

Addis Ababa University
College of Business and Economics
Department of Public Administration and Development Management

**The Role of Civil Society Organizations (CSOs) in Environmental
Protection: The Case of MELCA Ethiopia and World Vision Ethiopia**

**A Thesis Submitted to the School of Graduate Studies of Addis Ababa
University in Partial Fulfilment of the Requirements for the Masters
Degree of Public Management and Policy (Development Management)
in the Department of Public Administration and Development
Management**

By: Alelign Shibabaw

Advisor: Jemal Abagissa (PhD)

June, 2016
Addis Ababa, Ethiopia

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List of Abbreviations

ABN	African Biodiversity Network
AD	Alaba District
BRs	Biosphere Reserves
CBOs	Community-Based Organizations
CCAs	Community Conserved Areas
CDCF	Community Development Carbon Fund
CDM	Clean Development Mechanism
ChSA	Charities and Societies Agency
COP	Conference of Parties
CRDA	Christian Relief and Development Association
CSO	Civil Society Organization
CSP	Charities and Societies Proclamation
DOA	District Office of Agriculture
EC	Environmental Council (EC)
ENGO	Environmental Non-Governmental Organization
EPA	Environmental protection policy
GDP	Gross domestic product
GHG	Greenhouse Gases
IGOs	Intergovernmental organizations
IMF	International Monetary Fund
LDCs	Least Developed Countries
MELCA	Movement for Ecological Learning and Community Action
MERET	Managing Environmental Resources to Enable Transitions

NGO	Non-Governmental Organization
NNI	Net National Income
OFWE	Oromia Forest and Wildlife Enterprise
PCF	Prototype Carbon Fund
PHE	Population, Health and Environment
REDD+	Reduction of Emissions form Deforestation and forest degradation
SEGNI	Social Empowerment through Group and Nature Interaction
TNRS	Tigray National Regional state
UNFCCC	United Nations Framework Convention on Climate Change
UNICEF	United Nations International Children’s Fund
WVE	World Vision Ethiopia
WVI	World Vision International

Abstract

The role of civil society organizations (CSOs) in environmental protection endeavor is considered in this study by taking into account one from each category of CSOs that are legally operating in Ethiopia i.e. Ethiopian Residence (MELCA Ethiopia), and Foreign Charity (World Vision Ethiopia). The objectives of the study is aimed at uncovering the specific roles and activities of SEGNI environmental education program, MELCA Ethiopia, and Humbo CDM project that works on forest regeneration under World Vision Ethiopia. It also attempts to figure out the benefits and challenges experienced by the projects. The study follows a descriptive research method to effectively address the foregoing objectives. The target population considered for SEGNI is the one that runs in Holeta town among those in Sebeta town, Welmera and Sebeta Hawas woreda due to mainly the existence of active and vibrant environmental protection activities. For Humbo CDM project, the target population taken in to account is the Humbo community that is organized under seven forest cooperatives. Abella Longena forest cooperative was targeted among the seven due to a relatively vast area it covered, high membership size, and sale and revenue sharing of carbon trading. The study employed both probability (i.e. simple random) and non-probability (purposive) sampling techniques appropriately. About 10 % of representative samples were selected using lottery method that yield 113 samples among the total 1125 SEGNI club members in Holeta and 90 samples from the 903 members at the cooperative. As a result of an active participation of members in environmental education, SEGNI members are able to acquire various ecological, cultural and indigenous knowledge, and it helped them develop attitudinal change, social responsibility, communication skill, and become proactive and action-oriented. The findings regarding the forest regeneration activities at Humbo woreda show that members are able to get full access to social, economic and legal benefits, not to mention the restoration of rich forest coverage that significantly decreased the environmental problems the community used to face. The environmental protection endeavors undertaken by both projects which are the first in its kind in Ethiopia have been well-recognized both nationally and internationally. And the success of the projects could be replicated elsewhere so as to reach out to a wider community whose overall impact will greatly contribute to a better living environment for all living things. The Charities and Societies proclamation (no. 621/2009) and the 70/30 directive have been found to be restrictive as it significantly affects local CSOS like MELCA Ethiopia. CSOs working towards environmental protection are therefore recommended to forge one umbrella so as to lobby against national and international laws affecting their operations and to create regional and international integration and networking for experience sharing and technical support..

Key Words: *Environmental Protection, Civil Society Organizations, SEGNI program, Humbo CDM project, MELCA Ethiopia, World Vision Ethiopia.*

CHAPTER ONE

1. Introduction

1.1 Background

The pressures on the world's environment and ecosystems are numerous and come from myriad and diverse sources. Natural resources, land, water, forests and various animal species are being degraded or lost at an alarming rate in many places throughout the world. The reasons for the magnitude and rate of this destruction are many and complex. They include poverty, greed, untenable economic models, mismanagement of resources, lack of adequate education and trained personnel, under-development, deforestation, illegal dumping of hazardous wastes, global warming, the depletion of the ozone layer, pollution and many more. Essentially, an over-emphasis on economic development without environmental system considerations lies at the heart of why our planet's environment is in such peril. (Steele, 2010)

Ethiopia is a country where natural resource degradation has been going on for centuries. At the present time it is facing a serious ecological imbalance triggered mainly by the fast increment of its population size. This has led to a destructive cycle of land use pattern, involving deforestation followed by continuous cropping and grazing with little or no investment on the soil. This pattern leaves few opportunities for the natural vegetation to regenerate, making the land more susceptible to erosion, affecting the hydrological cycle and altering the regimes of the rivers. Changing this situation calls for better management of the natural resources including putting appropriate policies and regulations in place to facilitate better environmental management.” (Shibru & Kifle, 1998).

As also argued by Cesar (2013), Ethiopia's economy and ecological system are fragile and vulnerable to climate change. Environmental challenges in Ethiopia include climate change, soil degradation, deforestation, loss of biodiversity and ecosystem services, and pollution of land, air and water. Ethiopia's economy is also highly dependent on natural resources. Exploitation of these natural resources may generate large economic benefits

in the short term. However, in the long term unsustainable use of these natural resources increases not only environmental degradation, but decreases economic growth and livelihood opportunities. Air pollution, ozone depletion and greenhouse effects are no longer environmental threats that exist and affect only the advanced industrialized societies and countries. These are intricate issues and impact disastrously on rural communities whose subsistence activities depend on the natural environment and where climate plays a crucial role. (Salih, 2001).

As discussed above by the different scholars, the impact of environmental degradation on a global and national level is considerably threatening. Considering the nature of environmental problems, it is obviously beyond the capacity of, particularly, poor countries like Ethiopia where there exist limited institutional capacity and environmental consciousness and genuine accountability, as well. Roles of civil society organizations in supplementing or influencing governments' policies and actions is becoming significant. As forwarded by IMF (2015), "civil society organizations (CSOs) are now more vocal than in the past. They are experts in economic issues and their influence expands to parliaments and governments. Whether national, regional, or international, the way CSOs do business has been profoundly affected by globalization. CSOs increasingly employ extensive networks to pursue their activities and to try to influence policies on a broad range of issues".

The motive of the researcher to undertake a research on the topic under consideration is mainly because of the fact that Environment is the utmost important global issue that has a far-reaching effect on human life. Environmental hazards are the most hyped phenomena affecting all countries of the world which has called for a global solution in recent years. Irrespective of the severity of its impact, a very little attention has been given locally and literature sources on the research topic are not readily and sufficiently available to be consulted as a baseline reference. The study considered two organizations both carrying out different environmental activities. The organizations categorized under Ethiopian residence (MELCA Ethiopia) and Foreign charity (World Vision Ethiopia) are exemplary in a way that the projects they undertake are the first and only at a national level whose overall impact is believed to have greater significance in many ways. As a

result, conducting a full-fledged study on what and how CSOs carryout their environmental protection activities on the ground would be of great help by contributing to the filed to some extent.

1.2 Description of the Research Area

In this section of the study, a background information on the two selected civil society organisations (CSOs) for the topic under consideration i.e. “the role of civil society organisations on environmental protection” is presented. The study has purposely taken in to account one organisation from Ethiopian Residences i.e. MELCA Ethiopia and, one other from Foreign Charities i.e. World Vision International, Ethiopia so as to give equal weight to organisations from each category, thereby visualizing what roles are being undertaken by each will be manifest. However, it would have been even more inclusive if the study could incorporate a lot other organisations from both sides, if not because of time and financial feasibility. Furthermore, following the general background information, a special emphasis will be given on the two specific research areas i.e. SEGNI environmental education program at MELCA Ethiopia and Humbo Clean Development Mechanism (CDM) project at World Vision International Ethiopia.

1.2.1 MELCA Ethiopia

MELCA (Movement for Ecological Learning and Community Action) -Ethiopia formerly known, as MELCA Mahiber is a non-governmental organization registered under the Charities and Societies Agency of Ethiopia with a certificate no. 3408 as an Ethiopian resident charity. MELCA-Ethiopia, was born out of the African Biodiversity Network (ABN) in 2004. MELCA means ford both in Amharic and Oromo language – two of the widely spoken languages of Ethiopia. It means a crossing point on a river, which is symbolically used to indicate the need to take people away from their misconception about local people and culture to an understanding and appreciation of traditional ecological knowledge. MELCA is currently working in five project areas in four national regional states. These are Bale Project area and Suba-Sebeta project area in Oromia National Regional State, Sheka Project area in the Southern Nations, Nationalities and

Peoples Region (SNNPR), Majang project area in Majang zone of Gambella National Regional State and Woreilu project area in Amhara regional state (MELCA, 2015).

MELCA works on three thematic areas. These are Social Empowerment through Group and Nature Interaction (SEGNI), Agro-ecology and Biosphere Reserves (BRs) and Community Conserved Areas (CCAs). MELCA's vision is to see healthy and prosperous people that conserves their bio-cultural diversity while its mission is to work for healthy ecosystems, resilient communities and critical young generation through developing and institutionalizing innovative approaches and experiences (MELCA, 2015). The study focuses particularly on Social Empowerment through Group and Nature Interaction (SEGNI) program which is run under Suba-Sebeta Project in four different locations. That includes Holeta town, Sebeta town, Sebeta-hawas woreda, and Welmera woreda. The study area is exclusively on SEGNI club activities in Holeta town where there exist eight schools, i.e. Burka Welmera Primary, Menagesha Kolobo Primary, Goro Kerensa Primary, Burka Harbu Secondary, Burka Harbu Primary, Holeta Secondary, Burka Gale primary and Holeta primary schools. Each school has one SEGNI club having student members who engage in various environmental protection activities in school and community at large.

1.2.1.1 Environmental Education- SEGNI (Social Empowerment through Group Nature Interaction)

The overall objective of MELCA's SEGNI program is to create a means for linking the youth in schools with culture, nature and self by way of intergenerational learning with the intention of creating, in the youth, a sense of responsibility for the conservation of their cultural and ecological resources. To this effect, the program is designed in such a way that the youth, selected from schools around project sites, would, together with selected elders, be taken to wilderness "on trail". They would stay in the forest for a period of five days, to experience nature and culture as well as related environment and natural resource conservation mechanisms from elders to connect with themselves. During the course of the program, participants will also be involved in a process called "discovering your cultural biodiversity". The daytime is assigned for exploring their

biodiversity and the night-time is for culture. These explorations are undertaken through processes known as trekking and tracking for exploration of biodiversity during the day and storytelling and night watch for exploration of culture during the night. (Amanuel, 2011)

Trekking is a movement through the forest to learn about the flora and fauna while tracking is a time for evaluating the learning process. During the night elders tell traditional stories to the children and then after they go out for a night watch to have time to look in to oneself and the connection between self and nature. Members of SEGNI clubs undertake such roles of stewardship and become an “eco-advocates” advocacy by way of exploring their cultural heritages and collecting various traditional artefacts as well as traditional seeds and keeping them in a traditional learning center they construct. They also organize and celebrate special celebration days such as bio-cultural diversity day, elders’ day, on which they present variety shows about and bio-cultural diversity to the wider community. As part of their commitment toward environmental protection and rehabilitation SEGNI club members would also be involved in nursery site development and planting of indigenous trees. (ibid)

1.2.2 World Vision International, Ethiopia

World Vision is an international Christian relief and development organization founded in 1950 and presently operating in about 100 countries. World Vision began its first intervention in Ethiopia in 1971 with relief and opened Ethiopia office in 1975. Relief, rehabilitation and small community development projects dominated the decade that followed. During the 1984/85 drought, World Vision Ethiopia participated in a massive relief operation that saved the lives of millions of people. At present registered and licensed by Ethiopia’s Charities and Societies Agency, World Vision Ethiopia operates in more than 80 Woredas of the country, coordinated by 17 Programme Cluster Offices in Amhara, Oromiya, Tigray, SNNPR, Benshangul Gumuz, and Addis Ababa City Administration. Moreover, World Vision carries out emergency response interventions in South Omo and Borena. It also supports Somali refugees in Dollo Ado, Sudanese

refugees in Tongo and South Sudanese refugees in Gambella. (World Vision Ethiopia, n.a)

1.2.2.1 Livelihood Program/Humbo CDM Project

Livelihood program works towards improving household food security status, resilience to shocks and recovery from disasters. The major program interventions under livelihood are economic development, climate change and food security. Climate Change intervention ensures farm land productivity through improved tree coverage using Farmers Managed Natural Regeneration (FMNR), reforestation of degraded lands using FMNR, and promoting efficient technology to improve access for clean energy (cook stoves). Humbo Clean Development Mechanism (CDM) project, located in Humbo woreda , wolaita zone in Southern Nations, Nationalities, and Peoples' Region (SNNPR) came into being in January 2005. The total population in the woreda is about 46,087 with an area coverage of 2,728 hectare of previously degraded land. The woreda covers 9 kebeles with having a total of 8,512 households (UNFCCC, 2016).

The Humbo CDM project is managed by 7 forest cooperatives whose members are 5,168 in total. These are, namely, Abella Gefeta forest cooperative (575 members), Abella Longena (903), Abella Shoya (505), Bolla Wanche (725), Bossa Wanche (809), Hobicha Badda (848), Hobicha Bongota (803). The regeneration activities of the project are aimed to restore the forest cover for protection of the fragile landscape, and also deliver economic benefits to the local population. This is done in collaboration with the communities through temporary protection from grazing and firewood collection, seedling plantation, possible establishment of some alternate grazing areas and firewood production plantings on the periphery of, or outside the main forest blocks, as well as significant pruning and tending /training/ of the regenerating forest where ample live root material is present. (ibid)

1.3 Statement of the Problem

Environmental protection has been one of the most debated and contested issues in recent days globally. Due to the fact that the nature of the harsh consequences environmental degradation bring on countries across the board, there is a need for concerted efforts by all countries of the world regardless of their level of contribution so as to mitigate its possible impact. Countries like China and the United States are known for emitting thousands of tonnes of gases because of mainly uncontrolled human activity. Developing countries like Ethiopia have significant amount of untapped resources which could be potentially utilized to transform its social and economic status to the better if supported with sound policy and as well commitment in execution. Ethiopia, as a predominantly agricultural economy, is heading fast towards industrialization. The industry-led economy mainly consumes a significant amount of natural resources which in turn could potentially jeopardize the ecology to a larger extent. Thus, environmental protection as an emergent hot issue in Ethiopia and as well a global phenomenon requires an all-inclusive effort by the global North and South alike.

The consequences of environmental degradation is diverse in that it affects every aspect of country's development. As put by César (2013), "the most important environmental problems in Ethiopia include, climate change, land degradation, overgrazing and deforestation, indoor air pollution and water pollution. Other important environmental problems include loss of biodiversity and ecosystem services, spread of invasive alien species, urban outdoor air pollution, and toxic household wastes". The gravity and magnitude of impacts of environmental degradation like global warming has been given an ultimate attention by world leaders at the 2015 Paris climate summit. As the premier of Ethiopia, Hailemariam Dessalegn, clearly emphasized, "Climate change, weather variability and related disasters threaten our lives, livelihoods, and hard-fought development gains". He stressed also the importance of global partnership in combating global warming that "there is a need to see matching actions and support from our partners" (UNFCCC, 2015)

Environmental regulatory and monitoring bodies working towards mitigating environmental hazards should play a pivotal role in striking a balance between economic activity and environmental stability. The rising economic growth being registered at present in Ethiopia is mainly at the expense of natural resources. This has also been reinforced in the environmental policy of Ethiopia that “Natural resources are the foundation of the economy” (EPA, 1997). Though the legal framework that underpin the environmental protection endeavors was enacted in a form of policies, laws and regulations, the situation on the ground does not seem to go in line with it but slowing down as shown above. As one of the key guiding principles stated in the environmental policy of Ethiopia, “every person has the right to live in a healthy environment” (EPA, 1997). On the one hand, the available policies, strategies and legal instruments related to the implementation of sustainable development agenda seem to be diverse and adequate. On the other hand, the environmental degradation occurring in the country is alarming. What a discrepancy!

Having all the required legal framework so as to secure a safe living environment for human life, the researcher believes that the reality on the ground should not have been a far cry from what was promised in the policies. Environmental issues in practical terms have not been given a paramount importance and is not also treated on equal terms with politics and economy as a case in point. Environmental protection as one of the main way out from poverty should have been adequately addressed in many ways. In a populous and impoverished country like Ethiopia where a considerable number of people live under poverty and natural resources as major input for its rising economy, environmental protection should be at the heart of its sustainable development initiatives.

The severity of the environmental damage as pointed out in the environmental protection policy (EPA, 1997) is threatening : ‘Millions of tons of the fertile top soil have been washed away every year due to the removal of land cover and systematic farming’ and “much of Ethiopia's rich natural and cultural heritage is under threat”. Furthermore, a report published by the government in 2011 (Ethiopian Business Review, 2015) states that, in the worst-case scenario, Ethiopia would achieve only half of the potential of its GDP in 25 years because of the adverse impacts of climate change.

The deteriorating nature of Ethiopia's environmental situation exacerbated by absence of vibrant and active advocacy groups, environmental policy think tanks and civil wars have been the major causes of recurrent droughts the country is known for globally. Tackling problems of environmental degradation coupled with shortage of skilled manpower, technical capacity, weak institutional capacity, infrastructure and poor culture of popular participation seem to be beyond the reach of the national government. This calls for the role of non-state actors in filling the gap left by the State. The need for participation of non-state actors have also been acknowledged globally. According to Gemmill & Bamidele-Izu (n.a.), the 1992 Earth Summit affirmed that the commitment and genuine involvement of non-state actors are critical to reaching sustainable development goals.

It could have been a good starting point if local academic research works on environmental protection by CSOs are undertaken so as to see which particular aspect of it is already addressed and which one requires to be researched. This research particularly will attempt to contribute to the area to a considerable extent as to what environmental protection activity is taking place, thereby allowing others to further their research study on the area where little or no research is undertaken.

Civil Society Organizations (CSOs) as dubbed as "the third sector" are supposed to take part by meddling in the political decisions of countries whenever it is detrimental to the needs of the present as well as future generations. As argued by Desse (2012), CSOs basically arise from failures of national States (and international institutions) and markets. CSOs are thus created by the citizens to fill the gap left by markets and States. In light of the forgoing, this study is going to look into where CSOs are in the big picture and what they are undertaking to tackle this threatening environmental situation in an elaborate way and identify the benefits reaped and challenges being faced in realizing their goals and objectives.

In spite of the fact that the global world is witnessing unprecedented commitment towards combating climate change, Ethiopia seems to be lagging behind in this regard. As the official data obtained at the Charities and Societies Agency shows, there is only one registered non-governmental organization currently working on climate change in

Ethiopia where natural resources depletion is in peril. As indicated in the IMF factsheet (IMF, 2015), the roles and influences of CSOs in countries' economic and political affairs are escalating. As far as the available literature shows, the roles CSOs should undertake seem to have been on only human rights advocacy and good governance issues. What and how non-state actors like civil society organizations in Ethiopia contribute towards environmental protection is significantly an overlooked issue, which is what this study is going to address adequately.

1.4 Objectives of the Study

1.4.1 General Objective

The general objective of the study is to review, assess and describe the environmental protection roles being played by MELCA Ethiopia and World Vision Ethiopia in their SEGNI program and Humbo Clean Development Mechanism (CDM) projects, respectively.

1.4.2 Specific Objectives

With having the above general objective, the study will have the following specific objectives:

- To identify the specific activities being undertaken by the selected CSOs towards environmental protection.
- To distinguish what benefits are being enjoyed by the target population as a result of the interventions made through the focal projects of the two organizations.
- To find out the challenges being faced by the organisations and the target community alike while undertaking environmental protection endeavours.
- To assess the sources of financial resources secured by the CSOs to run the projects under consideration.

- To evaluate the effects of the Charities and Societies' Proclamation, No.621/2009, if any on the projects' environmental protection activities.

1.5 Research Questions

This study is aimed at assessing the roles of civil society organisations (CSOs) in environmental protection, with special emphasis on MELCA Ethiopia and World Vision Ethiopia. In light of this, the research findings attempted to deal with the following basic questions:

- I. What are the specific activities Civil Society Organizations under consideration undertake in securing a safe and protected environment in the operation area of the projects?
- II. What benefits are there for the target communities as a result of the environmental protection endeavours by the organizations through their project interventions?
- III. What challenges are being faced by both the organisations and the target communities while undertaking their environmental protection activities?
- IV. Where do the CSOs secure financial resources from to run their projects regarding environmental protection?
- V. What are the effects if any, observed on the performance of the CSOs in their environmental protection activities as a result of the enactment of the Charities and Societies' Proclamation, No.621/2009?

1.6 Scope of the Study

The scope of the study stretches to civil society organisation (CSOs) licensed to operating in Ethiopia in various sectors. The study focuses only on those non-governmental organisations (NGOs) working towards environmental protection among the many other sectors. To make it more inclusive and representative, the study targeted one active NGO from the many Ethiopian Residences and one other from the existing Foreign Charities. Among the various thematic areas and projects undertaken by MELCA Ethiopia and World Vision Ethiopia, only one thematic area/project from each has been selected for the sake of feasibility and efficiency.

SEGNI program from MELCA Ethiopia and Humbo Clean Development Mechanism (CDM) project from World Vision Ethiopia are the focal research areas/projects the study focused in detail. Regarding data collection, the study took into account only selected respondents from both organisations. Three key informants from MELCA Ethiopia; one from Oromia Forest and Wildlife Enterprise (OFWE) and 2 others from World Vision Ethiopia who are in charge of the projects have been considered. Besides, selected representative samples from the beneficiaries of both projects got targeted. Moreover, available secondary sources of data on the research areas under consideration have been consulted.

1.7 Significance of the Study

The study under consideration is significant in that it shows how civil society organisations (CSOs), whose role in Ethiopia is not as active, vibrant and diverse as the case in the West, fare and undertake their activities in the existing legal framework. The other importance of the study is its potential to shed light on the extent to which CSOs are affected by the Charities and Societies Proclamation (proc. no.621/2009) especially in terms of financing and range of operations. Moreover, the finding of the study does give a clear picture so as to measure the worthiness of CSOs contribution towards environmental protection and to what extent they are attempting to tackle the likely impacts of environmental hazards, and the practical changes being made on the ground.

It is also important to note that the two projects (Environmental Education /SEGNI/ and Humbo Clean Development Mechanism/CDM/) are the first of its kind in Ethiopia whose impact needs to be clearly understood in how effectively addresses problems associated with environmental degradation. It's highly hoped that the finding of the study can make clear why it is important to teach the youth about environmental protection and, to engaging in carbon trading which is a central pillar of the Kyoto Protocol and other international agreements aimed at slowing climate change.

It could also serve as an input for others who would like to conduct a further research on the subject under consideration. Best practices of the projects' undertaking could also be shared with others working on similar areas and replicated, if found worthy. The success stories of the projects may also have a triggering effect on others (governmental bodies, non-state actors especially community-based organisations) to embark on new ventures so as to address the needs of local people elsewhere.

1.8 Limitation of the Study

As far as existing literature shows, most researches conducted on civil society organizations (CSOs) are focused on the contributions they have made towards economic development, good governance and human right related issues, and legal and implementation challenges associated with it. As a result, getting access to research works on environmental protection issues in particular has been found to be somewhat challenging.

Due to the diverse nature of activities environmental protection embraces, covering its whole aspect in this study, thus, has not been feasible especially in terms of time and finance. Besides, the study did not take into account the whole target community members while collecting data regarding the benefits enjoyed and challenges faced. Though non-response of survey questionnaire from some target respondents encountered while conducting data collection, it was fixed by incorporating other respondents from the contingency plan. In addition, cooperation extended from some officials and key informants was not to the expected level due to mainly their busy schedule in their

occupational duties, as they claimed. However, the researcher has done his level best to make sure that all the required actions are taken accordingly.

The other challenge faced is that out of the eight schools located in Holeta town where SEGNI clubs run, the target population i.e. students from three schools could not be accessed. Unfortunately, the three schools (Holeta high school, Burka Gale primary school and Holeta primary school) were partially shut down because of the political unrest that took place in most areas in Oromia region. The data collection endeavor in the remaining schools was not in fact easy either. Following an active facilitation role of school principals and the project coordinator, it was eventually managed to collect the required data from the remaining schools in a proportional manner.

