

Addis Ababa University
School of Graduate Studies
**Department of Public Management and Policy, College of Management,
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Corporate Social Responsibility in Sustainable Environment Management in Ethiopia

(The case of selected corporations and social enterprises)

By:

Asemamaw Tilahun Debas

Approved by Board of Examiners:

Advisor

Signature

Date

Examiner

Signature

Date

Statement of Certification

This is to certify that Ato Asemamaw Tilahun Debas has carried out his thesis work on the topic entitled Corporate Social Responsibility in Sustainable Environmental Management in Ethiopia case study on selected corporations and social enterprises. The work is original in nature and is suitable for submission for the award of Masters Degree in Public Management and policy specialization in Development Management.

Advisor: Costantinos BT (PhD)

Date:

Statement of Declaration

I, the undersigned, declare that this thesis is my own original work and has not been presented in any other University. All sources of materials used for this thesis have been duly acknowledged.

Declared by

Name: Asemamaw Tilahun Debas

Signature: _____

Date: April 2011

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Abbreviations

CSR.....	Corporate Social Responsibility
EMS.....	Environmental Management System
EPA.....	Environmental Protection Agency
GEMI.....	Global Environmental Management Initiative
ISO	International Standards Organization
MNC.....	Multinational Corporations
SE.....	Social Entrepreneurs
SPSS.....	Statistical Packages for Social Sciences
TQEM.....	Total quality Environmental Management
TQM.....	Total Quality Management

Abstract

Multinational corporations, local companies, and social enterprises use various environmental techniques in addressing their corporate social responsibility for sustainable environmental management in Ethiopia. Using both primary and secondary data collection methodology, the research has identified both the techniques they employ and the factors that oblige corporations and social enterprises to engage in environmental preservation. The results imply that corporations and social enterprises are contributing to sustainable environmental management by offering knowledge creation education, open discussion on environmental issues, and adopting different techniques to safeguard the environment. Corporations and social enterprises engage in environmental management to influence of legislators, customers and competitors, on the one hand and own responsibility, public recognition and improve relations with the local community, on the other.

Chapter One

Introduction

1.1 Background of the Study

The term –sustainable development” was first coined at the United Nations Conference on the Human Environment in 1972 and later gained prominence by way of a report to the United Nations by the World Commission on Environment and Development, chaired by Norwegian Prime Minister Gro Harlem Bruntland (henceforth referred to as The Bruntland Report). The definition emerging from the report is,

Sustainable development is development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs” emphasizes the dynamic aspect of sustainability. At its core is the notion that all natural systems have limits, and that human well-being requires living within those limits. It implies that renewable resources should be used wherever possible and that non-renewable resources should be husbanded to extend their viability for generations to come (Hall, Daneke and Lenox, 2010:440).

Over the past three decades, multinational business activity has been playing a significant role in shaping the world economy. Growing international market competition coupled with the increasing need for efficient resource movement has made multinational corporation major agents facilitating this transformation (Yava, Yaprak and Riecken, 1984:72). Multinational corporations are business entities that operate in more than one country. The typical multinational corporation normally functions with a headquarters that is based in one country, while other facilities are based in locations in other countries (Tatum, 2010:1).

Parallel to the above, in the past ten years, corporate social responsibility (CSR) has blossomed as an idea, if not as a coherent practical program. CSR commands the attention of executives everywhere— if their public statements are to be believed—and especially that of the managers of multinational companies headquartered in Europe or the United States (Costantinos, 2008:2). According to the EU Commission (2002:347) as quoted by Crowther and Aras, (2008:2)

CSR is a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis.

Then again, in the last few years, the media has increasingly raised attention to outstanding people who received awards for their social enterprises from a growing range of recognized organizations, like the Schwab Foundation for Social entrepreneurship or Ashoka. The attention to the topic spread to a broader public when Muhammed Yunus, founder of the Grameen Bank, was awarded the Nobel Peace Prize in 2006. This shed light on the growing number of successful social entrepreneurial initiatives that contribute to solving the world's most pressing problems (Lau, 2007:12). According to Thompson et al. (2000:328) as quoted by (Lau, 2007:15) social entrepreneurs are individuals who have the ability to identify an opportunity to satisfy needs that governments will not, cannot or failed to meet, to compile the necessary resources and to use these to make a difference.

The goal of this paper is to present the role of multinational corporations', local companies', social enterprises' social responsibility for sustainable environmental management in Ethiopia.

1.2 Statement of the problem

Traditionally, environmental protection has been considered to be "in the public interest" and external to private life. Governments have assumed principal responsibility for assuring environmental management, and have focused on creating and preserving a safe environment. They have directed the private sector to adopt environmentally sound behaviour through regulations, sanctions, and occasionally, incentives. When environmental problems have arisen, the public sector has generally borne the responsibility for mitigation of environmental damage. . In this approach, some have contended that unrestricted private sector behaviour has been considered as presenting the "environmental problem". However, the roles of sectors have been changing, with the private sector becoming an active partner in environmental protection. Many governments and businesses are now realizing that environmental protection and economic growth are not always in conflict. Since the Brundtland report was published in 1987 as a result of World Commission on Environment's work, business and management scholars have been grappling with the question of how and why corporations should incorporate environmental

concerns into their own strategies. Today many companies have accepted their responsibility to do no harm to the environment. An earlier emphasis on strict governmental regulations has ceded ground to corporate self-regulation and voluntary initiatives (Mazurkiewicz, 2004:2).

Appropriate and promising solutions do exist. Multinational corporations are principal technology innovators that are key to environmental improvements and impact mitigation. They also have an important role to play in a sustainable future, as they are significant means by which technology innovation can feasibly be converted into practice (Sadowski, 2004:1). Local companies can also contribute for sustainable environmental management through integrating the environmental aspect of corporate social responsibility. This is the duty to cover the environmental implications of the company's operations, products and facilities; eliminate waste and emissions; maximize the efficiency and productivity of its resources; and minimize practices that might adversely affect the enjoyment as well as usability of the country's resources by future generations (Mazurkiewicz, 2004:2). Social entrepreneurs are very successful in finding innovative ways to address the right problems. Other than most of their development initiatives, social entrepreneurs try to address the most urgent needs by tackling the root causes of these needs and by including the people concerned in the solution process. With this approach they try to eliminate the patterns of society that cause the problems and attempt to empower the ones in need, giving them the capacities to contribute to their own development (Schwab Foundation for Social entrepreneurship, 2010:2).

A growing number of multinational corporations, local companies and social enterprises are operating in Ethiopia. However, their role towards sustainable environmental management has not yet been studied and put to public consumption. Hence, this study focused on the role of multinational corporations, local companies, and social enterprises' social responsibility for sustainable environmental management in Ethiopia, as the unit of analysis for the following four reasons. First, corporations are the primary engines of economic development. They have also financial resources, technological knowledge, and institutional capacity to implement ecological solutions (Shrivastava, 199:37). Second, social responsibility represents the response of the business community for the issues of sustainability. Through corporate social responsibility, companies address various important issues (Embaye, 2007:2). Third, social enterprises combine

the necessary ambitions, skills and methods resulting in appropriate problem solutions that could be the remedy for the world's ills (Lau, 2007:2). Fourth, the study on multinational corporations', local companies', and social enterprises' social responsibility for sustainable environmental management in Ethiopia is almost non-existent.

However, the study acknowledges that multinational corporations, local companies and social enterprises are few of the many wheels of sustainable environmental management. Consumers and governments form the other wheels (Gallup International Institute, 1992, in Shrivastava, 1995:937). Consumers must be willing to consume fewer products and use these more wisely, while governments must establish ecologically sustainable economic policies (Zimmerman, 1990 as quoted by Shrivastava, 1995:937). Although studying the contributions and roles of governments and consumers is also necessary, it is outside the limited scope of this research.

1.3 Objectives of the study

The main objective of this study is to know the major roles of corporations' and social entrepreneurs' social responsibility for sustainable environmental management in Ethiopia. Specifically, this study has the following objectives:

1. To assess how multinational corporations, local companies, and social entrepreneurs are contributing to the achievement of sustainable environmental management in Ethiopia.
2. To describe the major kinds of environmental tools that are used by multinational corporations, local companies, and social entrepreneurs to preserve the environment in Ethiopia.
3. To identify the factors that obliged multinational corporations, local companies and social enterprises to engage in environmental preservation in Ethiopia.
4. To examine the implications and possible lessons that could be learnt

1.4 Research questions

For the purpose of this study, the following research questions have been administered. These questions guide the research and the researcher.

1. What are the major roles of multinational corporations, social entrepreneurs and local companies' social responsibility for sustainable environmental management in Ethiopia?

2. How are multinational corporations, local companies and social entrepreneurs contributing to the achievement of sustainable environmental management in Ethiopia?
3. What kind of environmental tools do multinational corporations, local companies and social enterprises use to preserve the environment in Ethiopia?
4. What are the factors that obliged multinational corporations, local companies and social entrepreneurs to engage in environmental preservation?
5. What are the implications and possible lessons that could be learnt?

1.5 Methodology of the Study

1.5.1 Research Design

According to Babbie (1989:237), surveys are appropriate for descriptive, explanatory and exploratory purposes. As the purpose of the research study is descriptive, the unit of analysis is organizations and the point of focus is the role of organizations, survey design is regarded as the most appropriate research design to conduct this research. The time dimension is cross-sectional, as the role of multinational corporations, local companies, and social enterprises is studied by taking a cross-section of the phenomenon at a given time and analyzing the cross section carefully. The study is conducted with quantitative and qualitative techniques. The scores are analyzed using descriptive statistics.

1.5.2 Respondents

The participants of this study have been 36 multinational corporations, local companies, and social enterprises, which are operating in the country. First, the selected participants were 45 multinational corporations, local companies, and social enterprises, which incorporated 15 for each. However, 4, 1 and 4 of multinational corporations, local companies and social enterprises do not returned the questionnaires. Therefore, the study comprised 36 respondents, which comprised 11, 14 and 11 of multinational corporations, local companies and social enterprises respectively.

1.5.3 Sampling Design and Sampling Method

The aggregation of elements from which the sample is actually selected is called population (Babbie, 1989:170). For the purpose of this study, the population is all multinational corporations, local companies and social enterprises that are working in Ethiopia. As the complete coverage of the population is not possible, a subset of the population is selected. To conduct this study, purposive sampling method is used. The reason behind this is that: first, it has not been possible to complete a list of the corporations and social enterprises (sampling frame). Second, this method allowed the researcher to identify in advance the characteristics that has been needed.

1.5.4 Sources and methods of data collection

In order to find sufficient and relevant information, both primary and secondary sources of data have been used. The primary sources of data have been obtained from questionnaires that included both open and closed-ended. On the other hand, the secondary sources of data have been collected from books, internet and journals.

1.5.5 Measures

For the purpose of this research, two types of self administered questionnaires have been used as the data- gathering method. The first type of the questionnaire is distributed to Multinational and Local Corporations and the second type of questionnaire is distributed to Social Enterprises. These questionnaires are composed of two parts. The first part consists of questions with predetermined responses. This enabled the researcher to extract numerical data. The second part has been semi-structured, with open-ended questions to allow the respondent to forward his/her own response to the questions. This enabled the researcher to extract textual data.

1.5.6 Procedure of data collection

The questionnaire has been passed out to the respondents during business hours at their workplace. However, prior to this, permission has been requested and actual move to the data undertaken after asking consents of the subjects. The respondents and heads of the organizations have been informed about the purpose of the study. The researcher also informed managers or decision makers of the organization that they have the right to refuse filling the questionnaires without any consequences.

1.5.7 Data analysis

This study is used descriptive statistics to analyze the data. Analysis has been generated from the data collected through the questionnaires. The research questions are served as a guide for conducting the analysis. The questionnaires produced both qualitative and quantitative data. The items of the questionnaires have been analyzed through counting of the frequencies in which the selected and provided texts from the respondents is appeared. Since working through manual is boring, SPSS program has been used.

1.6 Scope of the Study

Any research problem has to be delimited in scope to manageable size. Thus this study is delimited to 36 organizations to find out the role of multinational corporations', local companies' and social enterprises' social responsibility for sustainable environmental management in Ethiopia. For the purpose of the study, Multinational Corporation refers to foreign corporations operating in Ethiopia. It does not show Ethiopian corporations operating outside Ethiopia. According to Crowther and Aras, (2008:14) CSR incorporates three basic principles. These are sustainability, accountability and transparency. However, this study shows only the environmental aspect of CSR. According to Ashoka foundation (2010:1), Social enterprises are organizations with innovative solutions to society's most pressing social problems. They are ambitious and persistent, tackling major social issues and offering new ideas for wide-scale change. Therefore, this study is delimited on individuals or head of organizations that are concerned on the sustainable environmental management in Ethiopia.

1.7 Significances of the Study

The research has the following significances for parties who have direct or indirect interest on it;

- The output from the research can help corporations, social organizations and policy developers to take some remedial actions or corrective measures on the problems identified in the research;
- It enables the researcher to acquire basic experiences regarding several issues on areas of sustainable environmental management and related aspects and the tentative solutions provided by the researcher can also enable the interested parties to solve the identified problems;

- The identified role of corporations and social enterprises will help the country to integrate their role in the policy of sustainable environment;
- It will also serve as a future reference for researchers on the area. In addition, importantly, this research will educate clients in deciding on whether the industries are really fulfilling its responsibility to the environment or is just showing off to promote its business.

1.8 Limitations of the Study

The following are the major limitations of the study:

- Some respondents did not give the required full information as well as unable to response the questionnaires on time;
- Insufficiency of time that is provided to conduct this research is also one potential limitation of the study.

1.9 Organizations of the Paper

To set the scene, the next chapter is about the theoretical review section. In this section the various theoretical views on the roles of corporations‘ and social organizations‘ social responsibility in sustainable environmental management, the different techniques of environmental management and the motivations behind implementation of environmental management system are addressed. In the third chapter, data analysis, presentation and interpretation are incorporated. Finally, chapter four contains summary of findings, conclusions and recommendations for corporations, social enterprises and community and policy developers.

Chapter Two

Literature review

2.1 Introduction

It is said that those who conduct research belong to a community of scholars, each of whom has journeyed into the unknown to bring back an insight, a truth or a point of light. What they have recorded of their journeys and findings will make it easier for others to explore the unknown: to help others to discover an insight, a truth, or a point of light. Hence, in order to present a clear understanding of the research problem a review of the relevant literature is necessary. This research study aimed to assess the role of multinational corporations, local companies and social enterprises' social responsibility for sustainable environmental management in Ethiopia. The literature review focuses on the three actor's role on sustainable environment. The purpose of this chapter is to review the accumulated knowledge related to environmental management in general as well as multinational corporations, local companies and social enterprises and their roles towards sustainable environmental management.

2.2 Sustainable development

The concept of sustainable development received its first major international recognition in 1972 at the UN Conference on the Human Environment held in Stockholm. The term was not referred to explicitly, but the international community agreed to the notion - now fundamental to sustainable development - that both development and the environment, hitherto addressed as separate issues, could be managed in a mutually beneficial way (Sustainable Development Commission, 2010:1).

The term was popularized 15 years later in *Our Common Future*, the report of the World Commission on Environment and Development, often referred to as the Brundtland Report. The report included what is deemed the 'classic' definition of sustainable development: "development which meets the needs of the present without compromising the ability of future generations to meet their own needs" (Sustainable Development Commission, 2010:1).

It was not until the Rio Summit, however, that major world leaders recognized sustainable development as the major challenge it remains today (Sustainable Development Commission, 2010:2).

The World Summit on Sustainable Development which held in Johannesburg in 2002, was attended by 191 national governments, UN agencies, multilateral financial institutions and other major groups to assess progress since Rio. The Johannesburg Summit delivered three key outcomes: a political declaration, the Johannesburg Plan of Implementation, and a range of partnership initiatives. Key commitments included those on sustainable consumption and production, water and sanitation, and energy (Sustainable Development Commission, 2010:2).

In most recent, in early December 2009, the world had high hopes that the impending United Nations Climate Change Conference would finally accomplish what the outcome of a similar conference held in 1997, the Kyoto Protocol, could not. The conference was marked by a high number of “closed door meetings” and political manoeuvring, with the result being the “Copenhagen Accord,” a short document put forth by the United States, China, India, Brazil and South Africa. The Accord essentially outlines a general feeling that stopping climate change is a good idea, but falls short of the hoped-for targets of a legally binding and enforceable agreement, that could lead to a real reduction in green house gas emissions worldwide (Priority press, 2010:1).

