
**CORPORATE ENVIRONMENTALISM AND SUSTAINABILITY:
EMERGING TRENDS IN KENYA**

BY:

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DECLARATION

This project is my original work and has not been presented for a degree in any other university.



03.11.2003

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This project has been submitted for examination with our approval as university supervisors.



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To Lukelesia and Leunida. You have been a source of joy and inspiration.

“My position is straightforward. Industry must make a profit. But these profits should not be at the expense of the environment. I don’t necessarily see this as a conflict.”

Dr. Mostafa K Tolba

Executive Director, UNEP

European Conference on Industry and Environmental Management, 1997

“Industry and business associations should encourage individual companies to undertake programmes for improved environmental awareness and responsibility at all levels to make these enterprises dedicated to the task of improving environmental performance based on internationally accepted management practices.”

Chapter 30, Agenda 21.

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TABLE OF CONTENTS

Declaration.....	i
Acknowledgements.....	iv
Table of Contents.....	v
Abstract.....	vii
List of Acronyms and Abbreviations.....	viii
List of Tables.....	ix
List of Figures.....	ix
List of Graphs.....	x
Appendices.....	x

CHAPTER ONE

1.1 INTRODUCTION.....	1
1.2 BACKGROUND TO THE STUDY.....	3
1.3 EMERGING TRENDS IN CORPORATE ENVIRONMENTALISM.....	6
1.4 STATEMENT OF THE PROBLEM.....	10
1.5 RATIONALE.....	12
1.6 OBJECTIVES.....	13
1.7 DELIMITATIONS OF THE STUDY.....	14
1.8 DEFINITION OF TERMS AND CONCEPTS.....	16

CHAPTER TWO

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

2.1 INTRODUCTION.....	22
2.2 CORPORATE BUSINESS AND SUSTAINABILITY.....	22
2.3 CORPORATE ENVIRONMENTALISM.....	25
2.3.1 The Evolution of Corporate Environmentalism.....	25
2.3.2 The Changing Corporate Culture.....	27
2.3.3 The Future of Corporate Business.....	30

2.4	DRIVERS OF CORPORATE ENVIRONMENTALISM.....	33
2.5	THE BENEFITS OF CORPORATE ENVIRONMENTALISM.....	36
2.6	CONCEPTUAL FRAMEWORK.....	39
2.7	THE OPERATIONAL CONCEPTUAL FRAMEWORK.....	46
2.8	HYPOTHESES.....	50

CHAPTER THREE: METHODOLOGY

3.1	SAMPLING FRAME.....	51
3.2	THE SAMPLE.....	52
3.3	DATA COLLECTION.....	53
3.4	DATA ANALYSIS.....	54

CHAPTER FOUR: RESULTS AND ANALYSIS

4.1	DRIVERS OF CORPORATE ENVIRONMENTALISM.....	56
	4.1.1 Analysis and Hypothesis Testing.....	61
	4.1.2 Discussion.....	62
4.2	CORPORATE ENVIRONMENTAL ACTIVITIES.....	66
	4.2.1 Analysis and Hypothesis Testing.....	74
	4.2.2 Discussion.....	75
4.3	BENEFITS OF CORPORATE ENVIRONMENTALISM.....	78
	4.3.1 Analysis and Hypothesis Testing.....	82
	4.3.2 Discussion.....	84

CHAPTER FIVE: CONCLUSSIONS AND RECOMMENDATIONS

5.1	CONCLUSSIONS.....	86
5.2	RECOMMENDATIONS.....	90

REFERENCES.....	95
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APPENDICES

ABSTRACT

The concept of corporate environmentalism, seen in the increasing adoption of the green agenda by companies in Kenya, resonates with global trends. Companies are becoming eager to project a reputation profile of being green as a strategic and competitive issue. These emerging trends represent a paradigm shift in corporate management. The triple bottom line concept of economic, social and environmental sustainability is becoming key to future business success.

This study investigates three basic, but key issues in the emerging trends of corporate environmentalism in Kenya: the motivating factors, corporate activities, and benefits. The study compares the nature of corporate environmentalism between the manufacturing and service companies on the basis of these three aspects.

The study uses two independent samples. Sample 1 consists of seventeen (17) companies from the manufacturing and allied sector. Sample 2 consists of eight (8) companies from the commercial and services sector. The companies were purposively selected to meet a criterion for environmental concern and responsibility. A standard structured questionnaire administered to environmental, corporate affairs, public relations, and marketing departments as the case may be, was used in the data collection.

In the analysis, the differences in the nature of corporate environmentalism between manufacturing and service companies were explored. Kruskal Wallis, a non-parametric statistical test, was used to determine whether there is any difference between manufacturing and service companies in relation to what motivates them, the kind of activities they engage in, and what benefits they get from corporate environmentalism.

Results show that companies are motivated by both internal and external factors towards corporate environmentalism, and both tangible and intangible benefits accrue to companies from their environmental concern and responsibility. Further, the results show that whereas, statistically, there is a difference in drivers and the kind of activities engaged in between manufacturing and service companies, there is no difference in benefits.

LIST OF ACRONYMS AND ABBREVIATIONS

EMS	Environmental Management System
ISO	International Standards Organization
EMAS	Environmental Management and Audit Scheme
WSSD	World Summit on Sustainable Development
ISIC	International Standard Industrial Classification System
BS	British Standard
EIA	Environmental Impact Assessment
HSE	Health, Safety and Environment
ICC	International Chamber of Commerce
WBCSD	World Business Council for Sustainable Development
BCSD	Business Council for Sustainable Development
RSA	Royal Society for the Encouragement of Arts, Manufacturers and Commerce
NGO	Non-Governmental Organization
IHA	International Hotels Association
CT	Clean Technologies
EPA	Environmental Protection Agency
UK	United Kingdom
MSRI	Michigan Source Reduction Initiative
WRAP	Waste Reduction Always Pays
WCED	World Commission on Environment and Development
LCA	Life Cycle Assessment
GBN	Green Business Networks
UNEP	United Nations Environment Programme
SDC	Sustainable Development Consortia
EAWS	East Africa Wildlife Society
CSR	Corporate Social Responsibility
UNRISD	United Nations Research Institute for Social Development
TNC	Trans-National Corporation

LIST OF TABLES

Table 4.1	Results-drivers of corporate environmentalism (manufacturing sector)
Table 4.2	Results-drivers of corporate environmentalism (service sector)
Table 4.3	Summary-drivers of corporate environmentalism
Table 4.4	Distribution 1-drivers of corporate environmentalism
Table 4.5	Results-corporate environmental activities (manufacturing sector)
Table 4.6	Results-corporate environmental activities (services sector)
Table 4.7	Summary-corporate environmental activities
Table 4.8	Frequency of environmental reporting
Table 4.9	Audience of environmental reports
Table 4.10	Structure of environmental reports
Table 4.11	Environmental management and staffing
Table 4.12	Aspects of supply chain management
Table 4.13	Distribution 2 - corporate environmental activities
Table 4.14	Results-benefits of corporate environmentalism (manufacturing sector)
Table 4.15	Results-benefits of corporate environmentalism (services sector)
Table 4.16	Summary-benefits of corporate environmentalism
Table 4.17	Distribution 3– benefits of corporate environmentalism.

LIST OF FIGURES

Fig.1	The triple bottom-line
Fig.2	Phases of corporate response to the environment
Fig.3	Changing role of industry associations
Fig.4	The operational theoretical framework

LIST OF GRAPHS

Graph 1	Comparison of drivers between manufacturing and service companies
Graph 2	Overall drivers of corporate environmentalism
Graph 3	Comparison of corporate activities
Graph 4	Overall involvement in select corporate activities
Graph 5	Frequency of environmental reporting
Graph 6	Audience of environmental reports
Graph 7	Structure of environmental reports
Graph 8	Environmental management and staffing
Graph 9	Aspects of supply chain management
Graph 10	Comparison of benefits of corporate environmentalism
Graph 11	Overall benefits of corporate environmentalism

APPENDICES

Appendix A.1	Standard Questionnaire
Appendix A.2	Sample 1
Appendix A.3	sample 2
Appendix A.4	Examples of corporate commitment to the environment
Appendix A.5	Examples of green adverts
Appendix A.6	Case Studies
Appendix A.7	Critical values of Chi-Square
Appendix A.8	Kruskal-Wallis test results

CHAPTER ONE

1.1 INTRODUCTION

Recent trends show an increased concern for the environment from the corporate sector in Kenya. The adoption of environmental management systems (especially ISO 14001), support for environmental projects, promoting public awareness and responsibility over the environment, and the use of the environment as a marketing tool are on the increase.

The corporate sector in Kenya, as everywhere in the world, is often the biggest culprit of environmental degradation. It consumes the largest proportion of natural resources, generates most of the wastes, and influence consumer behaviour. At the same time, it is the principal instrument of economic growth and social change. Moreover, it has the much-needed resources to improve environmental quality.

In line with global trends, the corporate sector in Kenya is being challenged to ensure that their operations are not only economically sustainable, but also environmentally and socially sustainable. The enactment of the Environmental Management and Coordination Act, 1999, increased public awareness of environmental issues, and the increasing central role of the environment in trade issues will significantly affect the way the corporate sector deals with the environment.

Globally, corporate environmental management is being viewed as a strategic issue, core to business competitiveness and long-term sustainability. However, how companies respond to the environmental agenda is a function of a variety of factors including location, sector, size, corporate culture, and the country's policy and regulatory framework. Moreover, the reasons motivating them to embrace corporate environmentalism largely determine the type and nature of response and the outcome.

In Kenya, there has been inadequate research on corporate environmentalism, and trends may be emerging more rapidly than an attempt to understand them. This study investigates three basic issues in the emerging scenario:

- What are the factors motivating or driving companies which previously treated the environment as a non-strategic, and non-competitive issue to start paying more attention to the environment in their business operations;
- What are some of the activities which define this emerging trends; and finally
- What are the benefits of such a corporate strategy?

For comparison purposes, the study uses two samples drawn from both the manufacturing and allied sector; and the commercial and services sector (for simplicity, these sectors are referred to as manufacturing and services sectors respectively, throughout the report). The companies, which participated in the study, meet criteria for environmental responsibility.

This report is organized in five chapters.

Chapter One provides the background to the study, discusses the emerging trends, defines the problem, sets the objectives, sets the limits, and justifies the study. Important terms and concepts used in the report are also defined.

Chapter Two reviews the literature on the Business-Environment debate. The chapter traces the evolution of corporate environmentalism as an emerging business imperative that is key to long term business sustainability and increased shareholder value. It shows that the genesis of this phenomenon is the sustainable development paradigm, which is redefining development discourse globally. Drivers and benefits of corporate environmentalism are also reviewed. Finally the chapter discusses the conceptual and theoretical frameworks used in the study.

Chapter Three discusses the methodology employed in the study. The sampling method, data collection, and data analysis techniques used are presented.

Chapter Four presents results and analysis of the study. This is presented in three parts in accordance with the three core areas of research i.e. the drivers, corporate activities, and benefits of corporate environmentalism. Statistical tests of the hypotheses are presented, as well as a brief discussion of the results.

Chapter Five draws conclusions from the study. It also offers recommendations on the basis of the research findings to policy makers, businesses, researchers, and the civil society.

1.2 BACKGROUND TO THE STUDY

The environment has become one of the key challenges facing the corporate sector today. Since the 1980's, there has been a considerable shift in the thinking regarding how to improve the social and environmental performance of corporations. An earlier emphasis on governmental regulation ceded ground to 'corporate self-regulation' and voluntary initiatives. This shift is sometimes characterized in terms of a transition from so-called state-led 'command and control' regulation in the 1960's and 1970's, to corporate self-regulation in the 1980's and 1990's, to more recent emphasis on co-regulation (Utting, 2002).

Moreover, the past two decades have witnessed a dramatic increase in the economic power of the corporate sector, partly due to patterns of globalization and economic liberalization. There is now a frank acknowledgement that the levers of economic growth and poverty reduction have changed: from public to private sector. Several writers (Jenkins, 2002; O'Keefe, 2003) have argued that this change in the role of the state and increased reliance on market forces has not been unproblematic. Both countries and companies face intensifying pressures to reduce costs and remain competitive. At the grandest level, therefore, sustainability and globalization of the world economy place competing demands on countries and companies.

Research on the social effects of globalization, carried out by the United Nations Research Institute for Social Development (UNRISD) in the early 1990's, raised the concern that the increasing power and freedom of TNCs was not being matched by an increase in their responsibility for the social and environmental impacts of their activities. Since then, some of the world's largest Transnational Corporations (TNCs) have sought to project an image of Corporate Social Responsibility (CSR). In 1997, UNRISD began research to examine the extent to which large companies are really improving their social and environmental performance and, in cases where progress was evident, to understand the different social,

political and economic and policy contexts and conditions that underpin such change (Jenkins, 2002).

The 1999 Millennium Poll on corporate social responsibility, a survey of 22,000 consumers across 23 countries on 6 continents, revealed that almost 90% of consumers agree that large companies should do more than focus only on profitability. This was true for the majority of citizens in 18 of the 23 countries. The survey also revealed that nearly six in ten consumers form impressions of a company based on broader responsibility to society at large or environmental impacts. This compares to only one in three who mention business fundamentals (e.g. financial factors, company size, management)(Fabian 2000).

Both the ideological shifts of the 1980's and the globalization of economic activity meant that nation states have been less willing and less able to perform many regulatory functions in recent years. In a dual context where neo-liberalism was weakening certain state institutions and discrediting the idea of 'command and control' regulation, and where certain state-based and international regulatory initiatives had failed, voluntary approaches were seen as the way forward. Initially, such approaches focused heavily on corporate self-regulation (Utting, 2002).

According to Utting (2002), the doctrine of economic liberalization that spread globally in the 1980's stressed the importance not only of 'deregulation' and the freeing-up of the market, but also corporate self-regulation, i.e. the notion that companies could regulate themselves. Improvements in social and environmental performance no longer needed to be ordered through 'command and control' regulation but could be attained through 'voluntary initiatives'. It is in this context that new emphasis has been placed on self-regulation and social responsibility of business. Instead of the social and environmental impacts of business being seen as issues primarily for governments to deal with, they are now regarded as matters of corporate responsibility for which companies themselves, or their trade associations, should set standards (Jenkins, 2002).

The discourse of corporate social responsibility and corporate citizenship highlighted the ethical basis for self-regulation and voluntary approaches. Corporations, it was claimed, were

coming to recognize that they must be more responsible to the concerns of multiple 'stakeholders' who affect or affected by a company's operations (Freeman, 1984); that increasing corporate freedom needed the counterweight of increased corporate responsibility; and that companies should be concerned not only with a 'bottom line' associated with finance, profitability and market share, but with a 'triple bottom-line' that also included social and environmental goals.

This discourse, like that of 'ecological modernization', also stressed strategic and economic benefits of corporate social responsibility. In a rapidly changing and uncertain world, corporations are subject to multiple pressures and risks. Rather than simply reacting to pressure, companies should engage proactively with the corporate responsibility agenda and activists. This would allow business to not only deflect or dilute certain pressures but also be in the driving seat to ensure that change took place on terms favorable to business. At the more micro-level, the so-called 'win-win' arguments suggested that corporate social and environmental responsibility made good business sense by boosting a firm's competitive advantage, creating new markets, and in some instances, even reducing costs (Utting, 2002).

Corporate self-regulation has not been without its fair of criticism. Many see it as essentially a public relations or window dressing exercise. They cite for example, the tendency of companies to produce glossy environment reports that lack substance or to adopt codes of conduct and corporate social investment projects in order to deflect criticism and project an image of a caring company when in reality business is carried on as usual. The catchword that sums up these concerns is "greenwash" (Greer and Bruno, 1996).

Several business and environment scholars have argued that there's clearly a paradigm shift in corporate governance in relation to environmental issues. Corporate environmental performance is in the process of becoming both a competitive and strategic issue for business. According to UNEP (2001), this paradigm shift has been significantly caused by:

- Growing public awareness of environmental issues;
- Greater appreciation by companies of environmental issues;

- Increasing regulation;
- Scientific and technological progress that permits resolution of some of the issues; and
- Technological developments that improve environmental performance as a by-product of better efficiency.

1.3 EMERGING TRENDS IN CORPORATE ENVIRONMENTALISM

Once rated a low priority corporate citizenship issue by companies, environmental management is becoming a competitive and strategic business issue in Kenya. Trends have been emerging, which suggest that good environmental stewardship is a key aspect of a company's branding, and competitiveness.

These trends are manifesting themselves in various ways:

- The increasing adoption of ISO14001 Environmental Management System standards by companies. Examples include: Bidco, Pan African Paper Mills, General motors, Tetra pak, Spinners&Spinners, Unilever, and Wartsila.
- More companies are showing their concern for the environment by supporting environmental projects. The most popular projects supported are in areas of forestry, urban clean up, and wildlife conservation.
- An increase in corporate membership of non-profit and non-governmental environmental organizations e.g. East African Wildlife Society, Friends of Nairobi National Park, Friends of Nairobi Arboretum etc.
- An upsurge in the phenomenon of eco-advertising, where environmental friendliness of products and services is now a competitive issue e.g. claims about products manufactured from recycled materials, ozone friendliness, and biodegradability.
- Voluntary messages on products appealing to consumers to exercise responsible disposal of the product or waste after use.