1.9 Organization of the study Paper

The thesis is organized under five chapters. The first chapter contains an introduction which comprises background, description of study area, statement of the problem, objectives, research questions, scope, significance, limitation and organization of the study paper. The second chapter is exclusively devoted to an elaborate review of relevant literature on environmental protection, civil society organizations, and related subjects as discussed by numerous authors. The third chapter is about research methodology which consists of research design, sampling frame, sample design and technique, source and instruments of data collection, and data analysis and interpretation. The fourth chapter covers data presentation, analysis and discussion in detail using appropriate tools and procedures. Finally, the final chapter deals with conclusion and recommendation. The paper has also a bibliography, appendixes and questionnaire.

CHAPTER TWO

2. Review of Relevant Literature

In this section of the study, works of various authors on environment, environmental problems, climate change, civil society organizations (CSOs) and associated subjects are sufficiently discussed. It is believed that, from what has been done by others, it will help broaden the conceptual understanding of readers as to how serious environment is for every human being. Moreover, it sheds some light on what and how various international CSOs contribute towards environmental protection activities in many ways. All literature sources consulted in this study have been duly acknowledged in the bibliography section using APA style.

2.1. Theoretical Literature

2.1.1. Environment: Overview

2.1.1.1. What is Environment?

Environment is widely defined to encompass our surroundings, including nature, natural resources and the socio-economic and physical infrastructure created by human beings. The emphasis on a wider definition of the environment stems from the variety of environmental functions (production, sink, regulatory, information carriers/education) and aesthetic-symbolic among other functions) and their relationship to the production and reproduction of society. Environmental change results from the the intensity, scale and quality of human interventions in the environment, through the expansion of agriculture and livestock production, irrigation, deforestation, industrialization and urbanization to mention but a few. In other words, the excessive use of environmental functions beyond their carrying capacity may be in some circumstances transform environmental change into serious environmental problems. (Salih, 2001)

Environment does not include only the areas of air, water, plants and animals but also natural and human-modified features which constitute the totality of our surrounding. In other words, it is made up of a combination of our natural and physical surroundings and the relationship of man with these surroundings. It must also include aesthetic, historic, economic, cultural and social aspects (Balbech, et al; as cited in Asmare, 2007).

Needless to say, environment provides man with all the necessary resources: soil, forest, water, mineral, air and food. The survival of man highly depends on the environment. Nevertheless, the failure to establish equitable system among peoples, states, and nature has led to disruption of economic, social and political framework necessary to ensure the uninterrupted continuation of civilization (Desalegn, 2003).

The environment is the complex set of physical, geographic, biological, social, cultural and political conditions that surround an individual or organism that ultimately determines its form and the nature of its survival. The environment is the product of both biophysical and social structures and processes, which we are a part of. Furthermore, it seems that in order to be something that humans care about, it is crucial that any articulation of “environment” must emphasize the inextricable connections to human societies by using simple language to explain how the environment influences the way people live and the way societies develop. For that reason, people, progress, development and the environment are all closely linked. For development to be sustainable – to meet the needs of the present without compromising the ability of future generations to meet theirs – it is essential that people take into account environmental concerns just as strongly as they concentrate on economic progress. (Steele, 2010).

2.1.1.2. What is Environmental Protection?

Environmental protection is a practice of protecting the environment, on individual, organizational or governmental level, for the benefit of the natural environment and humans (Pankratz, 1996). According to Pittock (2009), environmental protections are policies and procedures aimed at conserving the natural resources, preserving the current state of natural environment and, where possible, reversing its degradation.

Environmental protection includes all available practices used to protect our environment, whether on individual, organizational or global (international) level. This basically means that each and every one of us can do something to protect our environment but of course, global actions are the ones that would help our environment the most. The general opinion is that our environment is in the constant state of degradation due to so many different environmental problems (climate change, all forms of pollution, deforestation, biodiversity loss, etc.). Some environmentalists even say that the environmental protection has become a lost cause because environmental problems keep on growing at rapid pace, giving us a zero chance to do something about it. Calling environmental protection a lost cause is going too far because as long there is at least one healthy environment left in the world, environmental protection has its purpose, and is not completely useless as some may think it is. Without the environmental protection our environment would look much worse than it looks today, and we certainly must look for more ways to protect our environment. (Haluzan, 2010).

2.1.2. Natural Resources in Ethiopia

Ethiopia has a wealth of natural resources bases including surface resources (land, water, forest) and subsurface resources (ground water, minerals). It is a country of great geographical diversity with high and rugged mountains, flat-topped plateaux and deep gorges, incised river valleys and rolling plains. Most of the country consists of high plateau and mountain ranges with precipitous edges dissected by the numerous streams, which are tributaries of the major rivers. The Great Rift Valley separates the western and south-eastern highlands, and the highlands on each side give way to vast semi-arid lowland areas in the east and west, especially in the south of the country. The physical conditions and variations in altitudes have resulted in a great diversity of climate, soil, vegetation and wildlife which implies the presence of rich biodiversity (Demel and Tesfaye, 2002 as cited in Ayana 2011).

Natural resources are the foundation of the economy. Renewable natural resources, i.e. land, water, forests and trees as well as other forms of biodiversity, which meet the basic needs for food, water, clothing and shelter have now deteriorated to a low level of

productivity. In many areas of highland Ethiopia, the present consumption of wood is in excess of unaided natural sustainable production. Estimates of deforestation, which is mainly for expansion of rain-fed agriculture, vary from 80,000 to 200,000 hectares per annum. In economic terms, soil erosion in 1990 was estimated to have cost (in 1985 prices) nearly Birr 40 million in lost agricultural production (i.e. crop and livestock) while the cost of burning dung and crop residues as fuel was nearly Birr 650 million. Thus in 1990 approximately 17 per cent of the potential agricultural GDP was lost because of physical and biological soil degradation. The permanent loss in value of the country's soil resources caused by soil erosion in 1990 was estimated to be Birr 59 million. This is the amount by which the country's soil "capital" should be depreciated in the National Accounts or which should be deducted (as capital depreciation) from the country's Net National Income (NNI). (EPA, 1997)

Renewable natural resources, i.e. land, water, forests and trees as well as other forms of biodiversity, which meet the basic needs for food, water, clothing and shelter, have now deteriorated to a low level of productivity. In many areas of highland Ethiopia, the present consumption of wood is in excess of unaided natural sustainable production. Estimates of deforestation, which is mainly for expansion of rain fed agriculture, vary from 80,000 to 200,000 hectares per annum. The burning of dung as fuel instead of using it as a soil conditioner is considered to cause a reduction in grain production by some 550,000 tonnes annually. (Ayana 2011)

2.1.3. Nature-Society

Nature- society relations have been succinctly summarized by Martell (1994:24 as cited in Tallegen and Wolsink, 1998) who argues that, “the society-nature relationship is constituted by natural limits on society, society’s effects on nature and the effects of society’s impact on nature as they rebound on society”.

According to Goldblatt (1994, as cited in Salih, 2001), an abstract model of the relationship between societies and environment would differentiate between direct causes of environmental degradation and its structural causes. It would differentiate between the capacities and potentialities of different systems of production as agencies of

environmental change, and combine this with a sensitive appreciation of the impact of demographic change. It would trace the causes of social actions that affect ecosystems, particularly economic and demographic behavior, though it would not restrict the causes of that change to economics and demographics alone. It would specify the type of material impacts produced, known and unknown, and their multiple ecological and social consequences. It would be sensitive to the range of cultural perceptions, knowledge and valuations of the environment. It would trace the implications of ecological changes, distinguishing between those perceived by participants and those operating behind their backs, between those affecting economics, demographics and health and those contravening moral-aesthetic standards. It would do so with reference to the sorts of demands and requirements that different systems of production place on the environment.

2.1.4. Forests

Forests are one of the precious gifts of nature. They provide diverse environmental services such as nutrient recycling, hydrological and climate regulation, and photosynthetic products accumulation that are crucial processes needed to sustain life on planet earth. They also provide diverse goods that are traded locally and internationally involving millions of small, medium and large, even multi- billion dollar, companies and corporations, thus contributing to local, national and global economic development. Forests are storehouses of biodiversity, which are our insurance for food, medicine, economic goods and overall human wellbeing. Yet, and unfortunately, forests are being destroyed as if they are easy to regain. Short- term economic interests and poverty are driving the degradation of large scale forest resources and globally 13 million hectares are being lost each year. Although forests are being regained in some parts of the world those new forests, some secondary forests and others in the form of plantations, are not the same in stature and value as the old growth forests. Thus, comparing forest loss and gain on an area basis alone is not a rational approach for developing systems of sustainable use and conservation (Edwards, 2012).

Ethiopia is said to have had reasonably good forest cover in the past: it certainly has a rich forest development potential. But it is a country experiencing long years of continued

deforestation and forest degradation. In 2004, the high forests of the country were estimated at only 4.07 million hectares covering 3.6 percent of the total landmass. Although considerable areas of woodland and bushland exist in the country, even these are experiencing a high rate of destruction and degradation (Mulugeta Lemenih & Habtemariam Kassa, 2008).

National scale deforestation rate is estimated at about one percent per year (Demel Teketay et al., 2010, as cited in Edwards, 2012). Except for some fragmented initiatives, no noteworthy national forest management achievement is found in the history of Ethiopia. The decentralization of political administration during the last two decades, although important from a decision- making point of view, has contributed to the lack of national forest development. The Regions are adopting differing strategies and actions, which have resulted in large inter- regional differences in forest conservation and development outcomes. Whilst a few degraded forests are recovering, e.g. through area enclosures in Tigray, old growth natural forests in the west, southwest and southeast are shrinking showing that the efforts to restore forests in some Regions are being counterbalanced by the high rate of deforestation in others (Edwards, 2012).

Despite their limited coverage and the serious threat from deforestation and forest degradation, forest and tree resources in Ethiopia are providing diverse goods and services essential for poverty reduction, ensuring food security, contributing to economic development and maintaining environmental quality. Forests and woodlands provide such goods as biomass energy (the bulk of the energy used in the country), as well as wood and non- wood products utilized in hundreds of small and medium- sized cottage industries and larger wood- based factories. The value of wood and non- wood forest products harvested annually in Ethiopia was estimated at 10.45 billion ETB in 2005 (Sisay Nune et al., 2009).

The forests and other forms of biodiversity are under increasing pressure from population growth, unsustainable resource use, hotter and drier climate, poor management, clearing of natural habitats for agriculture especially for cash crop production and urban expansion, the demand for fuel wood and charcoal, oil and mining exploitation, illegal

and excessive timber production and political instability. Excessive deforestation and loss of biodiversity again led to permanent loss of soil fertility. The loss of fertile soil is also aggravated by slash-and-burn practices, over grazing, and natural climatic events (Aleazar, 2010 as cited in Ayana 2011)

2.1.5. Environmental Problems

Tallegen and Wolsink (1998) classify the common environmental problems into three categories: First, exhaustion or depletion of renewable and non-renewable resources. Second, pollution or the transformation of matter or substance into solid, fluid or gaseous waste, which is then released into the environment and can be a cause of environmental change as well as inducing environmental problems. Climate change, ozone depletion and greenhouse effects are among the common consequences of pollution. The environmental problems resulting from excessive use of the sink and regulatory functions of the environment are related to the environment's incapacity to handle excessive pollution and waste absorption. Third, disruption of the environmental functions, either by natural or human induced interventions as a major source of environmental change. For instance, the unintended consequences of fertilization in its capacity to generate organic substance for natural regeneration or the consequences of reducing fresh water flow on marine life.

2.1.5.1. Environmental Challenges in Ethiopia

In recent years environment has become a key issue in Ethiopia. The main environmental problems in the country include land degradation, soil erosion, deforestation, loss of biodiversity, desertification, recurrent drought, flood and water and air pollution. The National Adaptation Programme of Action (NAPA) is a mechanism within the UNFCCC, designed to help the Least Developed Countries (LDCs) including Ethiopia to identify their priority adaptation needs to climate change and to communicate these needs to the Conference of Parties (COP) of the UNFCCC and other concerned bodies. (Abebe, 2007)

The environment in Ethiopia, particularly, that in the north and eastern part, have been degraded to the extent that is difficult to reverse (Gedion, 2003; as cited in Asmare, 2007). The ecologies in many parts of the country have lost their natural state. Land degradation in all its forms has been most striking challenging the Ethiopian agriculture. As the Ethiopian economy is predominantly agrarian, the major environmental problems are those affecting this major economic activity. Thus, land degradation in all its forms- water and soil erosion, salinization and alkalization, chemical degradation, physical degradation and biological degradation has been the main environmental problem facing the Ethiopian agriculture (Demel, 2003).

Climate related hazards in Ethiopia include drought, floods, heavy rains, strong winds, frost, heat waves (high temperatures), etc. Ethiopia is highly vulnerable to drought. Drought is the single most important climate related natural hazard impacting the country from time to time. Drought occurs anywhere in the world but its damage is not as severe as in Africa in general and in Ethiopia in particular. Recurrent drought events in the past have resulted in huge loss of life and property as well as migration of people. The other climate related hazard that affects Ethiopia from time to time is flood. Major floods which caused loss of life and property occurred in different parts of the country in 1988, 1993, 1994, 1995, 1996 and 2006. (Abebe, 2007).

In economic terms, soil erosion in 1990 was estimated to have cost (in 1985 prices) nearly Birr 40 million in lost agricultural production (i.e. crop and livestock) while the cost of burning dung and crop residues as fuel was nearly Birr 650 million. Thus in 1990 approximately 17 per cent of the potential agricultural GDP was lost because of physical and biological soil degradation. The permanent loss in value of the country's soil resources caused by soil erosion in 1990 was estimated to be Birr 59 million. This is the amount by which the country's soil "capital" should be depreciated in the National Accounts or which should be deducted (as capital depreciation) from the country's Net National Income (NNI). (EPA, 1997)

The most important environmental constraints in Ethiopia are climate change and land degradation. For a smallholder rain- fed agriculture- based economy, land and climate are

essential production factors. Ethiopia is experiencing severe climatic anomalies such as erratic rainfall, generally attributed to global climate change. As a coping mechanism, most households revert to commonly accessible resources such as forests for harvesting wood and non- wood products to augment family income. This harvest is often unsustainable. It then results in the vicious cycle of poverty, leading to unmanaged and uncontrolled destruction of environmental resources, leading to further environmental and social degradation, i.e. extreme poverty. In extreme causes, persistent food insecurity leads to desertification, a threat over the vast dry lands of Ethiopia (Tamire Hawando, 1997, as cited in Edwards, 2012).

The other serious environmental curse in Ethiopia is land degradation (Dessaiegn Rahmato, 2008). Land degradation can be defined as the reduction or loss of biological and /or economic productivity of land. The loss of productivity results from the loss of physical, chemical and biological properties of land arising from irresponsible or inappropriate and unsustainable use of its resources such as soil, water and woodlands. Land degradation is particularly problematic for both environmental sustainability and poverty reduction in dry land areas, and it requires great human effort and resources to ameliorate. Causes of land degradation are complex: deforestation, improper cropping systems (poor soil and water conservation), soil erosion, loss of soil fertility particularly organic matter, and improper livestock husbandry. Inappropriate land- use systems, lack of legally enforceable tenure security and/or accountability in land use and management are exacerbating land degradation (Edwards, 2012).

2.1.6. Causes of Environmental Problems

Environmental problems can happen due to natural phenomenon or unwise human activities. The environmental problems that the world is suffering from are mainly due to human activities. Humans have created and brought strange substances to the environment which have changed the environment to the extent that is difficult to reverse. Although the global warming and the expansion of desertification at a continental level have their own impact, the causes of national problems such as the periodic famine, epidemics and migration are attributed to environmental degradation.

The poor in developing countries exploit the readily available resources using the unwise and traditional way. This brings about the depletion of resources to a stage where reversal to the original state would be beyond the ability of these poor. It is in this way that the environment especially the flora and fauna in the developing nations have been degraded even more seriously than those in developed ones. How the poor in these regions are desperate in handling and run only for their daily needs is best elaborated by Eckholm as follows:

“One of the saddest of all metaphor is surely that of eating the seed corn. Yet the inexorable pressure of pollution on the limited environment and its resources is forcing hundreds of millions of people to do just this, to burn cow dung instead of using it to enrich the soil, to cultivate steep slopes until the precious earth is washed down the rivers” (Eckholm, 1992).

The real cause for all the environmental problems is lack of environmental literacy-literacy that goes beyond awareness to affect people’s attitude and commitment. So long as people regardless of their economic status, are well aware of the long effect of harmful environmental skills and develop the values that help them become pro-active, there would be no way their economic demand derives them to leave environmental concerns aside. Thus, the root cause for all the environmental problems is lack of education in which lays the sustainable solution for the problem (UNESCO-UNEP, 1998).

2.1.7. Poverty-Environment linkages in Ethiopia

The key poverty-environment linkages in Ethiopia are related to: environmental health concerns related to malnutrition, polluted water and indoor air pollution; vulnerability to natural disasters and climate change; lack of secure tenure to land and other natural resources; and unreliable access to food and water. Ethiopia’s vision is to reach a middle-income status by 2025. Over the last two decades, the Ethiopian government has put in place a number of policies, strategies and laws that are designed to support sustainable development and the country is set to move towards a greener economy. There are gaps between the environmental commitments made and the actual implementation to improve

environmental outcomes. Weak capacity in environmental management and enforcement are key challenges. (Cesar, 2013).

2.1.8. Environment and Development

It is well understood that environment does not exist as a sphere separate from human actions, ambitions and needs. Human survival is now facing a global threat, consequent upon a complex of unrestrained human activities over the last three decades. The fact is that man's use and abuse of nature has pushed the biosphere to the limits of its tolerance and even beyond. Moreover, there has been a growing realization in national governments and multi-lateral institutions that it is impossible to separate economic development issues from environmental ones. Many forms of development erode the very environmental resources upon which development is based, and environmental degradation can be seen to undermine such development. Environmental issues have exposed the gulf between the reality of environment, interlocked in the daily lives of people, industries and communities, and the unreality of the distinction between them made in academic, planning and political institutions. (Nath, 1999)

What should not be overlooked is that environment is where people live; and development is what these people attempt to do, to improve their lot within that. Many critical survival issues are related to uneven development, poverty and population growth. Failure in the development attempted is often a failure in management of the human environment and related natural resources, and unequal access to benefits. These failures seem recently to have shifted the concern of the international community from the impact of economic growth upon the environment to the impact of ecological stress upon economic prospects. (Ibid)

Today the term development is never uttered alone but with a modifying term sustainable- sustainable development. At the center of sustainable development is a concern of Environment. This is to emphasize how a development endeavor needs to be sensitive to environmental matters without which its long lasting effect would be questionable. Development and environment are inevitably affecting one another because development is nothing but the result of the interaction of the components of the

environment. We don't think of development outside of the environment if at all there is anything outside of the environment. The issue of economic growth, poverty and environmental protection are intertwined in an inseparable way. Lasting economic growth is based on managing natural resources in a sustainable manner (Balbech et al 2002; as cited in Asmare, 2007).

Thus, it has become an established fact particularly among environmentalists that the mismatch between environmental management and development or lack of sustainable development has led many parts of the globe to environmental poverty. Development is a means for quality life but its improper handling results in an irreversible catastrophe the effect of which would lead to total destruction of the environment and the development effort itself. The global heat change due to the devastating effect of polluting gases from huge industries is a case in point. Similarly, Girma (1994 as cited in Asmare, 2007) states the environmental problems as the major constraints to the country's development. Environmental issues especially those related to natural vegetation, soil and wild animals are major constraint to the current development and more seriously threatening future prosperity of the country. (Ibid)

2.1.9. Environmental Education

2.1.9.1. What Is Environmental Education and Why Is It Important?

“Environmental education” is a process that provides learners with awareness and knowledge about the environment (typically including the relationship of humans to the natural world), and fosters the development of the skills, attitudes and motivations to enable learners to make informed decisions and take responsible actions that incorporate environmental considerations. The ultimate goal or outcome of environmental education is the creation of environmentally literate citizens. This is important because solving today's challenging local and global environmental issues and moving society towards sustainability cannot rest only with “experts” but will require the support and active participation of an informed public in their various roles as consumers, voters, employers, and business and community leaders. Environmental education focused on children and youth is a particularly important strategy because it's an opportunity to intervene at a key

developmental stage of life and because children can be an important influence on the environmental behavior of their parents. (CEGN, 2006)

Environmental or conservation education aims; to provide learners with the opportunity to gain an awareness or sensitivity to the environment, knowledge and experience of the problems surrounding the environment, to acquire a set of values and positive attitudes, to obtain the skills required to identify and solve environmental problems and, the motivation and ability to participate. Environmental education, and therefore conservation education, should be considered to include, not just formal education and training, but also public awareness-raising (e.g. posters and media campaigns), school environmental clubs and transfer of indigenous knowledge etc (Jacobson et al., 2006 as cited in Howe, 2009).

Nowadays, environmental education is sometimes integrated into school curricula as an interdisciplinary goal of formal education. It is also part of informal education, and a part of daily life during leisure time activities, as well as a substitute for or extension to the formal education sector. Environmental education is about experiencing, sharing, creativity, pleasure and sensitivity: environmental education activities can be informing the population, discovery activities (guided visits, games, outings), but can also consists of the active participation of the public (workshops, volunteering, excursions, role play, field trips or holidays). The public sector, as well as NGOs, provides materials, education and guidelines on environmental education. Protected Areas also play a vital role in environmental education in regions, having the scientific and protection issues at hand and being able to transfer the knowledge using participation opportunities to a broad public. (Wagner, 2011)

For Lucko (1982), environmental education is a process in which issues of the environment are dealt in, for, and about the environment. It's an intellectual endeavor whereby both environmental and issues of other subject areas could be addressed. It is a subject that is capable of addressing immediate and remote environmental issue. Environmental education is a process aimed at producing a citizenry that is knowledgeable about the biophysical and socio-cultural environments of which a man is a part, aware of environmental problems and management alternatives of use in solving

those problems and motivated to act responsibly in developing diverse environments that are optimal for living a quality life.

As argued by Aklilu (2006), Education is so powerful to bring about a concerted change; in this respect, in developing values in people to be concerned more for the wellbeing of the environment than for their economic demands. The need for environmental education emanates from the need for ensuring sustainable development. Environment and development are highly interwoven in such a way that whatever happens on one inevitably affecting the other. Number of research findings show the positive correlation between education and positive behavioral changes.

2.1.9.2. Approaches to Environmental Education

According to Canadian Environmental Grant makers Network (CEGN, 2006), the process of environmental education can occur through formal, non-formal, and informal approaches or settings.

- FORMAL environmental education is linked with the formal education system and generally takes place in a school context.
- NON-FORMAL environmental education is organized educational activity outside the formal school system, and includes environmental education activities or programs provided by community organizations, youth groups, museums, zoos, and nature/interpretive centres, etc.
- INFORMAL environmental education is the provision of information without an organized educational/ institutional structure and typically includes learning about the environment through the media, personal reading, everyday experience and interactions with other people.

2.1.10. Area Exclosure

Area exclosure refers to the practice of land management that involves the exclusion of livestock and human activities from an area that is characterized by severe degradation

often resulting from unregulated open access. The purposes of excluding domestic animals and human activities are to prevent further degradation of the ecosystem in order to provide the setting for re-vegetation/forest regeneration as well as restore the overall ecological balance in and provision of ecosystem services by these areas. To reverse the heavy land and vegetation degradation in Ethiopia, area exclosures have been employed for over 40 years, and extensively so since the last 20 years. (Edwards, 2012)

In area exclosures, restoration/ rehabilitation is primarily a natural process and human inputs are limited to protection against interferences. For this reason, some people call it a “zero management” strategy for rehabilitation. The zero management makes it also the cheapest method for the rehabilitation of degraded areas. Nonetheless, in a few cases, exclosures are supplemented by enrichment plantings with native and/or exotic species as well as soil and water conservation activities to speed up the restoration processes. (ibid)

Area exclosures are extensively used in many parts of Ethiopia especially in the northern highlands. In Tigray National Regional state (TNRS) alone, around 700,000 hectares, about 14 percent of the regional territory, have been put under this system of management (personal communication, Tigray Bureau of Agriculture and Rural Development). In many other National Regional States (Amhara, Oromia and Southern Nations, Nationalities, and Peoples), thousands of hectares of degraded lands are being rehabilitated through area exclosures (Betru Nedessa et al., 2005 as cited in Edwards, 2012)

The improvement in vegetation cover in exclosures also results in improvements in soil conditions, reduced soil erosion and run- off, increased soil deposition and improved infiltration. Soils of exclosed areas hold higher soil organic matter, nitrogen content, available phosphorous, exchangeable bases, cation exchange capacity (CEC) and many other improved biological and physico chemical properties compared to the soils of unclosed sites. These changes are related to increased biomass production by the recolonizing natural vegetation that increases above and below the ground, litter input, enhanced nutrient recycling, and improved deposition from erosion (Descheemaeker et al., 2006).

2.1.11. Carbon Finance

Carbon finance is the term applied to the resources provided to a project to purchase greenhouse gas emissions reductions. (World Bank, 2006 as cited in Labatt & White, 2007).