However, while the Copenhagen Summit may not have produced the results that many nations were hoping for, the 2010 United Nations Climate Change Conference, which was held in [Cancún, Mexico](#), is found a significant amount of common ground between the rich and the developing worlds. The meeting – known formally as the Sixteenth Session of the Conference of the Parties to the [United Nations Framework Convention on Climate Change](#) UNFCCC (COP 16) and the Sixth Session of the Meeting of the Parties to the Kyoto Protocol (CMP 6) (Diringer, 201:1).

The outcome of the summit was an agreement, not a binding treaty, which aims to limit global warming to less than 2 degrees Celsius above pre-industrial levels and calls on rich countries to reduce their greenhouse gas emissions as pledged in the [Copenhagen Accord](#) and for developing

countries to plan to reduce their emissions. The agreement includes a "Green Climate" fund, proposed to be worth \$100 billion a year by 2020, to assist poorer countries finance emission reductions and adaptation (Cassandra, 2010:2).

Another bit of the deal was an agreement on REDD+, a system to reward countries for lowering (or not raising, depending on their history) rates of deforestation. This includes safeguards meant to ensure the fair treatment of indigenous people. A new adaptation framework makes dealing with the effects of climate change a bigger part of the UN process. A final element was a deal on technology transfer (Climate Change Diplomacy, 2010:1).

The *New York Times* described the agreement as being both a "major step forward" given that international negotiations had stumbled in recent years, and as being "fairly modest" as it did not require the changes that scientists say are needed to avoid dangerous climate change (John, 2010:3). John Vidal, writing in *The Guardian*, criticized the Cancun agreements for not providing leadership, for not specifying how the proposed climate fund will be financed, and for not stating that countries had to "peak" their emissions within 10 years and then rapidly reduce them for there to be any chance to avert warming. Also criticized were the deferral of decisions on the legal form of and level of emission reductions required (Vidal, 2010:2).

In the last, parties agreed to hold COP 17 from November 28 to December 9, 2011, in Durban, South Africa.

2.2.1 Sustainable Environmental management

There is no concise universal definition of environmental management. According to Clarke cited in Barrow (2006:6), EMS is an approach which goes beyond natural resources management to encompass the political and social as well as the natural environment. Macgill cited in Barrow (2006:6) defined it as an interface between scientific endeavour and policy development and implementation. The process of allocating natural and artificial resources so as to make optimum use of the environment in satisfying basic human needs at the minimum, and more if possible, on a sustainable basis (Jolly 1978 cited in Barrow 2006:6). Again, Dorney, 1989:15 cited in Barrow 2006:6 defined it as generic description of a process undertaken by systems-oriented professionals with a natural science, social science, or less commonly, engineering, law, or

design background, tackling problems of the human-altered environment on an interdisciplinary basis from a quantitative and/or futuristic viewpoint. According to Erickson and King, (1999:2) environmental management seeks to steer the development process to take advantage of opportunities, try to avoid hazards, mitigate problems, and prepare people for unavoidable difficulties by improving adaptability and resilience. According to the British Standards Institution (1992:4), an EMS should:

- identify and assess the environmental effects arising from the organization's existing or proposed activities, products or services;
- identify and assess the environmental effects arising from incidents, accidents and potential emergency situations;
- identify the relevant regulatory requirements;
- enable priorities to be identified and pertinent environmental objectives and targets to be set;
- facilitate planning and control, auditing and reviewing activities to ensure both that the policy is complied with, and that it remains relevant;
- be capable of evolution to suit changing circumstances.

This collection is only an extract of the numerous existing definitions and shows that the authors tend to emphasize different aspects that define environmental management.

2.3 Multinational Corporations

Multinational corporations (MNCs) play a critical role in the global economy. By most estimates, production by multinational enterprises now accounts for over one-fourth of the world's output and one-third of world trade. Moreover, many scholars believe that the investments of multinationals, commonly known as foreign direct investment, have beneficial effects on economic growth, transferring technology and managerial expertise as well as providing capital (Jensen, 2006:1).

2.3.1 Definition of multinational corporations

Multinational corporations (MNCs) are also referred to as multinational enterprises, multinational firms, multinational companies and transnational corporations in business literature (Hill, 2007:21). For sake of consistency, this study only refers to these firms as MNCs, whereas the literature reviewed also includes the use of these synonyms. As the name above implies, MNCs conduct business and earn income across a number of foreign countries.

Hill (2007:21) defines a MNC as any business that has productive activities in two or more countries. —A multinational firm is an enterprise that engages in foreign direct investment and owns and controls value-adding activities in more than one country. It typically has multiple facilities across the globe, derives a substantial portion of revenues from foreign operations, manages subsidiaries with a common strategic vision and resource pool and often places foreign nationals or expatriates in key management posts” (Erwee, 2007:176). According to Root (1994:5) who described a MNC as a parent company that (1) engages in foreign production through its affiliates located in several countries, (2) exercises direct control over the policies of its affiliates, and (3) implements business strategies in production, marketing, finance and staffing that transcend national boundaries.

2.3.2 Activities of Multinational Corporations

Studying the role of multinational corporations for sustainable environmental management requires identifying the major activities of the corporations. Therefore, in the following section the study identifies the activities of the corporations. According to Baram, (1994:2) multinational corporations have three basic activities in the developing countries. These are

- Large Scale Development

One type of MNC activity is participation in joint ventures for the design and construction of large public projects intended to provide for human needs in developing nations. Usually, MNC works on such projects under a long-term contract with several participants that may include other MNCs, host country firm, national agencies, and local governments. Technical expertise and equipment capable of minimizing a broad range of future environmental impacts are needed at the outset for the design of such projects, and subsequently for the construction or on stage. At

a later stage, additional technological expertise and new equipment may be required for project modifications in response to new findings of environmental impacts, and for ongoing project management to meet increasingly stringent requirements for the conservation of resources.

- Facility Operation

A second common type of MNC activity involves the ongoing operation of a manufacturing facility or a resource extraction activity in a developing nation. The MNC may be involved in several ways: as the parent of a wholly owned subsidiary, which owns and operates the facility; as one of several private and public partners in a joint venture; or as the licensor of technology to an independent organization conducting the activity. Sustainable development will require technical expertise in the form of analytic and monitoring capabilities, "know-how," and sophisticated equipment and training programs designed to prevent accidents. It will further require technologies for waste recycling and source reduction, and methods for minimizing routine releases and fugitive emissions.

- Sale of Products

A third type of MNC activity in developing nations involves the sale of the MNC's products--either domestic products made by its local facility or products manufactured elsewhere and exported to the developing nation. To achieve sustainable development, technical advances will be needed to accomplish product redesign, to establish safer methods and better instructions for product use and disposal, and to develop biodegradable or reusable packaging and safer substitute products. The advanced technological expertise must be transferred to manufacturing facilities (for product redesign and development of substitute products), to suppliers (for development of new packaging), and to customers (for warnings and safe use instructions) for implementation. A continuum of advances and technology transfers is needed for many products because increases in product sales and use often lead to increased stress on the environment, most notably in the case of chemical products like pesticides, plastics, and solvents.

In summary, MNCs engage in at least three types of activities that have major implications for sustainable development and require continuing technological advances and transfers between various parties.

2.4 Corporate Social Responsibility

Although the concept has been developing since the early 1970s, there is no single, commonly accepted definition of “Corporate Social Responsibility” (CSR). The World Business Council for Sustainable Development stresses,

CSR is the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families, as well as of the local community and society at large (World Bank, 2000:2)

Various associations have developed their own definitions of CSR, for example, Business for Social Responsibility (BSR). Since the 1997 World Commission on Environment and Development Report (Brundtland report) was published, corporate managers and management scholars have been grappling with the question of how and why corporations should incorporate environmental concerns into their own strategic decision-making. In addition, they have been assuming a positive role in furthering the cause of environmental protection, as opposed to being seen as an environmental problem. Today many corporations have accepted their responsibility to do no harm to the environment (Hart, 2000:4). The Environment Strategy of the World Bank indicates, too, that the private sector is becoming a decisive factor in influencing environmental performance and long-term environmental sustainability (The World Bank, 2000:3).

Environmental organizations and corporations define Corporate Environmental Responsibility (CER) which is part of CSR as

the duty to cover the environmental implications of the corporation’s operations, products and facilities; eliminate waste and emissions; maximize the efficiency and productivity of its resources; and minimize practices that might adversely affect the enjoyment of the country’s resources by future generations (He and Chen, 2008:1675).

2.4.1 Principles of Corporate Social Responsibility

According to Crowther and Aras (2008:14), there are three basic principles, which together comprise all CSR activities. These are: sustainability, accountability, and transparency

1. Sustainability

Sustainability implies that society must use no more of resource than can be regenerated. This can be defined in terms of the carrying capacity of the ecosystem and described with input-output models of resource consumption.

2. Accountability

This is concerned with an organization recognizing that its actions affect the external environment, and therefore assuming responsibility for the effects of its actions. This concept therefore implies a quantification of the effects of actions taken, both internal to the organization and externally. More specifically the concept implies a reporting to external stakeholders of the effects of actions taken by the organization and how they affect those stakeholders.

3. Transparency

Transparency, as a principle, means that the external impact of the actions of the organization can be ascertained from that organization's reporting and pertinent facts are not disguised within that reporting. Thus all the effects of the actions of the organization, including external impacts, should be apparent to all from using the information provided by the organization's reporting mechanisms.

2.4.2 Corporate environmental management

A typical definition of corporate environmental management would be 'efforts to minimize the negative environmental impact of the firm's products throughout their life cycle' (Klassen and McLaughlin, 1996 cited in Barrow 2006:7). If business fails to adopt environmental management in a serious fashion there will be little progress, for, as Hawken (1993) cited in Barrow (2006:7) noted, corporations are Earth's dominate institutions- many corporations have earnings in excess of those of most developing countries, and some command more riches than some developed nations. Governments are often lobbied and prevailed upon to do what national business, and MNCs want. Big business often has better access to information, resources and skills than poor nations, and may have greater stability for year-to-year planning than some governments.

In addition, business interacts with a wide range of parties. Satisfying shareholders is at present the driving force; the adoption of environmental management implies concern for a wider range

of shareholders, the public, bystanders, employees, consumers, the regional and global environment. Environmental management must address its objectives within the context of company practices (Seldner and Cottrel, 1994) cited in (Barrow 2006:8). As its value is proven, those practices may be modified to help environmental management. The tasks of a business environmental management include:

- Education of employees to be aware of environmental issues;
- Updating management on relevant environmental regulations, laws and issues;
- Selecting specialists and checking that environmental management tasks contracted out to consultants have been satisfactorily conducted and are properly acted upon;
- Ensuring waste management is satisfactory;
- Avoiding legal costs, reducing premiums, risk and hazard assessment;
- If need be correcting mistakes of the past.

2.4.3 Motivations to implement environmental management

A wide range of bodies and professionals are involved in environmental management: government agencies, international bodies and aid organizations, research institutes, NGOs, business organizations and the public. According to Simon (2009:2), there are five powerful reasons every business should set up an environmental management system (EMS) today. These are

1. Better understanding of business processes: To make your business green you need to know exactly what it does and how it does it. This means reviewing all business functions and processes. "Clients often find they are doing things they didn't know about and which are not necessary," said Simon.

2. Reduced costs: An EMS typically finds smart ways to reduce energy consumption and wastage, which ultimately means lower bills.

3. Easier to attract and retain staff: Employees who are passionate about recycling and being green at home are more likely to be attracted to a business that fits with their way of thinking.

4. Competitive advantage: Because so few businesses commit to being green and actually do it, there is a huge marketing advantage to being able to demonstrate genuine green credentials. Simon added, "When all other factors are equal, being green can give your business a distinct competitive edge."

5. Less expensive than being forced to do it: Legislation will change and so will business practices in the decades to come. Changing business practices before the laws demands it is smart and cost effective.

Dyne (2008:3) instead gives top 10 reasons to implement an environmental management system within an organization. These are

1. Reduce your corporate footprint on the environment;
2. Fulfil consumer demand for environmentally-friendly products and services;
3. Reach a wider audience of environmentally-aware consumers and manufacturers;
4. Achieve ISO 14001 certification;
5. Identify potential environmental risks before they become an expense;
6. Improve enterprise efficiency through automated scheduling, email notifications, data management, and real-time progress reports;
7. Increase the collective knowledge base of your corporate intellectual property;
8. Be prepared for internal and external audits;
9. Give your employees another reason to feel good about their employer;
10. Get a public relations advantage over your competitors.

According to Barrow (2006:11), one or more of the following may generalize the different actors to engage in environmental management:

1. **Pragmatic reasons-** fear or common sense makes people or administrators seek to avoid a problem;

2. **Desire to save costs-** it may be better to avoid problems or counter them than suffer the consequences: pollution, species extinction, human deaths, costly litigation. There may also be advantages in waste recovery, energy conservation and maintaining environmental quality;
3. **Compliance-** individuals, local governments, companies, and states and so on may be required by laws, national or international agreements to care for the environment;
4. **Shift in ethics-** research, the media, individuals or groups of activities may trigger new attitudes, agreements or laws;
5. **Macro-economic-** promotion of environmental management may lead to economic expansion: a market for pollution control equipment, use of recovered waste, more secure and efficient energy and raw materials supply; or there may be advantages in internalizing externalities.

2.4.4 The role of corporations in ensuring environmental management

Shrivastav (1995:942) identified the mechanisms through which companies can contribute to sustainable environmental management (i.e., total quality environmental management [TQEM], ecologically sustainable competitive strategies, and technology-for-nature swaps or transfers.

1. Total Quality Environmental Management

TQEM involves dealing with environmental problems from a total systems perspective. Just as "total quality management" demands improvements in each stage of the design and production process, a TQEM perspective seeks to optimize the ecological performance of the entire corporate system (Shrivastava, 1995:944). TQEM uses life-cycle analysis (LCA) as a holistic approach to understanding the linkages between an organization and its natural environment. It identifies and deals with ecological costs of inputs, throughputs, and outputs throughout the life cycle of products. This understanding prevents the shifting of ecological costs both from one medium to another (e.g., from air to solid waste) and from one stage in a product's or service's life to another stage. This prevention is handled by extending the system boundaries to include all aspects of product development, production, use, and retirement (Hopfenbeck, 1993:233). On the input side, TQEM encourages energy and natural resource conservation and renewal by

- reducing use of energy and virgin materials through product redesign;
- making greater use of renew-able materials;
- off-setting energy/ resource consumption with replenishment;
- Developing ecologically sensitive purchasing policies and inventory-management systems (Post, 1991:35; Shrivastava, 1995:944; Shrivastava & Hart, 1994:620);

TQEM in the throughput system focuses on improving the efficiency of production, minimizing wastes, and reducing costs. It seeks to eliminate emissions, effluents, and accidents. Just as the "zero-defects" goal in quality control demands preventative action and continuous improvement at every step of the production process, a "zero-discharge" goal and a "zero-risk" goal can serve to focus a company's efforts toward the virtual elimination of waste. Corporations have been saving costs and even generating new revenues through their environmental programs. TQEM also focuses on product choice and design. Products that lack durability, difficult to repair and recycle place a greater demand on the natural resource base, create unnecessary waste and disposal costs. (Shrivastava & Hart, 1994:621).

In general according to GEMI's 'TQEM Primer' (1992:3), there is four basic elements of TQEM:

- **Customer identification:** in TQEM, environmental quality is determined by customer preferences. Buyers, the local community, environmental groups and the public are considered external customers, while a company's employees represent the internal customer group.
- **Continuous improvement:** a company's management and employees should work systematically towards the improvement of environmental performance. Company-wide employee involvement in TQEM is a key to success.
- **Doing the job right first time:** In TQEM it is essential to recognize and eliminate environmental problems before they occur. The best cure for a pound of environmental crises is an ounce of prevention. Focusing employee attention on the causes of environmental problems instead of the symptoms can reduce the cost of waste disposal, government reporting, and crises control. By investing in prevention, a company can save on the long-term costs of compliance, resources, and unplanned liabilities. The cost of

quality is the cost that quality failures impose on your company. In environmental management, these costs are those of generating wastes that do not add to or may even reduce the value of your product or service to your customer.

- **A systems approach:** TQEM teaches to look at each part of environmental management as a system. The system includes all of the equipment and people who must work together to achieve the desired objectives. Total Quality causes us to work across organizational boundaries, forming teams that represent all of the functions involved in making a system work as intended. Interactions of people and decision making procedures can be flow-charted and analyzed as a system. This focuses attention on what is wrong with the system, instead of forcing blame on an individual.

In a well-organized system, all the components (functions) work together to support each other.