Companies are increasingly using the media to project themselves as environmentally responsible corporate citizens. This desire to be seen as green is manifesting itself in two forms:

- Company branding: companies want to be identified and differentiated from competitors on the basis of their green credentials and social responsibility.
- Product/service branding: companies want to create a market niche for their products/services, through claims of “environmental friendliness”.

A pioneer “green” company in Kenya is **Bamburi Cement Limited**, founded in 1952. As early as 1959, it nipped an emerging environmental catastrophe in the bud by rehabilitating its vast limestone quarries- into what is now **Boabab Ltd**, a fully-fledged subsidiary company in 1977. Ten years later, United Nations Environmental Programme (UNEP) bestowed the company with the prestigious “*Global 500 Roll of Honour for Environmental Achievement*” award.

After Bamburi, an increasing number of companies have been striving for a green corporate image. A number of them like Unilever, Bidco, General Motors, Tetra Pak, and Spinners&Spinners have put in place environmental management systems leading to the award of ISO14001 certification – an environmental management standard.

BIDCO, a leading manufacturer of consumer goods, has environmental and stakeholder concerns at the core of its corporate values. It says:

“Our products, processes and services must reflect our customer needs, environmental friendliness, and the welfare of the community”.

Moreover, the company’s stated purpose is “*To transform the goodness of Mother Nature to serve human needs*”. **BIDCO**’s commitment to the environment is given in **Appendix A.4**.

UNILEVER, a multinational consumer goods manufacturer was awarded the ISO14001 certification for good environmental practices in the year 2002. In a special supplement to mark the certification (*East African Standard, Wednesday, April 3, 2002*), the company notes that the benefits of building quality in all the stages of the supply chain were coming through,

particularly with regard to increased efficiencies, waste reduction, cost reduction, and enhanced customer satisfaction. The company's commitment to the environment is given in **Appendix A.4**.

Van Leer (E.A) Ltd, an industrial packaging firm, in its 50th Anniversary supplement (*Daily Nation, Friday, December 21, 2001*), says it sees environmental protection as an integral and essential part of its corporate responsibility. The group has set as its objective to improve material and energy efficiency and to reduce environmental impacts of its products and systems. Towards this end, it is implementing an environmental management system in conjunction with an existing quality management system (ISO9001).

In the petroleum sector, major players have been repositioning themselves as custodians of the environment. This mirrors the fact that sustainable and environmentally friendly energy is at the core of environmental protection initiatives. **Shell** has packaged itself as a pioneer Oil Company to introduce unleaded fuel in the Kenyan market, because of its commitment to environmental protection and human health objectives.

In a supplement (*Daily Nation, Tuesday, June 25, 2002*), **Total (K)** presented the following facts as to why it should be the choice of Kenyan consumers:

- That it was the first oil company in Kenya to achieve ISO9002 certification for its countrywide network of service stations.
- That it has led the development of the affordable and portable LPG "Meko", bringing cleaner, safer cooking and better domestic lighting; and at the same time helping conserve precious forests by reducing dependence on firewood and charcoal.
- That it is committed to the highest standards of facilities, to safeguarding the environment, and actively improving the quality of life in Kenya.

In November 2001, **Mobil Nairobi Terminal** was re-certified ISO9002 in recognition of its commitment to offer quality service. In a supplement (*Daily Nation, Friday, November 30, 2001*), the terminal said it had put in place environmental control measures to arrest any oil spillage or degradation. All the activities at the terminal are designed to be environmentally

friendly. The company has installed interceptors and adopted procedures to ensure that effluent that is released into the environment is free from any oils.

It's not only in the manufacturing sector where companies are warming up to the environmental agenda. The services sector too has seen some proactive companies rebranding themselves as "green". In the services sector, **Safaricom** is emerging as a company abundantly committed to the environment. As a testimony to its commitment, it is significant that a by-line on its scratch cards for pre-paid service reads, "*Committed to Supporting Kenya's Environment.*" The company is involved in a number of activities to support the environment, and uses the environment in its advertisements.

The **Postal Corporation of Kenya** has always been associated with the conservation of Kenya's fauna and flora, by issuing postage stamps that sensitize policy makers and the public on the importance of preservation and protection of environmental heritage:

- In April 2000, it highlighted the plight facing five species of turtles by issuing a set of five stamps.
- In February 2001, it put to sale the eighth definitive Stamp issue, showcasing the rich diversity of Kenyan crops.

The **Nation Media Group** has been at the forefront of environmental protection efforts. Its on East African Wildlife Society's Roll of Honour as a "Guardian of Our Forests", 2002 for which it was awarded the *Mahogany Award*. Nation Media Group is also spearheading the conservation of the Aberdare Forest through the *Nation Aberdare Forest Fund* to which several companies have donated.

An increasing number of companies are using the environment in their advertisement. This eco-advertising takes two forms:

- Claims of environmental friendliness of goods and services; and
- The use of environmental features as a background for visual impression.

A few examples of eco-advertising are given in **Appendix A.5**.

1.4 STATEMENT OF THE PROBLEM

The past few years have witnessed a dramatic increase in corporate environmental activities. These activities include the adoption of EMS (particularly ISO14001), support for environmental projects, efforts to increase public awareness of environmental issues, and the adoption of environmentally friendly practices and technology. These activities, individually or collectively constitute corporate environmentalism- the way companies express their concern for the environment.

These trends have generally been defined by a number of characteristics:

- The active involvement of both manufacturing and service sectors;
- This corporate environmentalism is mostly voluntary i.e. not required by law;
- The emergence of the environment as a core marketing issue for a number of companies; and
- The use of mass media to communicate and project good corporate image of environmental stewardship.

This conforms to global trends where the environment is becoming a core and competitive issue for business, and also, its biggest challenge this century. The trends also conform to the worldwide patterns, where environmental concern and responsibility is now moving beyond the traditional “brown sectors” (high-impact industrial activities) to incorporate sectors whose impacts on the environment were traditionally thought to be insignificant.

A trend may be emerging where companies regard environmental concerns as having a direct bearing on corporate profitability and long-term sustainability. However, as this fundamental transformation of corporate practice takes root in Kenya, a review of literature shows it has received very little research attention locally. A number of basic issues remain unexplored. Of particular importance are the core motivating factors behind this corporate environmentalism; the level of corporate commitment to the environment; and what from the corporate perspective are the benefits to them.

The reasons for increased corporate environmentalism are numerous and complex. Some are reactive, while others are proactive. These drivers of corporate environmentalism are a function of spatial, sectoral, and scale-related variables. Scholars such as Howes et al (1997); Richards and Frosch (1994); Chase (1994); Sanchez (2000); and Hutchison (1997), view the most fundamental drivers of corporate environmentalism to include:

- Pressure from stakeholders who include shareholders, investors, customers, employees, communities, environmental groups, and business partners;
- Regulations and anticipation of regulation, and the need to be in compliance;
- The need to improve and maintain a company's reputation seen as an important asset in the company's branding;
- Economic opportunities to cut costs, establish new market niches and improve efficiency; and
- The need to be ethical corporate citizens by ensuring environmental quality, and responding to changing societal expectations and values.

The way companies respond to the environmental agenda is a function of several factors such as the country's legal and regulatory framework; industry sector; position in the material's supply chain; size; and corporate culture. In Kenya, there has been no attempt at characterizing the recent corporate environmental initiatives as either reactive or proactive. Moreover, the differences in approach between manufacturing and service sectors have not been explored.

In recent years, a number of scholars in the environmental and corporate governance (notably Howes et al 1997; Spencer Cooke 1999; Watts 2002; Porter 1991; and Schmidheiny and Zorraquin 1996) have proposed the apparently paradoxical notion, that goals of business and environment might be reconcilable. These protagonists have insisted that companies can profit from enhanced environmental performance in ways such as:

- *Reducing costs*: in the short-term by becoming more eco-efficient (doing more with less) and in the long-term, working to ensure nothing is wasted;

- *Creating options:* anticipating new markets driven by customers who are more environmentally and socially conscious, and evolving business portfolios and supply chains to match;
- *Reducing risks:* managing the wider risks through a better understanding of what represents responsible behaviour; and
- *Gaining customers:* enhancing the brand by providing services and products built on sustainability thinking that is in tune with customer expectations.

Many writers have added a note of caution to this win-win evangelism, notably Walley and Whitehead (1994) who argue that businesses are not homogeneous, and although impressive benefits can be found, they are not widespread and they do not necessarily represent the norm for individual companies. Win-win opportunities become insignificant in the face of the enormous environmental expenditures that will never generate a positive financial return.

As more companies in Kenya continue to project themselves as environmentally conscious, this study seeks to answer three basic questions:

- What are the drivers of emerging corporate environmentalism in Kenya?
- How do companies approach the environmental agenda?
- What are the benefits of corporate environmentalism, if any?

1.5 RATIONALE

In the 21st century, corporate business will face unprecedented scrutiny, risks and challenges as dramatic change sweeps the world. To continue on a profitable path, the business case to society will at the minimum be that, what it does is legal, profitable, and socially and environmentally sustainable. The sustainable development agenda is already a fundamental issue that is re-directing corporate values and management practices.

The sustainable development agenda, and more critically the environmental nexus of it, will shape, rather than follow economic trends (Howes et al 1997). Sanchez (2000) has argued persuasively that the challenge facing the industrial, service and financial sectors in the 21st

century will be a global market place increasingly concerned with long-term sustainability; while Richards and Frosch (1994), note that the responsibility a company has for the environmental consequences of its actions is becoming an increasing focus of attention in government, industry and among the public at large.

In Kenya, the enactment of the Environmental Management and Coordination Act, 1999, will have profound effects on the way corporate business handles environmental concerns. Moreover, increasing public awareness of environmental issues and pressures from a globalizing world means that Kenyan companies have to achieve world-class efficiencies to remain competitive and sustainable.

As the environmental policy and regulatory framework in Kenya solidifies, understanding the dynamics of the business-environment partnership is crucial in managing the transition to a sustainable society. Understanding these emerging trends is important to:

- The policy makers in underpinning policy, institutional, and regulatory framework that enables the corporate sector to play a much bigger role in environmental protection, while remaining competitive and sustainable.
- The corporate sector in understanding the emerging issues likely to shape the future of corporate business.
- Researchers in identifying areas of inadequacy for further research.
- Identifying the role of different stakeholders and points of intervention.
- Identifying business opportunities in the environment-industry debate.

1.6 OBJECTIVES

The study has three broad objectives:

1. To investigate the driving factors behind the emerging corporate environmentalism in Kenya for the manufacturing and service sectors. Specific objectives are:
 - To find out whether manufacturing and service companies are motivated by the same factors towards corporate environmentalism;
 - To find out the relative importance of factors driving corporate environmentalism for manufacturing and service companies.

2. To investigate some corporate environmental activities which characterize the emerging corporate environmentalism for the manufacturing and service sectors. Specific objectives are:
 - To find out whether there is a difference in corporate activities between manufacturing and service companies;
 - To examine the extent to which the environment is a business strategy for companies;
 - To examine the extent of corporate environmental reporting among companies.
3. To investigate business benefits of corporate environmentalism for the manufacturing and service sectors. Specific objectives are:
 - To find out whether there is any difference in benefits of corporate environmentalism between manufacturing and service companies; and
 - To find out the relative importance of benefits of corporate environmentalism for the manufacturing and service companies.

1.7 DELIMITATIONS OF THE STUDY

Whereas corporate sustainability is a triple concept encompassing economic, social, and environmental pillars, the study restricts itself to the environmental nexus of sustainability.

The study is restricted to companies who are publicly known to be environmentally conscious. They either have a structured environmental management system, support environmental projects or their products/services are environmentally- friendly. Both public and private companies will be considered, notwithstanding their location, only limited by cost and time constraints.

In considering drivers of corporate environmentalism, the study will restrict itself to what are considered ten main drivers i.e.:

- Compliance requirements
- Customer pressure

- Shareholder and investor pressure
- Ethical corporate behavior
- Potential economic benefits
- Neighborhood communities
- Eco-efficiency
- Business partners
- Corporate reputation
- Company's risk profile

The study evaluates how companies approach the environment by considering ten corporate activities, which show their commitment and concern. These are:

- Environmental Management Systems (EMS)
- Corporate environmental policy
- Corporate environmental communication
- Compliance
- Environmental department or unit
- Environmental audits and reviews
- Recycling and/ or reuse
- Support for community projects
- Supply chain management
- Support for environmental projects

In the outcomes of corporate environmental management, the study considers ten main business benefits i.e.

- Cost-cutting from efficiency improvements
- Improved corporate image and reputation
- Reduced corporate risk exposure
- Options in new markets from innovations
- Attracting and motivating top talent
- Attracting investment

- Community acceptance and support
- Access to credit
- Customer satisfaction
- Improved product and service quality and brand

1.8 DEFINATION OF TERMS AND CONCEPTS

Environmentalism

Environmentalism is a collective term that describes ways in which people or organizations express their concern about the state and future of the environment. It is founded on a number of concerns, including: a reaction against technocracy, concern for wider issues of equity and justice, and a sense of personal responsibility to leave a worthwhile environmental heritage for future generations.

Corporate Environmentalism

Corporate environmentalism is where companies express their concern for the environment by incorporating environmental objectives into standard business practices both at the technical and strategic levels. At the technical level, companies adopt eco-efficiency principles. At the strategic level, the environment is a competitive business issue that is integrated into decision-making process throughout the supply chain.

Sustainable Development

The World Commission on Environment and Development (WCED) in its report, *Our Common Future*, defined sustainable development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

Corporate Sustainability

Corporate sustainability is about balancing and meeting demands placed by various stakeholders on a corporate entity, over a long-term period. Corporate sustainability is increasingly seen as encompassing: economic, ecological, and social sustainability.

Agenda 21

It is a “blue print for action” on environment and development, an agenda for the 21st century. It is a product of the historic 1992 Earth Summit in Rio de Janeiro, Brazil. Chapter 30 of Agenda 21 specifically deals with strengthening the role of business and industry in sustainable development. It calls upon business and industry to fully participate in the implementation of Agenda 21, and particularly in promoting cleaner production and responsible entrepreneurship.

Eco-efficiency

Eco-efficiency is a management strategy, which enables more efficient production processes and the creation of better products and services while reducing resource use, waste and pollution. This is achieved through four aspects of eco-efficiency: dematerialization, closing production loops, service extension, and functional extension.

Stakeholders.

All those people who become exposed to a company’s activities, either voluntarily or involuntarily, now or in future. This definition enables a company to take a wide view of its responsibilities and establish appropriate management methods and feedback loops. It emphasizes their ethical responsibility, which goes wider than their legal obligations. They include employees, legislators and regulators, local communities, shareholders and investors, suppliers, customers, industry associations, environmental groups, scientific and education community, and the media.

Triple bottom-line

Means that companies today have to address three interrelated imperatives of economic, ecological, and social sustainability, if they have to be sustainable in the long-term, increase shareholder value, and provide value to a range of stakeholders.

Double-dividend

Refers to the win-win scenario, where certain measures benefit both the environment and the company’s financial bottom line (profitability).

Environmental liability

Environmental liability is a legal obligation to make a future expenditure due to the past or ongoing manufacture, use, release, or threatened release of a particular substance, or other activities that adversely affect the environment.

Compliance

Denotes a state in which a company meets environmental standards and conforms to legislation as set out by a regulatory authority. Compliance is the essential “bottom line” through which the environmental goals and targets, and effectiveness of government policy is achieved.

Compliance-plus

The approaches where companies go beyond existing environmental standards to voluntarily embrace stricter standards. It involves anticipating new regulations and adopting practices and innovation strategies that will place them ahead of evolving requirements.

Environmental standards.

There are many types of environmental standards along the pathway of a product from extracting raw materials through manufacture, transport, trade, sale, use and disposal. They can be grouped as: environmental quality standards, emission standards, product standards, process and production standards, and performance standards.

Supply chain management

Refers to the management of a company’s environmental impacts from cradle to grave. Essentially the supply chain is made up of: Product design and development, sourcing of inputs, in-bound logistics, conversion of inputs into final products, distribution and delivery, and end consumption and disposal.

Eco-labels

Eco-labels communicate the environmental impacts from producing or using a product.

ISO 14001

A standard created by the International Organization for Standardization (ISO) for managing a company's environmental impacts. ISO 14001 is not a guarantee of environmental excellence, but rather an assurance that the organization has a management system that identifies and manages the major environmental impacts.

Environmental Management System (EMS)

A system for managing a company's environmental impacts. The system should be comprehensive, systematic, planned, regular, and documented. The best-known models for an EMS are ISO 14001, EMAS, and BS7750.

An EMS reduces the organization's environmental risk by controlling its impacts in a comprehensive and systematic manner. It can be used to demonstrate legal compliance to regulatory authorities. The EMS also contributes to continuous improvement and cost reduction. An independently verified EMS demonstrates the organization's environmental probity to the outside world and can help win contracts.

Green Consumerism.

Refers to people deliberately buying goods and services that are environmentally-friendly such as cars that run on lead-free petrol, aerosols that don't contain CFC propellants, wooden products that don't contain tropical hardwoods and paper that is recycled.