Carbon finance explores the financial implications of living in a carbon constrained world—a world in which emissions of carbon dioxide and other greenhouse gases carry a price. Thus, carbon finance:

- Represents one specific dimension of environmental finance.
- Explores the financial risks and opportunities associated with a carbon constrained society.
- Anticipates the availability and use of market-based instruments that are capable of transferring environmental risk and achieving environmental objectives. (Labatt & White, 2007)

As argued by World Bank (2009), Africa continues to have a very strong interest in carbon finance as a tool of sustainable development in key sectors, such as forestry, agriculture, energy, and waste management. Nonetheless, challenges for carbon finance across the region remain significant because of the unpredictable investment climate present in many African countries and lack of capacity in some African public sector institutions. Moreover, many of the Kyoto Protocol's CDM methodologies and documentation requirements are often geared towards middle income countries, and towards countries, for example, which do not have hydropower as a baseline energy source. The CDM also does not adequately address the heavy use of non-renewable biomass for energy and lacks methodologies for regional grid integration, which could be used for projects underway in West, Southern, and East Africa.

According to Edwards (2012), internationally, financial mechanisms have been and are being put in place to assist developing countries to conserve and regenerate forests for climate change mitigation. The two important mechanisms are the CDM (clean

development mechanism) through its Afforestation and Reforestation sub – program and the REDD + (Reduction of Emissions form Deforestation and forest degradation in developing countries, including enhancing forest carbon stocks). Both forest regeneration, such as those in area exclosures, and the old growth remnant forests of Ethiopia sequester and hold large carbon stocks, which can quality for REDD + and /or CDM carbon financing opportunities, respectively. A number of CDM and REDD + projects have already been initiated in Ethiopia.

2.1.12. Climate Change

In broad terms, ‘climate’ is the typical range of weather, including its variability, experienced at a particular place. It is often expressed statistically, in terms of averages over a season or number of years, of temperature or rainfall and sometimes in terms of other variables such as wind, humidity, and so on. Variability is an important factor. ‘Climate variability’ is variability in the average weather behavior at a particular location from one year to another, or one decade to another. Changes in the behavior of the weather over longer time scales, such as one century to another, are usually referred to as ‘climate change’ (Pittock, 2009).

Climate has changed greatly over geological timescales. But what is of immediate concern is that climate has shown an almost unprecedented rapid global warming trend in the last few decades. Supporting evidence for recent global warming comes from many different regions and types of phenomena. For example, there is now ample evidence of retreat of alpine and continental glaciers in response to the twentieth century warming (there are exceptions in some mid- to high-latitude coastal locations where snowfall has increased). This retreat has accelerated in the last couple of decades as the rate of global warming has increased. (ibid).

Climate change and development are highly intertwined: The risks of global warming could jeopardise decades of development efforts, particularly in the poorest regions of our planet. It is therefore vital to ensure that development projects strengthen their

beneficiaries' capacities to confront climate change. It is also important to make sure that the same projects do not lead to excessive emissions of greenhouse gases (Keller, 2009).

2.1.12.1. Climate Change in Ethiopia

Climate change is a key concern to Ethiopia in our time and need to be tackled in a state of emergency. It has brought an escalating burden to already existing environmental concerns of the country including deforestation, serious soil erosion and loss of top soil and land degradation which in turn have adversely impacted agricultural productivity. In Ethiopia, models indicate that the average daily rainfall amount will decline to around 1.97 mm for the duration of 2070-2099. The decrease in rainfall amount will be aggravated by increased evapotranspiration rates caused by likely mounting temperatures and aridity. The mean annual temperature will rise to 26.9 0C during 2070-2099 (Cline, 2007; as cited in Ayana et al, 2011).

Many studies have concluded that the agriculture sector of the country is the most affected sector by climate change. The trends in the contribution of agriculture to the country's total GDP clearly explain the relationship between the performance of agriculture, climate and the total economy. Years of drought and famine (1984/1985, 1994/1995, 2000/2001) are associated with very low contributions, whereas years of good climate (1982/83, 1990/91) are associated with better contributions (CEEPA, 2006; as cited in Ayana et al, 2011).

Climate change is already taking place now, thus past and present changes help to indicate possible future changes. Over the last decades, the temperature in Ethiopia increased at about 0.2° C per decade. The increase in minimum temperatures is more pronounced with roughly 0.4° C per decade. Precipitation, on the other hand, remained fairly stable over the last 50 years when averaged over the country. However, the spatial and temporal variability of precipitation is high, thus large-scale trends do not necessarily reflect local conditions. The GHG emissions per capita in 1994 totalled to 900 kg CO₂ equivalent per capita and year. Compared to other countries, Ethiopia's emissions are

very low e.g. the U.S. emissions amount to 23.7 tonnes CO₂ equivalent per capita and year in 1994 (Keller, 2009).

Determined enough to combat climate change, Ethiopia has duly reacted by ratifying relevant international conventions and is taking the necessary steps to implement the two categories of responses to climate change, mitigation and adaptation. Ethiopia has so far ratified the UNFCCC and its related appliance, the Kyoto Protocol, presented its initial national communications to the UNFCCC in 2001, presented its first Climate Change National Adaptation Programme of Action (NAPA) in 2007 to the UNFCCC, Ethiopia has set target to build carbon neutral economy by 2025, presented its Nationally Appropriate Mitigation Actions in 2010, sectorial adaptation plan of action is being prepared and many other associated activities. (Ayana 2011)

Mitigation programmes aiming at reforestation and possibly soil conservation activities would have strong synergies in adaptation and could bring in the needed finance for adaptation precisely because mitigation has a value on international carbon markets and in new programmes on reduced emissions from deforestation and soil degradation. (Keller, 2009).

2.1.13. Actors in Environmental Protection

The environmental protection tasks are getting more and more complex in Ethiopia following the economic policy reform and the federal arrangement in the country. Moreover, the extent of environmental problems themselves has made the environmental protection undertakings more difficult. To make things worse, there is a widespread common understanding that it is only the Federal EPA or the environmental protection organs of the regional states which are the sole responsible bodies for environmental protection tasks. (Mellese & Solomon, 2012)

At this time in point, there is a growing tendency of making environmental protection works a common concern of state and non-state actors around the world. Both international and national legal instruments with respect to environmental protection are being developed by engaging all state and non-state actors as the indispensable

stakeholders. It is the ever growing complexity of environmental protection that has made the state's command and control mechanism for environmental protection less significant to manage the issue. Now the prevailing situations have dictated the paradigm shift from government to governance by involving all the necessary stakeholders in the environmental protection activities. (ibid)

The growing importance of non-state actors in environmental governance reflects a host of considerations including limitations on the capacity of government agencies; pressure from citizens for a greater role in decision making; acknowledgment of the increasing complexity of environmental management, and thus the need for more minds and different kinds of knowledge; and, in the context of developing countries, pressure from international funding agencies. (Armitage, 2008)

The challenge to integrate environment into development has never been more urgent than now. Infrastructure, industry and agriculture must be climate-proofed. Development must be energy and water efficient. Poor people's environmental deprivations and environmental rights must be tackled in development activity and political decision making. Institutions need to build environmental management capacity as too many of them treat the environment as an externality. Change will continue to be slow without adequate stakeholder pressure and developing strong linkages to learning from experience of 'what works' for environmental mainstreaming. (DBSA, 2009)

Environmental Protection Organs Establishment Proclamation No. 295/2002 has included non-state actors as part of the environmental protection organs. Article 8 (d), (e) and (f) incorporated representatives of the Ethiopian Chamber of Commerce, local environmental NGOs and Confederation of Ethiopian Trade Unions as members of the Environmental Council. Even if this is a positive step, the participation of non-state actors in the environmental governance in Ethiopia is at its rudimentary stage for three main reasons. Firstly, the participation of the non-state actors is limited only to the Environmental Council (EC) which is a very inactive organ as far as day-to-day environmental governance is concerned. Secondly, the number of non-state actors represented in the EC is too small to ensure a mass-base participation in the environmental governance. Lastly, the roles and responsibilities of the non-state actors

are not legally defined and it has become difficult to engage them in the course of actions of environmental governance in the country. (Mellese & Solomon, 2012)

Global environmental governance requires the participation of nonstate actors, including NGOs, Intergovernmental organizations (IGOs), and market-oriented actors, (e.g. multinational corporations), in solving the global environmental issues. Besides State actors, both IGOs and NGOs have been playing an increasingly key role for regional institutions, participating in many activities, previously known “states-only” activities. Because of the reluctance of national governments to take effective measures against the environmental issues, non-state actors appeared to be the leader of environmental activities at local and global levels. While participating in formulating, promulgating, and enforcing rules, non-State actors affect the behaviour of a wide range of actors. (Genckaya, n.a.)

NGO involvement in global environmental governance can take a variety of forms (Esty, 1998, 2002; Charnovitz, 1997 as cited in Gemmill & Bamidele-Izu, n.a):

- *Expert advice and analysis.* NGOs can facilitate negotiations by giving politicians access to competing ideas from outside the normal bureaucratic channels;
- *Intellectual competition to governments.* NGOs often have much better analytical and technical skills and capacity to respond more quickly than government officials;
- *Mobilization of public opinion.* NGOs can influence the public through campaigns and broad outreach;
- *Representation of the voiceless.* NGOs can help vocalize the interests of persons not well-represented in policymaking;
- *Service provision.* NGOs can deliver technical expertise on particular topics as needed by government officials as well as participate directly in operational activities;

- *Monitoring and assessment.* NGOs can help strengthen international agreements by monitoring negotiation efforts and governmental compliance;
- *Legitimization of global-scale decision-making mechanisms.* NGOs could broaden the base of information for decision-making, improving the quality, authoritativeness, and legitimacy of the policy choices of international organizations.

Civil society's involvement in global environmental governance has enriched the process and strengthened outcomes in a number of places and in a number of ways. In fact, it is the participation of nongovernmental groups that makes the process "global" and not simply "international." While many governments agree that NGO participation is indispensable, many also feel that the drawbacks of civil society participation may outweigh the benefits. Arguments and concerns abound on both sides. Some are fretful that NGOs might constitute special interest groups, and that their participation would invariably result in policy distortions. Others fear that intergovernmental decision-making processes would become bogged down by NGOs, which are not necessarily representative of or accountable to their particular constituencies (Nichols, 1996, as cited in Gemmill & Bamidele-Izu, n.a).

Decision makers are also anxious that NGOs may seek to usurp the sovereign powers of governments. However, some of these concerns may be overstated, considering the advantages of civil society involvement. Civil society can help build the political will for a new approach to development that integrates environmental and social goals. Non-governmental organizations can serve as alternatives to weak or inadequate democratic institutions, as avenues for more inclusive dialogues, and as conduits for disseminating information on activities and issues within the international system. (ibid)

2.1.14. Legal Frameworks

2.1.14.1 International Conventions and Multilateral Environmental Agreements (MEAs)

Ethiopia is party to about eleven multilateral environmental conventions and agreements (MEAs) aimed at protecting the land and society from environmental degradation and the associated human health and ecological threats. In this context, responsible institutions (focal points) have been assigned for the implementation of these multilateral environmental conventions. Of the eleven conventions to which the country is a party, six, namely, the Stockholm Convention on Persistent Organic Pollutants- better known as POPs Convention, Montreal Protocol on Substances that Deplete the Ozone Layer- known as the Montreal Protocol, Convention on the Prior Informed Consent procedure for Certain Hazardous Chemicals and Pesticides in International Trade- better known as Rotterdam convention, Basel Convention on the Control of Trans- boundary Movements of Hazardous Waste- better known as the Basel Convention, United Nations Framework Convention on Climate Change (UNFCCC), Bamako Convention and Libreville Declaration, have direct and/or indirect relation with environmental pollution control and the control of the associated health , ecological and socio- economic impacts. (Edwards, 2012)

Table 1: Environmental conventions signed/ ratified by Ethiopia

	MEA List	Country Position	Remarks
1	The Stockholm Convention on Persistent Organic Pollutants (POPs).	Party	Signed: 17/05/2002 Ratified: 09/01/2003 Proclamation No:279/2002
2	Convention on Biological Diversity (CBD)	Party	Signed: 10/06/1992 Ratified: 05/04/1994
3	Cartagena Protocol on Biosafety to the CBD	Party	Signed: 24/05/2000 Ratified: 24/05/2000
4	The United Nations Framework Convention on Climate Change (UNFCCC)	Party	Ratified: 05/04/1994
5	The United Nations Convention to Combat Desertification (UNCCD) in those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa	Party	Signed: 15/10/1994 Ratified: 27/06/1997
6	The Vienna Convention for the Protection of the Ozone Layer	Party	Ratified:11/10/1994
7	Montreal Protocol on Sustances that Deplete the Ozone Layer	Party	Ratified: 11/10/1994
8	The Rotterdam Convention on the Prior informed Consent (PIC) Procedure for Certain Hazardous Chemicals and Pesticides in International Trade	Party	Ratified: 02/07/2002 Proclamation No: 278/2002
9	The Basel Convention on the Control of Trans-Boundary Movements of Hazardous Waste	Party	Ratified: 12/04/2000 Proclamation No: 192/2000
10	Bamako Convention on the Ban on the Import into Africa and the Control of Trans-boundary Movement and Management of Hazardous Wastes within Africa	Signatory	Acceded: 2002 Proc. No. 355/2002
11	Libreville Declaration on Health and Environment in Africa	Signatory	Signed: 29/08/2008
12	Convention on the International Trade in Endangered Species of Wild Flora and Fauna (CITES)	Party	Ratified: 05/04/1989

Source: Edwards, 2012

2.1.14.2. National Legal and Institutional Framework

Following its establishment in 1995, the Environment Protection Authority (EPA) has developed three important items of legislation focusing on environmental management, namely, Environmental Impact Assessment), the Environmental Pollution Control Proclamations. Moreover, in 2008, the council of Ministers approved the Industrial Pollution prevention and control regulation and the Environmental Standards for Ethiopia, which were developed by EPA to address the issues of environmental pollution. (Edwards, 2012)

Apart from EPA, other line ministries have also enacted legislation that address, in the broader context, various aspects of environmental pollution. Regarding the implementation of these laws, a number of reviews (e.g. Shibru Tedla and Kifle Lemma, 1998; FSS, 2004; WHO, 2010 as cited in Edwards, 2012) show that there is low enforcement of the dictates in most of these laws. These directly relate to the lack of the necessary financial and human resources as well as the capacity to follow- up and monitor the implementation of these laws on the ground. (ibid)

Table 2: Ethiopian Policies, Strategies, Legislation and Regulations with regard to Environmental and Natural Resources Management

Document Type	Document Title	Source	Aspects Covered	Updated (Y/N)	Issue Date (MM/YY)
Policy	Policy on Forest Development, conservation and Utilization	FDRE, Forest Policy, Ministry of Agriculture, and Rural Development	Policy Orientation	No	09/2007
Policy	Agricultural Policies, Programmes and Targets for a Plan for Acceleration and Sustainable Development to end Poverty (PASDEP), 6/2005-10/2010	FDRE, Ministry of Agriculture, and Rural Development	Policy Orientation, Human resource	No	07/2006
Policy	National Policy on Biodiversity, Conservation and Research	Institute of Biodiversity Conservation	Policy orientation, institutional arrangements, regulatory frameworks, financial resources, human resources	No	12/2005
Policy	Ethiopian Water Resource Management policy	FDRE, Ministry of Water Resources	Health Risks, Policy orientation, Institutional arrangements, regulatory frameworks, financial resources, human resources, national guidelines	No	1999
Policy	Health Policy of the Transitional Government of Ethiopia	FDRE, Ministry of Health	Health Risks, Policy orientation, Institutional arrangements, regulatory frameworks	No	09/1993
Policy	Federal Policy on the Environment	FDRE, Environmental Protection Authority	Health Risks Policy orientation, institutional arrangements, regulatory frameworks, interventions	No	04/1997
Policy	FDRE Policy on HIV/AIDS	FDRE Ministry of Health	Health Risks, Policy orientation, National Guidelines	No	08/1998
Policy	Wildlife Development, Conservation and Utilization Policy	FDRE Ministry of Culture and Tourism	Policy orientation, regulatory frameworks, human resource	No	06/2009
Policy	National Population policy of Ethiopia	The Transitional Government of Ethiopia Office of the Prime Minister	Policy orientation, institutional arrangements, regulatory frameworks, human resource	No	04/1993

Policy	National Science and Technology Policy	The Transitional Government of Ethiopia	Health risks, Policy orientation, institutional arrangements, regulatory frameworks, human resources, financial resources	No	12/1993
Policy	Strategy on Forest Development, Conservation and Utilization	FDRE, Ministry of Agriculture, and Rural Development (currently the Ministry of Agriculture)	Policy orientation	No	09/2007
Policy	Food security Strategy	FDRE, Ministry of Agriculture and Rural Development	Risk Factors	Yes, 03/2002	11/1996
Strategy	Ethiopia Water Sector Strategy	FDRE Ministry of Water Resources (currently the Ministry of Water and Energy)	Health Risks, institutional arrangements, regulatory frameworks, financial resources, human resources, national guidelines, interventions	No	2001
Strategy	National biodiversity Strategy and Action Plan	FDRE Institute of Biodiversity Conservation, Ministry of Agriculture	Health Risks, Policy orientation, Institutional arrangements, regulatory frameworks, financial resources, human resources, national guidelines	No	12/2005
Strategy	Wildlife Development, Conservation and Utilization Strategy	FDRE Ministry of Culture and Tourism	Institutional arrangements, regulatory frameworks, human resource, financial resources	No	06/2009
Strategy	Health Sector Strategic Plan (HSDP-III), 2005/6-2009/10	FDRE Ministry of Health	Health Risks, Institutional arrangement, financial resources, human resources, national guidelines	No	2005
Strategy	Federal Strategy on the Environment	FDRE, Environmental Protection Authority	Health Risks, institutional arrangements, regulatory frameworks, financial resources, Human resources, National guidelines, interventions	No	04/1 99
Strategy	The Agricultural Development Led Industrialization (ASDLI) strategy		Policy orientations, institutional arrangements, regulatory frameworks, financial resources	No	2007

Legislation	Proclamation of the Constitution of FDRE, No. 01/1995	Federal Negaric Gazeta, No. 1, 21 August 1995	Risk factors, policy orientations, Regulatory frameworks, institutional arrangements, human resources, Financial resources	No	08/1995
Legislation	FDRE Rural Land Administration and Land Use Proclamation, No. 456/2005	Federal Negarit Gazeta., No. 44, 15 July 2005	Regulation Framework	No	07/2005
Legislation	Proclamation to provide for the Development, Conservation and Utilization of Forests, No. 542/2007	Federal Negarit Gazeta, Sept. 2007	Regulation framework	No	09/2007
Legislation	Council of State Special Decree No. 20/1990 for the Registration and Control of Pesticides	Federal Negarit Gazeta, No. 21 Sept. 1990	Regulation Framework, Risk factors	No (draft available)	09/1990
Legislation	Proclamation to Promote and Regulate Transaction of Precious Minerals, No. 651/2009	Federal Negarit Gazeta, No. 61 Sept. 2009	Regulation Framework, Risk factors	No	09/2009
Legislation	Environmental Impact Assessment Proclamation, No. 299/2002	Federal Negarit Gazeta, No. 11, 03 Dec 2002	Policy orientation, Regulatory framework, Risk Factors	No	12/2002
Legislation	Solid Waste Management Proclamation, No. 513/2007	Federal Negarit Gazeta, No. 13, 12 Feb. 2007	Risk factors, Environmental policy oriented	No	02/2007
Legislation	Environment pollution control Proclamation, No. 300/2002	Federal Negarit Gazeta, No. 12, 03 Dec 2002	Risk factors	No	12/2002
Legislation	Public Health Proclamation, No. 200/2000	Federal Negarit Gazeta, No. 26, 09 Mar 2000	Risk factors, policy orientation, national guidelines	No	12/2000
Legislation	Transport Proclamation, No. 468/2005	Federal Negarit Gazeta, August 2005	Regulatory frameworks	No	08/2005
Legislation	National Meteorological services Agency Establishment Proclamation, No. 201/1980	Federal Negarit Gazeta, No. 9, December 1980	Institutional arrangements, regulatory frameworks, financial resources, Human resources	No	12/1980

Source: Edwards, 2012

2.1.15. Civil Society Organizations (CSOs): Overview

The International Monetary Fund (IMF) uses the term “civil society organization” to refer to the wide range of citizens’ associations that exists in virtually all member countries to provide benefits, services, or political influence to specific groups within society. CSOs include business forums, faith-based associations, labor unions, local community groups, nongovernmental organizations (NGOs), philanthropic foundations, and think tanks. Branches of government (government agencies and legislators), individual businesses, political parties, and the media are usually excluded. (IMF, 2015)

The membership of civil society is quite diverse, ranging from individuals to religious and academic institutions to issue-focused groups such as not-for-profit or non-governmental organizations. In the realm of environmental governance, NGOs are the most prominent actors. NGOs involved in environmental governance are highly diverse, including local, national, regional, and international groups with various missions dedicated to environmental protection, sustainable development, poverty alleviation, animal welfare, and other issues. (Gemmill & Bamidele-Izu, n.a.)

The concept of civil society goes back many centuries in Western thinking with its roots in Ancient Greece. The modern idea of civil society emerged in the 18th Century, influenced by political theorists from Thomas Paine to George Hegel, who developed the notion of civil society as a domain parallel to but separate from the states (Cerothers, 1999 as cited in Ghaus-Pasha, 2004). The 90s brought about renewed interest in civil society, as the trend towards democracy opened up space for civil society and the need to cover increasing gaps in social services created by structural adjustment and other reforms in developing countries. Civil society is a sphere of social interaction between the household (family) and the state which is manifested in the norms of community cooperative, structures of voluntary association and networks of public communication ... norms are values of trust, reciprocity, tolerance and inclusion, which are critical to cooperation and community problem solving, structure of association refers to the full range of informal and formal organization through which citizens pursue common interests” (Veneklasen, 1994 as cited in Ghaus-Pasha, 2004).

Historically, the State has been seen as the main actor dealing with market failures and negative externalities. However, because of political and administrative constraints, States are often not able to cover the full range of needs of the citizens resulting from these market failures, especially since the demand is believed to be heterogeneous and the State is especially efficient in providing homogeneous goods and services (thanks to economies of scales) but it is much less efficient in providing heterogeneous goods and services (Johnson & Prakash, 2007, **as cited in** Desse, 2012). CSOs are thus created by the citizens to fill the gap left by markets and States. There is thus a long tradition of local civil society activism (more or less formal, more or less linked with religious organizations depending on the country or region). However, the last two decades represent a shift in the evolution of CSOs: thanks to the development of new communication technologies, especially the internet, CSOs have become more and more global and have become a new regulation agent both at a national (or regional) and global levels. (Desse, 2012)

Civil society has emerged as an important catalyst of change in the development and democratic processes at both the national and international levels. It has begun to play a critical role in the worldwide drive for equality, social justice, human rights, fair trade, debt cancellation, and the elimination of poverty. It has amply demonstrated its enormous potential for fostering democratic values, for engendering innovative approaches, for rallying public opinion and mobilizing grassroots communities. It is in recognition of its capacity to articulate and promote the interests of the weak, the marginalized and the voiceless in our societies that major international organizations, including UN agencies, continue to provide space for the participation of civil society in their development and development initiatives. For example, the Cotonou Agreement of June 2000 between the European Union and 77 African, Caribbean and Pacific (ACP) countries clearly recognizes civil society and other non-state actors as partners and seeks to promote their contribution to national development efforts. Various international instruments developed both in the African continent and beyond set minimum standards and legal guarantees for the formation and legitimate activities of civil society in pursuit of the welfare of humanity. (Taye & Bahru, 2008)

2.1.15.1. Civil Society in Ethiopia

In Ethiopia, civil society as we know it today, is a recent phenomenon. The earliest predecessors of civil society organizations (CSOs) in Ethiopia were traditional community-based organizations such as the *iddir*, the *Iqub* and other self-help organizations. During the Imperial period, trade unions and professional associations became the dominant forms of the voluntary sector. The droughts and famines of the 1970s and '80s paved the way for the formation of a number of national Non-governmental Organizations (NGOs) that primarily engaged in emergency relief operations. This was also the period when many international NGOs began to move into the country. The political upheaval following the 1974 revolution also led to the formation of politically-affiliated mass organizations, such as peasant associations, youth associations, women associations and cooperatives. (Taye & Bahru, 2008)

With the fall of the Derg regime in May 1991 and the political liberalization during the Transition Period, the voluntary sector saw a marked transformation in both quality and size. Not only was there a sharp rise in the number of NGOs, both national and international, but there was also a shift from relief operation to development interventions. Furthermore, several CSOs that focus on rights-based advocacy have also appeared on the scene. The recognition of civil and political rights in the 1995 constitution of the Federal Democratic Republic of Ethiopia (FDRE) and the country's ratification of major international human rights instruments have certainly been encouraging factors in the proliferation of CSOs and NGOs in the country. (ibid)

State-civil society relations have been uneasy for quite a while, especially following the general election in May 2005. The lack of an official policy towards civil society has remained a cause for uncertainty about government attitude towards civil society. Government's hostile reactions to concerns voiced by civil society organizations regarding its handling of human rights has created the impression that it wants governance to be off limit to independent CSOs. They are predominantly donor-dependent and mostly engaged in development and service delivery. Public forums on civil society issues are not only a recent phenomenon, but also quite few and sporadic. The institutional culture of networking and coalition building is lately beginning to catch

on, but needs considerable efforts to take root and serve as a vehicle for social mobilization. However, for some reasons, CSOs' efforts and contributions, by and large, have remained unacknowledged, to say the least. (ibid)

2.1.15.2. Overview of the Charities and Societies Proclamation

The overview of the Charities and Societies Proclamation is briefly discussed below by Eman Mohammed (2012).