In a system that is well-led and managed, everybody wins. If by bad management the components become competitive, the system is destroyed. Everybody loses.

(W. Edwards Deming, creator of TQM Cited in GEMI's 'TQEM Primer' 1992:3)

The next mechanism by which corporations can contribute to ecological sustainability is creating ecologically sustainable competitive strategies for their businesses.

2. Ecologically Sustainable Competitive Strategies

Competitive strategies are means by which companies gain market-place advantages over their rivals. These strategies are also used to guide firms' entries into new markets. The market for environmentally friendly products has grown to over \$200 billion per year (EPA, 1990:115) and green investment funds have mushroomed from a \$40 billion industry in 1984 to one that is currently estimated at close to \$500 billion (Council on Economic Priorities, 1991:85). Companies can strategically position them-selves to take advantage of these market trends. Three generic strategies commonly used by corporations are the least-cost strategy, the differentiation strategy, and the niche strategy (Porter, 1980:873).

- The least-cost strategy involves becoming the lowest cost operator in the industry. It requires mass production of standardized products needed by a broad group of customers. It exploits economies of scale in production and distribution. Least-cost firms can use their price flexibility to gain market share. This strategy works best where there is a large demand for standard products.
- The differentiation strategy involves producing a range of well-differentiated products that meet the specific needs of customer segments. These products have unique features and are hard to imitate. By offering uniqueness, manufacturers can lock in clients that want specific product features, and they can charge higher prices for these unique products.
- The niche strategy focuses on a narrowly defined segment of the market and fulfills the needs of special customers in that niche. Usually, this means producing highly specialized products and marketing them through limited-focused delivery systems. The total demand for the product may be low, but it is constant. Niche firms possess specialized knowledge about customers, distribution systems, product features, and production systems, which give them long-term competitive advantage (Porter, 1980:873).

Creating an ecologically sustainable least-cost strategy involves standardizing environmentally friendly product designs. Production systems are designed as closed-loop systems; they emphasize energy and resource conservation and use of clean technologies. Because of the large production volume, even small per-unit reduction of resources and energy can result in significant overall savings. With ecologically friendly standardized product designs, it is sufficient to provide employees with only basic training on safety, health, and environmental issues and customers with accurate product labels. Given the large-scale systems common in this type of strategy, environmental-impact assessment and emergency planning are critical (Shrivastava, 1995:946). To squeeze ecological efficiencies, it is essential to build partnerships with both subcontractors and suppliers and to encourage them to reduce packaging, waste, and costs. Standardized mass-production technologies can be transferred inexpensively and with limited competitive risks through licensing.

Ecologically sustainable differentiation strategies use environmental orientation of product features and packaging to create differentiation. Ecologically friendly packaging is a source of competitive advantage, particularly for products that need large amounts of packaging. Manufacturing plants are of moderate size; hence, operational improvements aimed at compliance with environmental and safety regulations may suffice to make manufacturing ecologically sound. The differentiated nature of products in this strategy increases the need for special training of employees and customers on safety, health, and environmental issues and specialized emergency plans. It is common to have many and diverse vendors when this strategy is used. Thus, management of vendors on a sustainable basis becomes particularly important. Through creative partnerships with vendors, it is possible to reduce packaging, wastes, transportation costs, and the duplication of materials. Although the technology transfer of environmentally sound technologies is desirable, it is expensive and competitively risky when this strategy is being used.

The ecologically sustainable niche strategy seeks ecologically friendly product niches. Customers who use this strategy are often very knowledgeable. They can be a source of safety, health, and environmental information and operational improvements. The right choice of niche minimizes the scope of precautionary measures. However, there is a need to protect safety, health, and environmental programs from cost-cutting pressures. If a company selectively works with key vendors, it can improve the environmental performance of products. Specialized technologies are a key competitive resource and often pose special environmental and health hazards. Transferring such technologies is very expensive and risky. These ecologically oriented strategies allow companies to gain first-mover advantages into environmentally sensitive market segments and inimitable production advantages. However, in order to gain these benefits, companies must establish compatible organizational structures, systems, and operating size. Organizational structures must allow free flows of ecologically relevant information within organizations and between organizations and their vendors and their customers, which facilitates cooperation. Organizational systems must be designed to accept, process, and integrate ecological signals from the external environment. The size of the operation must be determined in correlation to their ecological impacts. Very large-scale operations may irreversibly

overwhelm bioregional ecosystems. This problem may call for designing operations in smaller decentralized modules (Sale, 1986 cited in Shrivastava, 1995:951).

1. Technology Transfer: Technology-for-Nature Swaps

Technology Transfer: Technology-for-Nature Swaps- a major hurdle in reaching environmental sustainability lies in the grossly lopsided distribution of resources between developing and industrialized countries. Developing countries need new technologies to provide basic amenities to their teeming populations. They need ecologically benign technologies to minimize pollution and stop environmental degradation. Such technologies are available in industrialized countries, but at exorbitant prices. Developing countries, in perennial debt crisis, do not have the financial capital to acquire new ecologically friendly technologies (Sachs & Huizinga, 1987:175). In some cases, they do not have the human resources or industrial infrastructures to make these technologies work effectively (Shrivastava, 1995:951). In contrast, developing countries possess immense natural resources that industrialized countries want. These include plants for making pharmaceuticals, metal and mineral ores, land, marine and wildlife. Many of these resources and ecosystems are becoming extinct because of the inability of local governments to manage them in a sustainable way. Developing countries are facing a dramatic decline in eco-diversity as a result of deforestation, desertification, and coastal development (Wilson, 1989 cited in Shrivastava, 1995:951). One integrated solution to technological needs, and ecological preservation is to arrange technology-for-nature swaps. The principle of swaps is a valuable one, and it deserves serious attention by corporations. Chlorofluorocarbon substitute technology is one example of how technology-nature swaps may work (Kimball, 1992:77).

In addition to the above roles or techniques most of the corporations are using the following ways to address the environmental problem.

1. **Green marketing:** It refers to the process of selling products and/or services based on their environmental benefits. Such a product or service may be environmentally friendly in it or produced and/or packaged in an environmentally friendly way. The obvious assumption of green marketing is that potential consumers will view a product or service's "greenness" as a benefit and base their buying decision accordingly. The not-so-obvious assumption of green marketing is that consumers will be willing to pay more for

green products than they would for a less-green comparable alternative product. (Ward, 2010:51). According to Tatum (2010:2) green marketing is the promotion of various types of goods and services that are considered environmentally safe. These products are normally designed using natural or recycled materials, and are said to have little to no negative impact on the ecology of the planet. Many goods that meet this criteria are biodegradable, meaning they actually help replenish the planet rather than create an added burden to nature. The idea behind green marketing is to find ways to connect consumers who want to live a lifestyle that is as ecologically responsible as possible.

2. **Eco-labelling:** It is a voluntary method of environmental performance certification and labelling that is practiced around the world. An "eco-label" is a label which identifies overall environmental preference of a product or service within a specific product/service category based on life cycle considerations. In contrast to "green" symbols or claim statements developed by manufacturers and service providers, an eco-label is awarded by an impartial third-party in relation to certain products or services that are independently determined to meet environmental leadership criteria (Global Eco-Labelling Network, 1999:3).

3. **ISO 14000:** The ISO 14000 series emerged primarily as a result of the Uruguay round of the GATT negotiations and the Rio Summit on the Environment held in 1992. While GATT concentrates on the need to reduce non-tariff barriers to trade, the Rio Summit generated a commitment to protection of the environment across the world. ISO 14000 is a series of international standards on environmental management. It provides a framework for the development of an environmental management system and the supporting audit program. The ISO14000 standards are designed to cover:
 - Environmental management system;
 - Environmental auditing;
 - Environmental performance evaluation;
 - Environmental labelling;
 - Life-cycle assessment;
 - Environmental aspects in product standards;

ISO 14000 incorporates a series of standards. Among those standards, ISO 14001 is the corner stone. ISO 14001 specifies a framework of control for an Environmental Management System against which an organization can be certified by a third party. Other standards in the series are actually guidelines, many to help you achieve registration to ISO 14001. These include the following:

- ISO 14004 provides guidance on the development and implementation of environmental management systems;
- ISO 14010 provides general principles of environmental auditing (now superseded by ISO 19011);
- ISO 14011 provides specific guidance on audit an environmental management system (now superseded by ISO 19011);
- ISO 14012 provides guidance on qualification criteria for environmental auditors and lead auditors (now superseded by ISO 19011);
- ISO 14013/5 provides audit program review and assessment material;
- ISO 14020+ labelling issues;
- ISO 14030+ provides guidance on performance targets and monitoring within an Environmental Management System;
- ISO 14040+ covers life cycle issues.

Of all these, ISO14001 are not only the most well known, but is the only ISO 14000 standard against which it is currently possible to be certified by an external certification authority (International Standard Organization, 1996:1).

2.5. Social Entrepreneurs

To date, the academic discourse on sustainable development within the entrepreneurship literature has been sparse. Relatively few rigorous studies exploring the relationship between sustainable development and entrepreneurship have been published in mainstream entrepreneurship journals. The purpose of this special issue is to begin to address this gap. In this part, we outline some of the recent contributions exploring the role of entrepreneurship in sustainable development.

Sustainable development has emerged as an influential, yet controversial, concept for business and policy. Awareness is growing that a fundamental transformation in the way society consumes natural resources and produces energy may be needed if we are to make progress on pressing environmental issues such as ecosystem degradation and global climate change. With this as context, entrepreneurship is increasingly being cited as a significant conduit for bringing about a transformation to sustainable products and processes. Numerous books that sound dire warnings of environmental disaster often end on an optimistic note, concluding that civilization's salvation rests upon the shoulders of heroic social and environmental entrepreneurs (Brown, 2006). Influential practitioner journals such as the Harvard Business Review and Sloan Management Review advance the idea that entrepreneurship may be a panacea for many social and environmental concerns (Brugmann and Prahalad, 2007:80).

Yet, despite the promise, entrepreneurship holds for fostering sustainable development, there remains considerable uncertainty regarding the nature of entrepreneurship's role in the area of sustainability and how it may unfold. While entrepreneurship has long been recognized as a vehicle for societal transformation, especially as an economy moves from one technological epoch to another (Schumpeter, 1934, 1942), we have little understanding of how entrepreneurs will discover and develop those opportunities that lie beyond the pull of existing markets. In this paper, we outline some of the recent contributions exploring the role of entrepreneurship in sustainable development as well as the techniques and motivations to engage in alleviating the environmental problems.

2.5.1 Definition of Social Entrepreneurship

Any definition of social entrepreneurship should reflect the need for a substitute for the market discipline that works for business entrepreneurs. We cannot assume that market discipline will automatically weed out social ventures that are not effectively and efficiently utilizing resources. The following definition combines an emphasis on discipline and accountability with the notions of value creation taken from Say, innovation and change agents from Schumpeter, pursuit of opportunity from Drucker, and resourcefulness from Stevenson. In brief, this definition can be stated as follows:

Social entrepreneurs play the role of change agents in the social sector, by:

- *Adopting a mission to create and sustain social value (not just private value),*
- *Recognizing and relentlessly pursuing new opportunities to serve that mission,*
- *Engaging in a process of continuous innovation, adaptation, and learning,*
- *Acting boldly without being limited by resources currently in hand, and*
- *Exhibiting heightened accountability to the constituencies served and for the outcomes created.*

This is clearly an ‘idealized’ definition. Social sector leaders will exemplify these characteristics in different ways and to different degrees. The closer a person gets to satisfying all these conditions, the more that person fits the model of a social entrepreneur. Those who are more innovative in their work and who create more significant social improvements will naturally be seen as more entrepreneurial. Those who are truly Schumpeterian will reform or revolutionize their industries. Each element in this brief definition deserves some further elaboration (Dees, 2001:2). Let us consider each one in turn.

Change agents in the social sector: Social entrepreneurs are reformers and revolutionaries, as described by Schumpeter, but with a social mission. They make fundamental changes in the way things are done in the social sector. Their visions are bold. They attack the underlying causes of problems, rather than simply treating symptoms. They often reduce needs rather than just meeting them. They seek to create systemic changes and sustainable improvements. Though they may act locally, their actions have the potential to stimulate global improvements in their chosen arenas, whether that is education, health care, economic development, the environment, the arts, or any other social field.

Adopting a mission to create and sustain social value: This is the core of what distinguishes social entrepreneurs from business entrepreneurs even from socially responsible businesses. For a social entrepreneur, the social mission is fundamental. This is a mission of social improvement that cannot be reduced to creating private benefits (financial returns or consumption benefits) for individuals. Making a profit, creating wealth, or serving the desires of customers may be part of the model, but these are means to a social end, not the end in itself. Profit is not the gauge of

value creation; nor is customer satisfaction; social impact is the gauge. Social entrepreneurs look for a long-term social return on investment. Social entrepreneurs want more than a quick hit; they want to create lasting improvements. They think about sustaining the impact.

Recognizing and relentlessly pursuing new opportunities: Where others see problems, social entrepreneurs see opportunity. They are not simply driven by the perception of a social need or by their compassion, rather they have a vision of how to achieve improvement and they are determined to make their vision work. They are persistent. The models they develop and the approaches they take can, and often does, change, as the entrepreneurs learn about what works and what does not work. The key element is persistence combined with a willingness to make adjustments as one goes.

Engaging in the process of continuous innovation, adaptation, and learning: Entrepreneurs are innovative. They break new ground; develop new models, and pioneer new approaches. However, as Schumpeter notes, innovation can take many forms. It does not require inventing something wholly new; it can simply involve applying an existing idea in a new way or to a new situation. Entrepreneurs need not be inventors. They simply need to be creative in applying what others have invented. Their innovations may appear in how they structure their core programs or in how they assemble the resources and fund their work. On the funding side, social entrepreneurs look for innovative ways to assure that their ventures will have access to resources as long as they are creating social value.

Acting boldly without being limited by resources currently in hand: Social entrepreneurs do not let their own limited resources keep them from pursuing their visions. They are skilled at doing more with less and at attracting resources from others. They use scarce resources efficiently, and they leverage their limited resources by drawing in partners and collaborating with others. They explore all resource options, from pure philanthropy to the commercial methods of the business sector. They are not bound by sector norms or traditions. They develop resource strategies that are likely to support and reinforce their social missions. They take calculated risks and manage the downside, so as to reduce the harm that will result from failure. They understand the risk tolerances of their stakeholders and use this to spread the risk to those who are better prepared to accept it.

Exhibiting a heightened sense of accountability to the constituencies served and for the outcomes created: Because market discipline does not automatically weed out inefficient or ineffective social ventures, social entrepreneurs take steps to assure they are creating value. This means that they seek a sound understanding of the constituencies they are serving. They make sure they have correctly assessed the needs and values of the people they intend to serve and the communities in which they operate.

2.5.2 Theories of Entrepreneurship

Contemporary writers in management and business have presented a wide range of theories of entrepreneurship. Many of the leading thinkers remain true to the Say-Schumpeter tradition while offering variations on the theme. For instance, in his attempt to get at what is special about entrepreneurs, Peter Drucker starts with Say's definition, but amplifies it to focus on opportunity. Drucker does not require entrepreneurs to cause change, but sees them as exploiting the opportunities that change (in technology, consumer preferences, social norms, etc.) creates. He says, *“The entrepreneur always searches for change, responds to it, and exploits it as an opportunity”*. The notion of *“opportunity”* has come to be central to many current definitions of entrepreneurship. It is the way today's management theorists capture Say's notion of shifting resources to areas of higher yield. An opportunity, presumably, means an opportunity to create value in this way. Entrepreneurs have a mind-set that sees the possibilities rather than the problems created by change. For Drucker, starting a business is neither necessary nor sufficient for entrepreneurship. He explicitly comments, *“Not every new small business is entrepreneurial or represents entrepreneurship”* (Dees, 2001:2).

2.5.3 Differences between Business and Social Entrepreneurs

The ideas of Say, Schumpeter, Drucker, and Stevenson are attractive because they can be as easily applied in the social sector as the business sector.

Social entrepreneurs are one species in the genus entrepreneur. They are entrepreneurs with a social mission. However, because of this mission, they face some distinctive challenges and any definition ought to reflect this. For social entrepreneurs, the social mission is explicit and central. This obviously affects how social entrepreneurs perceive and assess opportunities. Mission-

related impact becomes the central criterion, not wealth creation. Wealth is just a means to an end for social entrepreneurs. With business entrepreneurs, wealth creation is a way of measuring value creation. This is because business entrepreneurs are subject to market discipline, which determines in large part whether they are creating value. If they do not shift resources to more economically productive uses, they tend to be driven out of business. Markets are not perfect, but over the long haul, they work reasonably well as a test of private value creation, specifically the creation of value for customers who are willing and able to pay. An entrepreneur's ability to attract resources (capital, labour, equipment, etc.) in a competitive marketplace is a reasonably good indication that the venture represents a more productive use of these resources than the alternatives it is competing against (Dees, 2001:3).