Eco-marketing/Eco-advertising

The use of environmental credentials of a product or service in marketing and advertising. It involves communicating the environmental friendliness of products/services to potential customers as a competitive advantage over other products.

Life-cycle Assessment (LCA)

The Society of Environmental Toxicology and Chemistry (SETAC) defines LCA as:

“A process to evaluate the environmental burdens associated with a product, process, or activity by identifying and quantifying energy and materials used and wastes released to the environment, to assess the impact of those energy and material uses and releases to the

environment, and to identify and evaluate opportunities to effect environmental improvements.

Cleaner production

The continuous application of an integrated, preventive, environmental strategy, to processes and products to reduce risks to humans, and the environment.

Co-regulation

In the field of CSR, co-regulation arise when two or more actors or stakeholders are involved in the design and implementation of norms and instruments that attempt to improve the social and environmental performance of firms.

Corporate Social Responsibility (CSR)

CSR has been defined as the ethical behavior of a company towards society (Schmidheiny, et al: 1997). It recognizes that not only shareholders but also multiple stakeholders have legitimate interest in the activities and performance of a business, and that a company needs to be responsible to their concerns.

Corporate citizenship

The practice of ethical values, compliance with legal requirements and respect for people, communities and the environment in decision making process in business management (Bhandari and Abe, 2001)

Ecological modernization

Ecological modernization involves an approach that emphasizes technological and managerial innovations to improve the efficiency of resource use, the need for a more systemic, as opposed to piecemeal approach, the “win-win” possibilities of such an approach, and the capacity of existing institutions to internalize care for the environment (Hajer, 1995; Dryzek, 1997; Utting, 2002a)

Corporate self-regulation

Involves companies and business or industry associations unilaterally designing and implementing various types of initiatives such as codes of conduct, environmental reporting, social audits, corporate social investment and the more traditional philanthropic activities.

Greenwash

Disinformation disseminated by an organization so as to present an environmentally responsible image (The Concise Oxford English Dictionary, 1999).

CHAPTER TWO

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

2.1 INTRODUCTION

The literature on business and the environment has expanded enormously from the 1990s. Several milestone books, such as Schmidheiny's *Changing Course: a Global Business Perspective on Development and the Environment*, have been published while there are now journals devoted exclusively to business and environment issues. Examples include the UN Environment programme's "*Industry and the Environment*".

The volume of material on clean technology, Life cycle assessment, and industrial ecology has also expanded and is often closely linked to the business and environment theme. However, business-oriented material is still dwarfed by other types of environmental literature, which focus on specific high profile environmental issues such as climate change.

This chapter reviews literature on corporate environmentalism. It traces the evolution of the concept of corporate environmental management as a strategic issue, and the driving factors behind it. The response of the corporate world to the environmental agenda, which constitutes a new and evolving corporate governance culture is explored, as well as the future outlook. The review also explores the business case for environmental management by examining its benefits to business and industry. Finally, the conceptual and theoretical frameworks of the study are discussed.

2.2 CORPORATE BUSINESS AND SUSTAINABILITY

The partnership between the corporate sector and environmental protection is crucial to achieving sustainable development. Chapter 30, of *Agenda 21*, sought to positively enhance this partnership. The World Summit on Sustainable Development (WSSD) held in Johannesburg in 2002; and ten years after the *Rio Summit*, underlined the growing importance of the corporate sector in delivering development that is economically, socially, and environmentally sustainable.

The central theme in both Rio and Johannesburg is that aligning business and industry with environmental protection is a key challenge that must be met if the global goal of achieving sustainable development is to be attained. After all, the history of corporate expansion is one of plunder of natural resources and excessive pollution. The earth's dwindling resource-base and ecosystem services, can no longer guarantee the future survival of business and industry; unless, there is a change of course.

Today, sustainable development is often presented as reconciliation between free-market economics and the protection of environmental quality as a prerequisite for sustainable economic activity and social welfare. According to Faucheux et al (1998), this view has implications for, and is reflected in changes of attitude by all the economic partners:

- In the private sector, firms have shifted (to varying extends) from a position of simple hostility towards environmental regulations – perceived as obstacles and as the source of additional expenses – to more positive consideration of the environment as a strategic opportunity;
- Government agencies in charge of regulation have started giving more attention to the manner in which environmental objectives can be incorporated into standard business practices; and
- An increasing number of “green consumers” express their support for environmental quality goals and for principles of cross-generational equity, and for commercial practices and policies respectful of these ideals.

...

To contribute to sustainable development, companies must integrate economic, environmental and social considerations into their decision-making, balance short-term priorities with long-term needs, and engage with stakeholders. Companies are discovering that addressing environmental and social sustainability at the corporate and operational levels is a necessary, and even profitable way to help manage risks, capitalize on opportunities, create competitive advantages, and strengthen their standing in communities (Woicke, 2002).

Scholars such as Elkington (1999) and Cheng Hai (1996); have argued that companies today have to face up to a “triple-bottom line” or risk extinction. They have to meet not only economic goals, but also environmental and social ones. Cheng Hai (1996), views the triple-bottom line as a paradigm of development based on proper balance between three interrelated value systems: value for money or economic justice, value for nature or environmental justice, and value for people or social justice.

When viewed within the context of sustainable development, environmental concerns become not just a cost of doing business, but a potent source of competitive advantage. To Schmidheiny (1992), integrating the principles of sustainable development into business operations, means among other things:

- Recognizing that there can be no long-term economic growth, unless it is environmentally sustainable;
- Confirming that products, services, and processes must all contribute to sustainable development;
- Maintaining credibility with society, which is necessary to sustain business operations; and
- Creating dialogue with stakeholders.

As benefits of investing in sound environmental management begins to manifest, a fundamental transformation is occurring where companies see sustainable development as a strategic issue shaping core business, a tool for survival and long-term advantage, and increased shareholder value. Rather than view the environment as an “add-on”, it is becoming an integrated part of doing business, a key aspect of product design, and a critical element in the supply chain (Spencer-Cooke 1999; Howes et al 1997; Burke 2000).

2.3 CORPORATE ENVIRONMENTALISM

2.3.1 The Evolution of Corporate Environmentalism

According to Burke (2000), business response to the environmental agenda was first to ignore the problem, then to minimize their seriousness, and then to exaggerate the cost of dealing with them. Only reluctantly did it begin to address them systematically, discovering much to its surprise, that on very many cases, cutting pollution also cut costs. Burke (2000), further argues that the initial reluctance to act cost the corporate world dear; legitimizing the widely held view that business is anti-environment and creating a growing deficit of trust with the public.

The review of literature indicates that there have been changes in the focus of corporate environmental management and responsibility. Elkington (1996: 21-25) has summarized a progression of three distinct phases of corporate awakening in relation to environmental performance and the adoption of a sustainable development agenda. They are as follows:

- *Responsibility to the environment:* Corporate responsibility emerged in the the1970s and the concept of Environmental Impact Assessments (EIA) was introduced. Gradually, the corporate sector begun to make early environment-related policy measures in their corporate management.
- *Responsibility with accountability:* The 1980s, saw the growth of policies related to the creation of in-house Health, Safety and Environment (HSE) units and the introduction of post-EIA reviews and audits. Public relations officers and legal advisors generally handled the eco-agenda.
- *Corporate environmentalism:* The 1990s was the age of growth in corporate environmentalism, where the focus shifted towards both strategic and competitive aspects, with environmental agendas being handled by strategists and company top management. At this stage, corporate environmental responsibility extends from cradle to grave, prompting new commercial infrastructures and new relationships between producers, consumers and governments. This stage is marked by

environmental strategies; life cycle assessments and supplier challenges; corporate accounting and reporting; green and ethical screening of companies; environmental benchmarking and environmental performance and sustainability indicators.

Studies by various scholars have highlighted changes in the way that corporate business has responded to environmental pressures. Groenewegen and Vergrat (1991) identify three overlapping phases, which they suggest characterize the evolving nature of the industrial response to environmental issues.

The first phase, which lasted through 1970s and into the early 1980s, was primarily characterized by reaction to regulatory demands. Schot and Fischer (1993), and Edwards (1998), similarly suggest that during this period, firms lacked interest in and commitment to environmental improvement and resisted adaptation to growing regulatory and public pressures.

Kleiner (1991) has called this phase an era of “resistant adaptation”, during which even compliance was considered an admirable target, and was characterized by unwillingness by companies to internalize environmental issues. According to Edwards (1998), there was, on the whole, little awareness of the potential savings that could be made from environmental initiatives and unwillingness to cooperate with even the most enlightened policy-making.

The second phase, which lasted throughout the 1980s and into the early 1990s, was characterized by companies beginning to respond to environmental issues more positively by developing technologies and techniques, which sought to control their operational impacts. Schot and Fischer (1993) argue that during this period, firms began to accept responsibility for their environmental performance, and to move beyond the defensive and reactive stance that was previously common. However, they argue that the responses continued to focus on regulatory compliance and lacked an innovative dimension.

Similarly, Edwards (1998) notes that this phase saw a more positive approach from many companies and a growing realization that innovative solutions in areas such as waste management, pollution, and environmental management systems could aid resource

efficiency and reap large financial rewards for forward-thinking companies. According to Fischer and Schot (1994), it was during this second era that “*win-win*” rhetoric came into being, and many companies adopted the “pollution prevention pays” motto.

The third phase began in the early 1990s and is ongoing. Companies began to recognize the environment as a core rather than a peripheral concern, and to shift the emphasis of their activities away from reactive or curative responses toward proactive and anticipatory approaches. Schot and Fischer (1993) suggest that this phase will see companies adopt innovative strategies that attempt to take their environmental performance beyond the baseline of compliance with regulatory demands.

Edwards (1998), on his part, notes that this phase has seen companies attempt to take on board conceptually challenging ideas like sustainable development. They have found “environment” pervading all aspects of their operations rather than being confined to pollution and waste management.

According to Gouldson and Murphy (1998), while there is general evidence to support these three broad phases of industrial environmental management, it is important to note that the take-up of environmental management initiatives in industry has been influenced by spatial, sectoral and scale-related variables.

2.3.2 The Changing Corporate Culture

According to Howes et al (1997), the governance of environmental affairs, both inside and outside companies is clearly changing, while Spencer-Cooke (1999) notes that a fundamental transformation is occurring, where companies are moving beyond basic environmental compliance to see sustainable development as a strategic issue shaping core business.

Several writers (Spencer-Cooke 1999; Tibor and Feldman 1996; Howes et al 1997; Schmidheiny 1992) have advanced the view that proactive companies are taking the lead in establishing a new paradigm of environmental management, changing it from an “add-on” function to one that is integral to a business’ strategic planning and operations, a key aspect of product design, and a critical element in the supply chain. Tibor and Feldman (1996),

further note that Environmental Management Systems (EMS) are becoming less compliance-driven and more strategy-driven.

Business, or at least big business no longer see the environment as a threat but now embrace more stringent environmental challenges as an opportunity to enhance competitiveness and expand market share (Howes et al 1997). Similarly, Tibor and Feldman (1996), note that rather than view environmental compliance as a financial liability, businesses are increasingly recognizing competitive opportunities in pollution prevention, clean technologies, and environmentally responsible products.

The responsibility a company has for the environmental consequences of its activities is becoming an increasing focus of attention in government, industry, and among the public at large. Companies are responding by beginning to take responsibility for the environmental consequences of wastes from production and for the ultimate disposal of the products they produce (Richards and Frosch 1994). Tibor and Feldman (1996), note that using a life cycle approach, Research & Development decisions are now emerging as standard operating procedures that take into account the use of raw materials, methods of manufacture, and the ultimate recyclability and disposability of a product.

Schmidheiny (1992) notes that under pressure from new management attitudes toward extended corporate responsibility, from increasing consumer expectations, and from tighter regulations, companies are recognizing that environmental management requires the minimization of risks and the impacts throughout a product's life cycle, from "cradle to grave". This, he adds, is leading to the industrial ideal of an economic system based on "reconsumption" – the ability to use and reuse goods in whole or part over several generations.

According to Tibor and Feldman (1996), responsibility for environmental protection is moving beyond the environmental department to all employees whose tasks have environmental aspects, and to top management. A 1992 survey of Fortune 500 companies by the Investor Responsibility Center, found that almost half of the 201 respondents now have board level committees responsible for environmental affairs. More companies, were

also found to be developing EMS programs that are geared to avert compliance problems, improve operating efficiencies, and gain competitive advantage (Tibor and Feldman 1996).

Existing analyses suggest that strategies implemented by firms with respect to the environment fall along a line between two extremes (Fauchex et al 1998):

- Firms pursuing a defensive strategy with respect to environmental issues. These are firms which view environmental restrictions as extra costs that must be kept to a minimum, or even reduced to zero whenever possible.
- Firms opting for proactive or integrated environmental strategies. These firms anticipate new regulatory requirements and turn to their own advantage business opportunities provided by new research required to solve environmental problems.

Howes et al (1997), lists some specific features of corporate response as:

- Proactive companies now have formal Environmental Management Systems and Environmental Auditing programmes, and many produce environmental reports for public consumption.
- There has been a growing interest in externally certified Environmental Management Systems (EMS) e.g. UK's environmental management standard, BS7750; the EU's Environmental Management and Audit Scheme (EMAS); and ISO 14001.
- A wide range of companies have been drawn into the environmental debate beyond the traditional brown sectors – chemicals, energy and metals which are threatened by tighter regulatory controls. Many firms involved in retailing or the manufacture of consumer products have been drawn in because of concern about customer reaction to their environmental performance.
- The use of partnership approaches in dealing with environmental problems is growing. For industry, partnership approaches help to enhance the credibility and legitimacy of their operations and practices.

- Many companies are striving towards what is known as “compliance plus” approaches to environmental management. This involves anticipating new regulations and adopting practices and innovation strategies that will place them ahead of evolving requirements.

As companies become better at prevention and husbanding resources, attention is shifting from problems caused by production to those caused by the product itself. It extends from cradle to grave in a management process called product stewardship (Schmidheimy, 1992). However, as Edwards (1998) notes, the road to a coherent and successful environmental strategy is a difficult one for many firms.

2.3.4 The Future of Corporate Business

Globally, a new wave of environmental regulations and initiatives, such as enforcement of *polluter-pays principle*, is forming. In addition, public policy is moving towards innovative financial and other incentives to address environmental destruction. Credible international co-operation is building to promote the conservation and efficient use of natural resources. A wide spectrum of financial options are being reviewed, including tax credits, pricing incentives whereby market prices integrate environmental costs, and the application of the user fees. Moreover, public concern about the environment has been on an upward trend.

As governments adopt policies to address sustainable development, the impacts on business will affect much more than the cost of getting goods and services into the markets. According to Woicke (2002), sustainability is increasingly moving “upstream”, and affecting decisions at the corporate and financial levels. Further, he argues that, transparency, disclosure and protection of minority shareholders have evolved from being solely insider issues to public concerns that when handled poorly, can destroy a company or, when handled well can create value. This, argues Burke (2000), will require companies to treat the environment as a business issue not just a technical one.

The challenge that will face the 21st C business will be a global market place increasingly concerned with long-term sustainability (Sanchez, 2000). A report published by 25 of UK’s leading companies in 1995; under the auspices of Royal Society for the Encouragement of Arts, Manufacturers and Commerce (RSA), concluded that successful companies of the

future will need to achieve world class standards, adopt the inclusive approach, behave responsibly towards the natural environment and seek business opportunities which are compatible with sustainable development (Hutchison 1997).

According to Howes et al (1997), those companies that are going to succeed and prosper will be those that develop a more proactive environmental strategy, which seeks to develop a competitive advantage out of stricter environmental standards. Simple legislative compliance will no longer be sufficient. The new challenge to corporations, argues Ditz et al (1995), will be to fully integrate environmental thinking into corporate decision-making – to in other words, translate their environmental concerns into the language of business.

Elkington (1996) suggests that the company of the future will be forced, by a drive towards more sustainable economic growth, to take account of and add value to a triple bottom line of economic, ethical and environmental considerations. Edwards (1998), on the other hand, argues that the influence of information technology will increasingly affect the environmental management of companies. More use is likely to be made of the Internet both as an information source for companies who are planning environmental strategies, and as a communication tool for enhanced stakeholder relations.

Business, much more than governments or non-governmental organizations will be the driving force behind the “sustainable capitalism” transition. To survive in the 21st C, Elkington (1999), argues, they will have to face up to seven business revolutions:

- *Revolution 1 (markets)* will be driven by competition, largely through free-market. The new sustainable industries of the 21st century will consign less sustainable companies – and even entire industry sectors to oblivion. As a result, business will shift to a new approach, using triple bottom line thinking and accounting to build case for action and investment.
- *Revolution 2 (values)* will be driven by the worldwide shift in human societal values.
- *Revolution 3 (transparency)* being fuelled by growing international transparency. Business will find its thinking, priorities, commitments, and activities under increasing intense

scrutiny worldwide from a wide range of stakeholders. Such information will be used to compare, benchmark, and rank the performance of competing companies.