The proclamation to provide for the registration and regulation of Charities and Societies (Proclamation No. 621/2009) was enacted on 13 February 2009 taking effect as the overall legal framework under which charities, societies, associations, non-governmental and civil society organizations are governed.

As outlined in the Preamble of Proclamation No. 621/2009, the Charities and Societies Law has two basic objectives, namely, to:

- i. realize citizens' constitutional right to freedom of association and
- ii. enhance and strengthen the role of charities in the overall development of Ethiopia;

According to the Proclamation, the legal definitions for operating CSOs in Ethiopia are as follows:

1. 'Ethiopian Charities' or 'Ethiopian Societies' shall mean those charities or societies that are formed under the laws of Ethiopia, all of whose members are Ethiopians, generate income from Ethiopia and wholly controlled by Ethiopians. However, they may be deemed as Ethiopian charities or Ethiopian societies if they use not more than ten percent of their funds which is received from foreign sources; (Article 2, sub-art.2 of the CSP)
2. 'Ethiopian Resident Charities' or 'Ethiopian Resident Societies' shall mean those charities or societies, formed under the laws of Ethiopia and which consist of members who reside in Ethiopia and who receive more than 10% of their funds from foreign sources (Article 2, sub-art.3 of the CSP)

3. 'Foreign charities' shall mean those charities that are formed under the laws of foreign countries or which consist of members who are foreign nationals or are controlled by foreign nationals or receive funds from foreign sources (Article 2, sub-art.4 of the CSP)
4. 'Mass-based societies' shall include professional associations, women's associations, youth associations and other similar Ethiopian societies. (Article 2, sub-art.5 of the CSP).

The Proclamation has provided for the establishment of an independent body called Charities and Societies Agency (ChSA) to oversee the activities of CSOs, which fall under its scope.

The Agency shall have the following objectives as Article 5 puts it:

- to enable and encourage Charities and Societies to develop and achieve their purposes in accordance with the law;
- to create a situation in which the operation of Charities and Societies is transparent and accountable;
- to ensure that Charities and Societies operate legally;

In addition to the Proclamation and Regulation, the Agency has also issued Directives. These are on:

1. Administration costs and Program costs (70/30)
2. Audit report and activity
3. Charitable committees
4. Charitable endowments
5. Consortium guidelines
6. Income-generating activities
7. Property
8. Public collection

According to CIVICUS (2008), “the Proclamation severely limits civil society space, is discriminatory and reflects a deep official distrust of CSOs rendering valuable services to the people of Ethiopia. Further, it is unconstitutional and against public interest to restrict a substantial section of civil society to a limited set of activities. Article 31 of the Constitution of Ethiopia guarantees: Every person has the right to freedom of association for any cause or purpose” (Eman, 2012).

2.1.16. Success Stories of Environmental Justice from the Developing World by Local Communities

Due to mainly the emerging nature of environmental issues in Ethiopia, in particular and globally, in general, well established models, approaches and strategies are not readily available as the case in other mainstream disciplines. The following sample studies briefly discuss what and how environmental protection issues are dealt with by different non-governmental organisations in different countries.

So many people regard the environment either as a commodity (exploit without limit) or a sanctuary (no humans allowed) that we lose sight of a practical reality: the most sustainable environmental improvements will come from local communities working constructively with the natural environment.

A refreshing new report by the Political Economy Research Institute (PERI, 2005) at UMass, Amherst, describes a diverse array of initiatives that successfully combine economic development, environmental protection and social justice. The report, “Environment for the People,” provides both a general philosophy for “building natural assets,” as well as a fascinating international survey of success stories.

In Somalia, for example, where war and poverty have decimated the acacia tree, pastoral nomads are reviving an ancient technique for conserving water — the building of “rock dams” that create water pools in gullies. This allows acacia trees to survive and grow, which in turn helps the soil retain water, which in turn grows grass that can feed livestock. The trees also provide shade in the hot desert.

In the savannas of West Africa and the Amazonian jungles of Brazil, the West is finally discovering what locals have known for centuries — that forests can be created through an active human collaboration with nature. This implies a new approach to environmental protection. Instead of centralized, top-down approaches in which locals are assigned “responsibilities without rights,” “community forestry” is more likely to renew the forest while providing timber, water and shade. In India, Peru and other nations, redistributing natural assets to the poor is an indispensable step toward protecting the environment.

“We humans are not apart from nature,” write Elizabeth A. Stanton and James K. Boyce, authors of the report. “How well we treat the natural world depends on how well we treat each other. Great inequalities of wealth and power enable elites to squander the Earth’s bounty while other people — of both present and future generations — bear the environmental costs. Human inequality is the enemy of environmental quality.” The booklet offers four general environmental protection strategies: Add value to natural assets. Capture the benefits of good environmental stewardship. Democratize access to natural resources. And defend the environmental commons. (PERI, 2005)

The exclosure at Alaba District (AD) has been used to illustrate the rehabilitation of degraded lands in Ethiopia as the study conducted by Mulualem et al (n.a.) revealed. The District Administration coordinated and mobilized the community through awareness-raising campaigns and discussions with elders and Peasant Associations’ (PAs) representatives, and it also identified households immediately surrounding the degraded sites. The District Office of Agriculture (DOA) provided tree seedlings and grass tufts, technical advice, supervision, and networking, and it facilitated activities in the exclosures. The exclosure sites were first selected based on criteria such as extent and severity of land degradation and interest of local communities around the degraded sites.

The degree of degradation was assessed on the basis of soil depth, past history of productivity, presence or absence of rock outcrops, and sensitivity to natural hazards (erosion and landslides). After site selection, rehabilitation measures at Alaba encompassed various activities, including reforestation, planting of grass tufts, building of soil erosion control structures, construction of micro catchments, and enrichment

planting of degraded areas with valuable species. These types of activities are described as major restoration interventions on degraded lands (Bongers and Tennigkeit 2010 as cited in Mulualem et al, n.a.) with active involvement of various actors.

In regard to biophysical changes of post-rehabilitation intervention, it has resulted in dramatic biophysical changes within few years. Tree planting, coupled with the natural regeneration of native woody species from the soil seed bank and seed rain, has resulted in the formation of a young secondary forest. The open ground is fully covered by grasses and forbs. The wild fauna, such as warthog, rabbit, hyena, and various species of birds, have been observed in the enclosed area. In general, the diversity of flora and fauna has increased substantially compared to pre-rehabilitation intervention conditions. Water runoff and soil erosion have been reduced significantly, due mainly to increased vegetative cover and the physical soil conservation structures, while the soil nutrient status and soil physical properties are expected to be ameliorated, primarily, as a result of the increase in soil organic matter.

By and large, the local people expressed the opinion that the exclosures had increased grass cover, decreased soil erosion, and increased rainfall frequency following the regeneration of vegetation on the degraded lands. Regarding the socio-economic effects of the rehabilitation intervention, the project has brought a positive change in the perception of the local people; from a pessimistic position at the beginning of the intervention to a more optimistic position at a later phase of implementation. Some of the factors that enhance sustainable use and conservation of the exclosures in AD include the growing sense of ownership, management by a local association, benefits generated from animal fattening, provisioning of thatch grass, improvements in community infrastructure, women's empowerment, growing tradition of saving money, and increasing respect of local by-laws. (Mulualem et al, n.a)

2.1.17. Concluding Remarks on the Review of Relevant Literature

As adequately discussed above by various authors about the different aspects of environmental protection, it's believed that readers could easily familiarize themselves with environmental and climate related concepts and issues. The researcher has attempted to clearly show the devastating effects of environmental degradation on countries' economy and human lives, in general. The alarming environmental situation of the global world and the Ethiopian case, in particular is the highlight of the subject under consideration. As shared by many literature sources, deforestation and soil erosion, in particular are two of the most common threats to environmental stability which has also been legally recognized in the environmental protection policy of Ethiopia. The national and international legal instruments adopted by the Ethiopian government (see Table 1&2) so as to support the environmental protection endeavour to alleviate further environmental risks is an encouraging act. However, the political commitment manifested in a form of policy formulation and adoption of various legal instruments should be equally supplemented through pragmatic and committed endeavours on the ground.

Environmental protection activities as discussed above could take various forms. The natural environment which we live in requires to be looked after so that human's existence will not be in jeopardy. The global environmental situation is deteriorating mainly as a result of uncontrolled human activities. As argued by different authors, Ethiopia as well is experiencing environmental hazards as never before. The researcher strongly believes that broad-based campaign should be launched at all levels so as to avert the tragic consequences of environmental degradation witnessed in many other countries.

It is stated in the literature that in spite of the formulation of different policies, strategies and procedures to combat desertification and climate change, the situation on the ground is exacerbating. The State as the main actor in designing legal documents and its enforcement does not seem to be faring well in the efforts to curb ill practices affecting the natural environment. The environmental situation of a country as highly linked with poverty and development need to be brought to public attention as a national agenda. All

State and non-State actors and stakeholders should have a say as to what and how to mitigate effects of environmental degradations since its impact is always far-reaching.

Despite the fact that the existing environmental hazards are rampant, the State apart from the rhetoric has not put in place concrete and pragmatic measures on the ground as literatures sources show. Besides, the role of CSOs in local environmental protection activities has not been clearly shown. In the wake of the infamous Charities and Societies Proclamation (No.621/2009), the already narrowed space for non-State actors has become even more intimidating to take part and contribute their fair share in policy formulation, advocacy and implementation at grassroots.

As the various roles played by international CSOs in environmental protection activities as shown in the literature can be taken as a litmus test of what they could significantly contribute locally if the existing legal framework allows them to freely interact. The researcher contends that the contribution of CSOs on national development, in general and environmental protection, in particular has not been properly recorded and communicated. The finding of this research therefore will have a potential to shed some light on the overall picture of where CSOs are in regard to efforts towards environmental protection.

CHAPTER THREE

3. Research Methodology

This section of the study shows details of the research design, the sampling method as well as the source and manner in which the data has been collected and analyzed.

3.1. Research Design

A research design is a conceptual structure that shows how all the major parts of the research project come together. According to Kothari (2004), it constitutes the blueprint for the collection, measurement and analysis of data. The type of research used in this study is descriptive due to the fact that the research is going to describe what environmental protection roles are being undertaken by the selected projects and the benefits and challenges on the ground in relation to the community under consideration. In addition, descriptive research method is the best method to explain the phenomena as it is and also helps to answer “what is” questions. As Kothari (2004) put, descriptive research studies are those studies which are concerned with describing the characteristics of a particular individual, or of a group. The study also employed both qualitative and quantitative research methods in appropriate manner.

3.2. Sampling Frame

The sampling frame considered for the study is a list of beneficiaries of the projects at both sites who are directly involving in the environmental protection activities. For SEGNI program, the beneficiaries are SEGNI member students at schools who are directly taking part and benefiting out of the undertakings of SEGNI program. Member students are categorized under clubs located in their respective schools. So that a total of 5 SEGNI clubs from 8 primary and secondary schools in Holeta town which has about 1,125 members became the sampling frame of the study. Three SEGNI clubs in three schools in Holeta town i.e. Holeta high school, Burka Gale primary school and Holeta

primary school were not considered because of the fact that they were partially shut down following a political unrest that took place in most areas in Oromia region.

At Humbo Clean Development Mechanism (CDM) project, World Vision Ethiopia, the beneficiaries taken as sampling frame are community members at Humbo woreda who are organized under seven farmers' cooperatives. The community members at Abella Longena forest cooperative which are 903 in number are specifically the ones used as sampling frame. The other sampling frame, of which samples of key informants were selected, is a list of staff members at both MELCA Ethiopia and World Vision International, Ethiopia. Thus, drawing a representative sample from the readily available sampling frame was systematically held with no difficulty.

3.3. Sample design and Technique

As argued by Kothari (2004), a sample design is a definite plan for obtaining a sample from the sampling frame. It refers to the technique or the procedure the researcher would adopt in selecting some sampling units from which inferences about the population is drawn. Sampling design is determined before any data are collected. This study, therefore, employed both probability and non-probability sampling techniques. The reason for using probability sampling technique was due to the convenience of accessing a ready-made sampling frame of beneficiaries at both projects from which representative samples could easily be selected and as well as of the homogeneous nature of the target population.

Among the various probability sampling techniques, this research made use of simple random sampling. The justification for applying a simple random sampling was that it gives each element in the population an equal probability of getting into the sample as they are homogeneous; and all choices are independent of one another. The study also employed non-probability sampling technique for the other target population of the study i.e. the organizations under consideration. It was mainly because that the two organizations i.e. MELCA Ethiopia and World Vision Ethiopia through their SEGNI program and Humbo Clean Development Mechanism (CDM) projects, respectively are

the owners of the projects, responsible for overseeing and monitoring all related activities and are also the main sources of data regarding environmental protection activities in their respective project sites.

Of all the non-probability sampling techniques, the study applied a purposive sampling for samples from the organization/project itself because that the main goal here was to focus on particular characteristics of a population that are of interest to the study, which best enable me answer the research questions. And most importantly, expert knowledge of the activities on the projects resides not in every member of the organization, but only in few of them who are in charge of the projects. As argued by Mugenda and Mugenda (1999), purposive sampling technique allows the researcher to use cases that have the required information with respect to the objects of his or her study.

In light of this, the personnel working on both SEGNI and Humbo CDM projects are believed to have had the data, skill, knowledge and experience regarding their respective projects. Thus, the study took into account all the officials who are in charge of both SEGNI and Humbo CDM projects as samples. That is, for SEGNI program two officials from MELCA and one other official from Oromia Forest and Wildlife Enterprise (OFWE) have been contacted. For Humbo CDM project, about two officials were contacted as a source of reliable and authoritative data which were generated using an in-depth interview method.

As a result, the data collected from each group of respondents in the study i.e. the target community (beneficiaries) and officials at the projects were validated with one another using a triangulation method. Here, it's important to make sure that the data collected are sufficient and representative enough for the study purpose. So, a purposive sampling was first applied so as to select one of the four SEGNI project sites. Holeta town which has 8 SEGNI clubs in eight schools with about 1,125 student members was selected as a focal site. Holta town was selected on the basis that a very vibrant and successful environmental protection related activity is undertaken by school clubs relatively than in the other sites. It is partly because that the town is where officials of the project are located. So that, gathering a rich data from selected sample respondents became possible.

Concerning Humbo CDM project where 7 forest cooperatives operate, Abella Longena Forest Cooperative was selected by applying a purposive sampling. The justification for doing so was that Abella Longena geographically covers the lion's share i.e. 1043 hectare of land out of the total 2,728 covered by the project. Besides, the cooperative has the highest membership (i.e. 903) than all the rest. And most importantly, of all the forest cooperative, Abella Longena has the largest share of carbon selling and as well revenue share as a result of carbon trading.

The research work requires specific, manageable, attainable, relevant and timely information from its respondents. According to Gay (1981) the appropriate number of subjects to be creditable for a study depends upon the type of the research work involved. For instance, for descriptive survey research method, a sample which is 10% of the population is considered to be a minimum for a larger population and for smaller population 20% may be required.

Since all the members of SEGNI clubs at all schools are more or less homogeneous in terms of exposure and environmental protection activities and availability, a simple random sampling was initially applied for 8 SEGNI clubs in Holeta town, and then the study took a 10% sample from the target population (1125) which equal to 113 samples. However, because of the inaccessibility of students in the three schools, the samples were selected proportionally from the remaining five schools. Likewise, for Humbo CDM project, a simple random sampling was applied, as a result of homogeneity in roles of environmental activity and level of involvement among members, to select a 10% representative samples from Abella Longena forest cooperative (with 903 community members), that yield 90 sample respondents. To this end, a lottery method has been systematically applied to select the required representative samples.

3.4. Sources and Instruments of Data Collection

The study made use of both primary and secondary source of data and relevant data collection instruments so as to enrich the problem solving endeavor.

3.4.1. Sources of Data Collection

3.4.1.1. Primary Data sources

The primary data sources are beneficiaries of the outcomes of the projects and officials who are in charge of the SEGNI program and Humbo projects at MELCA Ethiopia and World Vision International, Ethiopia, respectively. Beneficiaries selected in a systematic way from both projects are the ones from which a sufficient data on the topic under focus are gathered for the first time through Questionnaire. The key informants from both projects are also the primary sources of data on overall activities of the organization in general and the project, in particular. The two key informants from World Vision Ethiopia with whom an in-depth interview held namely : Mr. Demess Lemma, Forestry Officer, Soddo & Humbo Community Managed Natural Regeneration Projects and Mr. Kibret Mamo, Climate Change, Energy and Environment Specialist; Livelihood and Resilience Department.

The other three key informants from MELCA Ethiopia of whom primary data was solicited through an in-depth interview are namely: Mr. Befekadu Refera, Program Coordinator; Mr. Shimeles Tegegn, Menagesha-Suba project coordinator; and Mr. Endale Sahlu., Environmental Education Coordinator. The fourth official contacted is Mr. Shemelis Telila, Head of Suba-Forest District from Oromia Forest and Wildlife Enterprise (OFWE) which is a major actor collaborating with MELCA Ethiopia on specifically the environmental education training held in suba forest and environmental protection activities undertaken in a community adjacent to the forest.

3.4.1.2. Secondary Data sources

Secondary sources of data used regarding the topic under study, and other relevant ones, are reports, and related publications on the activities of the organization on environmental protections. Moreover, data, both print and online on roles of civil society organizations nationally and globally, causes and effects of environmental degradation, environmental

related hazards facing Ethiopia and the global world, have been discussed in a logical manner.

3.4.2. Instruments of Data Collection

Following identification of the foregoing primary and secondary sources of data, the study employed data collection instruments mentioned below by triangulating in order to ensure the accuracy, richness and validity of data on the subject under consideration.

3.4.2.1. Questionnaire

The study made use of Questionnaire as one of the major data collection instruments to collect data on what roles beneficiaries undertake and most importantly, the benefits they are reaping as a result of the interventions of the projects in their locality and challenges they are facing, if any, as well. The Questionnaire used has both an open-ended and closed ended questions which is well formulated, ordered, unambiguous, sufficient and relevant to the objectives of the study.

3.4.2.2. In-depth Interview

A one to one in-depth interview with four key informants from MELCA Ethiopia (including one from OFWE) was held in a flexible and systematic manner with the aim of enriching the study's objectives. Furthermore, an interview was also held with two key informants from World Vision Ethiopia. While administering the interview, the researcher attempted to make sure that ethical standards and integrity are kept intact, and required data on roles of the organizations, where the respondents are in charge in regard to environmental protection, practical challenges and best practices are elicited.

3.4.2.3. Document Analysis

Document analysis as an important research tool which is an invaluable part of triangulation. The study undertook analyzing and interpreting data generated from the examination of documents and records relevant to the subject under consideration.

Official documents having relevance to the topic were examined and utilized in the study in a systematic way just to make the study a trustworthy and authoritative one.

3.5. Methods of Data Analysis and Interpretation

Quantitative and qualitative methods of data analysis have been employed to make the analysis sounder. For the quantitative data, the analysis made use of graphs, tables, percentages, frequencies and figures. For the qualitative data, the study employed analysis techniques like documentation, conceptualization, coding and categorizing. The collected data were coded and cleaned to remove outliers or missing values and then categorized. The coded data has been transferred to a computer sheet to be processed using Statistical Package for Social Sciences (SPSS).

CHAPTER FOUR

4.1. Data Description, Analysis and Discussion: SEGNI

4.1.1. Introduction

This chapter of the study is exclusively dedicated to the description of the data acquired through questionnaire, in-depth interview and document analysis, and the analysis and discussion of the described data. The researcher has attempted to make sure that the collected data are presented in an aggregate and systematic manner using triangulation technique thereby respondents' reflections will be clearly understood. Most of the collected data through survey questionnaire are processed using SPSS software whose output is presented in the form of percentage, frequencies, tables and figures. Data gathered through an in-depth interview, document analysis and those the researcher considered as worth presenting manually are discussed qualitatively in a logical manner. The data collected from the two organizations i.e. MELCA Ethiopia (SEGNI program) and World Vision Ethiopia (Humbo CDM project) are presented and discussed one after the other since the research area and nature of the environmental protection activities undertaken by the two projects are quite different.

The data gathered from respondents at SEGNI program consists of 113 beneficiaries (i.e. SEGNI members from 5 schools in Holeta town using survey questionnaire); 4 officials at MELCA Ethiopia (i.e. 3 from the project and one from its main partner i.e. OFWE) using in-depth interview; and relevant publications regarding the organization and the project in particular. Besides, the data collected from World Vision Ethiopia consists of 90 beneficiaries (i.e. members of Abella Longena forest cooperative in Humbo woreda) using survey questionnaire; 2 officials in-charge of the Humbo CDM project using in-depth interview; and related materials regarding the project, both in-print and online.

The analysis part of the data collected is presented in a separate paragraph following the data presentation for ease of reference and simplicity. The reliability statistics technique (Cronbach's Alpha) has been applied while using SPSS software.

Table 3: Reliability Statistics (SEgni)

Variables	Cronbach's Alpha	N of Items
Environmental knowledge Gained as an Eco-Advocate	.787	4
Environmental Activities at Community Level	.865	4
Effects of the training at Suba- Menagesha forest	.715	5
Benefits of Environmental Education	.794	5

Source: SPSS software

The research has made use of Cronbach's alpha as a measure of internal consistency (reliability). It is mainly used because of its appropriateness and as well, it is the most commonly used one for surveys having multiple likert questions to determine if the scale used are reliable. Thus, as the data in the table above indicates the values produced are within acceptable range.

4.1.2. Roles and Efforts undertaken by MELCA in Environmental Protection Activities in Ethiopia

Regarding the role of CSOs in environmental protection activities in Ethiopia, the officials pointed out that there exist a misconception by local people in that the roles of NGOs are only associated with relief operations even though they do play a far significant other roles. The roles being played by local CSOs include promoting biodiesel/biofuel consumption which are generated by Jatrofa plant and castor oil. These items are also exported to Europe market. Promotion of Floriculture is another important roles of local CSOs since using insecticide, pesticide and other chemicals will have a negative impact on soil and human life, as well.

The local CSOs including MELCA Ethiopia have done a widespread advocacy on this score. They have also managed to design and formulate code of conduct which has been

accepted as a legal requirement to be followed by all organizations, companies and industries. This code of conduct stipulates the strict use of an environmentally friendly approach in environmental protection activities and social security issues to staffs engaged in similar activities. Under the association called “Forum for Environment”, member CSOs were able to come up with a legal document “Environmental Impact Assessment”. This binding document is a result of the relentless efforts of these member organizations which is enforced to investors and other business entities engaging in environmental protection activities. As a result all involved should not disregard the environmental aspect of their business so as to sustain their operation.

According to the officials in charge at MELCA, until recently environmental issues were taken as a luxury and those advocating on this were labelled as anti- development while that endangered human life. However, changes have taken place through time. Local CSOs did also contribute some five years ago considerably to the formulation of a legal document i.e. “Climate Change Resilience Green Economy (CCRG)”. This document is aimed at promoting the use of non-carbon energy sources i.e. water, air, solar and geothermal. CCRG is an initiative to protect the country from the adverse effects of climate change and to build a green economy that will help realize its ambition of reaching middle income status before 2025. It identifies green economy opportunities that could help Ethiopia reach its ambitious growth targets while keeping greenhouse gas emissions low. The government intends to attract development partners to help implement this new and sustainable growth model.

Though the situation is encouraging, one of the respondents has emphasized what has been undertaken is not to the expected level and a lot should be done to tackle the looming environmental hazards. The CSOs have also exerted much efforts to realize biosphere reserves in different parts of the country. Four biospheres have been designed and prepared by different CSOs that got approval and certification by UNESCO. Sheka forest biosphere was prepared by MELCA Ethiopia; Keffa forest and Tana Lake biospheres were both designed by NABU. Yayu Coffee forest biosphere has been prepared by Environment and Coffee Forest Forum (ECFF).

According to the respondent, biosphere which is referred to as Man & Biosphere (MaB) is divided into three: 1) Core, 2) Buffer, 3) Transition. The core part is a No go zone where no man is allowed to settle and does any activity. It's only for the conservation of biodiversity resources. The Buffer zone is a half-way that protects the core part from entering into it. Here, big industries are not allowed but only local income generating activities, small farming and non-timber forest products like honey, spice collection, poultry, cattle production and so on. It also makes use of participatory forest management. The third and last one i.e. the Transition is a vast area where investment, urban settlement and other human activities could take place. However, factories generating environmental wastes and pollutants e.g. leather production are a forbidden acts. Any investments, therefore, that are only environmentally friendly are encouraged.

The other significant roles the local CSOs undertook as stated by the officials in charge is that local CSOs came up with a Nomination Document which outline the criteria/requirement to be fulfilled in order to be acknowledged & certified by UNESCO as a biosphere reserve. The three major criteria/functions mentioned are Conservation functions, Development functions and Logistic/ Research functions. Specific activities carried out to prepare the document are: holding public participation, mapping the place, stakeholders' participation, efforts towards reaching consensus on various matters, signing the document by the stakeholders and all levels of government hierarchies (e.g. ministry of science and technology, woreda bureaus...), and finally preparing the Nomination Document. All the cost associated with the realization of the above activities have been fully covered by the CSOs. MELCA Ethiopia is particularly working hard to realize the acknowledgment and certification of the fifth biosphere reserve which is on-going at Majang forest biosphere reserve.