The logic is entrepreneurs who can pay the most for resources are typically the ones who can put the resources to higher valued uses, as determined in the marketplace. Value is created in business when customers are willing to pay more than it costs to produce the good or service being sold. The profit (revenue minus costs) that a venture generates is a reasonably good indicator of the value it has created. If an entrepreneur cannot convince a sufficient number of customers to pay an adequate price to generate a profit, this is a strong indication that insufficient value is being created to justify this use of resources. A re-deployment of the resources happens naturally because firms that fail to create value cannot purchase sufficient resources or raise capital. They go out of business. Firms that create the most economic value have the cash to attract the resources needed to grow. Markets do not work as well for social entrepreneurs. In particular, markets do not do a good job of valuing social improvements, public goods and harms, and benefits for people who cannot afford to pay. These elements are often essential to social entrepreneurship. That is what makes it social entrepreneurship. As a result, it is much harder to determine whether a social entrepreneur is creating sufficient social value to justify the resources used in creating that value (Dees, 2001:4).

2.5.4 Characteristics of Social Entrepreneurs

Like business entrepreneurs social entrepreneurs have their own defining characteristics. According to Fisher, Martin and Kevin (2009:23) the following are the defining characteristics of Social entrepreneurs:

1. ***Social Catalysts*** – They are visionaries who create fundamental social changes by reforming social systems and creating sustainable improvements. According to Dees (2001) cited in Fisher, Martin and Kevin (2009:23) “though they may act locally, their actions have the potential to stimulate global improvements in their chosen arenas, whether that is education, health care, economic development, the environment, the arts, or any other social field.”
2. ***Socially Aware*** – Social improvement, as opposed to the creation of profit, should be the ultimate goal of the social entrepreneurs. The success of their endeavours is measured by their social impact, not by the amount of profits generated.
3. ***Opportunity-Seeking*** – They pursue their goals relentlessly, seeing every obstacle as an opportunity to develop and fine-tune their business models.
4. ***Innovative*** – They are creative, willing to think outside the box and ready to apply ideas to new situations. They understand that not every innovation will be a success, and they see failures as learning opportunities even as they strive for success.
5. ***Resourceful*** – Their visions are not limited by the resources that they have. Besides optimizing the use of existing resources, they actively expand their resource pool through collaboration with others.
6. ***Accountable*** – Social entrepreneurs are accountable to their beneficiaries, and they often ask themselves, “Am I creating value for the people I am serving? Do I understand their needs?” This is because social entrepreneurs want to know that they are actually making an impact. They are also accountable to investors who want to know that their contributions are indeed stimulating social improvements as promised by the social entrepreneurs.

2.5.5 Models of social entrepreneurs for sustainable development

The following are the basic models that social entrepreneurs apply for sustainable development:

- **Dispassionate analyzes drive passionate bets:** Leading social entrepreneurs have the ability to evaluate the system dispassionately, but then have the vision to make a passionate bet on a leverage point and a strategy to tip that leverage point.
- **The community is the compass, but a compass without a map is useless:** Community needs and preferences must fundamentally drive social entrepreneurial efforts. Nevertheless, these efforts must also be pragmatic and opportunistic about external realities.
- **Capacitate citizens to take charge:** key to long-term sustainability is community control over natural resources. However, a reality faced by many communities is that traditional control and decision making systems may need to be revived or may be strained when encountering previously non-existent threats. Therefore intervention is sometimes necessary. However, the intervention, to be lasting, must be aimed at capacitating local control as opposed to simply solving the problem at hand.
- **Adaptive discipline:** The protagonists you have met are focused, disciplined, and unrelenting, yet simultaneously adaptive to changing circumstances and new information. It is a unique temperament that allows one to be single minded without being narrow minded.
- **Equity needs ecology and ecology needs equity:** ecology and equity one cannot flourish without the other and development cannot truly be sustainable unless these twin pillars are structurally sound. Equity includes race, class, nationality, and gender. Ecology includes everything. There cannot be ecology without equity and there cannot be equity without ecology."

Integrating these insights more fully into the work of social entrepreneurs will kick the ball toward the goal of sustainable development. Similarly, the positive feedback loop of success and

attention will naturally encourage new entrants, driving more and more effective social entrepreneurial initiatives (Ashoka foundation, 2009:15).

What do social entrepreneurs still need?

In order to fulfil their objective social entrepreneurs require different things. Among those things the following are the major ones:

- **Investment:** More fuel is needed for social entrepreneurship to drive sustainable development on the ground. Stakeholders can and should allocate more resources (both financial and non-financial) for social entrepreneurs, as they will deliver tremendous bang for the sustainable development buck and spur innovations that may lead to exponential returns on investment.
- **Policy environment:** Social entrepreneurs will see their efforts buttressed and will find more promising opportunities to exploit as the rules of the game tilt in their favour. Perverse incentives in policy and regulatory structures that encourage environmental harms and do not encourage environmental benefits must be addressed.
- **Better information:** Better environmental data and the capacity to use this data intelligently at the community level are both essential.
- **Better cooperation and coordination:** Along with better information, social entrepreneurs also need to establish better synapses with other sectors and other social entrepreneurs.
- **Recognition and visibility:** Social entrepreneurs need recognition and visibility. For the best ideas coming from social entrepreneurs to be replicated, for the best people to enter this profession, and for the most pressing challenges in sustainable development to attract new social entrepreneurial entrants, profile for this profession and confidence in their abilities is essential (Ashoka foundation, 2009:15).

2.6. Ethiopian Environment policy

2.6.1 Introduction

Ethiopia is located in the north-eastern part of Africa between 3 and 15 degrees north latitude and 33 and 48 degrees east longitude. The total area of the country is about 1.13 million Sq. Kilometres and is bordered by Djibouti, Eritrea, Somalia, Kenya and the Sudan. The total population is about 77 million as of 2007 and the annual growth rate is about 2.7%. The altitude ranges from the highest peak of about 4,620 meters above sea level at Ras Dashen in the north, and down to 110 meters below sea level at the Danakil depression in the North East. About 45% of the country is highlands with an altitude of 1,500 meters above mean sea level and 55 % is lowlands with an altitude below 1,500 meters mean sea level. It has diverse topographic and climatic conditions. The country is endowed with rich natural resources, such as forest trees, surface and ground water resources, wild animals and birds (Tesfaye and Negussie, 2007:1).

The present government system is federal and the country is administratively structured into nine regional states, namely: Tigray, Afar, Amhara, Oromia, Somali, Benshangul-Gumuz, Southern Nations Nationalities and Peoples, Gambela, and Harari regional states and two city administrations, Addis Ababa the capital and Dire Dawa Administration council (Tesfaye and Negussie, 2007:1).

Natural resources, mainly land, water and forests are the bases for the economic activity of the vast majority of the Ethiopian people. Since time immemorial, people have been utilizing the diverse natural resources without giving attention to the conservation of the resources. This has resulted in to loss of soil fertility, which led to low productivity and low-income generation. Consequently, Ethiopia has become one of the developing countries facing serious and environmental challenges, in which the majority of the population is suffering from food shortage (Tesfaye and Negussie, 2007:1).

Poverty is one of the major challenges that Ethiopia is facing currently. A crucial mechanism, which has perpetuated poverty in Ethiopia, is the interaction of poverty and population pressures with the unproductive resource base. Unprecedented population pressures has resulted in decreasing plot size (average landholdings declined from 0.5 hectares per person in the 1960s to

0.11 in 1999), making an increasing number of households dependent on inadequately small and unproductive plots, and more vulnerable to the vagaries of unpredictable rainfall, and rendering some traditional farming practices unsustainable.

To overcoming the problem and understanding that a healthy, productive and economically viable environmental resource base are prerequisites for improving social well-being and facilitating sustained economic development, the Government has put environmentally sound economic development as its forefront agenda (Tesfaye and Negussie, 2007:2).

Since the Rio Summit the Government of Ethiopia has committed itself to bring about sustainable development by integrating environmental concerns in to all its national policies and programs. The country has also committed itself to fulfil the requirements put under the Millennium Development Goals (MDGs) and to all Multilateral Environmental Agreements, in which it has been a party (Tesfaye and Negussie, 2007:2).

Accordingly, Ethiopia has developed and is in the process of implementing a number of national environmental action plans and programs.

2.6.2 Ethiopian Environment policy

In a number of developing countries, balancing poverty and socioeconomic needs with environmental concerns creates very pressing problems. To meet this challenge and to realize the spirit of the World Summit on Sustainable Development held in Rio de Janeiro, Brazil, 1992, a number of countries have formulated strategic environmental sustainability policies to:

- a) include environmental concerns in their mission statements;
- b) develop long-term objectives;
- c) generate alternative strategies to pursue those objectives;
- d) implement strategies to devise policies, motivate employees, and allocate resources so that the formulated strategies can be executed;

e) monitor the execution of strategies and make adjustments according to feedback; and f) assess whether the strategies actually fulfil the countries' mission statements (Asayehgn, 2010:1).

Realizing that natural resources are the foundation of an economy, Ethiopia has attempted to develop a policy to protect its ecosystems. To counteract the short term results of economic and technical policies of the past and to meet the needs of present and future generations –the first comprehensive statements of Environmental Policy for the Federal Democratic Republic of Ethiopia were approved by the Council of Ministers in April 1997” (Asayehgn, 2010:2).

By proclamation No. 9/1995 the Ethiopian Environmental Protection Authority (EPA) has created an environmental policy, as well as legal and regulatory reforms to manage its environmental and natural resources. The overall aim of the Ethiopian Environmental Protection Authority (EPA) is to –to improve and enhance the health and quality of life of all Ethiopians and to promote sustainable social and economic development through the sound management and use of natural, human-made and cultural resources and the environment as a whole so as to meet the needs of the present generation without compromising the ability of future generations to meet their own needs” (EPA, 2010:7). Some of the specific duties of the Ethiopian Environment Protection Authority include:

- To prepare environmental protection policy and laws, and upon approval, follow up their implementation;
- To prepare directives and systems necessary for evaluating the impact of social and economic development projects on the environment; monitor and follow up their implementation;

Through sustainable management of the environment and natural resources, it is expected that the economic and social conditions of Ethiopia will be greatly improved and all Ethiopians will lead productive lives in a healthy environment. More specifically, keeping in mind the organization's overall aim and principles of action such as compliance and regulatory requirements, the policy objectives of the Ethiopian Environmental Protection Authority seek to communicate the following environmental priorities:

- Ensure that essential ecological processes and life support systems are sustained;
- Preserve biological diversity;
- See that renewable natural resources are used in such a way that their generative and productive capabilities are maintained;
- Ensure that the exploitation of non-renewable resources is managed wisely to extend the benefits far into the future;
- Identify under-utilized natural resources by finding new technologies for their development;
- Incorporate the full economic, social, and environmental costs of natural resources development into the planning, implementation, and accounting process by a comprehensive evaluation of the environment and the services it provides;
- Improve the environment of human settlements to satisfy the physical, social, economic, and cultural needs of their inhabitants on a sustainable basis;
- Ensure the empowerment and participation of the people and their own organizations in all levels of environmental management activities;
- Raise public awareness with educational programs to promote understanding of the essential linkages between environment and development;
- Undertake sectional and cross-sectional economic evaluations that create strategic alliances with the local, regional, national economy (FDRE, 1997 cited in EPA 2010:8).

Chapter Three

Data Analysis, Presentation and Interpretation

3.1 Introduction

The aim of the study is to know the major roles of multinational corporations', local companies' and social enterprises' social responsibility for sustainable environmental management in Ethiopia. The findings provided a better understanding of the role of the corporations and social enterprises in environmental management. To achieve, the research objective, the following research questions, as stated in chapter 1, formed the basis of data gathering, analysis and data interpretation.

1. What are the major roles of multinational corporations' and local companies' social responsibility for sustainable environmental management in Ethiopia?
2. What are the major roles of social entrepreneurs' social responsibility for sustainable environmental management in Ethiopia?
3. How are multinational corporations, local companies and social entrepreneurs contributing to the achievement of sustainable environmental management in Ethiopia?
4. What kind of environmental tools do multinational corporations, local companies and social entrepreneurs use to preserve the environment in Ethiopia?
5. What are the factors that obliged multinational corporations, local companies and social entrepreneurs to engage in environmental preservation?
6. What are the implications and possible lessons that could be learnt?

As it was already mentioned in the research methodology part, questionnaire is used as primary data collection method. It is distributed to the respondents by categorizing them in to two. The first type of the questionnaire is distributed to multinational and local companies and the second type of questionnaire is distributed to social enterprises. As shown in the table below, 45 questionnaires, which mean 15 for each, were sent out to the multinational, local and social organizations. Altogether, 36 organizations responded to the survey, giving a response rate of 80%. Of the 36 organizations that responded, 11 (30.5%) are multinational corporations,

14(39%) are local companies and 11(30.5%) are social organizations. The respondents represented a variety of positions and functions including, administrators, environmental managers, production managers, executive managers, human resource managers, etc

Table 3.1 Type of organization and response rate

No	Type of Organizations	Category of the organization	Sample Population	Response
1	Business Organizations	Multinational	15	11
2		Local	15	14
3	Social Organizations		15	11
	Total	Total	45	36
Total Response rate				80%

3.2 Analysis, Presentation and Interpretation of the data gathered

3.2.1 Environmental Management Systems and Tools

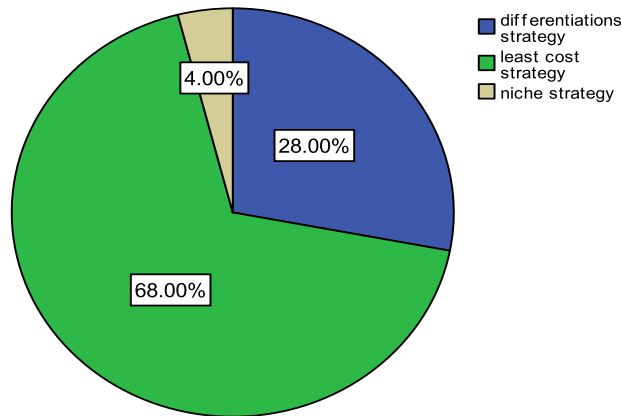
As explained in the literature review, environmental management system is a well structured and documented approach to respond to environmental challenges by focusing on environmental regulations and standards, and customer requirements. It is based on the need to respond proactively to the management of natural environment by conducting lifecycle assessment to lessen environmental burden and optimize the use of limited natural resources.

In parallel to the above, companies can strategically position themselves to take advantage of the market trends. Three generic strategies commonly used by corporations are the least-cost strategy, the differentiation strategy, and the niche strategy (Porter, 1980:873).

Accordingly, all selected business organizations have their own competitive strategies to point themselves in the marketplace. As shown in the following chart, 17(68%) of the organizations have least cost strategy. The rest of the organizations have differentiation and niche business strategy with 28 and 4 percent respectively. This entails that most of the organizations are producing mass production of standardized products needed by a wide set of clients and use their

price elasticity to gain market share. This strategy works best where there is a large demand for typical products.

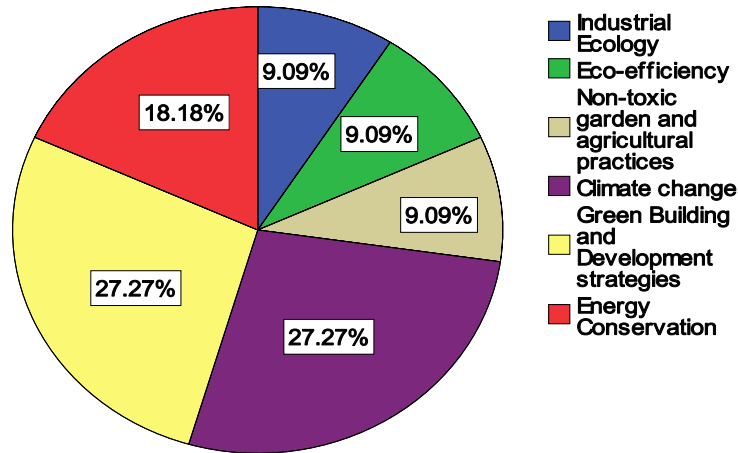
Chart 3.1 Organizations' Business Strategy



Source: Survey, 2010/2011

As far as social organizations concerned, social enterprises respondents are solicited information regarding the concepts considered in the management and design of the enterprise. Accordingly 1(9.1%) the respondents replied as industrial ecology, 1(9.1%) of them respond as eco-efficiency, 1(9.1%) of the respondent replied as non-toxic garden and industrial ecology, 3(27.3%) of the respondents answered climate change, 3(27.3%) of them replied green building and development strategies and 2(18.2%) of the respondents replied energy conservation. This information is precisely given on the chart below. From this reality, we can cascade the conclusion that most of the respondents are participating in climate change, green building and development strategies and energy conservation.