- *Revolution 4 (life-cycle technology)* driven by a shift from companies focusing only on the acceptability of their products at the point of sale to a new emphasis on their performance from cradle to grave. Managing the life cycles of technologies and products is a key emerging focus of the 21st C business.
- *Revolution 5 (partners)* which will dramatically accelerate the rate at which new forms of partnership spring up between companies, and between companies and other stakeholders.
- *Revolution 6 (time)* which will require thinking across decades, generations and, in some instances, centuries.
- *Revolution 7 (corporate governance)*, which is being driven by each of the other revolutions. New questions will be asked: what is business for, who are our stakeholders; what is the appropriate balance between shareholders and other stakeholders; and what balance should be struck at the level of the triple bottom line. The better the system of corporate governance, the greater the chance of success.

To Hutchison (1997), the transition towards sustainability could shift the focus for business towards changing customer demand, and is likely to require:

- Environmentally responsible products and services;
- Ethical business, including ethical and environmental investments;
- More disclosure of information about products and their performance;
- More efficiency in resource usage (more from less); and
- Better measurement of performance using a wider range of criteria.

2.4 DRIVERS OF CORPORATE ENVIRONMENTALISM

The motivation for companies to take the path towards sustainability may be encouraged by a variety of factors. Some are negative and reactive, such as the fear of non-compliance, or the wish to avoid bad publicity, while some are positive and proactive, such as new market opportunities and resource-cost savings.

Schmidheimy and Zorraquin (1995) in their book *“Financing Change”* (with WBCSD), list motivators for increased eco-efficiency, which they say are growing in importance both in financial terms and because of the growing awareness of the general public. They assert that in many parts of the world:

- Regulations are getting tougher and more importantly, enforcement is getting tougher;
- More use is being made of economic instruments to encourage constant improvement;
- Banks are more willing to lend to cleaner companies;
- Investors are increasingly interested in investing in cleaner companies;
- The best and the brightest are more willing to work for cleaner companies;
- “Greener consumerism” is maturing, with the general public believing it has a growing right to have a say in what companies do;
- The search for eco-efficiency can motivate a company and its employees to become more innovative on many fronts;
- Eco-efficiency is an excellent avenue for introducing the concept of Total Quality Management; and
- Media coverage of pollution and environmental liability problems is becoming more sophisticated.

Schmidheimy and Zorraquin, suggest that individually, any single one of the reasons listed above for companies to become more eco-efficient might be dismissed as unconvincing. The power, they say, “lies in the summation of the parts” (1995).

Howes et al (1997) have identified four principal drivers for improved corporate environmental performance as: regulation, customer pressure, local communities, and investors. Similarly, Richards and Frosch (1994) and Chase (1994), argue that dictates of

regulations, demands from consumers, pressures exerted by competitors, concerns about environmental image, opportunities to profit, and the desire to do the right thing, among other factors, influence the degree to which a firm takes interest in the environment.

According to Chase (1996:22), the first sets of influences are the company's main stakeholders. Elkington (1996) defines stakeholders to include employees, legislators and regulators, local communities, shareholders and investors, customers and consumers, suppliers, industry associations, environmental groups, scientific and educational communities, and the media. This definition of a company's stakeholders represents a fundamental shift in corporate responsibility, where traditionally, companies believed their primary responsibility were to maximize returns to their shareholders. But as Fabian (2000) notes, society is now holding companies accountable for their impacts on all stakeholders along the supply chain.

Sanchez (2000), notes that shareholders are no longer satisfied by short-term performance. Instead, they are demanding sound financial returns, lasting economic growth, long-term productivity increases and sharpened global competitiveness. He notes that, fundamentally, the newest criterion for investment is sustainability because it increases the long-term share value.

According to Howes et al (1997), the need to improve the company's overall environmental image, regarded as an essential component of company branding, is far more important than responding to green consumers as a driver of improved environmental performance. This, he argues, is because consumers think green only when buying a limited range of products and are generally concerned with functionality and cost rather than the environmental impacts associated with their consumption patterns and choices.

To Chase (1996), a positive reputation with a range of audiences has led not only to devoting far greater care and resources to avoiding a damaging incident but also to search for new and better ways to reduce the footprint on the environment. The implication is that, the fear of environmental failure is a more potent consideration in driving corporate environmental

policy for many companies than in the prospect of expanding market share through green claims.

Schimidheimy (1992), notes that a combination of increasing external pressures and growing internal commitment has made some leading companies ensure their products are made, used, and disposed of in the most environmentally compatible ways. The sheer increase in the number of NGOs, coupled with their ever-increasing sophistication in communication, coordination and lobbying is mentioned by Fabian (2000), as a major factor in forcing companies to account for their environmental impacts.

According to Chase (1996), the media with its capacity for instant, widespread communication of any incident is a major driving force behind a company's environmental management. Fabian (2000), agrees with this line of argument, by stating that the journalists' appetite for "shock value" news, results in regular exposes on companies with poor environmental or social performance.

Like other citizens, employees have become more aware of environmental issues. This, argues Howes et al (1997), is the route through which a broader shift in social attitudes is beginning to permeate companies. In many cases, this is being driven by the desire of managers and staff for the company they work for to reflect their personal values.

Hutchison (1997) notes that a significant reason for adopting an environmental policy for business is to save money by becoming more efficient. To him, a great many businesses have found that they can save considerable sums by cutting out wasteful practices in the use of raw materials and energy. The resulting reduction in resource and energy use through greater efficiency also cuts emissions and reduces environmental damage.

Howes et al (1997), mentions a series of interviews, where companies operating high impact sites frequently mentioned community stakeholders, as impacting on their corporate environmentally related decisions. The issues generally related to very direct and local impact environmental problems such as particulate emissions and odour. Large-scale

environmental problems such as climate change did not feature in company – community relations.

According to Chase (1996), the major matter of environmental liabilities has led to significant changes in the way companies now manage their assets, both current and future. Howes et al (1997) mentions a number of studies, which show that regulation, and anticipation of regulation, still remains the most important driver influencing corporate environment-related decisions. Further, regulatory issues are of particular importance to those companies carrying out extractive or basic processing activities high up the materials supply chain.

2.5 THE BENEFITS OF CORPORATE ENVIRONMENTALISM

Traditionally, firms saw environmental protection and economic competitiveness as incompatible. Some authors like Porter and Van de Linder (1995), have argued that this perceived conflict is a false dichotomy. Instead of hindering competitiveness, strict and sensibly constructed environmental standards act as catalyst to innovation, resulting in processes that not only pollute less but also lower costs or improve quality.

The literature on business and the environment, as well as the more optimistic official documentation, is replete with references to the environmental and economic double-dividend or win-win situation – the idea that certain measures can bring benefits in terms of both environmental and economic performance. Howes et al (1997) argues that by producing more from less and from cleaner production processes, both shareholder value and the environment can benefit. Similarly, Spencer-Cooke (1999) believes that by managing resources more eco-efficiently – using fewer inputs and producing less waste from the same unit of output, companies can benefit both the planet and the bottom line.

There are good reasons for a possible link between environmental performance and healthy profits. According to Porter (1991) and Schmidheiny and Zorraquin (1995), companies can profit from enhanced environmental performance in ways such as more efficient waste management, pollution prevention, premiums on green products and improved public

image. However, the power of the effect does not reside with any one green issue or business attitude, but their synergy (Schmidheiny and Zorraquin 1995).

Valerie and Garcia (1998), have argued persuasively that by reducing environment-related costs, environmental management remains an economic goal in and of itself: appropriate consumption of raw materials, mastery of production costs, improved product quality, greater efficiency and reliability of the productive apparatus, and optimal management of risk insurance contracts. Furthermore, in terms of standardization, satisfying environmental criteria constitutes a significant advantage for obtaining product quality labels and/or company certification.

According to Schmidheiny (1992), enterprises that embrace sustainability can effectively realize advantages in more efficient processes, improvements in productivity, lower compliance costs, and new market opportunities. To Gouldson and Murphy (1998), the benefits of eco-business include both tangible improvements in price competitiveness, resulting for instance from improved process efficiency, and less tangible improvements in non-price competitiveness, arising for example as a consequence of improved product quality or stakeholder relations.

Smart (1992), writes that companies believe the steps they are taking towards eco-business are both important and beneficial to them because:

- Pollution is waste, and preventing it at source can save money in materials and in “end-of-the-pipe” remediation;
- Acting voluntarily now can minimize future risks and liabilities, make costly retrofits unnecessary, and aid in the design of more efficient regulations;
- A company moving “ahead of the curve” on environmental issues will find competitive advantage over those struggling to keep up;
- New “green” products and processes can increase consumer appeal and open up new business opportunities; and
- A reputation for being environmentally progressive improves recruitment, employee morale, investor support, host community acceptance and management’s self-respect.

In its 2001 annual report, Shell enumerates the benefits of sustainable development to business as: attracting and motivating top talent, reducing costs through eco-efficiency, reducing risks, influencing options and evolving portfolios, influencing product and service innovation, attracting more loyal customers and enhancing the brand, and enhancing reputation. On its part, the International Hotels Association (IHA) (1995) observes that environmental management brings benefits not just in environmental terms, but also in terms of real business benefits, such as reduced costs and liabilities, greater service quality, customer satisfaction and improved corporate image.

Fussler (1999) notes that eco-efficiency and cleaner production hold the key for business to improve the environment, health, and boost corporate profitability at the same time. In what he calls a win-win-win triangle, Nyati (1996), argues that Clean Technologies (CTs) are good for the environment, good for business and industry, and good for people and consumers.

Companies with an environmental management system may find that their external financing is positively affected. The cost of capital may be lowered, insurance premiums reduced and share price improved (Piesse 1992) by the positive evaluation of a firm's environmental performance. These three aspects of a firm's financial structure may also be negatively affected by poor or non-existent environmental quality (Edwards, 1998).

According to Porter (1991), environmental regulations far from damaging the competitiveness of firms, enhances it by stimulating innovation. Dynamic firms, he says, will gain "fast mover" advantages by anticipating changing social demands, searching out clean technology opportunities, and not wasting resources fighting regulatory development. Spencer-Cooke (1999) on his part has argued that by reducing ecological burdens and moving voluntarily beyond compliance, companies can demonstrate that they are trusted stewards of the environment who deserve their license to operate.

To Howes et al (1997), "Compliance plus" approach reduces the cost of high standards of environmental performance and can promote competitiveness at the company level. It also reduces potential conflicts with community stakeholders, helping remove barriers to

business expansion, and less managerial time spent dealing with public complaints and press enquiries. Further, it reduces the risk the unacceptable environmental behaviour that will trigger consumer response.

A different argument can be made, based on the work of Walley and Whitehead (1994). According to this line of analysis, environmental regulations and standards may in fact destroy value in companies that devote large proportions of their investment budgets to unproductive compliance projects. To Howes et al (1997), this is because regulations and standards inevitably require businesses to change the way they carry out their activities. These changes are seen as imposing a net additional cost and hence having a negative impact on competitiveness.

Gouldson and Murphy (1998), view the costs environmental improvements – financial and managerial resources that must be committed to research, development and application of new techniques and technologies – as diverting resources from other possibly more profitable or productive uses.

Howes et al (1997), adopts a more cautious position on the double-dividend argument, noting that it can create unrealistic expectations. To him, businesses are not homogenous and although impressive examples of cost-saving environmental investments can be found, they are not widespread and they do not necessarily represent the norm for individual companies.

2.6 CONCEPTUAL FRAMEWORK

Traditionally, firms saw environmental protection and economic competitiveness as incompatible. Moreover, companies saw their primary responsibility to be that of enhancing profits for their shareholders.

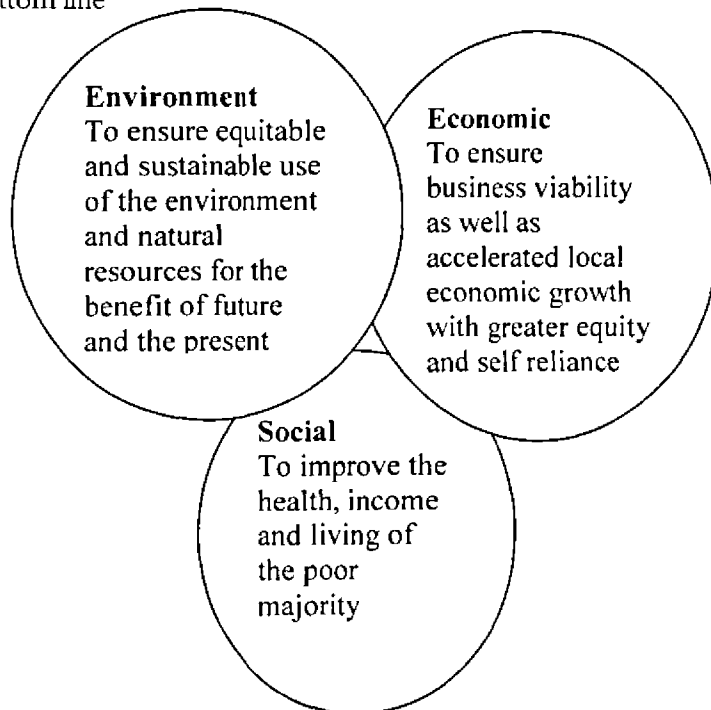
Recent trends, locally and globally show that environmental management is becoming a strategic issue for major tracts of industry and commerce. Corporate sustainability is being redefined beyond the traditional financial bottom line, to include environmental and social

governance issues. It is modeled on the wider concept of sustainable development as defined by the Brudtland Commission in 1987.

A model of corporate sustainability developed by Elkington (1999) defines it in terms of making sensible trade-offs between economic, environmental and social objectives of business. In what he calls the “triple-bottom line”, Elkington (1997) has argued that companies have to balance economic, social, and environmental concerns to survive in the 21st Century business environment or risk extinction.

In 1999, Elkington predicted that new sustainable industries of the 21st Century would consign less sustainable companies and even entire industry sectors to oblivion. As a result, business will shift to a new approach, using the triple bottom line thinking and accounting to build case for action and investment.

Fig 1: The triple-bottom line



Source: Elkington, J (1999)

The inadequacy of the Elkington (1999) model lays in the fact that it does not indicate what pressures are driving the sustainability objectives, the corporate response to those pressures, and the benefits. In this sense, it does not fit into the driver-response-outcome system approach of the study.

Richards and Frosch (1994), Chase (1994), and Howes et al (1997) have enumerated the drivers of the corporate sustainability agenda, especially the environmental nexus of it to include:

- Dictates of regulations and environmental standards;
- Demands from stakeholders who include shareholders, customers, employees, and business partners;
- Concerns about a company's environmental image;
- Opportunities to profit; and
- Desire to do the right thing.

A model developed by Hutchison (1997) classifies the corporate response to the environmental agenda into three active phases: Reactive, Managed, and Strategic, on the basis of three perspectives:

- The mindsets which are often prevalent, especially among the top executives;
- The assumptions about the market which are either explicitly stated or implicit in how a company behaves; and
- The management approach that is likely to prevail.

The model is shown in **Fig.2** below.

According to the model, in most cases, a company's initial response to environmental concerns is reactive. At the strategic phase, companies internalize the environment into their overall operations as part of their business culture. The managed phase is a transition phase between the Reactive and the Strategic phases.

As with the Elkington model (1999), the Hutchison model (1997) lacks linkage to what drives the corporate environmental management at each phase and the incentives for upward improvements. These incentives are in form of potential or real benefits accruing for particular active phases. Moreover, for the model to be useful, it requires clear and measurable environmental parameters for benchmarking and comparison. The lack of both qualitative and quantitative data is a major impediment. In Kenya, environmental data is still held as confidential commercial data, rendering accessibility even where data exists difficult.