The researcher contends that MELCA Ethiopia's role in sustaining the project in a continuous manner despite the challenges associated with fund is tremendous. Conducting the environmental education training regularly in suba menagesha forest for members and others interested where elders play great role in the transfer of indigenous ecological knowledge to the youth group is a great endeavour. Bringing the youth to the

forest where all environmental elements exist and experience it practically is believed to be a right approach that will certainly pay off. With the discussion held with key informants and considering responses of SEGNI members, MELCA's environmental protection role in SEGNI program and other areas is being rightly undertaken. Taking the initiative to design the first ever environmental education program in a complete and practical manner at school level on youth is worthy appreciating. The researcher strongly believes that there is nothing better than working on youth group and empowering them with scientific and indigenous ecological knowledge which qualifies to be taken as best practice and replicated by others.

In relation to the importance of considering environmental problems as an issue in Ethiopia, all respondents have agreed upon the significance of putting environmental protection activities into effect in earnest. They considered environmental issues as a survival issue, not a luxury by any means. Though investment is important for the nation's development, unless and otherwise it is environmentally sensitive, it will be damaging and will have no benefit in the long run. The best example for this as they put is a Tea Plantation set up in Sheka forest in 2004/05 which became catastrophic since tea plantation requires an elimination (total destruction) of any natural resources around the investment. What happened was that about 3,000 hectares of fertile land full of indigenous and long standing trees and other bio-diversities were granted to East African Company to eliminate the existing natural resources to make way for the investment. Is that an investment or destruction? exclaimed one respondent! However, as result of relentless advocacy roles by MELCA Ethiopia, the company was not able to go beyond 900 out of the 3000 hectares originally permitted which is taken as an important achievement. The respondents concluded that investment of any kind should not be at the expense of natural resources and affirmed that needs of the present and subsequent generations should not be unfairly compromised.

When asked what MELCA does in combating climate change and global warming, as a leading agenda worldwide, respondents said that what is being done will have ultimately its own contribution in mitigating climate change and global warming though the main

emitters of greenhouse gases are industrialized nations. They said that at the core of the environmental education (SEGNI) program, participants are expected to have emotional attachment with “Nature, Culture and Self” which they have managed to do so. When participants are back to their schools from training in suba-forest, they become an “Eco-advocate”. They mobilize school community and surrounding community to work hard for nature conservation by planting tree seedlings around degraded areas, homesteads, sloppy areas etc. In addition to this, they are actively participating at local soil and water conservation campaigns. Moreover, during SEGNI club meetings and public gatherings held, great emphasis have been given in awareness raising about climate change and global warming issues which members became already successful. The respondents concluded that through the active roles of SEGNI members, the community at large has been reached out and effective awareness creation held with a better natural environment which they believed should be replicated elsewhere as part of combating the global efforts to tackle causes of climate change and global warming.

4.1.3. Socio-Demographic Characteristics of Respondents

Table 4: Socio-Demographic Characteristics of Respondents

No.	Item	Category	Frequency	Valid Percent	Cumulative Percent
1.1	School Grade	4-8	55	48.7	48.7
		9-10	58	51.3	100.0
		Total	113	100.0	
1.2	Name of School	Burka Harbu	22	19.5	19.5
		Burka Harbu Sec.	23	20.4	39.9
		Burka Welmera	23	20.4	60.0
		Goro Kerensa	23	20.4	80.4
		Kolobo	22	19.5	100.0
		Total	113	100.0	
1.3	Age	11-15	31	27.4	27.4
		16-20	66	58.4	88.8
		Above 20	16	14.2	100.0
		Total	113	100.0	
1.4	Gender	Female	56	49.6	49.6
		Male	57	50.4	100.0
		Total	113	100.0	
1.5	Date of SEGNI Membership	2000-2005	66	58.4	58.4
		2006-2008	47	41.6	100.0
		Total	113	100.0	
1.6	Location of SEGNI Clubs	Holeta	113	100.0	100.0

Source: Field Survey, 2016

As the above table shows, 48.7% of SEGNI member students (55) are from 4-8 grades; 51.3% of members (58) are between 9-10 grades. Regarding schools they represent, Burka Welmera, Goro Kerensa and Burka Harbu secondary have each 20.4% of respondents' representation (23). The remaining ones i.e. Kolobo and Burka Harbu primary have each 19.5% representation (22). Age-wise 27.4% of the respondents (31) are between 11 and 15. And, 58.4% of respondents (66) are in the age group of 16 to 20. Those beyond 21 years have a 14.2% representation (16). The gender distribution shows that 49.6% of members (56) are female and the remaining 50.4% are male members. As the further indicates, the year they joined their respective clubs varies. While 58.4% of respondents (66) joined SEGNI clubs between the years 2000-2005, the remaining 41.6% did it from 2006 to 2008. In relation to location of SEGNI Club, all respondents (100%) are from Holeta town.

The significant amount of SEGNI members (58%) being in 9 to 10 grades is meant that they are in the age group where they can make a difference as their SEGNI membership experience is relatively rich than those in the lower class. About 48.7 % in grades between 4 to 8 imply that the youth group of students have long years ahead of them to serve their school and local community alike in environmental protection activities. Having the understanding, knowledge and exposure about the significance of keeping one's environment safe and healthy at such a tender age speak volumes. They can grow up with such a good understanding of environmental issues which has become a very pressing subject globally. SEGNI environmental activities which is new in its kind in school environment nationally will have a positive impact on other similar settings, if it is sustained. The gender distribution is encouraging in that there is no discrimination against female students as they do actively involve in SEGNI activities.

As learned from key informants, female students are highly encouraged to join SEGNI clubs and participate in tree planting, pruning, protecting seedlings and nature in general in both school and their respective local community. Parents of students are often consulted on the involvement and progresses of their children in environmental activities. Having been from the same area of SEGNI operation in Holeta town (100% respondents), it could give us a good picture of how much school compounds and different areas in the

community and the town have been changed as a result of the SEGNI program and members' active participation in various environmental protection activities. Though the majority respondents have at least agreed upon the statements asked, some portion of them have disagreed and/or are not in a position to say anything about it. It should not be overlooked that if the same exposure were offered to each member on equal terms, such a contrasting response should not have come out. Thus, it could be concluded that either those members have not properly understood the questions or they may not be among the active SEGNI participants or they may have prior knowledge/experience about what is offered in SEGNI clubs.

4.1.4. Beneficiaries and Organization of SEGNI Membership

Regarding the beneficiaries of SEGNI program, respondents showed that school communities including member students are the direct beneficiaries and the community at large are the indirect beneficiaries of the program. They also emphasized that equal chance is given for both males and women. In case of income generating activities, our beneficiaries are poor women and unemployed youths. We give more priorities for poor women. As one respondent said, as a principle, helping women means helping the family members.

Concerning the role of SEGNI members, the study found out that of the total SEGNI members (113), each SEGNI club in each five school has one coordinator, secretary, cashier and chairman, which gives as 18% of total members (20). And 82% of the remaining SEGNI members (93) have only membership status.

This signifies that there exist division of duties and responsibilities among members in each SEGNI club. The specific tasks assigned help members to carry out their duties so that their performance on environmental protection activities can be clearly measured. And there will not be conflict of interest. The extra duties on the 18% of members apart from their duties as being SEGNI member just like the remaining members in all schools will help them develop their sense of responsibility and accountability. The hierarchical arrangement of members' responsibility does also contribute to the effectiveness and stability of SEGNI activities in all schools in Holeta.

Regarding the organizations of SEGNI Clubs operation, one of the key informant who is in charge of SEGNI education forwarded that there exist a total of 53 SEGNI clubs operating under the Suba-Sebeta project. The clubs run in four different locations; namely Welmera woreda, Sebeta-Awass woreda, Sebeta town and Holeta town. SEGNI membership is exclusively on voluntary basis. In Holeta town, there are 8 SEGNI clubs actively operating in eight schools. About 1125 students both in primary and secondary schools are registered as SEGNI members in their respective clubs. At the beginning of each academic year, orientation program is administered for the whole school community. Though membership is open to everyone, those from grade five to twelve are highly encouraged to join clubs. This is primarily due to the fact that these students with a relatively higher age groups are better manage the practical training conducted in suba-menagesha forest for five full days and their relative maturity in taking responsibilities and actions.

As to how SEGNI clubs are structured, the respondents disclosed that following registration of membership at the beginning of each academic year, the project management body undertake selection of SEGNI club committee members. The committee comprises of representatives of student members (5 to 7 selected members on average), one secretary, one cashier (accountant), and one student chairman. Each committee member has specific role to play. In order for SEGNI clubs to operate in a coordinated and effective manner, the project has designed an approach called Cluster. It's under Clusters that schools that are physically proximate are classified for ease of oversight. SEGNI Council is mainly responsible for coordination, supervision, and follow-up on environmental protection activities undertaken in each SEGNI club in all the four different locations.

Regarding special consideration for marginalized and women in particular in the project, respondents emphasized that there is no special treatment along gender, economic, social, ethnicity or religious lines and thus equal opportunity is granted for all interested. They said that equal number of males and females (12 males and 12 Females) are participated at each round for the environmental training held at suba menagesha forest.

4.1.5. Method/Approach/ of SEGNI Education

As forwarded by respondents on methods and approaches used to run environmental education program, MELCA Ethiopia makes use of different approaches in its environmental education program. That includes school orientation program, discussion with stakeholders, organizing SEGNI nature experience (recruit school students, transport to Menagesha suba forest, purchasing food materials, camping, transporting elders and scouts to the camp site etc...) and conduct at least 6-12 rounds SEGNI programs per year. Employing a participatory approach with school and local community, stakeholders, and collaborating partners has made the whole process smooth and effective. The orientations conducted to create awareness about SEGNI program for the school community enabled students to join SEGNI clubs voluntarily and working closely with local elders and authorities paved the way for the successful implementation of the environmental training at suba forest and as well environmental protection activities at community level.

School participants were able to establish SEGNI clubs when they get back to their schools and construct traditional house in the school compound. They all managed to collect both cultural and biodiversity related materials and artifacts at the house so as to serve as “learning center”. Members do organize poems, drama, riddles and proverbs etc and often transmit information related to culture and biodiversity using school mini-media both at school breaks and during flag ceremonies. SEGNI members also organize and participate in school level, cluster level and project area level culture and biodiversity celebration and disseminate the knowledge obtained from SEGNI nature experience for wider audiences using different outlets including Mass Medias (both regional and national level broadcasting agencies).

4.1.6. The Rational (Motives) to Run SEGNI Program

When asked what rational (motives) were there for MELCA to set up and run SEGNI clubs, they strongly asserted that there is a gap between younger generation and elders (older generation) which they call “inter-generational gap”. The traditional ecological knowledge the elders equipped with is not properly transferred to the youth. The youth

are mainly engaged in modern education and do not value the indigenous knowledge that are found in a form of riddles, rituals, cultural ceremonies, stories and so on. The respondents stressed that it could make a dramatic upsurge if the two disconnected generation could create a link. The main motive of MELCA was just to bridge this inter-generational gap. When crafted, experiences were taken from Botswana and South Africa.

During the time of independence in South Africa, all hitherto national parks, game reserves, sanctuaries and so on were owned by the colonizers. As a result, the black South Africans did not mind about its significance. To address this gap, a program called Wilderness was set up. The program was aimed at creating awareness about its importance and richness. 'Imbewu'-refers to seed- in Zulu language- a concept metaphorically used as planting seed in the minds of young South Africans. As mentioned by the respondents, the Botswana experience has it that a training called "African Customary Law" coordinated by African Biodiversity Network (ABN) made a big difference. All members of ABN including Ethiopia represented by MELCA attended the training.

The training offered was about the way how to harmoniously live in a natural setting, how to create an environmental attachment with nature, appreciate traditional knowledge and building confidence. Besides, creating linkage between scientific and traditional knowledge was given a special emphasis. During the training, the trainees were able to spend one full night in a forest without food and any other essential element following a demonstration on how to cope with possible dangers they might encounter in the forest. The respondents concluded that the Wilderness program became instrumental as it put mainly the younger group of society in the actual forest are and teach them accordingly and in Botswana, all the ABN members got trained by the African Customary Law. They concluded that these two major experience were instrumental in motivating MELCA Ethiopia to replicate it by taking into account number of local situations.

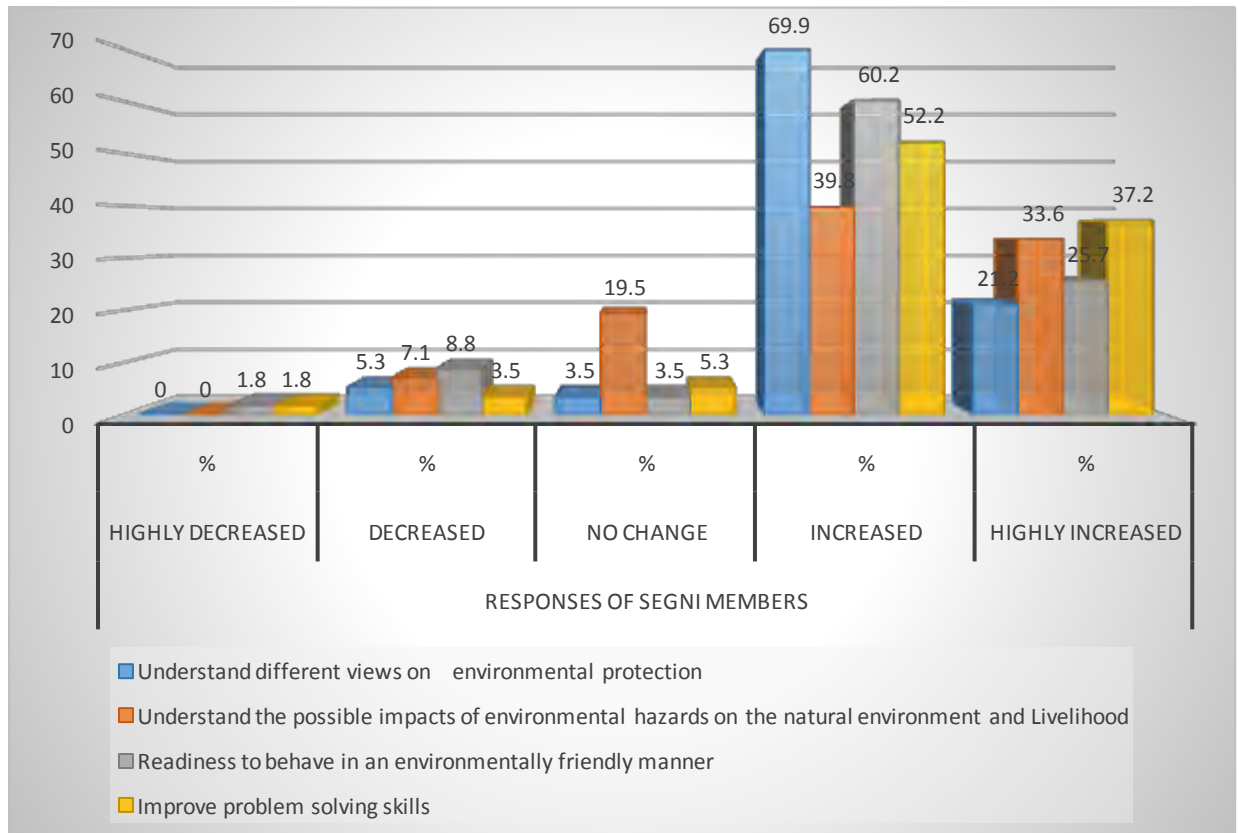
4.1.7. Perception on the Environmental Training at Suba-Menagesha Forest

The study found out that 89.4% of student respondents (101) have indicated the training they got at suba-menagesha was a successful one. About 10.6% of respondents (12) said otherwise. Out of the 12 respondents who said the training was not satisfactory, 58.3% underlined the reason that the training was short considering the non-existence of prior exposure on environmental issues. While 16.7 % of the respondents (2) said their reason is related to the scary nature of the night experience mainly the solitary time they spend in the forest alone, the remaining 25% of them expressed no response at all.

The training offered at suba-menagesha forest for five full days was conceived as a success by a considerable number of respondents as the data shows. This could be perceived in that the sessions included in the training were believed to have been a fruitful one that could potentially make them feel confident in their engagement in the environmental protection activities on the ground. Furthermore, having satisfied with the training offered in regard to ecological knowledge, medicinal plants, natural resources, quality seeds, biodiversity, cultural artifacts and the like can be taken as a guarantee that members' will be possibly capable to impart their knowledge with other students and community members alike and influence them to join SEGNI clubs and protect their natural environment in many ways.

4.1.8. Knowledge Gained as a Result of Participation in Environmental Education

Figure 1: Environmental Knowledge Gained as an Eco-advocate



From the study it could be concluded that the majority i.e. 83.2% SEGNI member respondents' (94) knowledge and conceptual understanding on environmental protection got considerably improved after becoming SEGNI members. About 16.8% of them (19) said the training didn't make any difference.

The above table shows that 91.1% (103) of respondents' understanding on the different views of environmental protection has been increased and highly increased. While 3.5% of them (4) said it did not make any difference, the remaining 5.3% said it even decreased it. About 73.4% of members (83) said that their understanding on the possible impacts of

environmental hazards on the natural environment and Livelihood is increased and highly increased. And, 19.5% of the respondents (22) disclosed no change has taken place on the score while 7.1% said it got decreased.

As indicated, considerable number of respondents 85.9%, which is 97, have indicated that their knowledge on 'readiness to behave in an environmentally friendly manner' has been increased/highly increased. While 10.6% of respondents' knowledge on the subject got decreased and highly decreased, 3.5% of the rest respondents (4) agreed that no change took place. Regarding problem solving skills, 89.4% of the respondents' (101) environmental knowledge as an eco-advocate has been increased and highly increased. About 5.3% of them (6), it decreased and highly decreased it and the remaining 5.3% of the respondents (6) said there is no change.

In order for the students to be actively engaging and playing an eco-advocacy role in their community, they have to be equipped with all the necessary knowledge and exposure which they have acquired in SEGNI clubs as emphatically witnessed by all the respondents.

As indicated above respondents' knowledge being increased/highly increased in general is an indication of the effectiveness of the SEGNI intervention which is a stepping stone for the change desired that is aimed at securing a healthy natural environment with balanced eco-system. Having a better understanding on different views of environmental protection and possible impacts of environmental hazards can be considered as a prelude to expected responsibilities of an eco-advocate which is readiness to behave in an environmentally friendly manner. When one's readiness to put into effect what he /she taught in training is increased/highly increased, we can say that the objectives of securing a safe environment is highly likely to materialize.

Having an increased/highly increased qualities on problem solving skills and self-esteem as being core virtues in any activity is highly significant. This means that members can be able to tackle environmental related challenges they encounter both in their school and local community in a flexible and appropriate manner and report to the concerned

whenever they found it to be beyond their control. Having a developed self-esteem enables the eco-advocates to be self-confident, and proud in what they do so that they can be highly influential.

4.1.9. Environmental Activities at Community Level

Table 5: Environmental Activities at Community Level

Environmental Activities at Community Level	Responses of SEGNI Members											
	Strongly Disagree		Disagree		Not Sure		Agree		Strongly Agree		Total	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Educate community members about the different types and uses of natural resources scientifically	6	5.3	4	3.5	18	15.9	45	39.8	40	35.4	113	100
Create awareness on importance of protecting natural resources	8	7.1	2	1.8	2	1.8	38	33.6	63	55.8	113	100
Impart them knowledge on the possible causes and effects of environmental degradation	6	5.3	4	3.5	18	15.9	38	33.6	47	41.6	113	100
Teach them the available kinds of medicinal plants and seeds	10	8.8	2	1.8	12	10.6	41	36.3	48	42.5	113	100
Mean	7.5		3		12.5		40.5		49.5		113	

Source: Field Survey, 2016

Majority of the respondents in the study have showed that they carryout various environmental protection activities in their respective communities. Considerable number of respondents (75.2%) perform activities like educating community members on the types and uses of various natural resources as the data shows. About 8.8% of SEGNI members (10) stated that they disagree and strongly disagree with their role in educating

community members about natural resources. While 3.5% of them (18) disclosed they are not sure of their engagement in educating community members.

The figure above also shows that members' duty on awareness creation, imparting knowledge on causes and effects of environmental degradation and medicinal plants and seeds have considerably increased. About 89.4% of respondents (101) have confirmed that they agree and strongly agree with their role in awareness creation on protecting natural environment. While 8.9% of them (10) do disagree and strongly disagree with this particular role. Besides, insignificant amount of respondents (2) are not sure of their role on this score.

Regarding imparting knowledge on causes and effects of environmental degradation, about 75.2% of respondents (85) have agreed and strongly agreed on their role, while 8.8% of respondents (10) disagree and strongly disagree. Those who are not sure of their role constitute 15.9 % of respondents (18). When asked whether or not members do teach community members about varieties of medicinal plants and seeds, 78.9% of them (89) have indicated that they agree and strongly agree with the role. While 10.6 % of respondents (12) do disagree and strongly disagree, the remaining 10.6 % of SEGNI member respondents are not sure of their role on this particular activity.

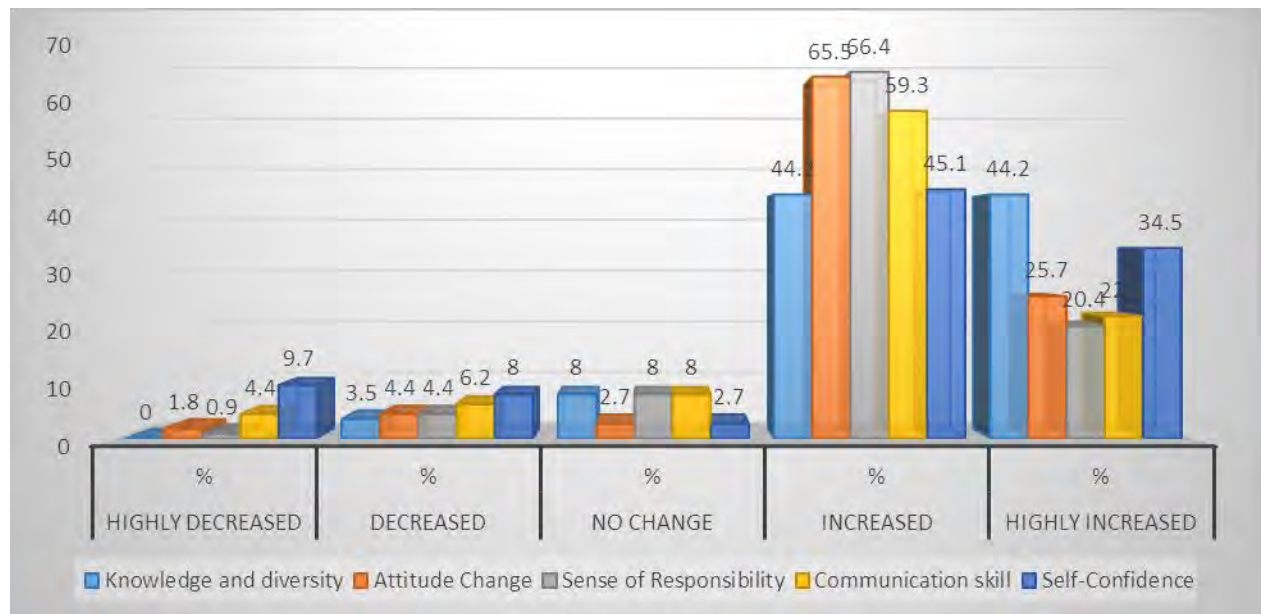
A scientific understanding and knowledge on different types and uses of natural resources helps the community at large utilize the resources around its surrounding in an appropriate and economical manner for the various purposes they want. This also avoids the age-old tradition of destroying natural resources for one's economic and social needs haphazardly. In order for the natural environment to be kept safe and healthy, it's a must that citizens are well aware of what surrounds them and having the scientific understanding of its uses for themselves and the generations to come is the best thing one could have. In regard to awareness creation, respondents confirmed the fruitfulness of their campaign which could be taken as an important step to witness the required objectives. Here, it is fundamental that the community at large are the ones whose awareness need to be improved which is the basic task of eco-advocacy since collective action is what matters.

Undertaking activities in a strong manner at community level in regard to imparting knowledge on causes and effects of environmental degradation and medicinal plants and seeds is a major step. Identifying clearly and scientifically the possible causes and impacts of environmental degradation can potentially deter community members from taking blind actions while utilizing natural resources. Being successful in engaging in teaching community members the available kinds of medicinal plants and seeds is beneficial for their livelihood. Scientific uses of medicinal plants can be considered as an alternative remedy to health problems. This could be used free of charge and as needed in time of emergency and helps the growth of indigenous medication. And when it comes to seeds it's even more important to conserve quality and indigenous seeds for reuse and conserving for further need. This is a good input for the community that account for a majority of farmers where agriculture is the mainstay of the economy.

It's also important to note that protecting the natural environment should not be left to SEGNI members only or to specific segments of the community. This young group of the community who are scientifically trained are change agents who let others in their surrounding join them and make a difference altogether which eventually makes the environmental protection endeavor more effective and fruitful.