Chart 3.2 Concepts considered in the management and design of Social Enterprises



Source: Survey, 2010/2011

Recent trends show that companies, which strive for sustainable environment management, demonstrate some degree of accountability in the operation of their company and assign a responsible person to monitor the operations of their organization towards the environment. Sustainable environment demands a responsible person for environmental concerns.

As shown in the table below, 76 percent of the organizations have an individual who explicitly responsible for environmental concerns whereas, 24 percent of the organization do not have such individuals.

Table 3.2 Organizations and environmental concerns

Does your organization have at least one person with explicit responsibility for environmental concerns?	Frequency	Percent
Yes	19	76
No	6	24
Total	25	100

Source: Survey, 2010/2011

The next question solicited was the location of the individual who answered ‘yes’ in the above question. Accordingly out of 19 respondents who responded as yes we have at least one person with explicit responsibility for environmental concerns 3(16%) of their individual found in senior department, 10(52%) of the responsible person for environment located in production department, and 2(11%), 2(11%), 1(5%) and 1(5%) of them situated in the marketing, finance, specialized environment and other department respectively. From this data we can conclude that most of the individuals who are explicitly responsible for environmental management are located in the production department. The information depicted on table 3.3 below.

Table 3.3 the location of the responsible person for environment in the organization with frequency and percentage

Department	Frequency	Percent
Senior Department	3	16
Production Department	10	52
Marketing Management	2	11
Finance Department	2	11
Specialized Environmental Department	1	5
Other Departments	1	5
Total	19	100

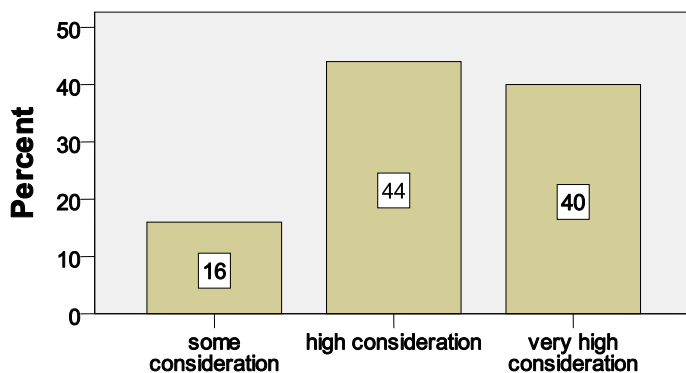
Source: Survey, 2010/2011

Consideration of Environmental Factors

As it is already said in the introductory and literature review part of this paper now a day, environmental management requires consideration of different factors when organizations either purchase or selling of products. Such a product or service may be environmentally friendly in it or produced and/or packaged in an environmentally friendly way. With this regard, the respondents are asked whether they considered environmental factors when the purchase and market goods and services. Accordingly, the overall weight of the data shows that 10(40%) of

the respondents replied as very high consideration, 11(44%) of them said high consideration and 4(16%) of them replied some consideration for the environment while purchasing and marketing goods and services through assessing the environmental performance of their suppliers, requiring their suppliers to undertake environmental measures and informing their buyer's ways to reduce their environmental impacts.

Chart 3.3 the extent of organizations consideration for environment when purchasing goods

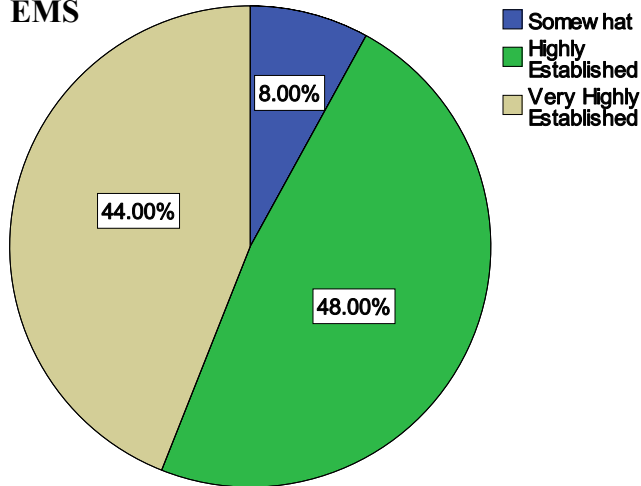


Source: Survey, 2010/2011

Practices established to implement environmental management

As discussed in the literature review, environmental management practices have evolved greatly over the past years. Initially viewed as a burden to facilities, environmental management is undergoing a change to a systems approach. Companies have initiated environmental management systems to demonstrate their commitment to continuous care and improvement of the environment. As indicated in the chart below, 92% of the organization fully established written environmental policy, environmental criteria used in the evaluation and compensation of employees, environmental training in place for employees, carry out external and internal environmental audits, benchmarking of environmental performance, etc. However, 8% of the selected organization partially established the above criteria of environmental management. This implies that most of the organizations are fulfilled for the pre-condition of the implementation of environmental management.

Chart 3.4 the extent of the implementation of EMS



Source: Survey, 2010/2011

Keeping in mind the above facts for the implement environmental management, as indicated in the following chart, 15 (61.25%) of the organizations are in progress towards environmental management. However, 10(38.75%) of the organizations are fully implemented environmental management and certified ISO 14001 environmental management certificate. From this we can conclude that, most of the company is conform to applicable national laws and regulations include pollution prevention as one of its policies and have a commitment towards continuously improving environmental performance.

Chart 3.5 Percentage of companies implemented Environmental Management



Source: Survey, 2010/2011

Management Practices and Environmental activities

As discussed earlier, due to agreements on global warming, an increase in the number of environmentally aware consumers, and the advent of ISO 14000; companies are increasingly interested in capturing benefits associated with environmental sustainability and stewardship. Environmental management systems have emerged as a means to systematically apply business management practices to environmental issues to improve competitive and environmental performance. To this end, the respondents are solicited about the extent to which management practices integrated with environmental activities. The results of this question can be found below in table.

As it shows the most management practices integrated with environmental management is quality management system, health and safety management system and materials requirement planning. The least integrated ones were full-cost accounting system and process accounting system.

Table 3.4 Means and Standard Deviations of the integration of management practices in environmental management

Management approaches	Mean	Std. Deviation
Health and Safety Management System	2.8800	.33166
Full cost accounting system	2.8400	.37417
Management accounting System	2.8000	.40825
Process accounting system	2.7600	.43589
Materials Requirement Planning	2.8800	.33166
ISO 9001	2.9200	.27689

Source: Survey, 2010/2011

3.2.2 Environmental Measures, Roles and Performance of the Organizations

As discussed in the literature review, corporations and social organizations have different roles to play for sustainable environmental management. According to this survey, 68%, 52%, 61% and 47% of multinational, local and social organizations are fair enough in contributing for sustainable environmental management. They are playing through offering knowledge creation education to people from different groups on environmental, open dialogue with the people on environmental issues, educating employees towards the current environmental problems and their solutions, giving regular financial support to local community activities and projects towards sustainable environmental management respectively.

In addition, in some way, 33%, 47%, 39% and 45% of the respondents said as their organizations are contributing for sustainable ecological running through offering knowledge creation education to people from different groups on environmental issues, open dialogue with the people, educating employees towards the current environmental problems and their solutions,

giving regular financial support to local community activities and projects towards sustainable environmental management respectively . This information is depicted precisely on table 3.5 below.

Table 3.5 the role of corporations and Social Organizations for environmental management

	Yes		In Part		No	
	Frequency	%	Frequency	%	Frequency	%
Offering awareness creation education to people from different groups towards environmental issues	24	68	11	33	-	-
Open dialogue with the people on environmental issues	18	52	17	47	-	-
Educating employees towards the current environmental problems and their solutions	21	61	14	39	-	-
Giving regular financial support to local community activities and projects towards sustainable environmental management	16	47	16	45	3	8

Source: Survey, 2010/2011

The contribution of corporations and social organizations for Ethiopian Environmental Protection Authority Objectives

As discussed in chapter two, the Ethiopian environmental protection authority has created an environmental policy, as well as legal and regulatory reforms to manage its environmental and natural resources. Through contributing to Ethiopian Environmental Protection Authority, it is expected that the management of the environment and natural resources will be greatly improved. The following table shows the response of the respondents to the contribution of Ethiopian environmental management objectives.

Table 3.6 the role of organizations for Ethiopian environmental protection authority

	Yes		In Part		Not applicable	
	Frequency	%	Frequency	%	Frequency	%
Contributing to the objectives of the Ethiopian Environmental protection Authority through:						
Preserving biological diversity	19	53	9	25	7	22
Maintaining renewable resources	23	67	10	30	2	3
Ensuring that non-renewable resources are managed wisely	26	75	7	22	2	3
Ensuring empowerment and participation of the people in sustaining the environment	22	64	13	36	-	-

Source: Survey, 2010/2011

As shown in the above table, all multinational, local and social organizations are highly contributing to the achievement of the Ethiopian environmental protection authority objectives through preserving biological diversity (52.8%), maintaining renewable resources (67%), ensuring that non-renewable resources are managed wisely (75%), and ensuring empowerment and participation of the people in sustaining the environment (64%). In addition, 25%, 30% 22% and 36% of organizations are partially contributing to the achievement of the objectives of Ethiopian environment management.

The role of social entrepreneurs in the social sector

As we said earlier, social enterprises are reformers and revolutionaries but with a social mission. They make fundamental changes in the way things are done in the social sector. There are different ways social entrepreneurs play change agents in the social sector or in sustainable environmental management. Regarding the respondents reply, a total of 82% of social enterprises are adopted a mission to create and sustain the environment whereas as 9% in part, and 9% answered no to do so. This implies that social entrepreneurs are creating and sustaining social value for the sake of lasting improvements and sustaining the impact.

On the other hand, 91% of the respondents are contributing to sustainable environmental management through recognizing and persistently pursuing new opportunities, engaging in a process of continuous innovation, adaptation, and learning, acting boldly without being limited by resources currently in hand, and exhibiting a heightened sense of accountability to the constituencies served and for the outcomes created.

Table 3.7 the role of social entrepreneurs in the social sector

	Yes		In Part		No		Not applicable	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
The role of Social Entrepreneurs								
Adopting a mission	9	82	1	9	1	9	-	-
Recognizing and relentlessly pursuing new opportunities	10	91	-		-	-	1	9
Engaging in a process of continuous innovation, adaptation, and learning	10	91	1	9	-	-	-	-
Acting boldly without being limited by resources currently in hand	10	91	1	9	-	-	-	-
Exhibiting a heightened sense of accountability to the constituencies served and for the outcomes created	10	91	1	9	-	-	-	-

Source: Survey, 2010/2011

Multinational corporations, local companies and negative environmental impact

Environmental aspects are all areas of a business that can have an impact on the environment. Environmental impacts are the effects of these aspects on the environment, including air, noise, water (storm water, groundwater, and waste water), soil, flora, fauna and people. The essence of this information is to identify how important potential negative environmental impacts considered from corporations products and production. It is obvious that identifying the potential negative environmental impact that exists in an organization important to the corporation in

order to take remedial actions (corrective measures) to correct it. With this regard, a total of 88%, 60%, 76%, 76%, 68%, 72%, 84% and 80% of the respondents answered that the current operation of their company does not have impacts on use of natural resources, solid waste generation, waste water effluent, local air pollution, global pollutants, aesthetic effects, soil contamination, and risk of severe accidents respectively.

On the other hand, 12%, 40%, 24%, 20%, 25%, 20%, 8%, and 20% of the respondents replied that the company's operations have moderately negative impacts on use of natural resources, solid waste generation, waste water effluent, local air pollution, global pollutants, aesthetic effects, soil contamination, and risk of severe accidents respectively. Additionally, 4%, 8% and 4% of the respondents answered that the existing operation of their facility have very negative impacts on global pollutants, aesthetic effects, soil contamination and risk of severe accidents respectively. This data reveals that most of the organizations' product or production process does not have negative impacts on the identified variables.

Table 3.8 Business organizations and negative environmental impact

The impacts of the operations of corporations on:	No negative impacts (%)	Moderately negative impacts (%)	Very negative impacts (%)	Not applicable (%)
Use of natural resources	88	12	-	-
Solid waste generation	60	40	-	-
Waste water effluent	76	24	-	-
Local air pollution	76	20	-	4
Global pollutants	68	25	4	-
Aesthetic effects	72	20	8	-
Soil contamination	84	8	4	4
Risk of severe accidents	80	20	-	-

Source: Survey, 2010/2011

The next question asked the respondents about a change in the environmental impacts per unit of output of the corporations products or production process in the last three years with respect to use of natural resources, solid waste generation, waste water effluent, local air pollution, global

pollutants, aesthetic effects, soil contamination and risk of severe accidents. Accordingly, 80%, 80%, 76%, 76%, 76%, 72%, 84% and 80% of them replied that the environmental impact per unit of output of its products or production processes in the last three years significantly decrease regarding use of natural resources, solid waste generation, waste water effluent, local air pollution, global pollutants, aesthetic effects, soil contamination and risk of severe accidents respectively. On the other hand, 4%, 8%, 8%, 16%, 16%, 20%, 16%, 16% of them replied that the environmental impacts per unit of output of its products or production process in the last three years increase with regard to use of natural resources, solid waste generation, waste water effluent, local air pollution, global pollutants, aesthetic effects, soil contamination and risk of severe accidents respectively. This information is revealed on the following table 3.9 precisely.

Table 3.9 Business Organizations and a change in the environmental impacts per unit of output of its products or processes in the last three years

A change in the environmental impacts per unit of output of the corporation's products or processes in the last three years with respect to:	Significant Decrease (%)	Decrease (%)	No Change (%)	Increase (%)	Significant Increase (%)	Not Applicable
Use of natural resources (energy, water, etc)	80	4	-	4	-	12
Solid waste generation	80	4	-	8	-	8
Waste water effluent	76	8	4	8	-	4
Local or regional air pollution	76	8	-	16	-	-
Global pollutants (e.g. greenhouse gases)	76	8	-	16	-	-
Aesthetic effects (noise, smell, landscape)	72	8	-	20	-	-
Soil contamination	84	-	-	16	-	-
Risk of severe accidents	80	4	-	16	-	-

Source: Survey, 2010/2011

Business organizations and production technologies

As we have said in the literature review, corporations can use different production technologies to minimize the impacts their process may have on the environment. Accordingly, as indicated in the following table, multinational and local companies in Ethiopia have undertaken different methods specifically related to its production technologies to cope up with the negative environmental impacts. Among those methods, as they can select more than one method, 88% of the respondents are adopted change in production processes which reduce pollution emissions and resource use, 80% of the sampled companies adopted changes in production technologies, 52% of the corporations adopted end-of-pipe technologies which reduce pollution emissions or allow for resource recovery and 48% of the companies implemented changes in product change characteristics.

Table 3.10 Business organizations and Production technologies

If your facility has undertaken significant measures specifically related to its production technologies, which of the following most closely characterizes the nature of such measures?	Yes (%)	No (%)
Changes in production processes which reduce pollution emissions and/or resource use	88	12
End-of-pipe technologies which reduce pollution emissions or allow for resource recovery	52	48
Changes in production technologies	80	20
Changes in product characteristics	48	52

Source: Survey, 2010/2011

Methods of encouraging energy and natural resource conservation

As discussed in literature review, there are different methods of which the corporations can contribute for sustainable environmental management. These methods mostly focus on improving the efficiency of production, minimizing wastes, and reducing costs. It look for eliminate emissions, effluents, and accidents. To this end, the respondents are solicited about how important the methods listed in the following table in encouraging energy and natural

resource conservation and renewal in their organizations. Accordingly, the survey indicates that multinational and local companies are adopted like reducing use of energy and virgin materials through product redesign, making greater use of renewable resources, off-setting resource consumption with replenishment, developing ecologically sensitive purchasing policies and inventory- management systems, and selling products and services based on their environmental benefits. These types of products are normally designed using natural or recycled materials, and are said to have little too or no negative impact on the ecology of the planet. Many products that meet this criteria are eco-friendly, meaning they actually help replenish the planet rather than create an added burden to nature.