Fig 2: Phases of Corporate Response to the Environment

REACTIVE	MANAGED	STRATEGIC
<p><i>Mindset</i>-business as usual: act on other issues if pressured.</p>	<p><i>Mindset</i>-cost effective and efficient use of resources with some reductions in emissions.</p>	<p><i>Mindset</i>-business strategy integrated with social and environmental factors; inclusive approach; use ethics and enlightened self-interest as basis for innovation.</p>
<p><i>Assumptions about the market</i>-Shows typical change pattern.</p>	<p><i>Assumptions about the market</i>-conventional market forces prevail but watch for emergence of changing customer preference.</p>	<p><i>Assumptions about the market</i>-aware of the need for long-life products, resource conservation, zero pollution to match consumer needs.</p>
<p><i>Management approach</i> - current practices satisfactory with technical fix for unusual problems.</p>	<p><i>Management approach</i>-a systematic approach introduced, using life cycle analysis, environmental audits and reports.</p>	<p><i>Management approach</i>-integrated, holistic, systems approach with open reporting and independent verification linked with financial performance.</p>

Source: Hutchison (1997)



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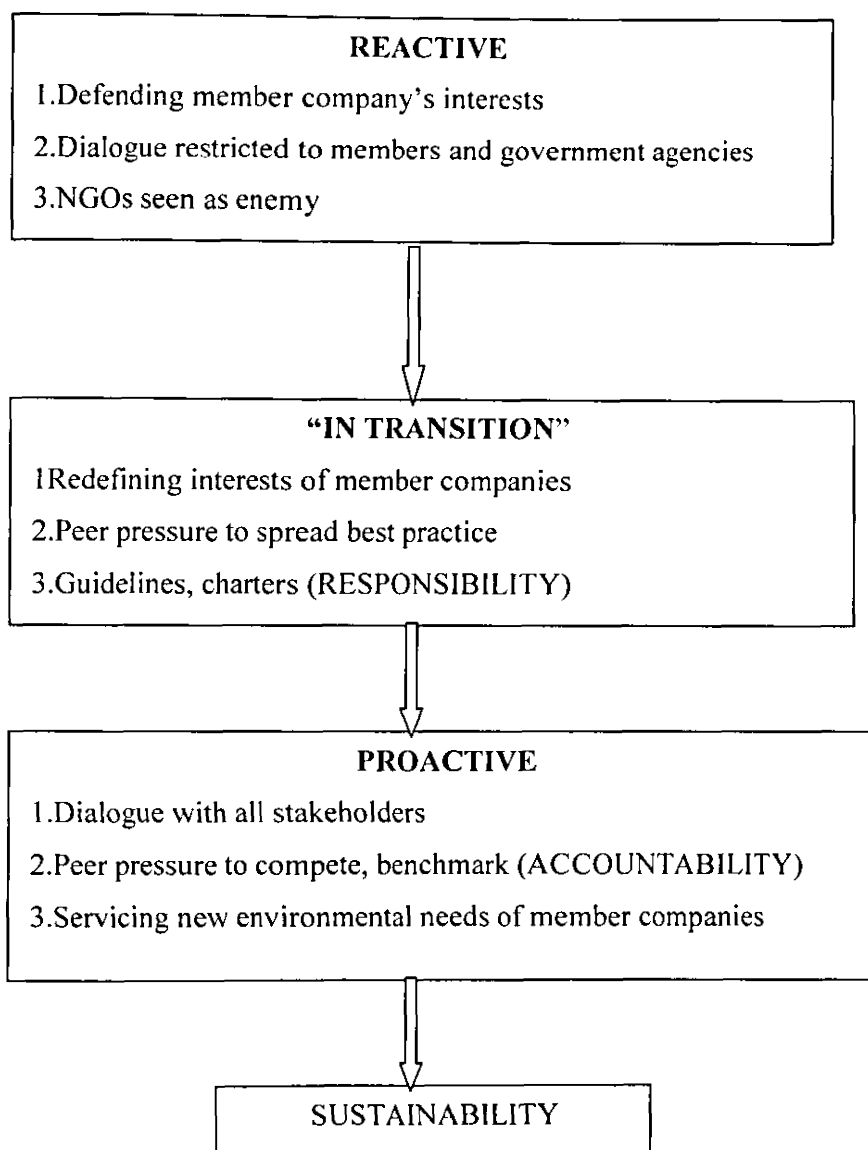
Source: Hutchison (1997)

A similar model to that of Hutchison (1997) was developed by UNEP (1994). It divides the active phases into three: reactive, in transition, and proactive, based on the changing role of industry associations.

According to the model, when the environmental agenda is largely driven by NGOs, the media and regulations, industry associations play a defensive role during the reactive phase. During the transition phase, industry associations form Green Business Networks (GBNs) and exert pressure on their members due to the emergence of corporate environmental markets. In the longer term, the “Sustainable Development Consortia” brings companies and other organizations together to achieve tasks that are beyond the resources of the individual members, during the proactive stage.

The UNEP model (1994), however, suffers from the same inadequacies of the Hutchison model (1997). Moreover, it represents collective response rather than individual companies. The model is shown in Fig.3.

Fig.3: The Changing Role of Industry Associations



Source: UNEP (1994)

According to Gouldson and Murphy (1998), the benefits of eco-business include both tangible improvements in price competitiveness and less tangible improvements in non-price competitiveness. The benefits can also be classified as either direct or indirect.

According to Schmidheiny (1992) and smart (1992), the benefits of eco-business include:

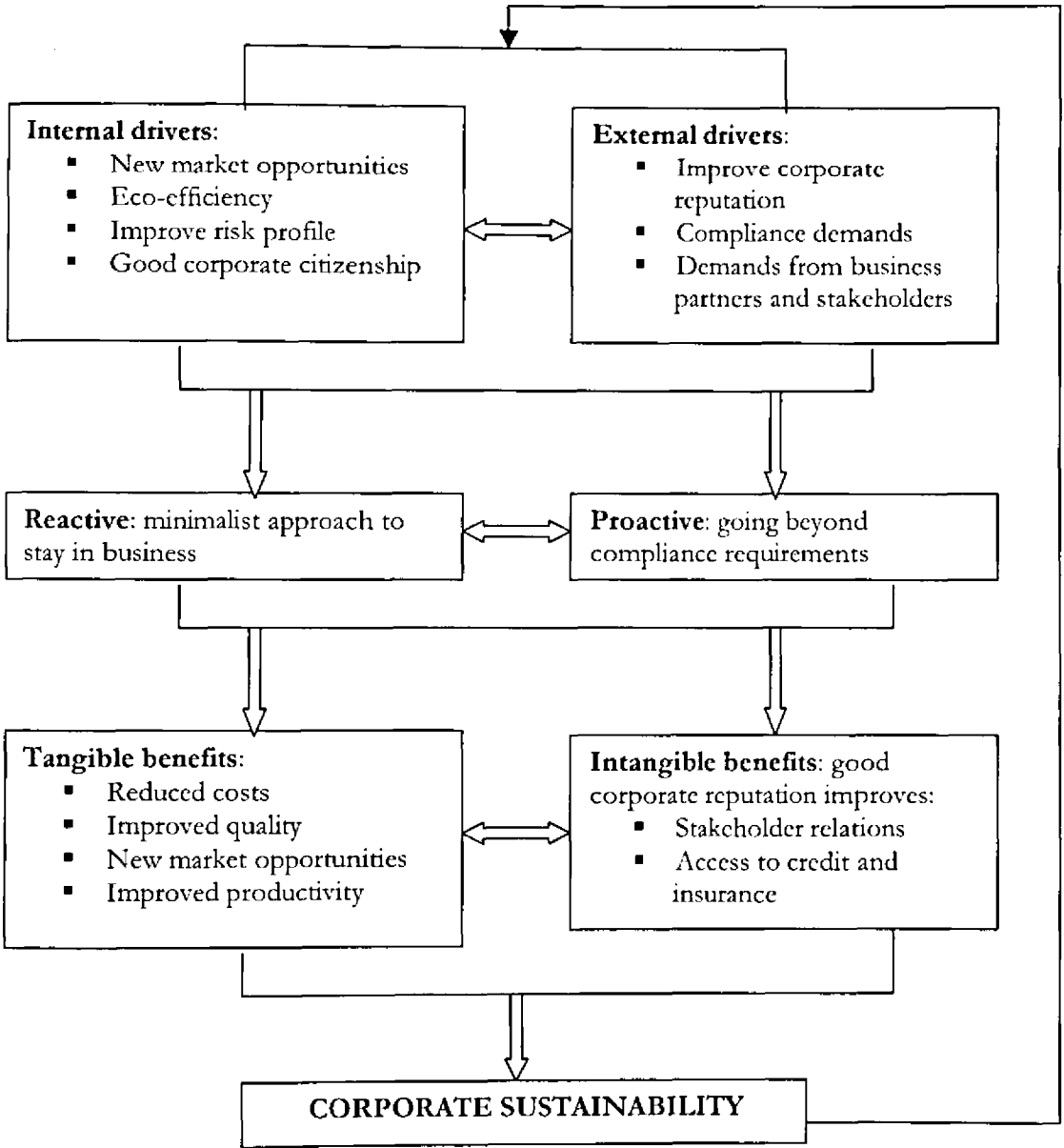
- Efficiency in processes
- Improvements in productivity
- Low compliance costs
- New market opportunities
- Cost reduction in end of pipe remediation
- Minimize future risks and liabilities
- Reputation for environmental stewardship
- Attracting customers that are more loyal and enhancing the brand.

2.7 THE OPERATIONAL THEORETICAL FRAMEWORK

The emerging trends in corporate environmentalism in Kenya are studied using a model based on driving forces-response-outcome (benefits) approach. The model is a composite of ideas from:

- Elkington (1999) model of corporate sustainability, which provides the general framework of the study.
- Hutchison (1997), and UNEP (1994) models of phases of corporate environmental management.
- Postulates of Richards and Frosch (1994), Chase (1994), and Howes et al (1997) on drivers of corporate environmentalism.
- Postulates of Gouldson and Murphy (1998), Schmidheiny (1992) and Smart (1992) on the benefits of eco-business.

Fig.4: The Operational Theoretical Framework



Source: Howes et al (1997); Gouldson and Murphy (1998); Schmidheimy (1997); Smart (1992); Elkington (1999); Hutchison (1997); UNEP (1994); Richards and Frosch (1994); Chase (1994).

Internal and external factors drive companies to respond to the environmental agenda as part of doing business. At the most basic level, the way companies respond to the environmental pressures can be classified as either reactive or proactive. The nature of the response in turn determines the benefits of corporate environmentalism, which may be tangible or intangible. The benefits of corporate environmentalism constitute the core of corporate sustainability, alongside benefits from corporate social responsibility and economic performance.

In the theoretical framework, the drivers of corporate environmentalism are divided into two categories: external and internal drivers. Internal drivers include:

- New market opportunities in green products and services;
- Opportunities to profit by being more eco-efficient;
- The need to improve a company's risk profile; and
- Ethical corporate behaviour towards the environment.

External drivers include:

- The need to improve a company's corporate reputation;
- The need to be in compliance with regulations and environmental standards;
- Demands from business partners who include banks, insurers and suppliers;
- Responding to investor requirements and pressure;
- Responding to customer pressure and demands; and
- Pressure from neighbourhood communities.

The benefits of corporate environmentalism are divided into tangible benefits from price competitiveness and intangible benefits from non-price competitiveness. Tangible benefits include:

- Improved quality of products and services;
- Reduced costs through eco-efficiency (low material and energy-intensity);
- New market opportunities from innovation of green products and services;
- Reduced costs from pollution and waste reduction measures;
- Improvements in productivity;
- Lower compliance costs; and
- Avoiding costly end-of-pipe remediation.

Intangible benefits are associated with corporate reputation. Improved corporate reputation for being environmentally progressive:

- Improves recruitment by attracting, motivating, and retaining top talent;
- Improves investor support, and shareholder value;
- Improves customer loyalty and enhances product or service brand;
- Minimizes future risks and liabilities. As a result, the cost of capital and insurance may be lowered;
- Reduces the risk of consumer backlash from unacceptable environmental behavior; and
- Reduces potential conflicts with community stakeholders, helping remove barriers to business expansion and less managerial time spent on complaints and press inquiries.

2.8 HYPOTHESES

- H_0 : There is no difference in factors driving corporate environmentalism for manufacturing and service industries.
- H_1 : There is a difference in factors driving corporate environmentalism for service and manufacturing companies
- H_0 : There is no difference in benefits derived from corporate environmentalism between manufacturing and service companies
- H_1 : There is a difference in benefits of corporate environmentalism between service and manufacturing companies
- H_0 : There is no difference in corporate environmental activities between service and manufacturing companies
- H_1 : There is a difference in corporate environmental activities between service and manufacturing companies.

CHAPTER THREE

METHODOLOGY

3.1 SAMPLING FRAME

The study used a sample of twenty five (25) companies. The sampling frame consists of companies that are environmentally conscious. The criteria for corporate environmental stewardship include:

- Companies with external environmental certification e.g. ISO 14001, BS7750 or EMAS
- Companies with quality standards i.e. ISO9002
- Companies which support environmental protection and conservation initiatives
- Companies using eco-advertising for their products and services.

Due to the lack of a complete list of environmentally conscious companies from which the sample could be drawn, the sampling frame was constructed from various sources. It is therefore only a good approximation.

- ISO14001 certified companies were compiled from standardization, verification and certification organizations and the ministry of industry.
- Companies that support environmental projects were compiled from Nation Media's Aberdare Forest Fund, the Kenya Wildlife Service (KWS), and the Green Cities Project.
- Companies that use eco-advertising were compiled from the media.

The sampling frame was divided into two clusters: manufacturing and allied sector; and commercial and services sector. Seventeen (17) manufacturing and eight (8) service companies were chosen to participate in the study.

For the purposes of the study, manufacturing companies were defined so as to include three classes of industries according to the International Standard Industrial Classification system (ISIC). This is:

- Agricultural food processing industries;
- Agricultural non-food processing industries; and
- Non-agricultural manufacturing industries.

Commercial and services companies as defined according to the ISIC classification, include: printing and publishing, equipment maintenance, transport, hotel and hospitality, financial and insurance, and telecommunications.

3.2 THE SAMPLE

The study used two independent samples:

Sample1: consists of seventeen (17) companies from the manufacturing and allied sector.

Sample2: consists of eight (8) companies from the commercial and services sector.

The samples are shown in Appendix A.2 and Appendix A.3.

The differences in the sample sizes is due to the fact that:

- Sample 1 is an aggregate of three classes of industries according to the ISIC classification as opposed to sample 2. The aggregation was necessary to raise a critical number of companies for statistical analysis. This does not affect the study significantly, as viewed against the objectives; sample 1 can largely be defined as a homogeneous group with distinct business characteristics from sample2.
- Due to the nature of the services sector, there are as yet not many companies, which have embraced environmental sustainability as a business imperative; as compared to sample 1 companies, which by nature are viewed as having high environmental impacts.

The structure of the samples, and particularly the disproportionate representation of some sectors, mirror the fact that different sectors respond to the environment differently on the basis of such fundamentals as:

- Regulation and policy environment;
- Nature of business activities in relation to resource use, pollution potential, and waste generation; and
- The availability of clear-cut business opportunities from pursuing the environmental agenda.

For example:

- The energy and the extractive industries always face tougher regulatory regimes. However, there are also opportunities to profit.
- The financial sector faces potential liability from environmental failure and risks to their clients.
- The hotel industry apart from resource consumption and waste problem it faces, is directly related to the tourism sector. It therefore has a more direct stake in environmental conservation.
- Others may be purely on reputation and brand building venture.

3.3 DATA COLLECTION

Primary data was collected using structured questionnaires. The questionnaires were administered to environmental departments, corporate strategy departments, marketing departments, production departments, public relations departments, and human resource departments. This reflects differences in the environmental management structures among companies.

Structured questionnaires were used to collect data on the strength of two factors:

- They provided a means of obtaining a uniform set of data from all respondents in the two samples for comparison; and

- They provided a highly focused way of collecting data, eliminating the risk of collecting data that was not useful to the study.

To improve the quality and speed of the research, two approaches were used in the design of the questionnaire:

- The questions were directly related to the specific research questions, objectives, and hypotheses of the study.
- Closed questions were used in preference to open questions because:
 1. They are quicker and less ambiguous than open questions;
 2. They provided a better way of dealing with sensitive data which environmental data is frequently thought to be by companies; and
 3. Provided uniform responses across respondents, which suited computer processing, comparison, and analysis.

The main disadvantage of closed questions is that they take longer to design. They require extensive pre-testing to get all the alternatives. There is also potential to introduce bias through choice alternatives. These limitations were minimized through:

- Extensive literature review before design to capture as many alternatives as possible; and
- Including a category of “other” in the alternatives so that if none of the categories apply, the respondent can provide an alternative answer to the question.

3.4 DATA ANALYSIS

In data analysis, both descriptive and inferential statistics were used. Descriptive statistics were used to organize data to show trends and patterns of corporate environmentalism in Kenya based on the variables investigated. Inferential statistics were to draw conclusions about corporate environmentalism in Kenya, based on sample results. Particularly, they were used to test whether there are any significant differences in corporate environmentalism in Kenya between manufacturing and service companies on the basis of three core research areas: drivers, corporate activities, and benefits of corporate environmentalism.

Frequency distribution and bar charts were used to show:

- Factors that influence individual companies towards environmental management.
- Benefits to companies from environmental management.
- The activities that constitute corporate environmentalism.

The Kruskal-Wallis one-way analysis of variance by ranks- a non- parametric statistical test was used to test the hypotheses. The test was chosen because:

- It does not require any assumptions to be made about the shape of the populations
- It uses ordinal – scaled data
- The samples are independent
- The sample sizes are more than the requisite five.

Recall that the three hypotheses relate to the three research questions and objectives i.e. to test whether there is any significant difference in the nature of corporate environmentalism in Kenya in relation to:

- The factors driving corporate environmentalism;
- The environmental activities which characterize the emerging corporate environmentalism; and
- The benefits of corporate environmentalism.

To test the three hypotheses, three distributions were constructed from the collected data. Each distribution consists of scores of individual companies in relation to how they respond to drivers, activities, and benefits of corporate environmentalism. A company's score is the total number of its NO or YES responses to a range of alternatives. Where:

YES constitutes a score of **1**

NO constitutes a score of **0**

SPSS was used in data processing and analysis.

CHAPTER FOUR

RESULTS AND ANALYSIS

This chapter presents results and analysis of the research. Its organised in three sections, in line with research questions, objectives and hypothesis of the study:

Section 4.1: Results and analysis of drivers of corporate environmentalism;

Section 4.2: Results and analysis of corporate environmental activities;

Section 4.3: Results and analysis of benefits of corporate environmentalism.

Three hypotheses are tested using kruskal-Wallis statistical test of variance by ranks for the drivers, corporate activities and benefits of corporate environmentalism for both manufacturing and service companies. A brief discussion of the results is offered in each section.