4.1.10. Effects of the training at Suba-Menagesha Forest

Figure 2: Effects of the training at Suba-Menagesha Forest



Source: Field Survey, 2016

As it can easily be understood from the above table, the overall effect of the environmental protection training at suba-menagesha forest is generally positive which have brought them lots of benefits as indicated. On effects of the training on knowledge and diversity, 88.4% of respondents (100) have indicated that it is increased and highly increased. About 3.5% of them (4) have disagreed with the training's effect on knowledge and diversity. And, 8% of them (9) said it did not bring any effect at all.

Regarding attitude change, 91.2 % of respondents (103) have said that the training's effect on attitude change has increased and highly increased. Those who said otherwise constitute 6.2 % of respondents (7). On training's effect towards sense of responsibility, 86.8% of respondents (98) confirmed that the training has increased and highly increased it. While 5.3% of them (6) said it is decreased and highly decreased, the remaining 8% of them are not sure of it.

In relation to effects of the training on communication skill the study found out that 81.4% of respondents' (92) communication skill have increased and highly increased.

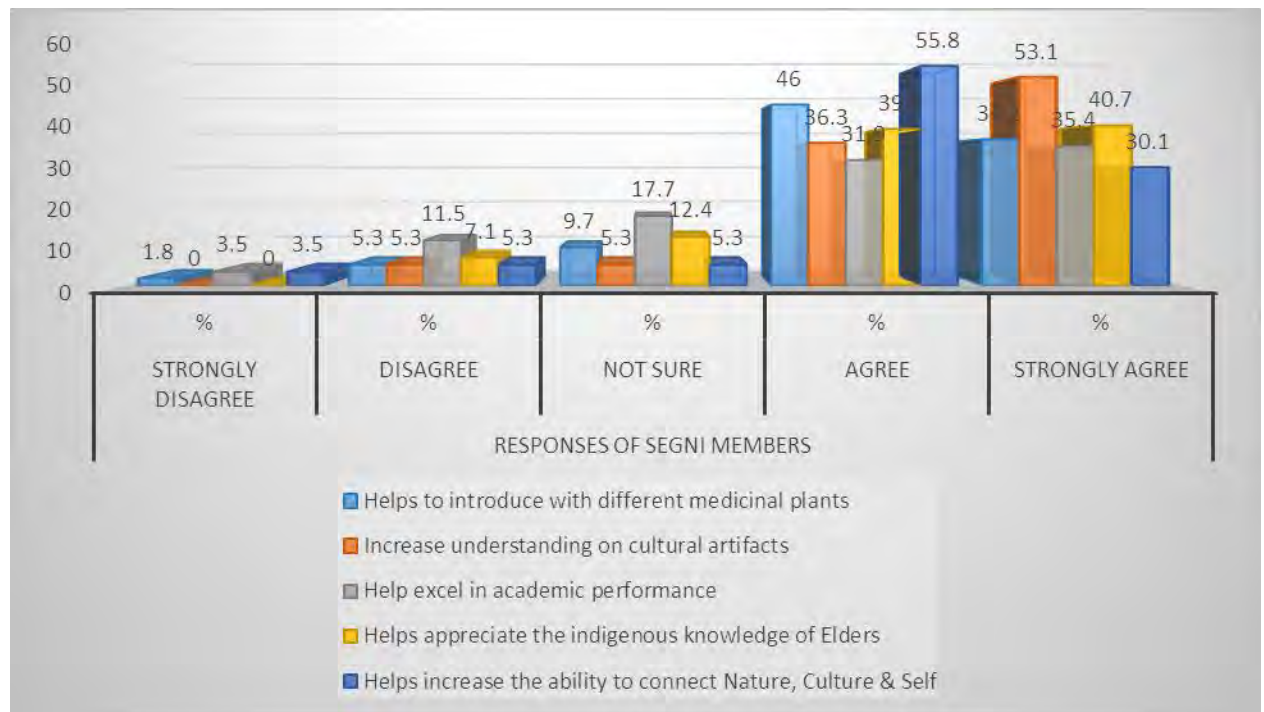
While 10.6% of them (12) said it is decreased and highly decreased, the remaining 2.7% (3) showed that it has brought no change at all. On training's effect on self-confidence, the study confirmed that 81.4% (92) of respondents' self-confidence has increased and highly increased. While 17.7 % of them (20) said it is decreased and highly decreased, the remaining 2.7% (3) said the training has brought no change.

The virtues that the respondents indicated as being increased are basic outputs that are expected at the end of a given training or exercise of this level at best. An eco-advocate whose knowledge and diversity improved with a positive attitude can make a considerable change in protecting his/her natural environment. Having the aforementioned qualities greatly helps one to develop a good sense of responsibility and self-confidence as the relationship between knowledge and confidence is highly linked. Moreover, communication skill as one of the expected qualities of an eco-advocate which they mainly exercise in their reflection of night-watch session is paramount in helping amplify their message to the wider community.

It's logical that respondents have found out the training in suba-menagesha to be sufficient/highly sufficient since majorities of respondents in the study said they have benefited from their participation in SEGNI clubs. It's also an indication that the sessions included in the training have met participants' expectation. If they feel fulfilled in whey they have been given with, they will likely be in a robust mood to put things in to effect with good morale and confidence.

4.1.11. Benefits of Environmental Education

Figure 3: Benefits of Environmental Education



Source: Field Survey, 2016

Regarding benefits of environmental education towards acquaintance with different medicinal plants, 83% of respondents (94) have agreed and strongly agreed, while 7.1% of them (8) said they disagree and strongly disagree. About 9.7 % of respondents (11) are not sure of it. Regarding increase of understanding on cultural artefacts, 89.4% of respondents (101) have agreed and strongly agreed while 5.3% of respondents (6) have disagreed with the statement. The remaining 5.3% disclosed that they are not sure of it.

On training's benefit toward academic performance, 67.3% of respondents (76) have asserted that environmental education helped them excel in their academic performance. While 15% of them (17) have disagreed and strongly disagreed, the rest 17.7% i.e. 20 are not sure of its benefit towards their academic life. Concerning indigenous knowledge of elders, 80.5% of respondents of SEGNI members (91) have agreed and strongly agreed on the point that the environmental education helped them appreciate elders' indigenous knowledge. About 7.1% of them (8) expressed their disagreement with the point. The

remaining 12.4% of respondents said they are not sure of it. When asked whether environmental education increases their ability to connect nature, culture and self, 85.9 % of respondents (97) agreed and strongly agreed on this score, while 8.8% (10) have asserted otherwise. The rest 5.3% of respondents (10) said they are not sure of it.

Becoming a member of SEGNI club proves that participants are fully benefited out of the various engagements in environmental protection activities in school and at community level as the overwhelming majority of (92%) respondents i.e. 103 confirmed in the study. Realizing their involvement in SEGNI clubs as being beneficial speak volumes. Endowed with the required environmental knowledge will be of great help to the students to make a noticeable change on the ground. Moreover, it is a plus as it will be easier for them to induce others to join them to make the endeavour everyone's concern.

The majority respondents' choice can be taken as an indication that SEGNI members' involvement in environmental protection activities has resulted in positive impression among household members. This is where the eco-advocacy role takes its root. Having been member of a household and part of the larger community as well, eco advocates can be able to make differences since getting acceptance helps the campaign to respect and refrain from engaging in unlawful practices against natural resources possible. The other important effect this could bring about is the potential to influence other members of a household and community alike and follow in their footsteps. Its aggregate effect will create a collective sense of responsibility among members of community, thereby the burden will be shared and the endeavour of environmental protection will likely be successful.

As argued by 67.5% of respondents (75), becoming a SEGNI member and spending considerable time on environmental protection activities in school and community has only a positive impact on their academic performance. Though it might consume their study time considering that their primary role as a student is academic learning, engaging and carrying on some extra burden must have enabled them to feel more responsible and respected which will undoubtedly help them indirectly excel in their education. The

exposure they got at suba-menagesha forest in particular could play an important role in the way they look at their environment and in developing their perspective towards nature, culture and self.

Benefits as one of the major expected impacts of the SEGNI program is the hallmark of the project. What should be noted here is that the major benefit of the program is the acquisition of knowledge, which is the most important type of benefit unlike economic and social one, without which achieving the rest is very unlikely.

In relation to the benefits being secured by the target community as result of the intervention of the suba-sebeta project, all key informants reflected the following as being major benefits:

- At project area, environmentally sensitive, culturally responsible youth generation are created.
- More than 500 hectares of degraded areas are rehabilitated by soil and water conservation activities and more than 500,000 tree seedlings planted around degraded areas in the last ten years.
- More than 500 poor women and youth are benefited from income generating activities.
- More than 50 schools are supported with mini-media materials and schools mini-media services are strengthened

Overall, the benefits the project has offered to beneficiaries as witnessed by all sources including student respondents and key informants are found very satisfactory. Having a great number of satisfied target groups with the outcome of the project is significant in enabling them remain committed to their environmental roles and has the potential to attract others in joining SEGNI clubs so as to ultimately ensure collective responsibility in environmental protection. Nevertheless, taking into consideration the causes of the responses of those few who expressed their disagreement with the points mentioned is highly important so that problems could be addressed timely if it is concrete.

4.1.12. Environmental protection on Economic Needs

About 91.1% of respondents (103) have stated that protecting the natural environment will not have a negative impact on the economic needs and wants of the community.

This implies that though it may probably have an immediate economic benefit in a form of for example access to firewood and charcoal, its long-term impact on livelihood will be far-reaching. The respondents who are believed to have a profound knowledge and fair understanding on the causes and consequences of environmental hazards, climate change and global warming have demonstrated that long-term benefits should not be compromised at all. This clearly shows that the youth have conceptualized the major reasons why natural resources are terrifyingly depleting irresponsibly not just in their locality but nationally as well.

4.1.13. Collaboration with Actors

When asked if MELCA liaise with other actors in relation to managing suba-sebeta project, officials argued that there exist a close collaboration with different local actors to smoothly and effectively run SEGNI program in all locations. That include Oromia Forest and Wildlife Enterprise (OFWE), Oromia Agriculture Bureau, and Oromia Finance and Economic Development Bureau. The Oromia Forest and Wildlife Enterprise (OFWE) does facilitate and allow MELCA Ethiopia to use the Suba-Forest to host environmental training, in providing vehicle, water and other essential logistic supplies for the training. OFWE also provides explanation to participants regarding the historical background of the forest and related issues whenever trainings are held. They confirmed also that MELCA Ethiopia does collaboratively work with Education, Culture and Tourism, Youth and Sport, Women and Children Affair offices as well as Woreda and Town Administrations of government offices.

Woreda Education Office which is an important collaborative government agent grants authorization for the project to run SEGNI clubs in schools in the Woreda. Woreda Culture and Tourism Office collaboratively facilitate the celebration of cultural events

with MELCA Ethiopia. Supervision or follow up of SEGNI club activities is undertaken by Education office. Annual school levels, clusters and project area level cultural biodiversity celebrations are undertaken with active involvement and special support of the above mentioned governmental institutions. To further illustrate the overall nature of collaboration MELCA has with its major partner i.e. OFWE in running SEGNI's environmental training the official in charge of the Suba-Menagesha District elaborated the existing working relationships, its benefit and challenges as well.

One of the actors collaborating with MELCA Ethiopia on particularly SEGNI environmental education program is Oromia Forest and Wildlife Enterprise (OFWE). OFWE is a government developmental organization headquartered in Kebena area, Addis Ababa with a total of nine branches throughout the country. It has a legal mandate to administer all natural resources including parks and forests located in Suba-Sebeta district. Its main area of collaboration with MELCA includes provision of the suba-menagesha forest for environmental training, a bureau for SEGNI site to store administrative supplies and also providing camp-site for SEGNI program for free. OFWE does also render transportation service for all SEGNI programs and support it with logistics as well.

The respondent said that there is a protected land adjacent to the suba forest and the community residence given to the community where members of the local community engage in rehabilitating the previously degraded and unproductive land. Preparing the land for protection and tree planting has been carried out by the community itself. Members of the local community does activities like cutting off the over-dense plants and trees and avoiding the unwanted ones, harvesting commercial trees /exotic trees/(e.g. eucalyptus tree, timber tree..) economically for utilization. Members are encouraged to conserve and protect indigenous & endangered tree species like *weira*, *yehabesha tsid*, *wanza*, *zigba*, *koso* etc. which are only found in Ethiopia.

As revealed, both organizations collaborate in mobilizing the community to manage the area and ultimately handover the ownership to the community to run it by their own. By doing so, it resulted in substantial reduction of pressure on suba-forest. MELCA and

OFWE collaboratively work on awareness creation and teaching the community on how to scientifically protect their natural environment and encourage the peasants to prepare their own plot of land for the purpose of tree planting and protection. The land they encourage the peasants to protect is the unproductive ones whose mapping has been fully carried out by OFWE.

As a result, most of the peasants managed to have a protected land which is a section of the farmland they owned. OFWE provided them with seedlings and technical support in regard to which species is favorable and how to plant and protect it. With the help of MELCA, OFWE managed to open up environmental clubs in schools that are adjacent to suba forest. Though it's not as full-fledged and inclusive as SEGNI environmental clubs, OFWE club members are taught about forestry, its protection and running nursery activities. Students are expected to teach and share with their parents the scientific ecological knowledge they gained in their clubs. The other advantage is that students get employment opportunity with payment when schools closed and engage in drilling wells, tree planning, and its treatment and let their household members use this opportunity which the respondent said was the result of the collaboration work.

The respondent admitted that the following benefits have been realized as a result of collaboration with MELCA Ethiopia:

- The working relationship with MELCA has helped OFWE to open up environmental clubs in schools that are adjacent to the suba forest area.
- The understanding of the community on particularly medicinal values of plants have satisfactorily increased which is manifested in the rise of demand for seedlings.
- Attitude changes observed.
- Barren and unproductive lands became productive.
- The reduction of deforestation, grazing and charcoaling is encouraging.

When asked if there are already challenges being experienced, the official asserted that there are some challenges faced while running the environmental protection activities. Population pressure that forces people to settle in a certain geographic area densely

coupled with the rise of urbanization has increased the demand for forest resources for economic consumption. Though there are considerable improvements, the practice of illegal cutting of trees by some members of the community is taking place. This might be exacerbated by the absence of alternative energy sources which could contribute to the reduction of such illegal practices. The other challenge is the legal discrepancy exists between the law by the Federal government and the Oromia region. While the Federal government stipulates that those complicit in the illegal cutting of trees are subject to up to 5 years in prison while the Oromia Forest proclamation (No. 72/95) makes it between 5-15 years. As the official revealed, since 79% of the country's forest resources is located in Oromia region, strengthening the rule (in favor of the Oromia one) to prevent others from engaging in illegal practice is essential.

According to the respondent, the work rate of SEGNI program is not to the expected standard when compared with what they stand for and the extent of benefit including economic one gained by the students and community members at large need to be increased. In addition, teaching them not to use natural resources without providing them with alternative energy sources will not bring about the required result. The official also recommended that if elders from SEGNI could be integrated in the regular OFWE program in suba forest where there are about 10,000 visitors annually on average. So that, visitors apart from their recreational purposes could acquire environmental knowledge on usefulness of medicinal plants, exotic and indigenous trees and its linkage with culture.

Generally, OFWE's endeavor on increasing the forest coverage of the country and ensuring the conservation of existing natural resources contribute immensely in its collaboration work with MELCA. OFWE freely supplies seedlings to MELCA to some extent and MELCA buys some timber products for its projects with a minimum cost. And the official concluded that furthering and strengthening the existing working relationship with MELCA is significant and beneficial for all involved and the community at large.

4.1.14. Sources of Finance

On the subject of sources of finance, respondents acknowledged that in running SEGNI program, MELCA Ethiopia secures finance from different sources. Fund is mainly obtained from different foreign donors. That include Development Fund of Norway, Cord Aid, Swedish society for conservation of Nature (SSNC). The key informants stressed that they are not accessing these days expected funds mainly as a result of the 2009 Charities and Societies proclamation.

The researcher contends that financial resources as a fundamental element for the existence of projects and programs need to be secured in some way. If the situation continues like it is now, the sustainability of SEGNI program will be in jeopardy. Despite all the positives gained out of the intervention of the project, the depleting access to fund will discontinue the encouraging impact witnessed on the natural environment. This is particularly apparent with local CSOs like MELCA Ethiopia as they are bound by the law not to mobilize more than 10% of their fund from foreign sources which respondents claimed as threatening to the project's sustainability.

4.1.15. CSOs Proclamation

In relation to the Charities and Societies Proclamation (no.621/2009) and its impact on the overall operation of MELCA Ethiopia, in general and SEGNI program, in particular, respondents said that their operation is highly affected because of it. Mobilizing about 90% of the budget from local source is becoming a challenging task as MELCA Ethiopia sustains its operations mainly from the fund secured from foreign donors. The 70/30 directive also made life more difficult.

As argued by Berhanu & Getachew (2013), “while the 70/30 Guideline is meant to promote transparency in civil societies operations, there are significant concerns that it is affecting all categories of CSOs negatively in achieving their goals”. The intention of the government to come up with the 70/30 arrangement that assigns 70% of the fund to program costs and only the remaining 30% for administrative costs seems to be

incompatible with existing realities. The MELCA case in particular as confirmed by key informants is different and the lion's share of their fund is incurred for administrative related costs. The SEGNI program by its nature requires purchase of consumables, paying per diem for elders, scouts and cooks, transportation cost etc. All these are considered as administrative costs. This categorization inhibited them a lot from conducting more SEGNI programs per year.

It may be applicable to strictly impose this directive on organisations whose fund could be abused and misappropriated. However, categorizing all CSOs that are engaged in different activities with different pattern of expenditure as one and treating them in the same manner is nonsensical. The researcher argue that with the advantage of hindsight, MELCA's operation is being affected slowly by the law and therefore it should be communicated with all concerned that being out of the scene will only bring about more damage on the natural environment and their existence in the long run. The government of Ethiopia needs to clearly conceptualize what specific impacts the law could bring about and see the pros and cons of having the law in place. In addition, it's mainly through encouraging environmental NGOs that Ethiopia can effectively tackle the global environmental catastrophe our world is facing.

4.1.16. Challenges Encountered while Running the Project

Regarding challenges being encountered by MELCA in undertaking and overseeing environmental protection activities in SEGNI clubs, the following challenges have been experienced as officials put:

- Limited or scarcity of fund to undertake MELCA's program around the project area at full capacity.
- The CSO proclamation became restrictive.
- The 70/30 directive in how secured fund is utilized is obstructive.
- High turnover of staff members.
- Fund raising is becoming a challenge following government arrangement that all secured donor money should first go to government pools instead of directly

reaching the organization. This way of doing business is making life difficult for CSOs though it might be taken as an advantage for donors as it cut off all the unnecessary bureaucratic hurdles.

Overall, in spite of the challenges being faced, the officials added that MELCA in its environmental education program has considerably met its goals and objectives. They said that MELCA has got wider public and government acceptance that served as an example of excellent environmental education experience at global level and awarded by UNESCO and got wider media coverage by Euro news.

4.2. Data Description, Analysis and Discussion: Humbo CDM

Table 6: Reliability Statistics: Humbo CDM

Variables	Cronbach's Alpha	N of Items
Knowledge on Environmental Problems	.977	6
Products and Services Gained (Economic Benefits)	.807	6
Changes observed (Impacts) due to Forest Rehabilitation	.972	7

The research has made use of Cronbach's alpha as a measure of internal consistency (reliability). It is mainly used because of its appropriateness and as well, it is the most commonly used one for surveys having multiple likert questions to determine if the scale used are reliable. Thus, as the data in the table above indicates the values produced are within acceptable range.

4.2.1. Roles and Efforts World Vision Ethiopia undertake to support and sustain Humbo CDM project

As revealed by the officials, World Vision Ethiopia has exerted much efforts to support and sustain Humbo CDM project in Wolaita zone. The efforts made include problem

identification, area delineation, forest management practices, capacity building of communities and government staff, organized communities to cooperatives, facilitated land user certificate, developing by law and benefit sharing, support development of community sustainable plan. And they added that activities related to facilitation of project interventions, designing sample plots, baseline data collection and conducting periodic carbon monitoring and support planning of community sustainable plan development have been carried out. World Vision staff members are providing technical training and building the capacity of cooperative members. Much effort has also been invested in community consultation, education and awareness building around the concept of carbon trading.

Generally, the roles and efforts exerted can be concluded as follows:

- World Vision facilitated broad stakeholder consultation and meetings, gathered information and brought stakeholders together regularly as the concept was being developed.
- World Vision facilitated the granting of legally binding tree user rights by government, which gave communities confidence that they would benefit from their efforts in restoring the forest
- World Vision provided regular and persistent follow ups, and responded to problems as they arose, including countering rumors and accusations.
- World Vision provided training in FMNR, management of trees and forest, leadership, and financial and cooperative management.
- World Vision and the local government facilitated the formation of forest management cooperatives.
- World Vision and the local government worked with the cooperatives to develop their own by-laws relating to the management of livestock, fire, disputes, sustainable harvesting of forest products and sharing of benefits.
- World Vision identified vulnerable households that were going to experience temporary loss of income or access to fuel wood or fodder, and assisted them with alternative opportunities, such as small business loans for marketing, vegetable production and honey production.

- Once the project started, participating communities began benefiting directly from forest restoration through access to fodder and firewood from pruning trees, even within the first year.

Regarding goals and objectives of the Humbo CDM project, the following has been forwarded by key informants and literature sources:

- Regeneration of native forest, utilizing the farmer managed natural regeneration (FMNR) and traditional forest establishment techniques.
- Enhancement of GHG removals by sinks in the project area.
- Promotion of native vegetation and biodiversity in the project area, which can be utilized as a refuge for local and migratory species and to improve the connectivity of fragmented forest resources.
- Reduction in soil erosion and flooding and help maintain supply of the subterranean streams to support the region's water supply.
- Provision of income stream for communities through sustainable harvesting of forest resources.

The officials opined that CSOs should play a significant role in protecting the natural environment in the form of policy formulation, advocacy and actual implementation on the ground. Furthermore, they forwarded that there should be a close collaboration with the government so that it will green light their initiatives. They also believed that the government cannot carry all the burden alone as the case in the West show. And, recommended that the private sector as well should take part in environmental protection activities and they concluded the legal framework has to be flexible enough in enabling all actors participate in a satisfactory manner. .

Officials argued that environmental problems in Ethiopia should be taken as a main agenda at all levels as its impact is very devastating and affecting almost everything. They said that, the entire livelihoods of communities highly depend on the environmental services such as provision, regulation, formation and other cultural related issues. They also contend that though development at the expense of the environment may seem to be rosy at the time being, it will be counterproductive. And the responsibility to protect the

natural environment should be everyone's business and should not be left to specific groups.

Key informants emphasized on how the project fare in combating climate change and global warming that Humbo project is contributing immensely for both climate change strategies (mitigation and adaptation) and to emission reduction and emission removal. All the forest regeneration activities undertaken so far can be taken as an appropriate measure in tackling global warming and climate change as the project's success is acknowledged both nationally and internationally as well.

4.2.2. Socio-Demographic Characteristics of Respondents

Table 7: Socio-Demographic Characteristics of Respondents

Item	Category	Frequency	Valid Percent	Cumulative Percent
Location of Residence (Woreda)	Humbo	90	100.0	100.0
	Total	90	100.0	
Age	20-30	11	12.2	12.2
	31-40	38	42.2	54.4
	41-50	34	37.8	92.2
	51-60	7	7.8	100.0
	Total	90	100.0	
Gender	Female	14	15.6	15.6
	Male	76	84.4	100.0
	Total	90	100.0	
Household Size	1-5	35	38.9	38.9
	6-10	52	57.8	96.7
	11 & above	3	3.3	100.0
	Total	90	100.0	
Year of Membership at the Cooperative	2005-2008	49	54.4	54.4
	2009-2012	31	34.4	88.9
	2013-2016	10	11.1	100.0
	Total	90	100.0	

Source: Field Survey, 2016

As the data shows, all the respondents (90) are from Abella Longena forest cooperative in Humbo woreda, in Wolaita zone. In respect to age category of respondents, 12.2% of them are in the range between 20&30; 42.2% being between 31-40; 37.8% are between 41 and 50; 7.8% in the range of 51 and 60. The gender distribution of respondents reveal that 15.6% of them (14) are female and the rest 84.4 % are Male (76). While 38.9 % of respondents (35) have household members ranging from 1 to 5; 57.8% of them (52) have household size between 6 and 10. About 3.3% of respondents (3) have got a household size of 11 and above. Concerning year of membership at the cooperative, about 54.4% of them (49) joined from the year 2005 to 2008; 34.4 % of respondents (31) became members from 2009 to 2012 and the remaining 11.1% i.e. 10 did join between the year 2013 & 2016.

Having all the 100% respondents of the Abella Longena forest cooperative from the same Humbo area imply that working together on common goals becomes possible. The physical proximity of the residents is an advantage in creating further integration among themselves. So that they can discuss on matters of common interest and take collective action which makes it more productive than working disconnectedly. The age pattern of respondents generally show that members of different age groups i.e. 20-60 have been able to take on responsibilities both in the project as active participant in the forest regeneration activities and at home as head of the household.

About 80% of respondents (72) in the age group of 31 to 50, show that most of them are mature enough and well experienced in farming and other agricultural activities. These majority group which is in a productive age group can make a significant difference than those below and above their age category. Besides, they have more household responsibilities. And, the relatively younger age groups that constitute 12.2 % of respondents (11) do have longer years of service ahead of them to engage in forest regeneration activities in the project whose sustainability is unquestionable.