Table 3.11 Business organizations and methods of encouraging energy and natural resource conservation in percentage

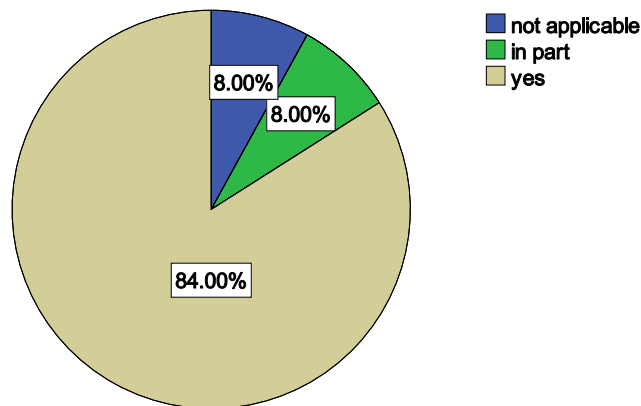
How important the following methods in encouraging energy and natural resource conservation and renewal in your facility or organization:	Not Important	Some Important	Important	Very Important
Reducing use of energy and virgin materials (resources extracted from nature in their raw form) through product redesign	-	-	24	76
Making greater use of renew-able materials	-	-	24	76
Off-setting energy/ resource consumption with replenishment	-	-	16	84
Developing ecologically sensitive purchasing policies and inventory-management systems	-	-	16	84
Selling products and/or services based on their environmental benefits (Green marketing)	-	-	32	68

Source: Survey, 2010/2011

Business organizations and consideration of potential impacts of new product development

Nowadays, as indicated in the literature review, product-development decisions are based upon not only projected cash flows but also projected future costs associated with each product design. Improved quality using product design and packaging is a basis for competitive advantage. To be competitive, companies should consider the potential impacts of the products or services when they develop it. The respondents are requested about the consideration of their organization for the potential impacts when developing new products and services. Accordingly, 21(84%) of them replied yes, 2(8%) of the respondents replied in part and the rest 2(8%) of the respondents replied not applicable in their organizations. This means the majority of corporations taking different factors into consideration like assessing energy use, recyclability or pollution generation of the product, lack of chemicals or the use of synthetic materials in the products when they develop new product.

Chart 3.6 the extent to which the consideration of potential impacts of new product development in the environment



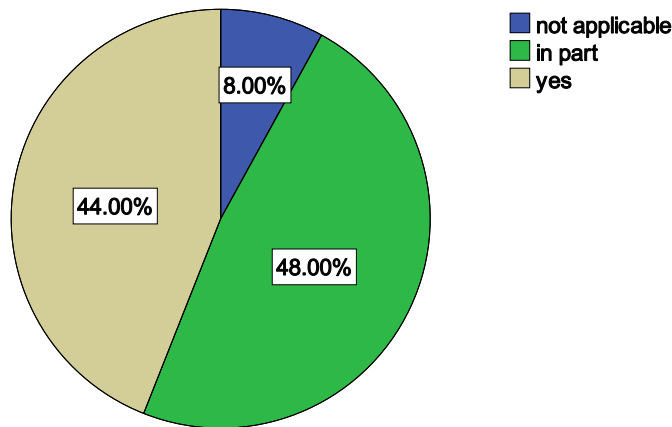
Source: Survey, 2010/2011

Business organizations and Environmental information on the products

The respondents are requested whether they are providing clear and accurate environmental information on its products, processes and activities to customers, suppliers and local community. Accordingly, 44% of them replied yes, 48% of the respondents replied partially providing clear and accurate information about the attributes of the product on the environment

to customers, suppliers and local community. This implies majority of the respondents are providing information on the products. The main reason is that when a product provides information on the package about environmentally friendly in it or produced and/or packaged in an environmentally friendly way, potential consumers will view a product or service's "greenness" as a benefit and base their buying decision accordingly or consumers will be willing to pay more for green products than they would for a less-green comparable alternative product.

Chart 3.7 Business organizations and Environmental information on the products



Source, Survey, 2010/2011

3.2.3 The influence of stakeholders and Motivation on environmental practices

As we discussed in the literature review, business interacts with a wide range of parties. Satisfying shareholders is the driving force of the corporations; the adoption of environmental management implies concern for a wider range of shareholders' the public, bystanders, employees, consumers, the regional and global environment. Environmental management must address its objectives within the context of company practices.

As the survey shows the most obvious stakeholders that influence firms' adoption of environmental practices are various government bodies that account 92%, 4% and 4% from the 4 point Likert scale of some, strong and very strong influence respectively. This means that government plays an important role in firms' decision to adopt environmental management.

First, governments can act as a coercive force by sending a clear signal of their endorsement of ISO 14001 by, for example, enhancing the reputation of adopters. Second, government can facilitate adoption by reducing information and search costs linked to the adoption of the standard by providing technical assistance to potential adopters.

The table below also shows customers are the second largest influential in adopting environmental management for corporations which accounts 80%, 8%, 8% and 4% of very strong, strong, some and no influence. This suggests that, firms are responding to customer requirements. Several studies have found that firms that adopted environmental management practices were motivated by customer concerns. A survey of the largest Canadian firms showed that customer pressure was the second most cited source of pressure to adopt an environmental management plan, after government pressure (Henriques and Sadorsky, 1996).

The data also shows that next to legislators and customers, like competitors, suppliers, local community, environmental organizations and shareholders account a significant amount of influence in enforcing the corporations to adopt environmental management. The least influential to adopt environmental management is employees and trade associations. This suggests that in Ethiopia there is no strong union of trade and employees who can strive for the establishment of environmental management in the corporations.

Table 3.12 the influence of different groups in improving environmental performance in percentage

To what extent has each of the following groups influenced your organization to improve its environmental performance?	No Influence (%)	Some Influence (%)	Strong Influence (%)	Very Strong influence (%)
Customers	4	8	8	80
Suppliers	12	16	60	12
Competitors	4	8	16	72
Trade associations	20	24	32	24
Local Community	12	20	12	56
Socially responsible investment funds	12	32	40	16
Environment organizations	8	12	36	44
Media	16	20	44	20
Shareholders	16	12	36	36
Corporate Management	16	16	40	28
Employees	24	28	40	8
Other facilities	20	16	44	20
Regulators or legislators	12	4	4	92

Source: Survey, 2010/2011

The influence of internal corporate departments to adopt environmental management

Like stakeholders, who have a strong influence on the firms to adopt environmental management, corporate departments have pressure on the corporations to implement environmental management. As indicated in the table below, the three most powerful corporate departments on the implementation of environmental management is corporate public relations, corporate legal and regulatory affairs and corporate marketing department which accounts 52%, 48% and 46% respectively. 40% of the corporations do not have a separate environmental department. This data implies that in trying to improve relations with stakeholders, public relation department exerts power on the corporation to implement environmental department.

Table 3.13 influence of corporate departments to adopt environmental management

To what extent have the following corporate departments influenced your organization to improve its environmental performance?	No Influence (%)	Some Influence (%)	Strong Influence (%)	Very Strong Influence (%)	Our Corporation does not have such department (%)
Corporate Environmental Management	-	-	24	36	40
Corporate legal and regulatory affairs	-	4	32	48	16
Corporate Public Relations	-	12	32	52	4
Corporate Strategy	-	20	32	40	8
Corporate Marketing	-	14	36	46	4
Corporate Product Design	-	22	30	44	4

Source: Survey, 2010

Motivations for implementation of Environmental management

In order to see the motivations the following question was devised for the respondents: “How important do you consider the following motivations to have been with respect to the environmental practices of your facility?” All respondents were asked to indicate how important they perceived their reasons to engage in environmental practices on a 4-point Likert scale, with 1 representing ‘not important’ and 4 standing for ‘very important’. The results of this question can be found below in Table 3.14. Note that respondents had the opportunity to rank several environmental management motivations.

When looking at their scores on the 4-point Likert scale, it can be concluded that the five most important motivations for environmental practices for corporations are regulatory compliance, prevent environmental incidents, corporate image, cost saving and improve relation with the local community with a percentage of 96, 92, 90, 84 and 80 respectively. The least motivational factor for implementation of environmental management is easier to attract and retain staffs, which account 20% and 52% of very important and important scale respectively. It can be

derived from these results that companies required by laws, national or international agreements to care for the environment.

Table 3.14 Motivations to implement environmental management in percentage

How important do you consider the following motivations to have been with respect to the environmental practices of your facility?	Not Important	Somewhat Important	Important	Very Important
Prevent or control environmental incidents	-	-	8	92
Regulatory compliance	-	-	4	96
Corporate profile/image	-	-	10	90
Cost savings	4	-	12	84
New technology development	-	8	64	28
New product development	-	16	52	32
Easier to attract and retain staff	-	28	52	20
Competitive Advantage	4	4	28	64
Achieve ISO 14001 certification	-	8	56	36
Improve relations with our local community	-	4	16	80

Source: Survey, 2010/2011

The relation of purchasing department with suppliers

The respondents were asked to provide information on their purchasing department relations with suppliers in purchasing the materials. As the table shows, 52% of the corporations always use a green purchasing policy. On the other hand, the rest of the corporations use green purchasing policy occasionally and frequently.

The table also shows 20%, 36% and 36% of the corporations purchasing department asks suppliers to be certified ISO 14001 all the time, frequently and occasionally respectively. On the other hand, 4% of the corporations purchasing department do not ask suppliers to be certified ISO 14001. This implies that the sampled corporations are working with vendors and it can help to improve the environmental performance of products.

Table 3.15 the relation of purchasing department with suppliers

	Never		Occasionally		Frequently		All the time	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
To what extent does your purchase department use a green purchasing policy?	-	-	6	24	6	24	13	52
To what extent does your purchasing department request your suppliers to be ISO 14001 certified?	1	4	9	36	9	36	5	20

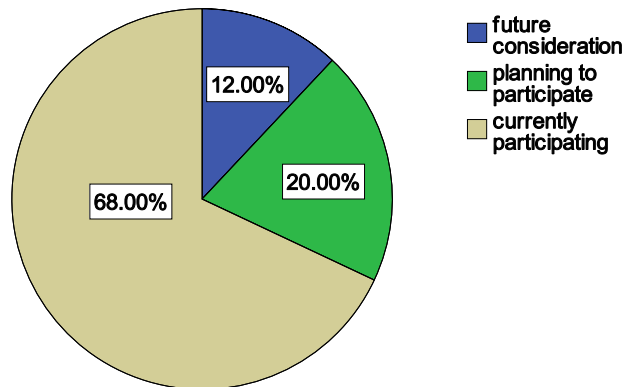
Source: Survey, 2010/2011

Status of participation of corporations in industry- led environmental programs

Respondents are solicited an information regarding their participation in industry-led environmental programs. Accordingly, 17(68%) of the respondents replied as currently participating, 5(20%) of them answered as planning to participate, 3(12%) of the respondents answered that they will consider it for the future. This information is precisely given on the pie-chart below.

This implies that most of the respondents are participating in environmental management programs like responsible care, industry climate challenge programs etc.

Chart 3.8 the status of the participation of corporations in industry-led programs



Source: Survey, 2010/2011

3.2.4 The models, motivations and barriers of Social Entrepreneurs

The models of Social Enterprises for sustainable environmental management

As we discussed in detail in the literature review part, the basic model of the social entrepreneurs working in sustainable development is fairly simple. Assess a problem; understand the environmental, social, and economic dimensions. Figure out the leverage points, then execute like a pit bull being told to eat every T-bone steak in a butcher's shop, that is relentlessly and efficiently.

As the table shows, social enterprises used different models concurrently. The most basic models used by social enterprises are the community is the compass, but a compass without a map is useless 10(90.9%). This implies that social enterprises drive by the community needs and preferences. The next model used by the social organizations is equity needs ecology and ecology needs equity 9(81.8%). This revealed that social enterprises implicitly recognize the transitive and fundamentally interconnected relationship between ecology and equity one cannot flourish without the other and development cannot truly be sustainable unless these twin pillars are structurally sound.

The third model used by social organizations is capacitating citizens to take charge, which accounts 8(72.7%). This shows social enterprises believe that a key to long-term sustainability is community control over natural resources with the transfer of the knowledge and ability to continue monitoring, to assess the result, and to identify the most promising strategies to address future problems.

The other two models dispassionate analyzes drive passionate bets, and adaptive discipline also accounts 7(63.6%), and 6(54.5%) respectively.

Table 3.16 Models of social entrepreneurs for sustainable environmental management

If your enterprise has working towards sustaining the environment, which of the following models of social entrepreneurs for sustainable environmental management are adopted?	Frequency (n=11)	Percent
Dispassionate analyzes drive passionate bets	7	63.6
The community is the compass, but a compass without a map is useless	10	90.9
Capacitate citizens to take charge	8	72.7
Adaptive discipline	6	54.5
Equity needs ecology and ecology needs equity	9	81.8
Total	43	

Source: Survey, 2010/2011

Motivations of social entrepreneurs to engage in sustainable environmental management

Like corporations, there are different factors to influence social organizations to engage in environmental activities. From the information given on the table below, 11 (100%) of the respondents replied as they engaged because they want to take one’s own responsibility. In addition to this, 2(18.18%) and 8(72.7%) of the above respondents select seeking public recognition and improve relations with the community respectively. In oppose to corporations, this data revealed that, in social organizations there is no obligation imposed by the legislation.

All of social organizations want to take their own responsibility to see an Ethiopia where the environment sustainably managed.

Table 3.17 motivations of social entrepreneurs to engage in sustainable environmental management

Which of the following factors influence you to engage in environmental activities?	Frequency	Percent
Obligated by compliance with legislation	0	0
Seeking public recognition	2	18.18
To improve relations with the community	8	72.7
To take one's own responsibility	11	100
Total	21	

Source: Survey, 2010/2011

Barriers in developing sustainable environmental management

The positive feedback loop of success and attention will naturally encourage new entrants, driving more and more effective social entrepreneurial initiatives. However, there are nevertheless tremendous hurdles and challenges that social organizations in Ethiopia face that dampen the effectiveness of their efforts. Among those hurdles the first one is investment, 9(82%) of them respond as very high influence, 1(9%) of them respond as high influence and the rest 1 (9%) respond as some influence. This revealed that still more fuel is needed for social entrepreneurship to drive sustainable development on the ground. The second hurdle is policy environment which accounts 8(73%) of them as very high influence, 2(18%) of respondents respond high influence and the rest 1(9%) of respondents replied some influence. This means that Ethiopian social organizations needs the rules of the game slant in their favour to see their efforts buttressed and find more promising opportunities to exploit. Furthermore, better information and cooperation also contributes to the barriers in developing a sustainable environmental management. This information is clearly shown on table 3.18 below.

Table 3.18 Barriers of social organizations in developing sustainable environmental management

	No influence		Some influence		High influence		Very high influence	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Investment	-	-	1	9	1	9	9	82
Policy Environment	-	-	1	9	2	18	8	73
Better information	-	-	-	-	7	64	4	37
Better cooperation and coordination	-	-	-	-	7	64	4	37

Source: Survey, 2010/2011

Chapter Four

Summary of findings, Conclusions and Recommendations

This chapter is divided into three sections. The first section summarizes the major findings of the study, the second section presents the conclusion of the research and the third section suggests for corporations, social enterprises, and community and policy developers.

4.1 Summary of major findings

- A total of 11 multinational corporations, 14 local companies, and 11 social organizations have participated in the study. The respondents have a variety of positions and functions including, administrators, environmental managers, production managers, executive managers, and human resource managers.
- The participant multinational and local corporations have least cost, differentiation and niche business strategy with a percentage 68, 28 and 4 percent respectively.
- Social enterprises considered industrial ecology, eco-efficiency, non-toxic garden and industrial ecology, climate change, green building and development strategies, and energy conservation in the management and design of the enterprise with 9.1%, 9.1%, 9.1%, 27.3%, 27.3%, and 18.2% respectively.
- Of multinational and local corporations in the study, 76 percent of the organizations have at least one individual explicitly responsible for environmental concerns.
- The corporations' responsible person for environmental concern is located in the department of senior management, production, marketing, finance, specialized environment and other department with 16%, 52%, 11%, 11%, 5% and 5% respectively.
- Of all corporations, 88% are highly consider environmental factors while purchasing and marketing goods through assessing the environmental performance of their suppliers,

requiring their suppliers to undertake environmental measures and informing their buyer's ways to reduce their environmental impacts.