4.1 DRIVERS OF CORPORATE ENVIRONMENTALISM

A list of factors, which drive corporate environmentalism, was provided. Companies chose those factors that were applicable to them. Moreover, a category for others took care of any other factors that were not listed. A score of 1 and 0 were assigned for every YES and NO response respectively. Each company was given a total score based on how it responded to the factors driving corporate environmentalism. This score is a reflection of the number of factors motivating environmental responsibility and care among companies.

Tables 4.1 and 4.2 give a summary of the results.

Table4.1: Results –Drivers of Corporate Environmentalism for the Manufacturing Sector

COMPANY	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	SCORE
M01	1	1	1	1	1	1	0	1	1	1	1	10
M02	1	1	1	0	1	1	0	1	1	1	0	8
M03	1	1	1	1	1	1	1	1	1	1	0	10
M04	1	1	1	1	1	1	0	1	1	1	1	10
M05	1	1	0	0	1	1	0	0	1	1	0	6
M06	1	1	0	0	1	1	0	0	1	1	0	6
M07	1	1	1	1	1	1	1	1	1	1	0	10
M08	1	1	1	1	1	1	1	1	1	1	1	11
M09	1	1	1	1	1	1	1	1	1	1	0	10
M10	1	1	1	1	1	1	1	1	1	1	0	10
M11	1	1	1	1	1	1	0	1	1	1	0	9
M12	1	1	1	1	1	1	0	1	1	1	0	9
M13	1	1	1	0	1	1	0	0	1	1	1	8
M14	1	1	1	1	1	1	1	0	1	1	0	9
M15	1	1	1	1	1	1	0	1	1	1	0	9
M16	1	0	0	0	1	1	0	1	0	1	0	5
M17	1	1	1	0	1	1	1	1	1	1	0	9
FREQS	17	16	14	11	17	17	7	13	16	17	4	

Table4.2: Results-Drivers of Corporate Environmentalism for the Service Sector

COMPANY	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	SCORE
S01	1	1	0	0	1	1	0	0	0	0	0	4
S02	0	0	1	0	1	1	0	0	0	0	0	3
S03	0	0	0	0	1	1	0	0	0	0	0	2
S04	0	0	0	0	1	1	0	0	0	0	0	2
S05	1	1	1	1	1	1	1	1	1	1	0	10
S06	0	0	0	1	1	1	0	1	0	0	0	4
S07	1	1	1	1	1	1	1	1	1	1	1	11
S08	0	0	1	0	1	1	0	0	0	1	1	4
FREQS	3	3	4	3	8	8	2	3	2	3	2	

KEY

- D1 Compliance
- D2 Eco-efficiency
- D3 Competitiveness
- D4 Health and safety
- D5 Corporate reputation
- D6 Responsible corporate citizenship
- D7 Customer pressure
- D8 Impact mitigation
- D9 Insurers, lenders and investors
- D10 Risks and liabilities
- D11 Others

The results show variation in the factors driving corporate environmental responsibility between manufacturing and service companies at two levels:

- The number of factors that influence corporate environmental behaviour; and
- The relative importance of each factor in influencing corporate behaviour.

Table 4.3 shows the relative importance of each driver for both manufacturing and service companies in terms of percentage frequencies.

Table4.3: Summary-Drivers of corporate environmentalism by frequency

DRIVER	SAMPLE 1(%)	SAMPLE 2(%)	OVERALL (%)
Compliance	100	37.5	80
Eco-efficiency	94.1	37.5	76
Competitiveness	82.4	50	72
Health and safety	64.7	37.5	56
Corporate reputation	100	100	100
Responsible citizenship	100	100	100
Customer pressure	41.2	25	36
Impact mitigation	76.5	37.5	64
Insurers,lenders,and investors	94.1	25	72
Risks and liabilities	100	37.5	80
Others	23.5	25	24

From the table, the need to build and maintain a good corporate environmental reputation, and the need to be responsible corporate citizens are the most important drivers for both manufacturing and service companies. All companies are driven by these two factors in their environmental activities.

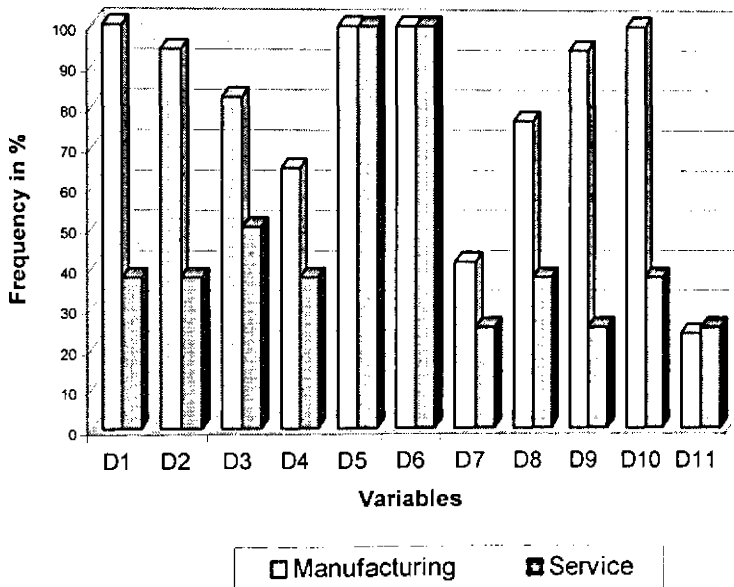
The manufacturing sector has more pressure to be environmentally responsive than the service sector as evidenced by the wide range of drivers. The following considerations are more important to manufacturing companies than service companies:

- Compliance with regulations and environmental standards
- Achieving eco-efficiency
- Competitive opportunities in pollution prevention and environmentally responsible products

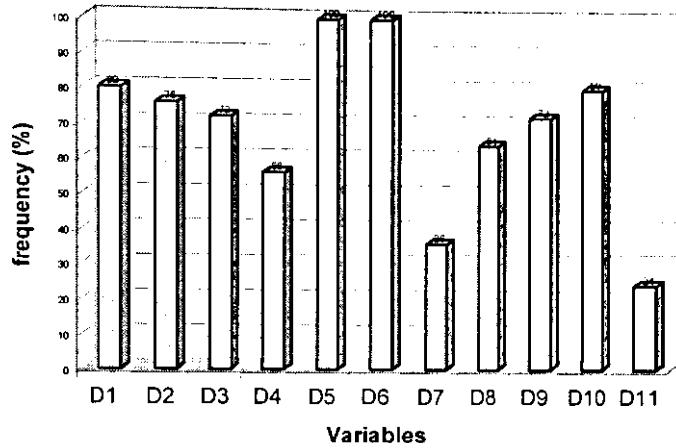
- To avoid risks and liabilities from environmental failure
- Pressure from: insurers, lenders, and investors.

The relative importance of each driver by sector is shown in the graph1 below. Graph 2 shows the overall significance of drivers of corporate environmentalism across sectors.

Graph 1: Comparison of drivers between manufacturing and service companies



Graph 2: Overall significance of drivers



4.1.1 Analysis and Hypotheses Testing

The hypothesis was tested using Kruskal-Wallis statistical test of variance by ranks at 0.05 level of significance. The distributions for the two samples consist of total scores for individual companies in relation to factors driving corporate environmentalism. The distributions are given in Table 4.4 below.

Recall that:

H_0 : There is no difference in factors driving corporate environmentalism for manufacturing and service companies.

H_1 : There is a difference.

From statistical analysis:

Computed value of H , $H_k=5.03$

Critical value of H , $H_c=3.84$

Decision rule: reject H_0 if $H_k > H_c$

Decision: H_0 is rejected, and H_1 accepted

See **AppendixA.8** for statistical results.

Table 4.4 Distribution 1-drivers of corporate environmentalism by scores

<i>Sample1</i>	<i>Sample2</i>
10	4
8	3
10	2
10	2
6	10
6	4
10	11
11	4
10	
10	
9	
9	
8	
9	
9	
5	
9	

4.1.2 Discussion

The apparent variations in drivers of corporate environmentalism between the two samples reflect fundamental differences in the nature of business activities; their impact on the environment; and relationships with different stakeholders.

The need to build and maintain good corporate reputation and act responsibly are two factors that transcend both manufacturing and service sectors because they are increasingly becoming an important aspect of corporate branding that offers competitive advantages. Good corporate reputation with a wide range of audiences is now seen as key to business sustainability- reflecting a worldwide shift in corporate governance. In the new paradigm, a

business' stakeholders go beyond shareholders and management. Being seen to respond to changing societal challenges and expectations through good corporate practices is now recognised as critical to building customer loyalty in a competitive business environment.

The need to be in compliance with regulations and standards and achieve eco-efficiency are more critical to the manufacturing sector than the service sector due to the fact that the manufacturing sector is characterized by high material and energy consumption; and high waste generation and emission. As a result, the manufacturing sector is:

- Highly regulated to control its resource and energy consumption, and pollution effects; and
- Under competitive pressure to reduce costs by adopting eco-efficiency principles i.e. producing more from less.

There are divergent views about the role of regulation in stimulating changed corporate behaviour. At one extreme, some in business would argue that regulation has become almost irrelevant because environmental practices will improve through self-motivation and market drivers without any need for public policy. The alternative view is that regulation is the only factor, which would induce companies to alter their behaviour. Evidence from the research suggests that:

- Regulation is still one of the most important factors leading to changes in practice, especially for the manufacturing sector,
- Both regulation and self-motivation through market mechanisms are necessary to fundamentally alter a company's environmental practices.

Regulatory pressures are of paramount importance for most companies, particularly for high impact industries such as metals, chemicals, paper, and energy. This is because, compliance, for example:

- Can legitimise a company's activities;

- Can empower environmental managers and enable them to secure funding for environmental projects and investments that may otherwise not have been made available;
- Reduces liabilities and risks from environmental failure.

The influence of the need to avoid future risks and liabilities; and pressure from insurers, lenders and investors; is more pronounced for manufacturing companies than service companies. This reflects differences in risk profiles. Manufacturing companies are more susceptible to environmental risks and liabilities from accidents and inappropriate environmental behaviour than service companies- with the exception of banks and insurance companies. This explains the apparent pressure from insurers, lenders, and investors to manufacturing companies to show more responsibility to the environment. Managing the environment responsibly is seen as improving a company's risk profile, profitability and long-term sustainability. The company therefore becomes attractive to creditors, and investors.

Consumer pressure is not yet a sufficient factor to push companies towards better environmental practices, unless where opportunities exist for product differentiation through eco-labelling like in the oil industry. In a depressed economy, coupled with low levels of environmental awareness, consumers are more concerned about price and functionality of products and services, rather than their environmental attributes.

The results show that both internal and external stimuli may be equally important in driving corporate environmentalism. The top five ranked reasons mentioned by companies show this fact. Internal drivers include:

- To reduce energy and material consumption, and improve efficiency
- To be responsible corporate citizens
- To improve a company's risk profile.

External drivers in the top five ranked reasons are:

- To comply with environmental regulations and standards; and
- To improve corporate reputation to a wide range of audience e.g. customers, local communities, and business partners.

To sustain a company's environmental profile, internal commitment is important. Environmental stewardship and commitment should be part of the management culture right from the board level. Whereas, external drivers are important in stimulating good corporate behaviour towards the environment, they do not guarantee long-term sustainability of environmental programmes. A strategy that is externally-driven is weak, because external pressures change from time to time due to:

- Changing legal and regulatory frameworks;
- Changing institutional frameworks;
- Changing perceptions and attitudes towards the environment by different stakeholders; and
- Changing societal expectations and pressures.

4.2 CORPORATE ENVIRONMENTAL ACTIVITIES

Table 4.5 and Table 4.6 provide a summary of companies' involvement in ten key corporate activities. Each company is given a score on the basis of how many activities it engages in.

Table 4.5 Results-Corporate Environmental Activities for the Manufacturing Sector

COMPANY	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	SCORE
M01	1	1	1	1	1	1	1	1	1	1	10
M02	1	1	1	1	1	1	1	1	1	1	10
M03	1	1	1	1	1	1	1	1	1	1	10
M04	1	1	1	1	1	1	1	1	1	1	10
M05	1	1	1	1	1	1	1	1	1	1	10
M06	1	1	1	1	1	1	1	1	0	0	8
M07	1	0	1	0	1	1	1	0	1	1	7
M08	1	1	1	1	1	1	1	1	1	1	10
M09	1	0	1	0	1	1	1	0	1	1	7
M10	1	1	1	1	1	1	1	1	1	0	9
M11	1	1	1	1	1	1	1	1	0	1	9
M12	1	1	1	1	1	1	1	1	1	1	10
M13	1	1	1	1	1	1	1	1	0	0	8
M14	1	1	1	1	1	1	1	1	1	1	10
M15	1	1	1	1	1	1	1	1	1	1	10
M16	1	0	1	0	1	1	1	0	1	1	7
M17	1	1	1	1	1	1	1	1	1	1	10
FREQS	17	14	17	14	17	17	17	14	14	14	

Table 4.6 Results-Corporate Environmental Activities for the Services Sector

COMPANY	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	SCORE
S01	1	1	1	1	1	1	0	1	1	1	9
S02	1	0	1	0	1	1	0	0	1	1	6
S03	1	0	1	0	1	1	0	0	1	1	6
S04	1	0	1	0	1	1	0	0	1	1	6
S05	1	0	1	0	1	1	1	1	1	1	8
S06	1	0	1	0	1	1	0	1	1	1	7
S07	1	1	1	0	1	1	1	1	1	1	9
S08	1	0	1	0	1	1	0	0	1	1	6
FREQS	8	2	8	1	8	8	2	4	8	8	

KEY

- A1 Corporate environmental policy
- A2 Environmental Management System
- A3 Corporate environmental reporting
- A4 Environmental audits
- A5 Business strategy
- A6 Compliance
- A7 Environmental department/unit
- A8 Recycling/reuse
- A9 Conservation project
- A10 Local community support

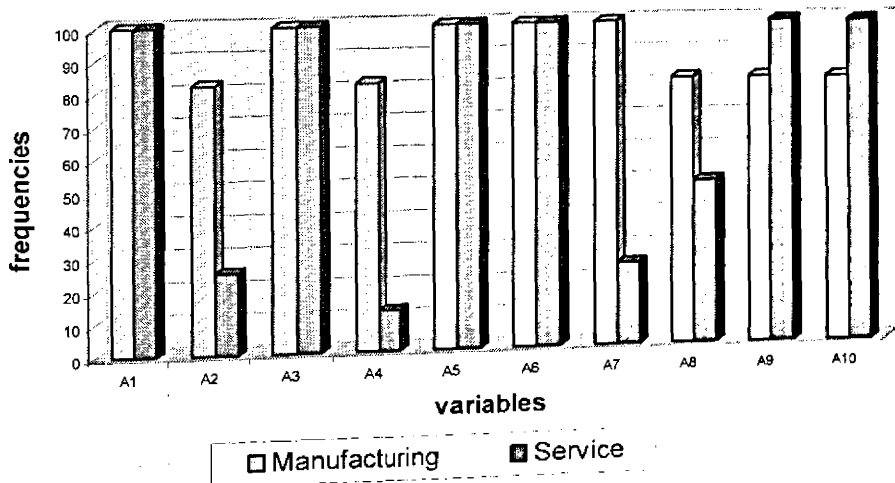
Table 4.7 gives a summary of the corporate environmental activities examined by frequency for the two sectors, and the overall case.

Table 4.7 Summary-corporate environmental activities

ACTIVITY	SMPLE 1	SAMPLE 2	OVERALL.
Corporate environmental policy	100	100	100
Environmental management system	82.4	25	53.4
Corporate environmental reporting	100	100	100
Environmental auditing	82.4	12.5	47.5
Business strategy	100	100	100
Compliance	100	100	100
Environmental department/unit	100	25	62.5
Recycling/re-use	82.4	50	66.2
Conservation projects support	82.4	100	91.2
Local community support	82.4	100	91.2

Graph 3 shows a comparison of corporate environmental activities engaged in by the manufacturing and services sectors.

Graph 3: Comparison of corporate environmental activities by sector



The results show that all companies interviewed (both manufacturing and service):

- Have a corporate environmental policy to support the environment or reduce the impacts of their activities on the environment;
- Report on their environmental activities or initiatives
- Acknowledge that the environment is now part of their business strategy; and
- Comply with environmental regulations and standards.

Support for conservation projects and local community projects is also a common strategy used by both manufacturing and service companies to show their concern for the environment.

Environmental management systems (EMS) and Environmental auditing are key aspects for manufacturing companies as opposed to service companies. Moreover, the possession of an environmental department or unit is more a feature of manufacturing than service companies.

Whereas all companies claim to report on their environmental initiatives and activities; Tables 4.8, 4.9, and 4.10; show variations in the frequency of the reports, the audience of the reports, and their structure (i.e. whether they are part or separate from company annual reports).