The gender aspect of respondents shows that most of the household heads in the cooperative are male (84.4%). It could possibly be because of the old age tradition that

men represent households than women in various family matters and due to the fact that societies in Ethiopia are predominantly patriarchal. However, female household heads that constitute 15.6% of respondents (14) is encouraging in that women have also become more responsible for their household survival as head of their family. And more importantly, their engagement in environmental protection activity enables other female household members aware of the fact that women can also equally engage in labour and other activities like men and make a living.

Regarding household size of respondents, majority of them (61.1%) have a household size of over six which is self-evident that considerable number of people are benefited because of the project intervention. As learned from officials, those household members beyond school age and with no job are given employment opportunities in the project of which women are prioritized. The data regarding the year of membership revealing that 54.4% of the cooperative members (49) joined between 2005 & 2008 could mean that they have invested their time, energy and skill for long years from the beginning of the project work thereby benefiting out of it accordingly. Those members joined the cooperative voluntarily as of 2009, that constitute 45.5% of the total (41), after learning the advantage others enjoy all still remain as active members as key informants added.

4.2.3. Organization and Operation of Forest Cooperatives in the Project

On what forest cooperatives operating under Humbo CDM project, key officials and secondary sources reveal that the Humbo forest regeneration project established seven community cooperative societies, which have legal ownership to 2,728 hectares of community land. These groups intend to manage the areas for the purposes of carbon removal using the Farmer Managed Natural Regeneration techniques, environmental benefits (biodiversity, water quality, and habitat) and income producing activities for the local population. The seven forest cooperatives are namely; Bolla Wanche cooperative (343.6 hectare); Bossa Wanche cooperative (341.9 hectare); Abela shoya cooperative (109.7 hectare); Abela Longena cooperative (1043.45 hectare); Abela Gefeta cooperative (176.42 hectare); Hobicha Bongota cooperative (340.04 hectare); and Hobicha Bada cooperative (372.42 hectare)

Regarding the beneficiaries of the project, the key informants argued that members of the forest cooperatives are the direct beneficiaries in terms of social, economic and legal benefit. The local community at large also benefits in regard to having a healthy ecosystem; and the government of Ethiopia in securing hard currency from sale of carbon credit. Concerning gender, though all male and female are offered equal opportunity, female household heads are highly encouraged to be member of forest cooperative and become active participants in various environmental protection activities to get mainly regular job opportunity.

4.2.4. Methods and Approaches Employed

In regard to methods and approaches utilized while undertaking forest regeneration activities, key informants forwarded that the project makes use of Farmer Managed Natural Resource (FMNR) approach (which is cheap, simple, low cost and replicable) to restoring and improving agricultural, forested and pasture lands. Members prune any unwanted new stems and side branches as they appear and can grow other crops between and around the trees. This technique enables members to get early benefits such as firewood harvesting. Realizing these early and substantial benefits has increased community enthusiasm and commitment for the work.

As further stated, the implementation of FMNR on an area of about 2,700 hectares in the Humbo area. This involves regeneration by area closure and selected planting with seedlings from nurseries. Mainly species endemic to the area are used to restore the forest including some exotics that have already been used. The respondents added that, the main reason why the project does not make use of the conventional approach to reforestation is mainly because of the high cost associated with replanting of trees from nursery stock. The FMNR innovative technique therefore has enabled 90% of the Humbo project areas to be reforested from the stumps of previously cut down but still living trees. To supplement the FMNR reforestation, newly established tree nurseries are also raising over 450,000 seedlings each year to restore the forest where no living tree stumps remain.

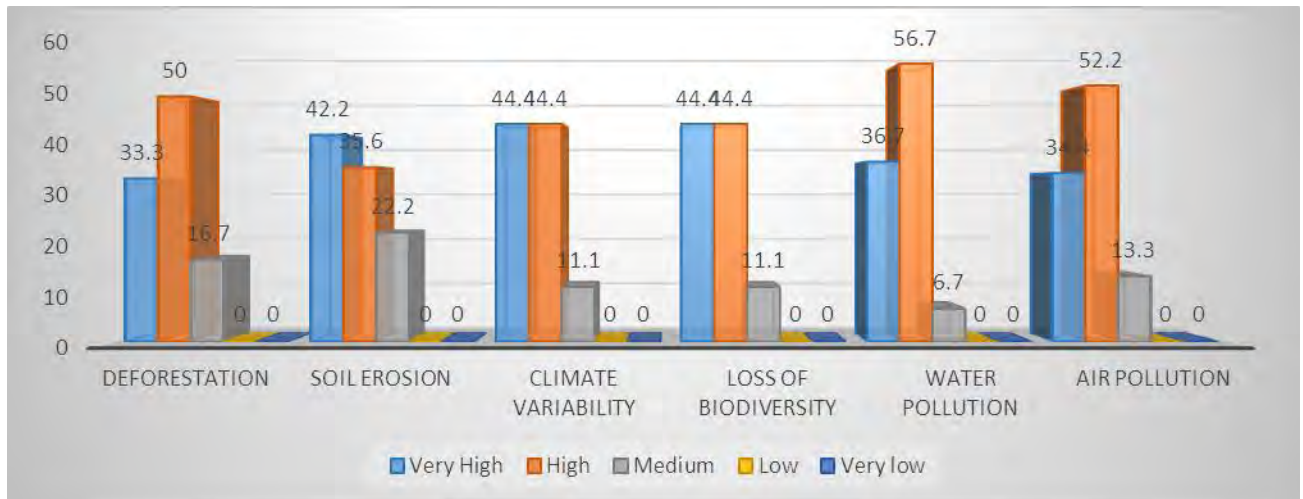
4.2.5. The Rational (Motives) to Run Humbo CDM project

As key informants stressed on the motives to set-up the CDM project, the Humbo approach is low cost, cheap and replicable (benefits the communities from the clean development mechanism, and Ethiopia ratified the Kyoto protocol, it has the right to access CDM opportunities) both A/R and clean energies/ renewable energy. And developing nations are highly encouraged to engage in forest regeneration programs as they have low level of industries and infrastructures contributing to high emission of greenhouse gases as the case in the industrial nations like the United States and China. Thus, they are benefited out of the sale of carbon credit. Thus, World Vision Ethiopia having a global experience came up with the idea of establishing Clean Development Mechanism (CDM) in Humbo and Soddo woreda where a large abandoned and degraded land exist and consulted with World Bank and the Ethiopian government on how to go about it and got approval to undertake the project.

Concerning causes identified at project level for the lands in Humbo to be degraded from the beginning, as key informants disclosed, was that Humbo communities were highly dependent on the natural environment for their survival, such as for fire wood collection, charcoal making for household uses and income earnings. Those over exploitation led the area to be denuded and soil loss because of erosion and flood. This tradition of uncontrolled human activities has continued for years which makes the surrounding area more vulnerable to high temperature, flood and other natural disasters and became degraded.

4.2.6. Knowledge on Environmental Problems

Figure 4: Knowledge on Environmental Problems



Source: Field Survey, 2016

As the data from the above table shows, members of Abella Longena forest cooperative have expressed to what extent they have acquired knowledge on environmental problems. Regarding knowledge on deforestation, 83.3% of respondents (75) said that their knowledge has been high and very high. About 16.7% of respondents (15) have an average knowledge on deforestation. Concerning soil erosion, 77.8 % of respondents' (70) knowledge on deforestation has been high and very high, while 22.2% of the remaining (20) did mention their knowledge on the subject being an average one.

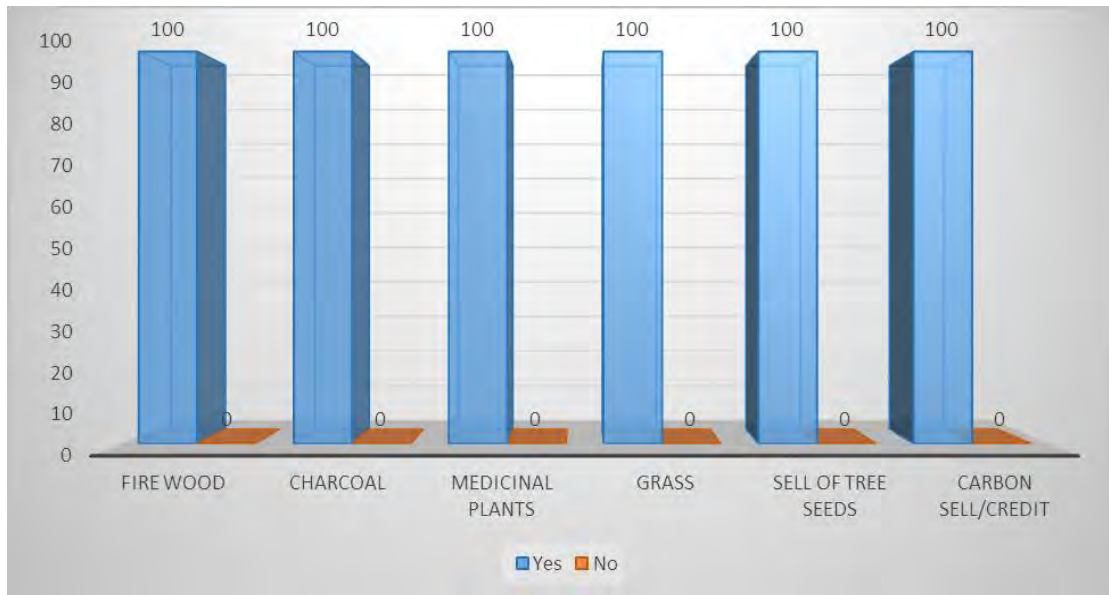
In regard to climate variability and loss of biodiversity, 88.8% of the respondents (80) for each agreed that their knowledge on the subjects has been high and very high and 11.1% of the remaining respondents' knowledge has been a medium one. Regarding water pollution, about 93.4% of respondents (84) argued their knowledge as being high and very high and the remaining 6.7% of them (6) expressed that their knowledge on the subject is medium. On the subject of air pollution, 86.6% of the respondents' (78) knowledge has been high and very high, while the remaining 13.3% of them (12) said they have a medium knowledge on the score.

Having a considerable amount of knowledge on the six major environmental problems as indicated in the percentage above is a crucial step for community members so as to keep their natural environment safe and healthy. Deforestation as a main cause for soil erosion, climate variability and air pollution can be prevented from taking place since members have a good understanding of its impact on their livelihood. Keeping the climate condition healthy will help prevail a good temperature conducive for their health and welfare of their eco system. Besides, it will contribute to the prevalence of normal seasonal rainfall for their agricultural productivity. Biodiversity as a major source of varieties of life on earth helps for the continuation of both flora and fauna. Water and air as two of the major sources of existence sustains both humans' and animals' life on earth. Having a polluted water and air is meant that the ecology of the community is unhealthy, unproductive, and unfavourable for a living, let alone creating access to carbon sale.

Those whose knowledge on environmental problems not improved as being a member of forest cooperative need to be addressed in a right way if it is found appropriate. It should be underlined that the causes forwarded by those members for not having sufficient knowledge could be considered as a good input for the project to improve the way they do business. It's very encouraging though to have a community more or less conscious enough towards environmental problems which is a major global issue these days and more importantly it's beneficial to both the local community and national government to be able to secure hard currency which could be invested on other essential infrastructure.

4.2.7. Products and Services Gained (Economic Benefits)

Figure 5: Products and Services Gained (Economic Benefits)



Source: Field Survey, 2016

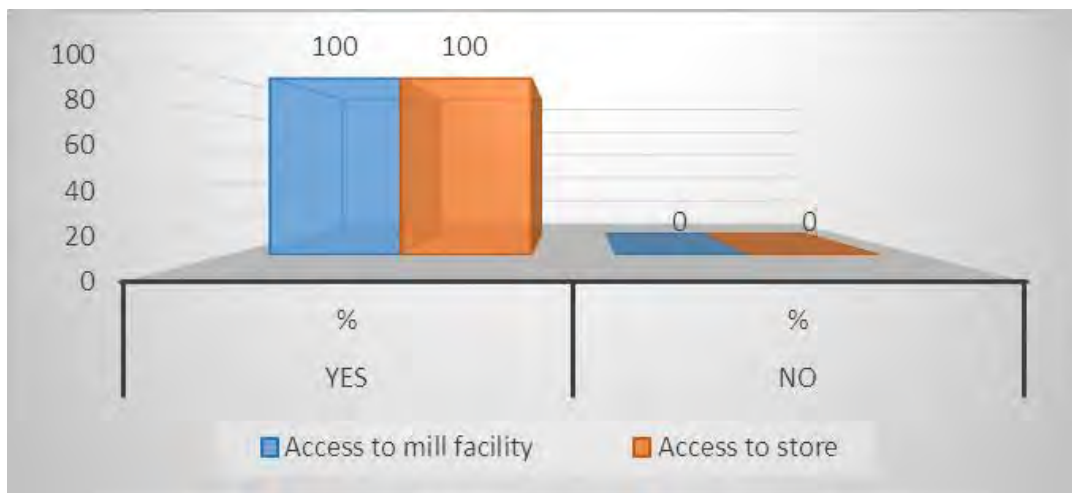
From the above figure, we can understand that all the 100% respondents unanimously have said they all have full access to the major products and services offered by the project, i.e., firewood, charcoal, medicinal plant, grass, sell of tree seeds, and carbon sell/credit.

A community that has obtained products and services as a result of its participation in forest regeneration activity in Humbo woreda is an indication that the project has at least met one of its major objectives in providing economic benefits to its direct beneficiaries. Having access to firewood and charcoal which are major sources of energy in rural areas like Humbo is an important solution for the farmers for their household consumption since it prevents them from illegally engaging in activities like deforestation. A community well aware of the use of medicinal plants can benefit a lot by substituting modern medication which is costly and often unreachable in remote areas like Humbo. Benefits like access to grass and sell of tree seeds is beneficial in that the farmers can be able to feed their animals without incurring any expense and they can as well secure money from selling tree seeds in markets which can potentially supplement their

household consumption. The Carbon sell/Credit as a major economic benefit for community members has always been the fundamental reason for the establishment and sustainability of the project as the data indicates. Having been able to have access to the above mentioned economic benefits is encouraging in that it can keep the community motivated and become guardian of their natural resources from any form of damage.

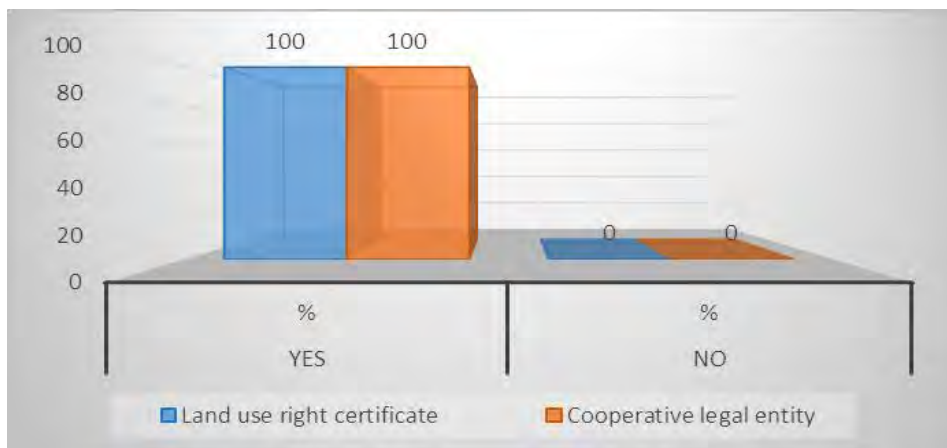
4.2.8. Social and Legal Benefits Gained

Figure 6: Social Benefits Gained



Source: Field Survey, 2016

Figure 7: Legal Benefits Gained



Source: Field Survey, 2016

The data discovered concerning social and legal benefits in the study above reveal that all the 100% respondents who are member of Abella Longena forest cooperative have access to both social and legal benefits. Regarding social benefits, the benefits enjoyed by the respondents are full access to mill facilities and store for their agricultural products in their woreda. The legal benefits they all have access to include land use right certificate and a legally approved cooperative entity.

A significant size of members of the forest cooperative accessing mill facility is helpful in that the farmers should not go to a remote area to get the service. As learned from key officials, mill facility was a far cry from their situation before the intervention of the Humbo CDM project so that it saves their time and money to a greater extent. In relation to store or warehouse unlike the traditional they have at their home as disclosed by the key informants, all respondents and community members i.e. farmers are now able to store all their agricultural products in a safe and environmental friendly location with no threat of decay which was the case before. The officials concluded that these services are rendered to all members of forest cooperatives in the woreda. The land use right advantage as confirmed by all the respondents (90) is an asset that gives them legal protection so that their land cannot be confiscated for infrastructural, agricultural or any other investment grounds by both State and non-State actors. It's also a guarantee for them to use the assigned land for any legal purposes for their social and economic advantages and most importantly for the ecological stability of their locality.

The Abella Longena forest cooperative among the other seven have got a legal entity that is approved by law. This advantage enjoyed by all members of the cooperative gives them the opportunity to interact with governmental and non-governmental organizations legally on issues like members' right, any dissatisfaction pertinent to benefits, occupational hazards, justice, equity and the like. Generally, the social benefits supports the livelihood of community members and the legal one helps the project to be sustainable and to smoothly work with the government and other actors on common developmental issues. The benefits secured by the community in terms of economic, social, legal and environmental areas have been shared also by key informants of the organization. Furthermore, they unanimously agreed that the welfare of the community

has been considerably improved when compared with the pre-intervention period of the project.

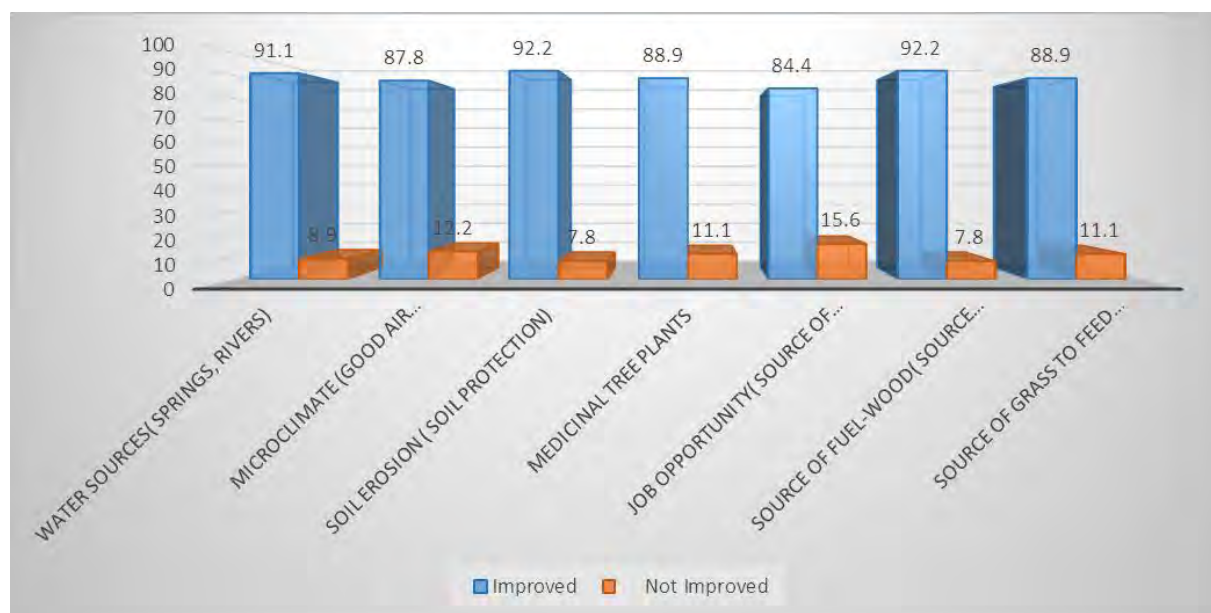
When asked if protecting the natural environment can deprive the community of its basic economic needs and wants, all the respondents of the study collectively agreed that it has no harm at all to economic needs and revealed that they have never encountered any challenge while undertaking forest regeneration activities in Humbo woreda. Whether the project increased their hope for a better future or not, 92.2% of the respondents (83) said it increased their hope while the rest 7.8% of them said they do not know about it.

4.2.9. Collaboration with Actors

The respondents agreed with the statement and said that the key actors are different government organs at all levels, the Humbo community, World Bank, UNFCCC, the Environmental Protection Authority, World Vision Australia. Liaising with the foregoing is mainly to get assistance in running the project smoothly and go in line with legal requirements both nationally and internationally. Considerable negotiations and consultations have been required at national, state, local government and community levels, and partnership arrangement has been made among the foregoing bodies.

4.2.10. Changes Observed (Impacts) due to Forest Rehabilitation

Figure 8: Changes Observed (Impacts) due to Forest Rehabilitation



Source: Field Survey, 2016

The data collected from respondents regarding changes observed in Humbo woreda as a result of the forest rehabilitation activity is presented as follows. About 91.1 % of respondents (82) have confirmed the improvement of water sources while 8.9 % of them (8) said the other way round. On micro-climate conditions, about 87.8% of respondents (79) argued its improvement in the locality with the remaining 12.2% i.e. 11 said the opposite. When asked on the condition of soil erosion, 92.2% of them (83) said it did improve while 7.8% of the remaining (7) didn't agree on the improvement.

About 88.9 % of respondents (80) reacted that medicinal tree plants in Humbo area has been revived while the rest 11.1% of them (10) disagreed. Regarding job opportunities, the majority (84.4 %) indicated its availability and the remaining 15.6% of them (16) disagreed. Concerning fuel wood and grass, 92.2% and 88.9% of respondents agreed upon its availability while 7.8-% and 11.1% of respondents respectively forwarded the opposite.

A considerable number of respondents (91.-%) agreed upon the restoration of water sources like springs and rivers in Humbo woreda imply that the community is having clean water for their consumption and for their animals. This helps them become healthy and productive. Besides, it saves their productive time from being spent uselessly in search of clean water in a faraway place. This has also been reinforced by the key informants that it has made life easier for the community at large as they have now spring water in abundance. Concerning micro climate, the reaction of the majority of respondents (87.8%) signify that the air condition and rainfall pattern is improved thereby their agricultural livelihood will not be affected with absence of sufficient rainfall.

The improvement of the air condition could be attributed to the regeneration of the forest coverage in the area that in turn helps human population inhale the oxygen exhaled from the recovered plants. Soil erosion as the main environmental challenges in Ethiopia as discussed by various scholars in the literature part is expected to be restored if degraded and barren lands are once regenerated which has been affirmed by the majority of respondents (92.2%). Preventing soil from being eroded helps the land absorb rich minerals and biodiversity in general, and prevent further extreme events like flood from taking place which in turn increases agricultural productivity. As 88.9% of respondents agreed, the improvement of medicinal plants in Humbo woreda is part of the forest regeneration activities being undertaken and apart from absorbing greenhouse gases in the atmosphere emitted due to various human and natural activities, it helps community members utilize for health need and for sale as an income generating means, as well.

Job opportunity as one of the changes brought as a result of the project's intervention is agreed by 84.4% of respondents in the forest cooperative. Besides to the other advantages enjoyed, having an employment opportunity in the forest in different capacities helps community members get extra means of income. Empowering the community with such an opportunity also creates sense of belongingness and solidarity towards the project and assists in ensuring its sustainability. Securing fuel wood which is a major source of energy in many parts of the country and as confirmed by 92.2-% of household heads prevents them from illegally engaging in destructing the natural resources and saves their money as they get it free of charge.

The responses of about 88.9% of respondents on the availability of grass from the project for their household needs, particularly for their animals is a further proof that the community is significantly rewarded in many ways as a result of their involvement in environmental protection activities in the project. So that the community can serve as a guardian of the natural resources in their surroundings. However, the responses of some members of the cooperative in disagreeing with some of the points above though in contrary with what is in the different documents consulted and key informants' reaction could be because of various reasons. Thus, the researcher contend that the officials in the project have to come up with a way to know the level of satisfaction or/and level of consciousness and understanding of members of the cooperative about what is being undertaken in the project and take corrective actions, if need be.

4.2.11. Sources of Finance

In relation to source of finance to run Humbo CDM project, the major contributor has always been the World Bank. The other being World Vision Australia. The carbon finance activities of the World Bank are a natural extension of the Bank's mission to reduce poverty. The Bank makes every effort to ensure that poor countries can benefit from international responses to climate change including the emerging carbon market for GHG emission reductions. The World Bank's carbon finance products help grow the market by extending the frontiers of carbon finance to new sectors or countries that have yet to benefit, and to reduce market entry risks for other buyers.

The role of the Bank through its Carbon Finance Unit has been one of market facilitator and catalyst. The Bank has made significant efforts in the development of the carbon market, first by launching the Prototype Carbon Fund (PCF) to demonstrate how to cost-effectively achieve GHG reductions while contributing to sustainable development. More recently, the Bank launched a series of carbon funds to expand learning-by-doing to other countries and economic sectors, and to address market failures, such as through the Community Development Carbon Fund (CDCF) and Bio Carbon Fund (BioCF), which

are designed to enable smaller and rural poor communities to benefit from carbon finance.