- Of all corporations, 92% of them fully established written environmental policy, public environmental report, environmental accounting, environmental performance indicators, environmental criteria used in the evaluation and compensation of employees, environmental training in place for employees, carry out external and internal environmental audits, and benchmarking of environmental performance. The rest of the corporations are partially established the above practices.
- 38.75% of multinational and local companies are fully implemented environmental management and certified ISO 14001 certificate while 61.25% of the organizations are in progress for the implementation of environmental management.
- The most three integrated management practice with corporations environmental management system is quality management system, health and safety management system and materials requirement planning with a mean of 2.92 and 2.88, 2.88 respectively while the least integrated one is process accounting system with a mean of 2.76.
- Business and social organizations are contributing a lot for sustainable environmental management through offering knowledge creation education to people from different groups on environmental issues, open dialogue with the people on environmental issues, educating employees towards the current environmental problems and their solutions, giving regular financial support to local community activities and projects towards sustainable environmental management. Furthermore, they are contributing for the achievement of the objectives of Ethiopian environmental protection authority through preserving biological diversity, maintaining renewable resources, ensuring that non-renewable resources are managed wisely, and ensuring empowerment and participation of the people in sustaining the environment.
- In addition to the above, social enterprises contributing for ecological sustainability through adopting a mission, recognizing and persistently pursuing new opportunities,

engaging in a process of continuous innovation, adaptation, and learning, acting boldly without being limited by resources currently in hand, and exhibiting a heightened sense of accountability to the constituencies served and for the outcomes created.

- The majority of multinational and local companies answered that the operation of their companies do not have impacts on the use of natural resources, solid waste generation, waste water effluent, local air pollution, global pollutants, aesthetic effects, soil contamination, and risk of severe accidents.
- Of all corporations, 80%, 80%, 76%, 76%, 76%, 72%, 84% and 80% of them replied significantly decrease in its products or production process environmental impact per unit of output in the last three years regarding use of natural resources, solid waste generation, waste water effluent, local air pollution, global pollutants, aesthetic effects, soil contamination and risk of severe accidents.
- To deal with environmental problems and encourage energy and natural resource conservation, the majority of multinational and local companies adopted a change in production processes and production technologies, reducing use of energy and virgin materials, making greater use of renewable resources, balancing resource consumption with replenishment, developing ecologically sensitive purchasing policies and inventory-management systems, and green marketing.
- Of all corporations, 84% of them definitely considering the potential environmental impacts of the products or services when they develop it.
- Of all corporations, 44% of them replied yes, 48% of the respondents replied partially in providing clear and accurate information about the attributes of the product on the environment to customers, suppliers and local community.
- The three most noticeable influential stakeholders on the corporation's decision to adopt environmental management are regulators, customers and competitors. On the other hand, the least influential to adopt environmental management are employs and trade associations.

- The three most influential corporate departments on the corporations to the implementation of environmental management are corporate public relations, corporate legal and regulatory affairs and corporate marketing department.
- The five most important motivations or reasons for environmental practices in corporations are regulatory compliance, prevent environmental incidents, corporate image, cost saving and improve relation with the local community.
- 52% of the corporations' purchasing departments always use a green purchasing policy. On the other hand, the rest of the corporations use green purchasing policy occasionally and frequently.
- 68%, 20% and 12% of corporations replied currently participating, planning to participate and future consideration for participation in industry-led environmental programs.
- The three most basic models used by social enterprises for sustainable environmental management are the community is the compass, but a compass without a map is useless, equity needs ecology and ecology needs equity and capacitating citizens to take charge.
- The three most important reasons to engage social enterprises in sustainable environmental management are to take one's own responsibility, seeking public recognition and improve relations with the community.
- The most hurdle facing social entrepreneurs in sustainable environmental management are investment, policy environment, and better information and cooperation.

4.2 Conclusions

The purpose of this study was to know the role of multinational corporations, local companies and social entrepreneurs' social responsibility for sustainable environmental management in Ethiopia. The aim was to assess how multinational corporations, local companies, and social enterprises are contributing to the achievement of sustainable environmental management, to describe the major kinds of environmental tools that are used by multinational corporations, local companies and social entrepreneurs to preserve the environment, to identify the factors that

obliged multinational corporations, local companies and social entrepreneurs to engage in environmental preservation, to examine the implications and possible lessons that could be learnt. The research problem was approached by the means of questionnaires.

Despite world is facing unprecedented condition in environmental degradation, in Ethiopia corporations and social organizations are playing a significant role. Among those roles the following are the major ones:

- offering knowledge creation education to people from different groups on environmental issues,
- open dialogue with the people on environmental issues,
- educating employees towards the current environmental problems and their solutions,
- giving regular financial support to local community activities and projects to sustainable environmental management,
- Realizing the objectives of Ethiopian environmental protection authority through preserving biological diversity, maintaining renewable resources, ensuring that non-renewable resources are managed wisely, and ensuring empowerment and participation of the people in sustaining the environment.
- Unlike corporations, social enterprises are also significantly contributing for ecological sustainability in Ethiopia through adopting a mission to create and maintain community value , recognizing and persistently pursuing new opportunities to serve the mission, engaging in a process of continuous innovation, adaptation, and learning, acting boldly without being limited by resources currently in hand, and exhibiting a heightened sense of accountability to the constituencies served and for the outcomes created.
- The findings also confirms that to cope up with environmental challenges multinational and local companies adopted different kinds of environmental preservation techniques. Among those techniques a change in production processes and production technologies, reducing use of energy and virgin materials, making greater use of renewable resources, balancing resource consumption with replenishment, developing ecologically sensitive purchasing policies and inventory- management systems, green marketing and purchasing policy, and considering the potential environmental impacts of the products or services when they develop it are the major ones.

- In the same way, social enterprises use the community as the compass, but a compass without a map is useless, equity needs ecology and ecology needs equity, capacitating citizens to take charge, dispassionate analyzes drive passionate bets and adaptive discipline models or techniques to deal with the current environmental problems.
- The study also confirmed that among those stakeholders exerted influence on the corporations environmental performance improvement regulators were perceived to be most influential. Customers and competitors were the second and the third influential on their environmental performance improvement.
- The finding shows that a variety of corporate departments influence facilities' environmental performance. Among those corporate public relations, corporate legal and regulatory affairs and corporate marketing department are the major ones.
- The major reasons or factors given to engage in sustainable environmental management for multinational and local companies are regulatory compliance, prevent environmental incidents, corporate image, cost saving and improve relations with the local community. As far as social entrepreneurs concerned, most important reasons to engage in sustainable environmental management are to take one's own responsibility, seeking public recognition and improve relations with the community.
- Although social enterprises are contributing a lot for sustainable environmental management in Ethiopia, they are facing investment, policy environment, and better information and cooperation problems.

In general, a strong and important result that emerges from the study is that there is evidence of corporations and social organizations' having significant roles on sustainable environmental management in Ethiopia. Even though the operations of corporations may have some detrimental effects, this study proves they have significant roles.

4.3 Recommendations

Based on the results of the study, the following recommendations are forwarded:

For Multinational and Local corporations

- Since most of corporations' business strategy is least cost, to strengthen their roles on ecological sustainability, it is essential corporations to build partnerships with subcontractors, suppliers, customers and to encourage them to reduce packaging, waste, and costs;
- Even if most of corporations have at least one person responsible for environmental concerns, they do not fully implemented environmental management system and certified ISO 14001. Therefore, they should strive to implement environmental management system and certified ISO14001 in order to ensure that whatever their level of impact, that impact is managed appropriately and minimized where possible;
- Corporations should incorporate total quality environmental management components on the techniques they already adopted in order to magnify their roles to ecological sustainability. These are customer identification, continuous improvement, doing the job right first time and systems approach;
- Unlike social enterprises, the corporation's motivation to engage in sustainable environmental management largely comes from regulators compliances or legislators. However, to maximize the benefit comes from corporations, they should try to implement before imposed by legislators.

For Social Enterprises

- Even if social enterprises are playing a significant role for sustainable environmental management in order to enlarge it they should network with other enterprises and stakeholders with an interest in moving communities towards sustainability;
- Develop a global vision (think globally, act locally) to expand inspirational influence beyond the local community;

For the Community and policy developers

- The community and government should recognize and support the role of corporations and social enterprises for sustainable ecology;
- Adopt policies to address leverage points in the system that encourage sustainable environmental management, such as taxes and incentives;
- Provide incentives for corporations and social enterprises encouraging ecological sustainability and create solutions for local issues;
- Since most of the hurdles of social enterprises are investment and better policy environment, policy developers should consider these factors when they develop it.

References

- Alexandra L. (2007), Social Entrepreneurs as Agents for Environmental Sustainability-An Analysis of the Contribution of Selected Social Entrepreneurs to the Achievement of the United Nations Millennium Development Goals, University of St. Gallen: St. Gallen
- Asayehgn (2010), Environmental Policy for Ethiopia's Sustainable Social and Economic Development: A Working Paper, University of California: California
- Ashoka (2010), what is social entrepreneur? http://www.ashoka.org/social_entrepreneur, accessed (07/11/2010)
- Ashoka foundation (2009), measuring effectiveness a six year summary of methodology and findings, www.ashoka.org, accessed (05/11/2010)
- Barrow (2006), Environmental Management for Sustainable Development, Routledge Printing Press 2nd edition, New York
- British Standards Institution (1992), "Specification for environmental management systems", HMSO:London
- Broder J. (2010). "[Climate Talks End With Modest Deal on Emissions](http://www.nytimes.com/2010/12/12/science/earth/12climate.html)". New York Times, <http://www.nytimes.com/2010/12/12/science/earth/12climate.html>, accessed (21/12/2010)
- Brown L (2006), Rescuing a Planet under Stress and a Civilization in Trouble, W. W. Norton, New York
- Brugmann, J. and Prahalad, C. (2007), Co-creating business's new social compact, Harvard Business Review 85 (2), 80–90
- Chen J. and He M. (2008), Sustainable development and corporate environmental responsibility: a comparative study of Chinese and multinational corporations, Southwest Forestry University, China

- Costantinos, BT (2008), Beyond globalization -The Starbucks – Ethiopia Coffee
Debate,<http://www.costantinos.net/Globalization%20and%20the%20Starbucks%20-%20Ethiopia%20Coffee%20debacle.pdf>, (accessed 05/10/2010)
- Council on Economic Priorities (1991), the better world investment guide, Englewood Cliffs, NJ:
Prentice Hall
- David C. and Guler A. (2008), Corporate Social Responsibility, Ventus Publishing Aps,
Denmark
- Earl B. (1989), the practice of social research, Wadsworth publishing company, Belmont
- Elliot D.(2010), Sixteenth Session of the Conference of the Parties to the United Nations
Framework Convention on Climate Change and Sixth Session of the Meeting of
the Parties to the Kyoto Protocol, Pew Centre on Global Climate Change, Mexico
- Embaye, (2007) corporate social responsibility in globe,
<http://www.csrglobe.com/pdf/Report.pdf>, (accessed 02/11/2010)
- Environmental Protection Agency (1990), Environmental investments: The cost of a clean
environment, Washington DC: U.S. Government Printing Office
- Erickson and King (1999) Environmental Management, <http://www.inem.org>, accessed
(22/11/2010)
- Erwee R. (2007), Global business environments and strategies: managing for global competitive
advantage, International management and leadership, Oxford University Press
174 – 203: Oxford
- Ethiopian Environmental Protection Authority (EPA) (2010), Environment for Development,
<http://www.epa.gov.et>, accessed (18/11-2010)
- Fisher, Martin J., and Kevin S (2009), "Real Good, Not Feel Good."
<http://www.realgoodnotfeelgood.org/pdf/>, accessed (15/11/2010)
- GEMI's 'TQEM Primer' (1992), Total Quality Environmental Management,
<http://www.gemi.org/resources/TQE>, accessed (22/11/2010)

- Global Eco-Labeling Network, (1999), what is eco-labeling?,
<http://www.globalecolabelling.net>, accessed (22/11/2010)
- Gregory D. (2001), the meaning of social entrepreneurship,
http://www.caseatduke.org/documents/dees_sedef.pdf, accessed (12/11/2010)
- Hart S. (2000), "Beyond Greening", Harvard Business Review on Business and the Environment", HBD Press, Boston
- Henriques I, Sadorsky P. 1996. The determinants of an environmentally responsive firm: an empirical approach. Journal of Environmental Economics and Management **30**: 381–395
- Hill C. (2007), International Business: competing in the global marketplace, Sixth edition, McGraw-Hill/Irwin printing press, New York
- Hopfenbeck W. (1993), the green management revolution: Lessons in environmental excellence, Englewood Cliffs, NJ: Prentice Hall
- International standard organization, (1996), Environmental management systems -- Specification with guidance for use, <http://www.iso.org/iso/catalogue>, accessed (25/11/2010)
- Jeremy H., Gregory D. and Michael L. (2010), Sustainable development and entrepreneurship: Past contributions and future directions, Journal of Business Venturing, 25(5):439-448
- John V. (2010), "[Does the Cancún agreement show climate leadership?](http://www.guardian.co.uk/environment/2010/dec/13/climate-leadership-cancun)", The Guardian,<http://www.guardian.co.uk/environment/2010/dec/13/climate-leadership-cancun>, (accessed 21/12/2010)
- Kimball L. (1992), Forging international agreements: Strengthening intergovernmental institutions for environment and development, Washington, DC: World Resources Institute
- Lori D. (2008), top 10 reasons to implement environmental management,
<http://blog.intelx.com/author/LoriDyne.aspx>, accessed (25/11/2010)
- Malcolm T. (2010), what is a multinational corporation? <http://www.wisegeek.com/what-is-a-multinational-corporation.htm>, accessed (02/10/2010)
- Malcolm T. (2010), what is green marketing? <http://www.wisegeek.com/what-is-a-green-marketing.htm>, accessed (02/10/2010)

- Michael B. (1994), Multinational corporations, private codes, and technology transfer for sustainable development, http://findarticles.com/p/articles/mi_hb3153/is_n1_24/ain28635803/pg_19/, accessed (21/11/2010)
- Micheal P. (1980), Competitive strategy, New York: Free Press
- Nathan J. (2006), Nation-States and the Multinational Corporation, Princeton University press
- Paul S. & Hart S. (1994), Greening organizations, International Journal of Public Administration, 17: 607-635
- Paul S. (1995), the role of corporations in achieving ecological sustainability, academy of management review, 20(4):936-960, Academy of Management: Lewisburg
- Piotr M. (2004), corporate environmental responsibility: Is a common corporate social responsibility framework possible? <http://siteresources.worldbank.org/EXTDEVCOMSUSDEVT/Resources/csrframework.pdf> (accessed 20/10/2010)
- Post J. (1991), Managing as if the earth mattered, Business Horizons, 34(4): 32-38 Boston University: Boston
- Priority press (2009), Copenhagen Climate Change Conference: From “Hopenhagen” to “Nopenhagen”, <http://eorm.com/media/priority-press/copenhagen-climate-change-conference/> edition 28, accessed (03/12/2010)
- Root F. (1994), Multinational Companies, <http://www.econ.iastate.edu>, (accessed 08/11/2010)
- Sachs J. & Huizinga H. (1987), U.S. commercial banks and the developing-country debt crisis, Washington, DC: The Brookings Institution
- Schumpeter J. (1934), the Theory of Economic Development, Harvard University Press: Cambridge
- Schumpeter J. (1942), capitalism, socialism, and democracy, Harper: New York.
- Schwab foundation, (2010), <http://www.skollfoundation.org>, (accessed 30/10/2010)

- Shauna S. (2004), Bringing Multinational Corporations into the Environmental Treaty-Making Process through the UN Global Compact,
http://www.pon.org/downloads/ien14_2sadowski.pdf (accessed 25/10/2010)
- Simon (2009) 5 Reasons To Set Up An Environmental Management System Today
<http://www.freshbusinessstinking.com/business>, accessed 22/11/2010
- Susan W. (2010), Definition of Green Marketing,
<http://sbinfoCanada.about.com/od/marketing/g/greenmarketing>, accessed (19/11/2010)
- Sustainable Development Commission (2010), History of Sustainable Development,
<http://www.sd-commission.org.uk/pages/a-brief-history-of-sustainable-development.html>. accessed (02/12/2010)
- Sweet C. (2010), "[Nations Approve Cancun Climate Package](http://online.wsj.com/article/SB10001424052748703518604576012922254366218.html)",
<http://online.wsj.com/article/SB10001424052748703518604576012922254366218.html>, accessed (21/12/2010)
- Tesfaye and Negussie (2007), The Need for Environmental Statistics and Indicators in Ethiopia Addis Ababa, Ethiopia, presented Environment statistics workshop
- The Economist (2010), Climate-change diplomacy, <http://www.economist.com/node/17730564>, accessed (21/12/2010)
- The World Bank (2000), "Making Sustainable Commitments: An Environment Strategy of the World Bank", Washington DC)
- Ugur Y., Attila Y. and Glen R. (1984), Note on the Perception of Multinational Companies,
<http://www.jstor.org/stable/40227732>, (accessed 03/10/2010)

LIST OF APPENDIX

Annex 1

Questionnaire 1 (to be filled by Multinational and Local companies)

**Addis Ababa University
School of Graduate Studies
Department of Public Administration and Management
School of Business and Public Administration
Masters Program in Public Management and Policy, Specialization in Development
Management**

**Survey Questionnaire for a Study on the Role of Multinational Corporations, Local
Companies' and Social Entrepreneurs' Social Responsibility for Sustainable
Environmental Management in Ethiopia**

To the Respondents,

This questionnaire is designed to collect information regarding the role of Multinational Corporations, Local Companies, and Social Entrepreneurs' Social Responsibility for Sustainable Environmental Management in Ethiopia to fulfill the requirements of the master of Public Management and Policy specialization in development management. The result of this questionnaire will be utilized for research purpose only.