Table 4.8 Frequency of environmental reporting

Frequency	Sample1		Sample2		Total	
	No.	%	No.	%	No.	%
Annually	17	100	8	100	25	100
Semi-annually	9	52.9	0	0	9	36
When necessary	9	52.9	6	75	14	56

Graph 5: Frequency of Environmental Reporting

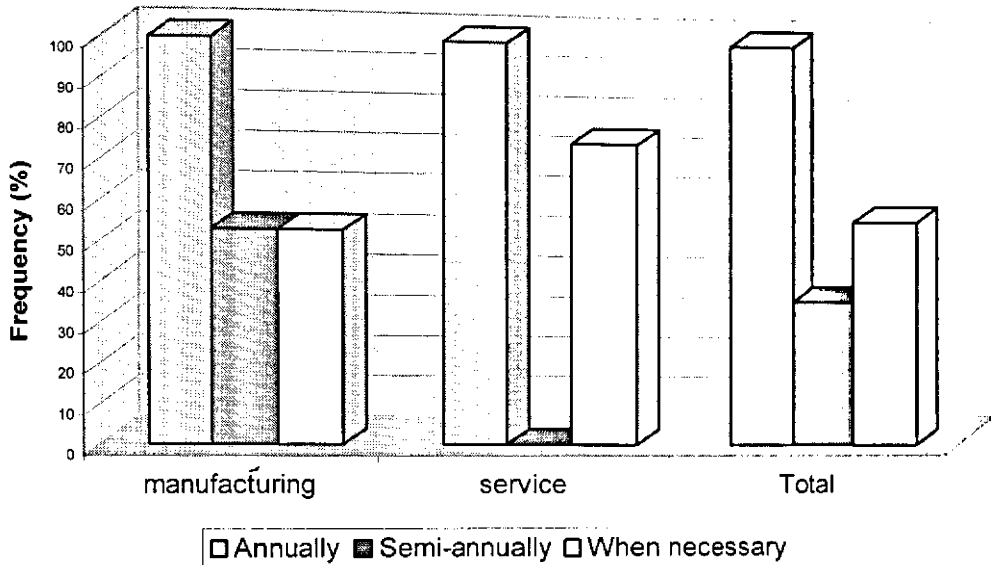


Table 4.9 Audience of environmental reports

Audience	Sample1		Sample2		Total	
	No.	%	No.	%	No.	%
General public	4	23.5	0	0	4	16
Investors/shareholders	10	58.5	5	52.5	15	60
Regulators	17	100	3	37.5	21	84
Company board of directors	17	100	8	100	25	100

Graph 6: Target audience of environmental reports

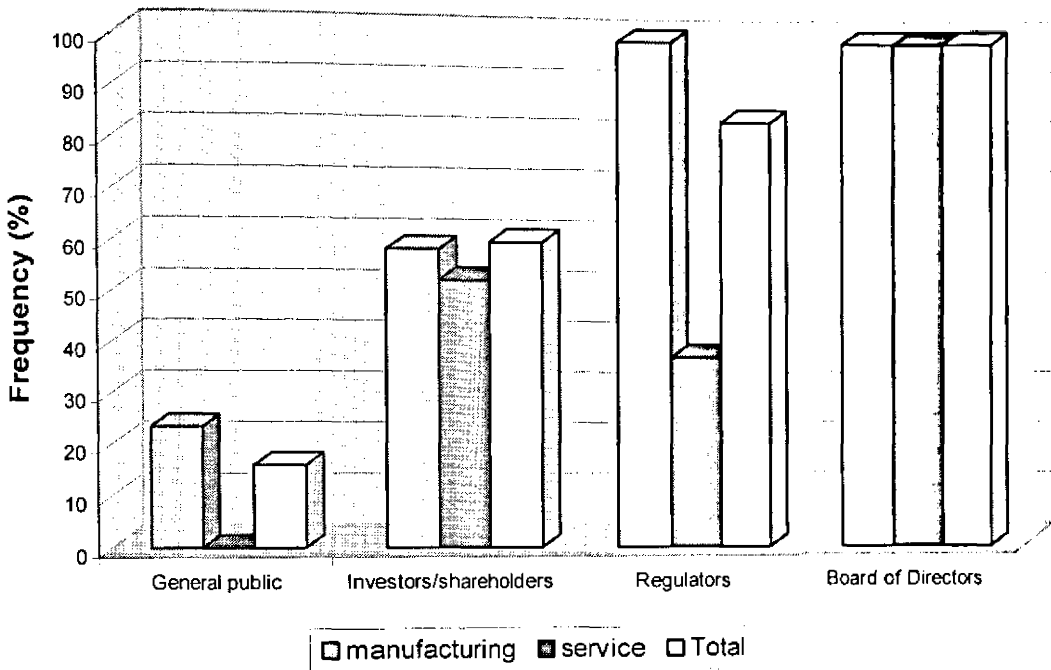
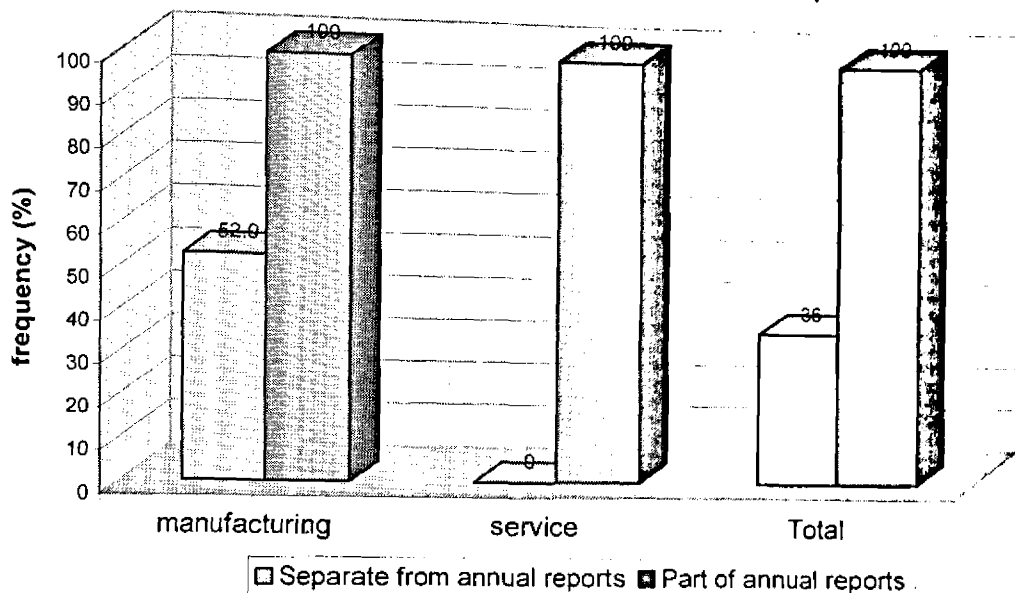


Table 4.10 Structure of environmental reports

Structure	Sample1		Sample2		Total	
	No.	%	No.	%	No.	%
Separate from annual reports	9	52.9	0	0	9	36
Part of annual reports	17	100	8	100	25	100

Graph7:Structure of environmental reports



All manufacturing companies interviewed have an environmental unit or department; while majority of service companies do not have. Even companies that have an environmental department or unit show variations when asked whether:

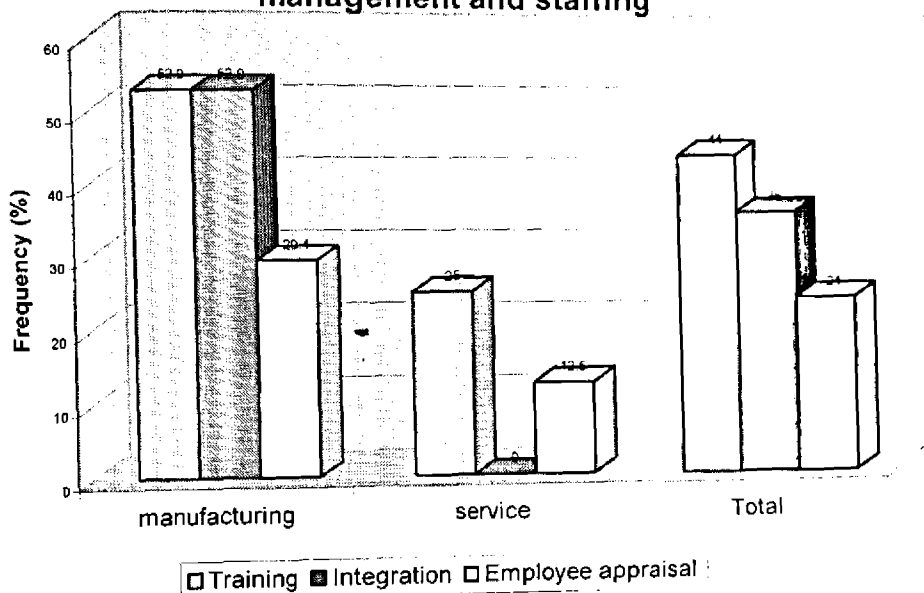
- They train their employees on environmental responsibility;
- The environment is integrated into all company departments and operations; and
- Environmental performance is part of employee performance.

This is shown in Table4.11.

Table4.11 Environmental management and staffing

	Sample1		Sample2		Total	
	No.	%	No.	%	No.	%
Training	9	52.9	2	25	11	44
Integration	9	52.9	0	0	9	36
Employee appraisal	5	29.4	1	12.5	6	24

Graph 8: Relationship between Environmental management and staffing

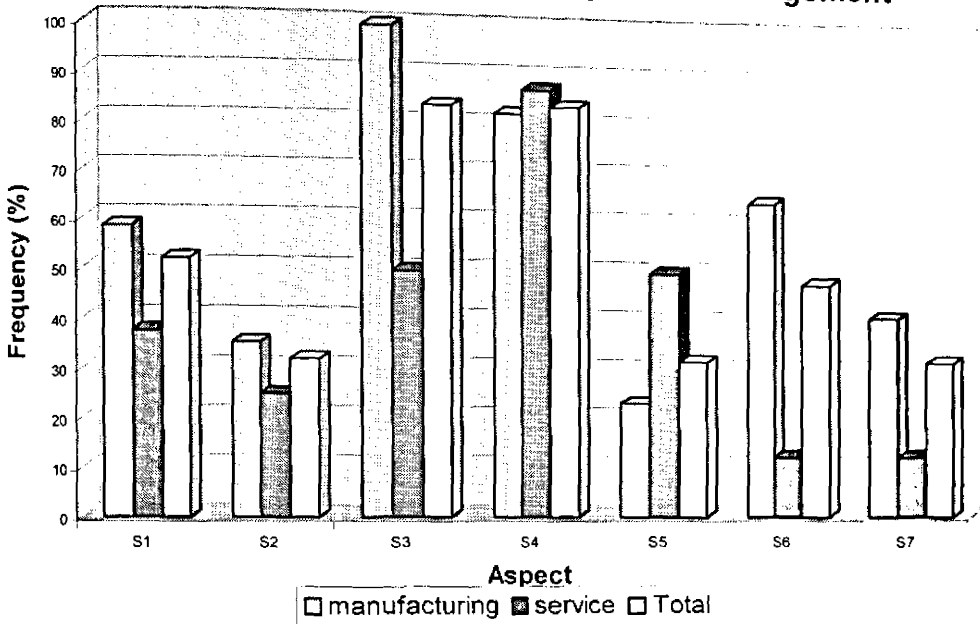


All companies interviewed consider the environment as part of their business strategy. However, when asked about how they incorporate the environment in some aspects of their supply chain, results show variations as shown in Table 4.12

Table 4.12 Aspects of supply chain management

	Sample1		Sample2		Total	
	No.	%	No.	%	No.	%
Eco-labeling/marketing	10	58.5	3	37.5	13	52
Business partners	6	35.3	2	25	8	32
Investments	17	100	4	50	21	84
Product design and service delivery	14	82.4	7	87.5	21	84
Purchasing	4	23.4	4	50	8	32
Packaging and transportation	11	64.7	1	12.5	12	48
Environmental accounting	7	41.2	1	12.5	8	32

Graph 9: Some aspects of supply chain management



4.2.1 Hypothesis Testing and Analysis

The hypothesis was tested using Kruskal-Wallis statistical test of variance by ranks at 0.05 level of significance. The distributions of the two samples consist of scores of individual companies based on their environmental activities. The distribution is shown in Table 4.13.

Recall that:

H_0 : There is no difference in corporate environmental activities for manufacturing and service companies.

H_1 : There is a difference.

From statistical analysis:

Computed value of H , $H_k = 8.65$

Critical value of H , $H_c = 3.84$

Decision rule: reject H_0 if $H_k > H_c$

Decision: H_0 is rejected, and H_1 accepted

See **Appendix A.8** for statistical results

Table 4.13 Distribution 2-corporate environmental activities

<i>Sample1</i>	<i>Sample2</i>
10	9
10	6
10	6
10	6
10	8
8	7
7	9
10	6
7	
9	
9	
10	
8	
10	
10	
7	
10	

4.2.2 Discussion

An examination of corporate environmental activities reveals an attempt to improve their corporate reputation. The adoption of an environmental policy is key to harnessing a company's resources towards branding itself as an environmentally responsible corporate citizen. Environmental reporting is part of reputation building to a wide range of audiences. Almost all companies regardless of sector, support environmental and local community projects as part of boosting their green credentials and being seen to be environmentally responsible corporate citizens.

Environmental management systems (EMS) and environmental auditing are critical to the manufacturing sector than to the service sector due to their high environmental impacts. There is therefore a greater need for a system to identify impacts, initiate mitigation measures, and monitor progress. Service companies lack such a motivation because of their low environmental impacts. Moreover, due to their high environmental impacts, most manufacturing companies have a department or unit to handle environmental issues. For most service companies, public relations, marketing, and corporate affairs departments handle the environmental agenda.

Although all companies now acknowledge that, the environment is a core business issue; an examination of the supply chain show most companies have yet to radically integrate environmental considerations in their supply chain management. An exception is the increasing role of environmental considerations in investment decisions, and product design and service delivery.

A substantial number of companies now require any new investments to meet environmental targets. This may be attributed to:

- The enactment of the Environmental Management and Coordination Act which makes EIA mandatory for new projects likely to have significant effects on the environment;
- The increasing central role of environmental risks and liabilities in due diligence by creditors;
- The fact that shareholders and investors are increasingly becoming aware of effects of irresponsible environmental behavior on their investments (share value). They are therefore demanding more transparency and responsible environmental behavior from companies in which they have a stake.

Similarly, environmental considerations have started influencing product design and service delivery because of emerging market opportunities for environmentally friendly products and services. Even though, the “green market” for goods and services is not yet substantial; as environmental awareness among consumers increase, and resources dwindle; the market has great potential.

Community initiatives, projects and relationships in general are increasingly important. Companies across sectors are beginning to place greater emphasis on developing and maintaining an image of being good neighbors. There are general benefits to be derived from good community relationships, such as:

- Less managerial time spent dealing with public complaints and press enquiries, and
- Good relations can also smooth the way for new investments.

Corporate environmental reporting is quickly becoming a key channel for companies to communicate their environmental initiatives and performance. Just as important, it is becoming an effective tool to demonstrate company-wide integrated environmental management systems, corporate responsibility, and the implementation of industry voluntary initiatives.

Environmental reporting in companies takes various forms. The results from the research show that the services and manufacturing sectors may take different approaches in their reporting. These forms include:

- Stand-alone corporate environmental reports
- Compliance reports to regulatory bodies
- Due diligence reporting to senior management
- Environmental updates on emerging environmental issues and regulations
- Project-specific environmental reports
- Part of the annual report

Companies face a range of different audiences with different needs for environmental performance information. Audiences include both internal and external stakeholders- employees, local communities, shareholders, consumers, media and environmental campaigners. Whereas company's communication with internal stakeholders is impressive, the results show that external reporting by companies is still below average. Only 16% of the companies interviewed said their reports are accessible to members of the public.

Corporate environmental reporting should be a tool for building dialogue and cooperation with stakeholders: employees, shareholders, bankers, customers, neighbors, environmental groups and government officials.

4.3 BENEFITS OF CORPORATE ENVIRONMENTALISM

Table 4.14 and 4.15 provide results for companies' response as to the benefits that accrue to them because of their corporate environmentalism.

Table 4.14: Results-Benefits of corporate environmentalism for the manufacturing sector

COMPANY	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	SCORE
M01	1	1	0	0	1	0	1	1	0	0	1	6
M02	1	1	0	0	1	0	1	1	0	0	0	5
M03	1	1	1	0	1	1	0	1	1	1	0	8
M04	1	1	0	0	1	1	1	1	0	1	1	8
M05	1	1	0	0	1	0	0	1	1	1	0	6
M06	1	1	0	0	1	0	0	1	0	1	0	5
M07	1	1	1	1	1	0	0	1	1	1	0	8
M08	1	1	1	0	1	0	0	1	1	1	0	7
M09	1	1	1	0	1	0	0	1	1	1	0	7
M10	1	0	1	0	0	0	1	1	1	1	0	6
M11	1	1	0	0	1	0	1	1	1	1	0	7
M12	1	1	0	1	1	1	1	1	1	1	0	9
M13	1	1	0	0	1	0	0	1	1	1	0	6
M14	1	1	1	1	0	1	0	1	1	1	0	8
M15	1	1	0	1	1	0	0	1	0	1	1	7
M16	1	0	0	0	0	0	1	0	1	0	0	3
M17	1	1	0	1	1	1	1	1	1	1	0	9
FREQS	17	15	6	5	15	5	8	16	12	14	3	

Table 4.15 Results-Benefits of corporate environmentalism for the service sector

COMPANY	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	SCORE
S01	1	1	0	0	0	1	0	1	1	1	0	6
S02	1	0	1	1	0	1	1	0	1	1	0	7
S03	1	0	1	0	0	0	0	0	0	1	0	3
S04	1	0	1	1	0	0	0	0	0	1	0	4
S05	1	1	1	0	1	1	0	0	1	1	0	7
S06	1	0	0	0	0	0	1	0	1	0	0	3
S07	1	1	1	1	1	1	0	1	1	1	1	10
S08	1	0	1	0	0	0	0	0	0	1	1	4
FREQS	8	3	6	3	2	4	2	2	5	7	2	

KEY

- B1 Corporate reputation
- B2 Financial savings
- B3 New market niches
- B4 Recruitment
- B5 Lower insurance premiums
- B6 Investment growth
- B7 Community acceptance
- B8 Access to credit
- B9 Customer loyalty
- B10 Improved quality and brand
- B11 Others

Table 4.16 shows a summary of how companies responded to the question as to what are the benefits of their corporate involvement in environmental matters.

