the uneven distribution of land and its resources affect the role of actors of the process. On the other hand, achieving restoration goals is one means of abating the impacts of poverty. The productive safety-net programme is considered as one means of fighting poverty and it has role in restoration process in the study area through labour delivery and filling food gap.

Therefore, an attempt to achieve restoration goals is determined by the degree of local community members' involvement in the process. To the contrary, the degree of involvement is determined by the resource regimes, and distribution and fertility of land in particular. Hence, while dealing with the restoration effort, it is important to carefully consider the poverty aspect. Without addressing the uneven distribution of land and its resources to farming population, and considering the varying interest originated from uneven distribution of resources, expecting better restoration results could be mere imagination.

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Appendices

Appendix –A: Key informants information

No	Name	Education level	Responsibility	Place of work
1	Mr. Adebacho Watchiso	BSc	Coordinator of the natural resource development and conservation work process	Hadiya zone
2	Mr. Getu Mamo	BSc	Expert	Hadiya zone
3	Mr. Yohannes Horamo	MSc	Expert	Hadiya zone
4	Mr. Behailu Tariku	BSc	Coordinator of the natural resource development and conservation work process	Sorro woreda
5	Mr. Mihretu Erihabo	BSc	Expert	Sorro woreda
6	Mr. Gedeon Tagese	BSc	Expert	Sorro woreda
7	Mr. Tessema Awano	BSc	Coordinator of the natural resource development and conservation work process	Shashogo woreda
8	Mr Tsegaye Gebrewold	BSc	Expert	Shashogo woreda
9	Mr Getahun Lendebo	BSc	expert	Shashogo woreda

Note:

BSc- Bachelor of Science

MSc- Master of Science

Appendix- B: Population of Hadiya zone by age group, sex and residence

Age group in years	Rural			Urban			Total		
	M	F	T	M	F	T	M	F	T
0-4	75948	73210	148158	6177	6100	12277	82125	79310	161435
5-9	100519	98359	198878	7571	6984	14555	108090	105343	213433
10-14	96610	90535	197145	7254	7543	14797	103864	98078	201942
15-19	68130	68180	136310	6144	6287	12431	74274	74464	148741
20-24	39649	42032	82681	3829	4191	8020	43478	47223	90701
25-29	35740	41355	77095	3511	4051	7562	39251	45406	84657
30-34	26247	33531	59778	2134	2794	4928	28381	36325	64706
35-39	29039	35208	64247	2362	2328	4690	31401	37536	68937
40-44	22338	24031	46269	1816	1397	3213	24154	25428	49582
45-49	18428	18442	36870	1499	931	2430	19927	19373	39300
50-54	14519	12854	27373	577	1071	1648	15096	13925	29021
55-59	9158	6762	15920	504	503	1007	5662	7265	16927
60-64	8823	6706	15529	839	559	1398	9662	7265	16927
65-69	5026	2794	7820	409	839	1248	5435	3633	9068
70-74	3909	2235	6144	318	187	505	4227	2422	6649
75-79	1675	1118	2793	137	93	230	1812	1211	3023
80+	2792	1118	3910	227	93	320	3019	1211	4230
total	558441	558857	11117298	45417	46564	91981	603858	605427	1209279

Source: HZFEDD, 2006

Note:

M- Male

F- Female

T- Total

Appendix- C: Urban-rural population in Hadiya zone

No	Sex	Urban	%	Rural	%	Total	%
1	Male	45417	49.38	558441	49.98	603958	49.94
2	Female	46564	50.62	558857	50.02	605421	50.06
Total		91981	100	1117298	100	1209279	100

Source: HZFEDD, 2006

Appendix-D: Interview questions

1. What are the major causes of land degradation in Hadiya zone/Sorro/Shashogo woreda?
2. Where the land degradation is severe? On communal land or on individual land?
3. In which season of the year is it more severe?
4. What are the main impacts of land degradation in Hadiya zone/Sorro/Shashogo woreda?
5. What the implementation of the restoration effort looks like?
6. How long the restoration history is in this area?
7. What actors involved in the process of restoration process?
8. What role the local community and government have in the process?
9. Is there any special role of community members near the land under restoration?
10. What makes difficult the restoration effort in this area?
11. How could it be possible to solve these challenges and apply restoration programme?
12. How do the actors of the restoration process perceive the restoration effort?
13. How is the success in restoration effort measured?
14. What the link between restoration effort and poverty alleviation?
15. Who is more beneficiary of the restoration effort?
16. How the return of the restoration effort distributed among the local community members?
17. What is the role of productive safety-net programme for restoration process?
18. What change can be seen at present compared to previous years in restoration results?