To this end, we kindly request that you complete the following short questionnaire regarding the stated objective. It will take no longer than 10 minutes of your time. Your response is of the utmost importance to me.

Therefore, your genuine, honest, and prompt response is a valuable input for the quality and successful completion of the project.

General Instructions

- There is no need of writing your name
- In all cases where answer options are available please tick in the appropriate box.
- For questions that demands your opinion, please try to honestly describe as per the questions on the space provided

Thank you in advance for your cooperation

Part I General Information

This section of the questionnaire refers to general information about the respondents. The information will allow us to compare groups of respondents. Once again, your cooperation is appreciated.

1. Your Position in the Company-----
2. Which one of the following more appropriate for your company?
Multinational Company Local Company
3. If the answer for the above question is multinational company:
Where is located the headquarters of the company? -----
Which one best describes your companies' basic activities in Ethiopia?
Facility Operation Large Scale Development Sale of Products
4. How many people do you employed? -----
5. Which one best describes your companies' activities?
Producing goods Providing services

Part II Environmental Management Systems and Tools

This section contains questions related to your facility's or organization's general management systems and tools, as well as those which relate to the environment. If your firm has many production facilities, please answer with reference to the facility at which you are located or with which you are most familiar.

6. Which of the following most describe your company's business strategy?
Differentiation strategy Least-cost strategy Niche strategy
 7. Does your facility have at least one person with explicit responsibility for environmental concerns?
Yes No
- If no, please proceed to question 10.

8. Which of the following best describes the location of this individual within your facility?
(Please tick only one box.)

- Senior management Production/operations Finance/accounting
 External/media relations Marketing/Sales Purchasing
 Human resources Product development
 Specialized environmental department (or equivalent)
 Other department (please specify) -----

9. While purchasing and/or marketing goods and services, to what extent does your facility or organization regularly considers the following measures? *(Please tick one box for each row.)*

	No Consideration	Some Consideration	High Consideration	Very high consideration
Assessing the environmental performance of our suppliers				
Requiring suppliers to undertake environmental measures				
Informing buyers of ways to reduce their environmental impacts				

10. To what extent the following practices have been established in your organization in order to implement environmental management. *(Please tick one box for each row.)*

	Not established	Somewhat	Highly Established	Very highly established
Written environmental policy				
Environmental criteria used in the evaluation and/or compensation of employees				
Environmental training program in place for employees				

Carry out external environmental audits				
Carry out internal environmental audits				
Benchmark environmental performance				
Environmental accounting				
Public environmental report				
Environmental performance indicators / goals				

11. Has your facility actually implemented an environmental management system?

Yes Year ____ In progress No

12. If no or in progress, please proceed to Question 15. If yes: Has your facility acquired ISO 14001 certifications in environmental management?

ISO 14001 Yes Year --------- No

13. To what extent are the environmental activities of your facility integrated with the following management practices? (Please tick one box for each row.)

	Not at all	Partially	Fully	Not Applicable
Quality management system (e.g. ISO 9000)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Health and safety management system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Full-cost or activity-based accounting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Management accounting system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Process or job control system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inventory or materials requirement planning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Part III Environmental Measures, Roles and Performance of the organization

In this section, you are asked to provide an overall picture of how your facility or organization has sought to address the environmental impacts of its production activities through technical measures and innovations and their role toward reducing the environmental problems.

14. Does your enterprise offer awareness creation education to people from different groups towards environmental issues? (such as Climate change, Eco-efficiency, etc)

Yes No In part Don't Know
Not applicable

15. Do you have an open dialogue with the people on environmental issues?

Yes No In part Don't Know Not applicable

16. Do you educate your employees towards the current environmental problems and their solutions?

Yes No In part Don't Know Not applicable

17. Does your enterprise give regular financial support to local community activities and projects towards Sustainable Environmental Management?

Yes No In part Don't Know applicable

18. Have you contributing to the objectives of the Ethiopian Environmental Protection Authority through:

A. Preserving Biological diversity?

Yes No In part Don't Know Not applicable

B. Maintaining renewable resources?

Yes No In part Don't Know Not applicable

C. Ensuring that non-renewable resources are managed wisely?

Yes No In part Don't Know Not applicable

D. Rapid public awareness with educational programs?

Yes No In part Don't Know Not applicable

E. Ensuring empowerment and participation of the people in sustaining the environment?

Yes No In part Don't Know Not applicable

F. Incorporate the full economic, social and environmental costs of natural resources development in the planning process?

Yes No In part Don't Know Not applicable

19. How important do you consider each of the following potential negative environmental impacts from your facility's products and production processes? *(Please tick one box for each row.)*

	No Negative Impacts	Moderately Negative Impacts	Very Negative Impacts	Not Applicable
Use of natural resources (energy, water, etc)				
Solid waste generation				
Waste water effluent				
Local or regional air pollution				
Global pollutants (<i>e.g.</i> greenhouse gases)				
Aesthetic effects (noise, smell, landscape)				
Soil contamination				
Risk of severe accidents				

Other impacts (please specify) -----

20. Taking into consideration the negative environmental impacts stated above, which of the following environmental performance measures does your organization regularly monitor?
(Please tick one box for each row)

	Yes	No	Not Applicable
Use of natural resources (energy, water, etc)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Solid waste generation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wastewater effluent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Local or regional air pollution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Global pollutants (e.g. greenhouse gases)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aesthetic effects (noise, smell, landscape)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Soil contamination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Risk of severe accidents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other environmental performance measure (please specify)-----			

21. Has your facility undertaken concrete actions to reduce environmental impacts associated with the following? *(Please tick one box for each row.)*

	Yes	No	Not Applicable
Use of natural resources (energy, water, etc)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Solid waste generation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Waste water effluent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Local or regional air pollution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Global pollutants (e.g. greenhouse gases)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aesthetic effects (noise, smell, landscape)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Soil contamination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Risk of severe accidents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other impacts (please specify)-----			

22. If your facility has undertaken significant measures specifically related to its production technologies, which of the following most closely characterizes the nature of such measures?

- Changes in production processes which reduce pollution emissions and/or resource use
- End-of-pipe technologies which reduce pollution emissions or allow for resource recovery
- Changes in production technologies
- Changes in product characteristics

23. Has your facility experienced a change in the environmental impacts per unit of output of its products or production processes in the last three years with respect to the following? *(Please tick one box for each row.)*

	Significant Decrease	Decrease	No Change	Increase	Significant Increase	Not Applicable
Use of natural resources (energy, water, etc)						
Solid waste generation						
Waste water effluent						
Local or regional air pollution						
Global pollutants (e.g. greenhouse gases)						
Aesthetic effects (noise, smell, landscape)						
Soil contamination						
Risk of severe accidents						

24. How important the following methods in encouraging energy and natural resource conservation and renewal in your facility or organization:

	Not Important	Some Important	Important	Very Important
Reducing use of energy and virgin materials through product redesign				
Making greater use of renew-able materials				
Off-setting energy/ resource consumption with replenishment				
Developing ecologically sensitive purchasing policies and inventory-management systems				
Selling products and/or services based on their environmental benefits (Green marketing)				

25. Have you tried to reduce your enterprise's environmental impact in terms of:

	Yes	No	In Part	Don't Know	Not applicable
Energy Conservation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Waste minimization and recycling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pollution Prevention	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Protection of the natural environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sustainable transport options	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

26. Can your enterprise save money by reducing its environmental impact (e.g. by recycling, reducing energy consumption, and preventing pollution)?

Yes No In part Don't Know Not applicable

27. Do you consider the potential impacts when developing new products and services (e.g. assessing energy use, recyclability or pollution generation)?

Yes No In part Don't Know Not applicable

28. Does your enterprise supply clear and accurate environmental information on its products, services and activities to customers, suppliers, local community, etc?

Yes No In part Don't Know Not applicable

29. Can you think of ways in which your enterprise could use the sustainability of its products and services to gain an advantage over competitors (e.g. recyclability of products, energy efficiency, etc)?

Yes No In part Don't Know Not applicable

Part IV: the influence of Stakeholders and Motivations on Environmental Practices

In this section, you are asked to provide information on the relative importance of different stakeholder groups and motivations on decisions regarding your organization's environmental practices.

30. To what extent has each of the following groups influenced your organization to improve its environmental performance?

	No Influence	Some Influence	Strong Influence	Very Strong influence
Customers				
Suppliers				
Competitors				
Trade associations				
Local Community				
Socially responsible investment funds				
Environment organizations				
Media				
Shareholders				

Corporate Management				
Employees				
Other facilities within company				
Regulators or legislators				

31. To what extent have the following corporate departments influenced your organization to improve its environmental performance? (Please tick one for each department):

	No Influence	Some Influence	Strong Influence	Very Strong Influence	Our Corporation does not have such department
Corporate Environmental Management					
Corporate legal and regulatory affairs					
Corporate Public Relations					
Corporate Strategy					
Corporate Marketing					
Corporate Product Design					

If other (please specify):-----

32. How important do you consider the following motivations to have been with respect to the environmental practices of your facility? *(Please tick one box for each row.)*

	Not Important	Somewhat Important	Important	Very Important
Prevent or control environmental incidents				
Regulatory compliance				
Corporate profile/image				
Cost savings				
New technology development				
New product development				
Easier to attract and retain staff				
Competitive Advantage				
Achieve ISO 14001 certification				
Improve relations with our local community				

Other reasons (please specify)-----

Part V Relations with stakeholders

In this section, you are asked to provide information regarding your organization relations with stakeholders.

Never Occasionally Frequently All the time

33. To what extent does your purchasing department use a green purchasing policy?
34. To what extent does your purchasing department request your suppliers to be ISO 14001 certified?
35. To what extent does your purchasing department ask suppliers to provide information about their environmental management practices?

36. What is the status of your participation in industry-led environmental programs such as Responsible Care, industry climate challenge programs, etc
- | | | | |
|-------------------------|--------------------------|-------------------------|--------------------------|
| Not being considered | <input type="checkbox"/> | Future consideration | <input type="checkbox"/> |
| Planning To participate | <input type="checkbox"/> | Currently participating | <input type="checkbox"/> |

37. Approximately how many complaints has your facility received from the surrounding community about odours, noise, smoke, dust, effluents, water pollution, or aesthetic appearance in the last three years?-----

38. General Comments-----

Thank you for your participation!

Annex 2

Questionnaire 2 (to be filled by Social Enterprises)

**Addis Ababa University
School of Graduate Studies
Department of Public Administration and Management
School of Business and Public Administration
Masters Program in Public Management and Policy, Specialization in Development
Management**

Survey Questionnaire for a Study on the Role of Multinational Corporations', Local Companies' and Social Entrepreneurs' Social Responsibility for Sustainable Environmental Management in Ethiopia

To the Respondents,

This questionnaire is designed to collect information regarding the role of Multinational Corporations', Local Companies' and Social Entrepreneurs' Social Responsibility for Sustainable Environmental Management in Ethiopia to fulfil the requirements of the master of Public Management and Policy specialization in development management. The result of this questionnaire will be utilized for research purpose only.

To this end, we kindly request that you complete the following short questionnaire regarding the stated objective. It will take no longer than 10 minutes of your time. Your response is of the utmost importance to me.

Therefore, your genuine, honest, and prompt response is a valuable input for the quality and successful completion of the project.

General Instructions

- There is no need of writing your name
- In all cases where answer options are available please tick in the appropriate box.
- For questions that demands your opinion, please try to honestly describe as per the questions on the space provided

Thank you in advance for your cooperation

Part I General Information

This section of the questionnaire refers to general information about the respondents. The information will allow us to compare groups of respondents. Once again, your cooperation is appreciated.

- 1. Your Position-----
- 2. Which organizational type best describes your enterprise?
Local NGO International NGO Co-operative
Other please specify-----
- 3. How many people do you employed? -----

Part II Involvement of Social Entrepreneurs in Sustainable Environmental Management

In this section, you are asked to provide an overall picture of your organization’s contribution in addressing the environmental problems of the country.

- 4. What is the vision of success for your organization?-----

- 5. Does your vision of success include sustainability principles and /or ensuring sustainable environmental management?-----

- 6. Is sustainable environmental management a priority for you and /or your organization and /or your funders? If so, please give examples of Sustainable Environmental Management initiatives-----

7. Which concepts, if any are considered by your organization in the management and design of the enterprise? (you can tick more than one choice)

Industrial Ecology	<input type="checkbox"/>	Eco-efficiency	<input type="checkbox"/>
Non-toxic garden and agricultural practices	<input type="checkbox"/>	Climate change	<input type="checkbox"/>
Green Building and Development strategies	<input type="checkbox"/>	Energy Conservation	<input type="checkbox"/>

If other, please specify-----

8. Does your enterprise offer awareness creation education to people from different groups towards environmental issues? (such as Climate change, Eco-efficiency, etc)

Yes No In part Don't Know Not applicable

9. Do you have an open dialogue with the people on environmental issues?

Yes No In part Don't Know Not applicable

10. Do you educate your employees towards the current environmental problems and their solutions?

Yes No In part Don't Know Not applicable

11. Does your enterprise give regular financial support to local community activities and projects towards Sustainable Environmental Management?

Yes No In part Don't Know Not applicable

12. Have you contributing to the objectives of the Ethiopian Environmental Protection Authority through:

G. Preserving Biological diversity?

Yes No In part Don't Know Not applicable

H. Maintaining renewable resources?

Yes No In part Don't Know Not applicable

I. Ensuring that non-renewable resources are managed wisely?

Yes No In part Don't Know Not applicable

J. Rapid public awareness with educational programs?

Yes No In part Don't Know Not applicable

K. Ensuring empowerment and participation of the people in sustaining the environment?

Yes No In part Don't Know Not applicable

L. Incorporate the full economic, social and environmental costs of natural resources development in the planning process?

Yes No In part Don't Know Not applicable

13. Does your organization contributes to Sustainable Environmental Management through:

A. Adopting a mission?

Yes No In part Don't Know Not applicable

B. Recognizing and relentlessly pursuing new opportunities?

Yes No In part Don't Know Not applicable

C. Engaging in a process of continuous innovation, adaptation, and learning?

Yes No In part Don't Know Not applicable

D. Acting boldly without being limited by resources currently in hand?

Yes No In part Don't Know Not applicable

E. Exhibiting a heightened sense of accountability to the constituencies served and for the outcomes created?

Yes No In part Don't Know Not applicable

Part III Motivations to engage in Environmental activities and ways to address the problem

In this section, you are asked to provide information on the motivations to engage in environmental activities and ways to address the environmental problems.

14. If your enterprise has working towards sustaining the environment, which of the following models of social entrepreneurs for sustainable environmental management are adopted? (you can tick more than one choice)

- Dispassionate analyzes drive passionate bets
- The community is the compass, but a compass without a map is useless
- Capacitate citizens to take charge
- Adaptive discipline
- Equity needs ecology and ecology needs equity

15. While purchasing goods, to what extent does your organization regularly considers the environmental friendly condition of the products?

- No Consideration Somewhat consideration
- High consideration Very high consideration

16. Which of the following factors influence you to engage in environmental activities? (you can tick more than one choice)

- Obligated by compliance with legislation
- Seeking public recognition
- To improve relations with the community
- To take one's own responsibility

If other please specify-----

17. To what extent the following barriers or obstacles influenced in developing a sustainable environmental management?

	No influence	some influence	High influence	Very high influence
Investment				
Policy Environment				
Better Information				
Better cooperation and coordination				

If other please specify-----

18. General Comments-----

Thank you for your participation!