4.2.12. CSOs Proclamation

Concerning the impacts of the Charities and Societies Proclamation (No. 621/2009) on the operations of the Humbo project, key informants acknowledged that it has not as such affected the project activities. However, they stressed the proclamation has a crippling effect especially on organizations categorized under Ethiopian Society and Charities whose sources of finance should constitute about 90% from domestic sources and 10% from foreign sources. This has become an uphill challenge for many. It's mainly because that World Vision Ethiopia (WVE) secures all its fund from foreign sources that it remains unaffected as a result of the proclamation. However, WVE as part of the Foreign Charities category is not allowed to engage in right related issues at all.

The researcher strongly assert that preferential treatment to organisations (MELCA & WVE), just because of being in different CSO category, whose engagement in environmental protection activities found in the study to be exemplary is illogical. It only shows lack of depth and deliberation among stakeholders before making it a law and therefore impacts of projects of organisations should be primarily considered than their category. As a result, organizations like MELCA need to be encouraged to do even more by avoiding any legal or bureaucratic hurdles like the CSO proclamation and 70/30 directive that potentially cripples their range of operations and sustainability.

4.2.13. Challenges Encountered while Running the Project

In relation to challenges being encountered in running the Humbo CDM project in Humbo woreda, the key informants stressed that the major challenges experienced in the project include the following:

- CDM compliance issues: The CDM compliance requirements made establishing the project both expensive and time consuming.

- Difficulties in managing community expectations: The community struggled to understand the concept of emissions trading. The most significant outcome for the community will be greater resilience to environmental shocks as well as creation of a stable income stream from forest products. Most community members had unrealistic expectations of the level of income that would be generated through carbon sales.
- The CDM registration process is long and time consuming, and the project is yet to be officially registered and recognized by the World bank board and participating countries.
- Actual projects costs are high and cannot be afforded by the community. World Vision Australia has been investing funds until such time when carbon trading will commence.
- Ownership of the emissions reduction credits is a complicated matter since only the government is recognized as the rightful owner of the land under which the sequestration is taking place. This leaves marginal space for NGO's to participate especially under the LULUCF- a key component under CDM Initiatives which require prolonged contractual obligations. The interventions of NGOs are short-term based.
- The land tenure system and fragmentation has created setbacks with part of Humbo dropped from the partnership with the World Bank, reducing the size of the forest and the emission reduction credits significantly.

4.2.14. Achievements of the Project

Regarding notable achievements registered as a result of the Humbo CDM project intervention, the following has been pointed out:

The Humbo project is a highly successful example of reforestation that alleviates poverty while addressing climate change through improved natural resource management. The rapidly changing face of the forest is evident showing rapid re-vegetation only one year on from inception. To date, 2,728 hectares of degraded forest that were being continually exploited for wood, charcoal and fodder extraction have been protected, and are now

being restored and sustainably managed. Over the 30 year crediting period, it is estimated that over 870,000 tonnes⁷ of carbon dioxide equivalent will be removed from the atmosphere, making a significant contribution to mitigating climate change.

While many carbon trade deals have been stifled by the high cost of reforestation, the Humbo project has overcome this barrier through the use of the cost-effective FMNR approach. The regeneration of the Humbo forest is also producing tangible benefits for the wellbeing of local communities. When a preliminary review of forestry activities was conducted in July 2008, a common sentiment expressed by community members was “we are too much happy. We never expected to see so much grass growing from these rocky, barren slopes, to see trees growing so quickly or to harvest firewood so early in the program”.

Forest restoration has resulted in increased production of wood and tree products, including honey, medicine, fibre, fruit and wildlife that contribute to household economies. Improved land management has stimulated grass growth, providing fodder for livestock and can be cut and sold as an additional source of income. At one site, Bola, 300 bundles of grass were harvested and sold over a year - an excellent outcome to occur in the debut year of the project. Eventually it is hoped that carbon credits will provide a supplementary community-based income stream.

Reforestation is also reducing land degradation and soil erosion. Water infiltration is improving, resulting in the recharging of ground water and a reduction of flash flooding. (Note: because the rainfall is seasonal, the rivers are also seasonal and don't flow for much of the year). With the likelihood that climate change may cause increased rainfall in Ethiopia's highlands, soil stability is essential for reducing vulnerability to flash flooding and stabilizing soil for agricultural production.

Crops surrounding reforested areas also benefit through modification of the microclimate, which comes about through a combination of reduced wind speed, lower temperatures, higher humidity and greater infiltration of water into the soil. The resulting healthier crops and livestock are essential to community members' nutritional status, health and livelihoods, so the implications for development are great. The Humbo project shows that

community-based restoration of forests can mitigate climate change while at the same time building environmental and social resilience to the impacts of climate change.

World Vision Ethiopia (WVE), in collaboration with partners successfully implemented the world's second biggest carbon selling project in Humbo in response to the Kyoto Protocol in 1997, to climate change by reducing greenhouse gas emission. So far the project has transferred more than 320,000USD income from carbon revenue to the Humbo community. More importantly, World Vision Ethiopia's Humbo CDM project has won the first Ethiopia's Civil Society Organizations' (CSO) best practice award in 2012 for its innovativeness, special significance to the general public, exemplary achievement in involving the community and partners, scalability and cost effectiveness.

CHAPTER FIVE

5. Conclusion and Recommendation

5.1. Conclusion

Environmental protection issues as a leading global agenda these days require a concerted effort by all state and non-state actors. In light of this, the study has attempted to look into what roles and efforts are being exerted by MELCA Ethiopia and World Vision Ethiopia in relation to environmental protection. The objectives regarding activities and efforts of the organizations have been demonstrated through the various environmental protection activities at community level, resource mobilization, collaboration with actors, meeting legal requirements and advocacy roles. In addition, benefits as a result of the projects' intervention have been secured through the acquisition of environmental knowledge, sharing of experience with community members, improvement of natural landscape, and social, economic & legal advantages. The challenges encountered at SEGNI program is mainly as a result the CSO proclamation while for Humbo CDM it is no more a setback and difficulties were only met in the early phase of the project specifically on issues of CDM compliance and community's expectation. The study also addressed the collaboration aspect of the project with different actors at which both projects have a smooth undertaking.

Regarding issues of fund, the study uncovered that World Bank has been the major bankroller for Humbo project while for SEGNI program, Development Fund of Norway, Cord Aid, and Swedish society for conservation of Nature (SSNC) are the main sources. The impacts of the CSO proclamation found out to be restrictive for MELCA though it does not affect WVE and other foreign charities since raising 90% of funds for MELCA and other local CSOs from local sources has already become an uphill task. Despite the fact that the legal environment is not as conducive as it should be for Civil Society Organizations in Ethiopia generally, the changes brought by the intervention of MELCA

Ethiopia and World Vision Ethiopia in their environmental protection activities have been very positive and inspiring whose impact will have far-reaching benefits.

In relation to issues of sustainability and effectiveness, Humbo CDM project is in a better position as its source of income is under the control of the community itself. Besides, the revenue received as a result of carbon trading is an internationally backed initiative which is the first in Ethiopia and Africa alike. On the other hand, MELCA Ethiopia, a country winner in the Educating Africa Pan-African Awards for Entrepreneurship in Education, has made great strides in the transfer of indigenous ecological knowledge from the older generation to the productive and energetic youth groups with the help of elders and environmental experts. Generally the direct participation of communities in both projects at all phases has been key to the success demonstrated in the study. It could therefore be concluded that the objectives and research questions of the study have been adequately addressed. In general, the CSOs under consideration have well-performed in protecting the natural environment to a great extent and have brought about all-rounded benefits to target communities.

5.2. Recommendation

The experience of Civil Society Organizations (CSOs) in the West has it that their diverse and powerful role in influencing policy decisions and pressuring governments to be held accountable for their actions and inactions is a major lesson worthy learning. Having a restrictive law (CSO Proclamation) in place might thwart every inspiration and effort that could be initiated by CSOs operating in Ethiopia. However, that was also the case many famed CSOs encountered in the early days of their operation which therefore should not be taken as an excuse not to go beyond what they normally do.

As unanimously agreed by key informants from both projects, the legal framework that exist (the 2009 Ethiopian Charities and Societies Proclamation and the 70/30 directive) is deterring the activities of CSOs considerably. MELCA Ethiopia as opposed to Foreign Charities is a case in point as it is only applicable to Ethiopian charities and societies. I therefore argue that the Ethiopian government should come up with a flexible and encouraging legal means in relation to source and use of fund so as to allow especially local CSOs to expand their activities and reach out to a wider community. Furthermore, protecting one's natural environment has only benefits for both local communities in providing access to economic advantage and environmental stability, and a source of hard currency as a result of carbon sale for the national government as indicated in the finding of the study.

The overall inspiring impacts of the two projects on the direct and indirect beneficiaries warrant that a lot more and wider significant changes could materialize if lots of CSOs, both local and international, were able to take part in various environmental protection related activities by involving all segments of the society. For this to be a reality, the government of Ethiopia should again come up with a means to embrace the existing ones and encouraging others to engage in actual undertakings.

The policy issue regarding CSOs in Ethiopia is one of the gaps that I believe needs to be bridged. I strongly argue that a policy document should be designed and formulated exclusively to CSOs as they are one of the third major sectors along with State and Private business. NGOs, Community-Based Organizations (CBOs), Religious

Institutions, Civic and Professional Associations, Research Centres, Think Tanks and other stakeholders should collectively exert their utmost efforts by lobbying, forwarding workable technical documents and other possible means to make sure that CSOs policy is on the scene and all the required provisions incorporated. The positive impacts of CSOs as manifested in this study by MELCA Ethiopia and World Vision Ethiopia on target population could be taken as typical cases in order to get legitimacy by both the national government and international community.

I assert that the Ethiopian government need to change its wrong perception about CSOs and believe that working together with all non-State actors for the common good of the public will only help meet Ethiopia's second Growth and Transformation Plan (GTP-II) (i.e. 4.4. Environmental Protection and Building Green Economy) and the Millennium Development Goals i.e. (Goal 7: Ensure environmental sustainability). It could also be conceived as a helpful approach to address the recurrent problems affecting the agricultural sector. As agriculture is the mainstay of the country's economy which is often plagued by soil erosion, flood, climate and rainfall variability, protecting the natural environment is the decisive means to rescue the sector from further damage like drought and famine. I recommend that there has to be dialogue and consultation with CSOs on matters of national concern and as well mutual trust, shared vision and common direction need to be developed. And the government therefore has to recognize CSOs as partners in the development arena.

The other point I would like to recommend is that instead of engaging independently, NGOs, CBOs, Advocacy groups and other forms of CSOs working towards environmental protection should come under one umbrella in order to have more power and influence on nation government's actions and inactions. Thus, once they create local integration and enhance a culture of collaboration and cooperation among themselves, networking and partnership with regional and international environmental NGOs will be a possibility so that exchange of best experiences and technical assistance will materialize.

In spite of paying more attention to the youth in SEGNI clubs with empowerment of ecological knowledge, issues of sustainability in relation to students leaving schools after

completion should have been considered. SEGNI club students mostly engaging in environmental activities from their early school days become more mature and influential when they reach high school. Absence of post-secondary school plan for outgoing students makes all the efforts exerted by MELCA fruitless. I therefore recommend that though MELCA Ethiopia may not be financially capable to fully cover the cost associated with any initiative after members' leave school, they could come up with a workable plan to at least engage them in sharing their knowledge and experiences as an eco-advocate with other schools and community elsewhere. MELCA Ethiopia has to make the follow-up on old SEGNI members' participation in environmental protection, irrespective of where they are and what they do, as one of its major objectives.

The overall consciousness and perception of the general public on the imminent danger of environmental degradation on all aspects of human life seems to be overlooked as the researcher believes. With an increasing attention given to environmental issues globally, companies and institutions are expected to adhere to legal procedures to make their products and services environmental friendly and ensuring social responsibility. All appropriate steps in a form of, for example, wide media coverage, strict legal enforcement or incorporating it in school curriculum need to be taken in earnest. Additionally, community based organisations in particular should be encouraged and promoted to engage in forest rehabilitation of degraded and unproductive lands in their localities as its outcome is always beneficial to all involved socially, economically and environmentally, and the practice is strongly backed by World Bank and UN in hard currency as a result of carbon trading, as well.

In relation to collaboration with actors, MELCA Ethiopia's partnership with the Oromia Forest and Wildlife Enterprise (OFWE) has been found to be a mutually beneficial one that, however, needs to be strengthened further. Here, elders' participation in the transfer of ecological knowledge to the youth should be transformed beyond that in a way that makes them part of OFWE's program in the forest where around 10,000 visitors come to Suba-forest annually. By seizing this opportunity, visitors' while recreating could be provided with some important indigenous knowledge on particularly the types and uses of various medicinal plants by elders from MELCA Ethiopia. By doing so a wider public

can be reached and the reciprocal working relationship will be sustainable and potentially expanded in other areas as well.

The contribution of donors in supporting the various programs and projects of CSOs technically and financially is generally a positive act. Nevertheless, running business with ownership by local communities should in the long run be taking place for the purpose of both sustainability and effectiveness in meeting targets. It would also be significant to incorporate and work closely with the private sector and investors. This will ultimately help them become autonomous by avoiding the common culture of donor dependency. So that appropriation of resources could be easily monitored and accountability will be ensured as a result of high sense of belongingness and solidarity by members of communities. Problems linked to high turnover of professional staff members, capacity building and resource issues could be better tackled if the aforementioned recommendations are taken into account in earnest.

5.3. Possible Area of Further Research

A further research on similar subject areas could be carried out so that the research problem under investigation will be better investigated and as well sufficient literature will become available for others to use as an input to fill possible research gaps. To this end, the researcher recommends the following research areas to be undertaken as they will have greater significance in showing the need to protecting the natural environment in many ways.

- *“The Effects of Implementing CDM (Clean Development Mechanism) Project in Ethiopia (Comparative Study)”*. Since this area of engagement is a newly introduced initiative, it would have a potential to shed some light on what advantages and disadvantages it would bring about in comparison with an engagement in other economic related activities.
- *“The Implication of Incorporating Environmental Education in School Curriculum”*. Environmental education at school level could be taken as an indispensable alternative to creating awareness among school children at an early stage, and its implication on the environmental protection endeavor would be a good research area.
- *“The Cost of Economic Growth vis-à-vis Environmental Stability”*. As clearly put in the environmental policy of Ethiopia, natural resources are the foundation of the economy. This signifies that the major cause of the economic growth the country claims to have recorded is due to mainly the consumption of the natural resources as an input. This, therefore, needs to be investigated as to what impact it could bring as a result of prioritizing the economy over environmental stability.

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Appendices

Annex- I

Survey Questionnaire

This research questionnaire is to be completed by randomly selected respondents from SEGNI clubs in Holeta town. The Questionnaire is administered to be used as an input for a thesis under the topic “The Role of Civil Society Organizations (CSOs) in Environmental Protection”. The research is undertaken by Mr. Alelign Shibabaw, a graduate student at the College of Business and Economics at Addis Ababa University in the discipline of public management and policy, specializing in Development Management.

The below survey questionnaire consist of both open and closed-ended questions. The objectives of the questionnaire is primarily aimed at describing the activities, benefits and challenges being experienced as a result of the intervention of the environmental education program (SEGNI) at Suba Menagesha project in Holeta town. You are kindly required to respond to each and every questions accordingly. Since the data will only be used for academic purpose, your name is no more important to be mentioned. I pledge here that your identity will be kept confidential and your name will never be placed on the survey itself or associated with the results in any way.

Your participation in this study is greatly appreciated!!

Thank you!!

Code_____

Socio-Demographic Characteristics of Respondents

1. Grade_____
2. School Name_____
3. Age_____
4. Gender_____
5. Date of SEGNI membership_____
6. Location of SEGNI club_____
7. What is your role in SEGNI club at your school?
e) Coordinator b) Secretary c) Cashier d) Chairman e) SEGNI member only
f) Specify, if any other_____
8. Do you think your knowledge and understanding of environmental protection got improved as a result of being a member of SEGNI?
a) Yes b) No
9. Do you think the training you acquired for 5 full days at Suba- Menagesha forest was satisfactory?
a) Yes b) No
10. If your answer for question #9 is 'No', what do you think are the reasons behind?

11. How do you rate your knowledge on environmental issues as an eco-advocate?
/Please fill the box below/

Environmental Knowledge Gained as an Eco-advocate	Highly Decreased	Decreased	No change	Increased	Highly increased
Understand different views on environmental protection					
Understand the possible impacts of environmental hazards on the natural environment and Livelihood					
Readiness to behave in an environmentally friendly manner					
Improve problem solving skills					
Specify, if any other					

12. Do you undertake any environmental protection related activity in your community?
a) Yes b) No

13. If your answer for question #12 is 'Yes', what environmental protection roles and activities do you undertake in your community and how do you assess them?
(Please fill the below table)

Environmental Activities at Community Level	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
Educate community members about the different types and uses of naturel resources scientifically					
Create awareness on importance of protecting natural resources					
Impart them knowledge on the possible causes and effects of environmental degradation					
Teach them the available kinds of medicinal plants and seeds					
Specify, if any other					

14. What do you think is the effect of the training at suba-menagesha forest and how do you rate them? /Please fill the box below/

Effects of the training at Suba-Menagesha Foreset	Highly Decreased	Decreased	No change	Increased	Highly increased
Knowledge and diversity					
Attitude Change					
Sense of Responsibility					
Communication skill					
Self-confidence					
Specify, if any other					

15. What benefits have you acquired as a result of your participation in environmental education program at SEGNI club in your school in regard to the following parameters:

Benefits of Environmental Education	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
Helps to introduce with different medicinal plants					
Increase understanding on cultural artifacts					
Help excel in academic performance					
Helps appreciate the indigenous knowledge of Elders					
Helps increase the ability to connect Nature, Culture & Self					
Others , please specify					

16. Do you think that protecting the natural environment will deprive the community of its basic economic needs and wants?

- a) Yes b) No c) no change

17. Do you think your participation in SEGNI environmental protection activities is beneficial to you, in general?

- a) Yes b) No

18. Have you ever encountered any challenge while undertaking environmental protection activities in your school and community alike?

- a) Yes b) No

19. If your answer for question #18 is 'Yes', what are the challenges you are facing?

20. What suggestion and recommendation do you have, if any on SEGNI program, in general?

Annex- II

Open-ended Interview Questions for key Informants at MELCA Ethiopia

1. What is your point of view on the role of CSOs in environmental protection activities in Ethiopia, in general?
2. Do you think that environmental problems in Ethiopia should be considered as an issue at all? And why you say so?
3. How many SEGNI clubs operate under MELCA Ethiopia, in general and in Holeta town, in particular?
4. How does your project structure SEGNI clubs in a way that is convenient for the effective and efficient implementation of your project?
5. What are the rationale (motives) forwarded by your organization to set up and run SEGNI clubs under the suba-sebeta project?
6. What roles and efforts have been undertaken so far by MELCA Ethiopia to support and sustain the suba-sebeta project from its inception?
7. Does your Organization liaise with other actors in relation to managing suba-sebeta project? If yes, what are they, and why you do so?
8. What type of methods and approaches your project use in the environmental education held at suba-menagesha forest?
9. What are the roles and responsibilities of each member in SEGNI clubs?
10. What are the major sources of finance your organization makes use of and how do you secure it so as to run the suba-sebeta project?
11. What is your take on the Civil Society Proclamation (no.621/2009) and its impact, if any on the overall operation of your organization in general and suba-sebeta project in particular?

12. How does your organization and, specifically the suba-sebeta project fare in combating climate change and global warming, as a leading agenda worldwide?
13. Who are your beneficiaries? Who benefits most, male or female? Why?
14. What are the benefits being secured by the target community as a result of the intervention by the suba-sebeta project?
15. What best practices your project possess which could be potentially replicated elsewhere by other bodies?
16. What challenges, if any, being encountered by your project in undertaking and overseeing your environmental protection activities in SEGNI clubs?
17. What general suggestion do you have regarding the prospect of the suba-sebeta project?

Appendix III

Survey Questionnaire

This research questionnaire is to be completed by randomly selected respondents from members of Abela Longena forest cooperative in Humbo Woreda. The Questionnaire is administered to be used as an input for a thesis under the topic “The Role of Civil Society Organizations (CSOs) in Environmental Protection”. The research is undertaken by Mr. Alelign Shibabaw, a graduate student at the college of business and economics at Addis Ababa University in the discipline of public management and policy.

The below survey questionnaire consists of both open and closed-ended questions. The objectives of the questionnaire are primarily aimed at describing the activities, benefits and challenges being experienced as a result of the intervention of the Humbo Clean Development Mechanism (CDM) project at Humbo woreda, Wolaita zone. You are kindly required to respond to each and every question accordingly. Since the data will only be used for academic purpose, your name is no more important to be mentioned. I pledge here that your identity will be kept confidential and your name will never be placed on the survey itself or associated with the results in any way.

Your participation in this study is greatly appreciated!!

Thank you!!

Code_____

Socio-Demographic Characteristics of Respondents

1. Location of Residence (Woreda) _____
2. Age _____
3. Gender _____
4. Household Size _____
5. Year of Membership at the Cooperative _____

6. Do you undertake any environmental protection related activity in your community?
a) Yes b) No

7. If your answer for question #6 is ‘Yes’, what environmental roles and activities do you undertake?

8. How would you rate your knowledge of the following environmental problems prevailing in your area? (Please fill the following table):

Knowledge on Environmental Problems	Very high	High	Medium	Low	Very low
Deforestation					
Soil Erosion					
Climate Variability					
Loss of biodiversity					
Water pollution					
Air pollution					

9. What economic benefits (products and services) have you obtained from the environmental protection activities at the project during the last 12 months?
[Please complete the table below]

Products and Services Gained	Yes	No
Fire wood		
Charcoal		
Medicinal plants		
Grass		
Sell of tree seeds		
Carbon sell/Credit		
Others, specify		

10. What social benefits, if any, do you have access to as a result of your involvement in forest regeneration in Humbo Woreda? /Please fill the table below/

Social Benefits Gained	Yes	No
Access to mill facility		
Access to store for agricultural products		
Others, specify		

11. What legal benefits, if any, do you have access to as a result of your involvement in forest regeneration in Humbo Woreda? /Please fill the table below/

Legal Benefits Gained	Yes	No
Land use right certificate		
Cooperative legal entity (approved by low)		
Others, specify		

12. What changes have been observed as a result of the rehabilitation of forest ecosystem conserved for the purpose of carbon sequestration? (Please fill the following table)

Changes observed (Impacts) due to Forest Rehabilitation	Improved	Not Improved
Water sources(springs, rivers)		
Microclimate (good air condition, precipitation etc.)		
Soil erosion (soil protection)		
Medicinal tree plants		
Job opportunity(source of income)		
Source of fuel-wood(source of energy)		
Source of grass to feed animals		
Others, specify		

13. Do you think that protecting the natural environment can deprive the community of its basic economic needs and wants?

b) Yes b) No c) No change

14. Have you ever encountered any challenge while undertaking environmental protection activities in Abella Longenna forest cooperative??

a) Yes b) No

15. If your answer for question #14 is ‘Yes’, what are the challenges you face?

16. Has the community forest management project increased your household’s hope for a better future?

a) Yes b) No c) Don’t know

17. What suggestion and recommendation do you have, if any on the project activities at Humbo worda, in general?

Annex- IV

Open-ended Interview Questions for Key Informants at World

Vision Ethiopia

1. What is your point of view on the role of CSOs in environmental protection activities in Ethiopia, in general?
2. Do you think that environmental problems in Ethiopia should be considered as an issue at all? And why you say so?
3. What are the rationale (motives) forwarded by your organization to set up and run the Humbo CDM project in Wolaita Zone, SNNPR?
4. What are the goals and objectives of Humbo CDM project?
5. How many forest cooperatives operate under Humbo CDM project and what are they?
6. What are the causes identified at Humbo Woreda that contributed for the lands to be degraded?
7. What roles and efforts World Vision Ethiopia undertake to support and sustain the Humbo CDM project?
8. What type of methods and approaches your organization employ in combating environmental problems at Humbo Woreda.
9. Who are your beneficiaries? Who benefits most, male or female? Why?
10. What are the benefits being secured by the community at Humbo woreda as a result of the intervention of the Humbo CDM project as per the following dimensions?
 - a. Economic
 - b. Social
 - c. Legal
 - d. Environmental

11. To what extent the welfare of the community members has been improved in comparison with pre-intervention period?
12. Does your organization liaise with other actors in relation to managing the Humbo CDM project? If yes, what are they and why?
13. How does your organization and, specifically the Humbo CDM project fare in combating climate change and global warming, as a leading agenda worldwide?
14. What are the major sources of finance your organization makes use of to run the Humbo CDM project?
15. What is your take on the Charities and Societies Proclamation (No.621/2009) and its impact, if any on the overall operation of your organization in general and Humbo CDM project in particular?
16. What are the challenges, if any being encountered by your project in undertaking and overseeing your environmental protection activities at Humbo Woreda?
17. What achievements and best practices, if any your project possess which could be potentially replicated elsewhere by other bodies?
18. What general suggestion and recommendation do you have regarding the prospect of the Humbo CDM project?

Declaration

I, the undersigned, declare that this thesis is my original work and has not been presented or submitted partially or in full by any other person for a degree in any other university, and that all sources of materials used for the purpose of this thesis have been duly acknowledged.

Declared by:

Name: Alelign Shibabaw

Signature _____

Date _____

Confirmed by Advisor

Name: Jemal Abagissa, Ph.D

Signature _____

Date _____