Table 4.16 Summary-Benefits of corporate environmentalism

Benefit	Sample1		Sample2		Total	
	No.	%	No.	%	No.	%
Corporate reputation	17	100	8	100	25	100
Financial savings	15	88.2	3	37.5	18	72
New market niches	6	35.3	6	75	12	48
Recruitment	5	29.4	3	37.5	8	32
Lower insurance premiums	15	88.2	2	25	17	68
Investment growth	5	29.4	4	50	9	36
Community acceptance	8	47.1	2	25	10	40
Access to credit	16	88.2	2	25	18	72
Customer loyalty	12	70.6	5	62.5	17	68
Improved quality and brand	14	82.4	7	87.5	21	84
Others	3	23.5	2	25	5	20

The results show that:

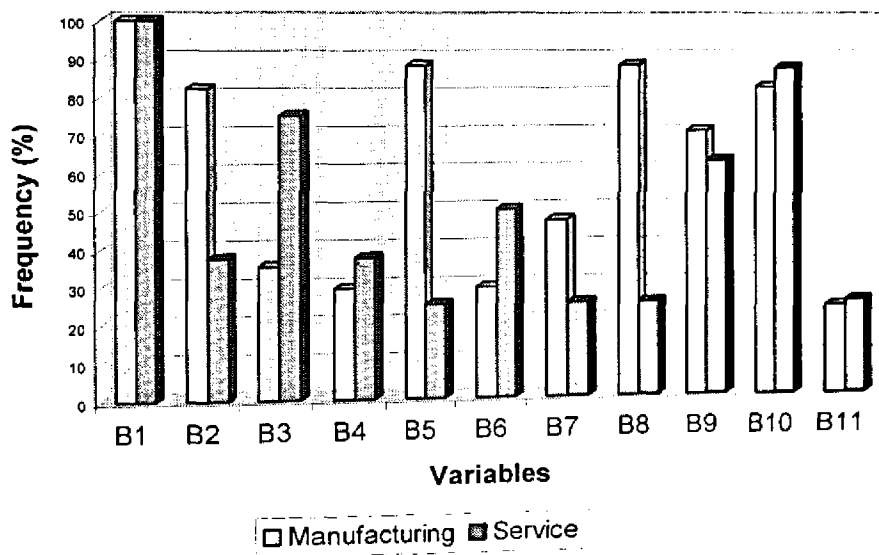
- All companies (both manufacturing and service) regard good corporate reputation with a wide range of audiences to be their main benefit of corporate environmentalism.
- Some benefits are more associated with the manufacturing sector than the services sector i.e.
 - Financial savings from eco-efficiency where 88.2% of manufacturing companies say it's a benefit as compared to 37.5% service companies;
 - 88.2% of manufacturing companies say lower insurance premiums is a benefit as compared to only 25% of service companies;
 - 88.2% of manufacturing companies say they benefit from easier access to credit as compared to 25% of service companies.
- 75% of the service companies regard new market niches as a benefit to them as compared to 35.3% of manufacturing companies. Further, half of them say their

investment grows from corporate environmentalism as opposed to only 29.4% manufacturing companies.

- Customer loyalty and improved quality and brand are equally important benefits to both groups of sectors.
- For both manufacturing and service companies, environmental stewardship does not improve their recruitment significantly – with only 29.4% and 37.5% respectively saying it does improve their recruitment.

A graphical representation of a summary of the results is given in the graph below.

Graph10: Benefits of corporate environmentalism



Overall, the following benefits are the most important for both sectors:

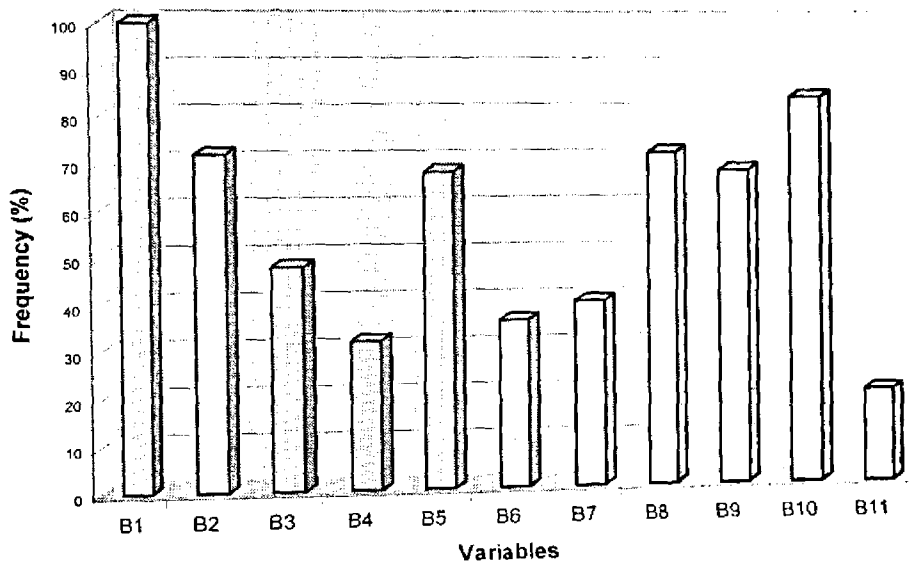
- Improved corporate reputation (100%)
- Financial savings from eco-efficiency (72%)
- Access to credit (72%)
- Lower insurance premiums (68%)
- Customer loyalty (68%)
- Improved quality and brand (84%)

The least significant benefits are:

- New market niches (48%)
- Recruitment (32%)
- Investment growth (36%)
- Community acceptance (40%)

This is shown in the graph 11 below.

Graph11:Overall benefits of corporate environmentalism



4.3.1 Analysis and Hypothesis Testing

The hypothesis was tested using Kruskal-Wallis test of variance by ranks at 0.05 level of significance. The distributions for the two samples consist of scores of individual companies.

The distributions are given below in 10.

Recall that:

H_0 : There is no difference in benefits of corporate environmentalism for manufacturing and service companies.

H_1 : There is a difference.

Table 4.17 Distribution 3-Benefits of corporate environmentalism by scores

<i>Sample1</i>	<i>Sample2</i>
6	6
5	7
8	2
8	4
6	7
5	3
8	10
7	4
7	
6	
7	
9	
6	
8	
7	
3	
9	

From statistical analysis:

Computed value of H , $H_k=2.21$

Critical value of H , $H_c=3.84$

Decision rule: reject H_0 if $H_k > H_c$

Decision: H_0 is accepted, and H_1 rejected

See **Appendix A.8** for statistical results

4.3.2 Discussion

A good corporate reputation emerged as the most important benefit for both manufacturing and service companies. This has several implications:

- Many companies regard overall environmental image as an essential component of company branding.
- A company's corporate image to a wide range of audiences is a strategic business benefit; good for business sustainability e.g. it improves access to credit, improves a company's perceived risk profile, helping to reduce insurance costs, improves customer loyalty, and may improve recruitment.

Manufacturing companies as compared to service companies, more frequently mention financial savings from eco-efficiency and lower insurance premiums as their benefit from proactive environmental concern. This reflects the underlying nature of business.

Manufacturing companies consume more resources, generate more wastes, and use more energy than service companies. Economically viable opportunities therefore exist to reduce costs through eco-efficiency in manufacturing than in the service sector.

Extractive companies e.g. mining, frequently mentioned community acceptance as a desirable benefit. This is because their operations impact directly on the livelihoods of communities i.e. displacements, pollution, natural resource depletion and competition, and cultural changes. Being accepted in communities in which they operate as responsible corporate citizens, who deserve their license to operate, is seen as smoothing the way for their business survival. As a result they encounter less obstacles in their expansion programs, and spent less managerial time dealing with public complaints and even litigation.

The high percentage of companies (72%) who say proper environmental stewardship affords them easier access to credit is testimony of the emerging importance of environmental due diligence in lending processes. This is particularly true for new investments financed by international financial agencies.

Although at 48% overall response, new market niches is a promising benefit of corporate environmentalism as environmental awareness among consumers improves. It is less frequently mentioned as a benefit compared to corporate reputation, financial savings from eco-efficiency, and easier access to credit and insurance. This may be due to:

- Low levels of technological innovation and investment in producing environmentally-friendly products and services; and
- The volume of green consumerism may not be sufficiently critical to warranty investments in new environmentally friendly products.

The exception is in the oil industry, where companies cite new market opportunities as a benefit to them. This may be due to the availability of opportunities for product differentiation like unleaded fuel and sulphur-free petroleum products.

The results show that the benefits that accrue to companies as a result of their environmental consciousness are both tangible and intangible. The results further show that the most important benefits relate to intangible benefits more than tangible benefits.

All companies concur that corporate reputation is a major benefit to them. The importance of corporate reputation finds expression in a number of issues:

- May improve recruitment (32%)
- Lower insurance premiums (68%)
- Attract investments (36%)
- Community acceptance (40%)
- Customer loyalty to the brand (68%)
- Access to credit (72%)

Among top tangible benefits are:

- Financial savings from eco-efficiency (72%)
- Improved quality and brand (84%)
- Lower insurance premiums (68%)

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 CONCLUSIONS

There are differences and similarities in the nature of corporate environmentalism between manufacturing and service companies. These differences and similarities between the two sectors are reflected in: factors that influence their environmental concern, environmental corporate activities, and the benefits of corporate environmentalism.

The differences in part reflect:

- The structural differences in the nature of business activities engaged in by the manufacturing and service sectors;
- The perceived degree of impact on the environment from corporate activities;
- The perceived degree of risk from environmental failure;
- The regulatory and policy framework that govern the two sectors; and
- The corporate management styles and structures of the two sectors.

The similarities in the nature of corporate environmentalism between the two sectors, show their shared objective of remaining competitive and sustainable over the long term by responding to issues that define market behavior. Ultimately, the only reason why companies have begun to address environmental issues in a strategic way is because of social concerns about impacts on human health and ecological systems. These broad social concerns are cross-sectoral and are usually converted into specific pressures on companies through a few well-known mechanisms such as: government regulations, policy and institutional responses, and consumer boycotts. Being seen to be responsible corporate citizens to these social concerns is key to building a good corporate reputation.

The similarities further show that the primacy of the profit motive is important in explaining the underlying business behavior. Environmental management in a company, however

sophisticated, is not a goal in itself. The underlying objective is to create a more secure set of relationships with the general public and the public institutions so as to allow companies and sectors to remain competitive. Good corporate relationships with a variety of stakeholders- investors and shareholders, creditors, local communities, consumers, insurers, business partners, and civil societies, is the companies most important asset for profitability and long term profitability.

Statistical tests using the Kruskal-Wallis test of significance by variance show that, whereas both the manufacturing and service sectors are statistically motivated by different factors towards corporate environmentalism, and have different approaches, the benefits are not significantly different.

Drivers of Corporate Environmentalism

In general, the study shows that:

- The motivation towards corporate environmentalism in many companies is both due to internal and external factors. Moreover, internal and external drivers are equally important in influencing corporate behavior.
- Some driving factors may be reactive such as compliance to regulations, while others may be proactive such as ethical corporate behavior and recognition of competitive opportunities.
- The need to improve a company's image as environmentally and socially conscious is a major stimuli across industry sectors.

The study shows that the need to be in compliance with regulations and environmental standards; reduce material and energy consumption; avoid future risks and liabilities; pressure from insurers, lenders, and investors; and recognition of competitive opportunities in pollution prevention, clean technologies, and environmentally responsible products and services are the key drivers of corporate environmentalism for the manufacturing sector. Regulation and anticipation of regulation, still remains the most important driver influencing corporate environment-related decisions. Regulatory issues are of particular importance to those companies carrying out extractive or basic processing activities high up the materials

supply chain. Companies operating closer to final markets are more conscious of the concerns of final consumers.

Some scholars have argued that market-driven pressures are making regulatory regimes irrelevant as vehicles in changing company behavior. Still others insist that regulations and environmental standards are the only drivers, which have the capacity to change a company's behavior towards the environment. Evidence adduced indicates a more pragmatic position. A mix of regulations and economic policy instruments will continue to be needed to stimulate changes in corporate behavior towards the environment. Even voluntary initiatives like the operation of a certified environmental management system, are linked to meeting regulatory requirements through environmental best practices.

As for the services sector, the need to improve a company's corporate reputation, and act as responsible corporate citizens by supporting the environment, are the key drivers. However, these drivers are equally important to the manufacturing sector. The most compelling case for the services sector involvement is therefore brand- building (both product and company branding). Most service industries still perceive their environmental impacts as no more than those related to domestic activities. The manufacturing sector however, has more compelling reasons for environmental stewardship.

Benefits of Corporate Environmentalism

The study shows that the benefits of corporate environmentalism across the sectors are not statistically different. This reflects the fact intangible benefits may be even more important than tangible benefits. Intangible benefits are derivatives of a good corporate reputation, and since a good image is important, independent of the sector; it follows that most benefits are shared across sectors.

In general, benefits derived from a good corporate reputation include:

- Improvement in recruitment by attracting, motivating, and retaining top talent;
- Lower insurance costs due to perceived good risk profile;
- Attracting investments;

- Community acceptance and support;
- Easier access to credit;
- Customer loyalty; and
- Improved brand of service or product.

In considering the benefits of corporate environmentalism; corporate reputation, financial savings from eco-efficiency, lower insurance premiums, access to credit for new investments, and improved quality and brand, rank as the most important benefits to the manufacturing sector.

For the services sector, the corporate environmentalism's most important benefits are: improved corporate reputation, new market niches from environmentally friendly products, customer loyalty, and improved quality and brand of the service.

Corporate Environmental Activities

Equally, on a range of ten corporate undertakings, the manufacturing and service sectors show structural similarities and differences. The one activity which is common to both sectors is their support for conservation and community projects- the two activities which are also central to brand building.

In general, however, the study shows that:

- Reputation building corporate activities such as support for environmental and local community projects, possession of an environmental policy and some form of environmental reporting, cut across sectors
- Whereas companies have some form of a reporting mechanism for their environmental activities; the quality and relevance of reporting varies. Corporate communication is still not developed to a level that shows transparency. Environmental data is still viewed as commercial intelligence whose disclosure must be limited to internal use.

- Companies have yet to internalize environmental considerations into their day-to-day operations like purchasing, transportation, storage, and packaging. The situation being more acute in the services sector.

More manufacturing companies operate Environmental Management Systems, have an environmental department, manage their supply chain, have more structured and stand-alone environmental reports which are also accessible to the public, and carry out recycling and/ or re-use of their wastes.

These apparent differences and similarities in the nature of corporate environmentalism call for policy and institutional responses that are cognizant of these.

5.2 RECOMMENDATIONS

On the basis of the research findings the following recommendations are made to the government, business and industry associations, the civil society, and researchers.

Recommendations to the Government:

- A “silent public”, which has not yet expressed its environmental concerns, denies industry the public pressure it needs to motivate improvement in environmental performance. The government should have public programs to create awareness of environmental issues. By doing so; it will help create a market incentive for companies through a critical mass of green consumers. A mere 36% of companies say customer pressure is a reason for them to incorporate the environment into their business. This compares to 48%, who say corporate environmentalism creates new market opportunities.

- To reduce the amount of greenwash claims by companies; the government should identify priority industry sectors for environmental improvement and encourage industry associations to develop voluntary codes of conduct and companies to subscribe to them. The government should also encourage companies to adopt structured Environmental Management Systems.

• Look for possibilities of combining voluntary initiatives with other public policy tools to encourage a market- driven corporate environmentalism:

1. A policy on government procurement which favours environmentally friendly companies
2. Reducing inspections for companies involved in voluntary initiatives
3. A favorable tax structure that promotes cleaner production and responsible environmental stewardship.

• Promote sustainability as an investment criterion. This has the potential to structurally change corporate behaviour. Investors and other stakeholders, such as fund managers, analysts and shareholders, need deeper knowledge of business' environmental performance to help them form more accurate judgments on the risk profile, worth and prospects of their investment decisions.

To achieve this will require:

- A banking policy committed to sustainability
- Amendments to the stock exchange rules and companies act, in relation to environmental disclosure.
- Performance measurement indicators and environmental benchmarking.

Recommendations to Companies and Industry Associations

• Incorporate environmental considerations into key business decisions. As the research findings have shown, in most cases, efforts to promote best environmental practices are often limited to a company's environmental department or officer. Overcoming the "green wall" between environment and mainstream business functions is one of the key challenges that business must meet to steer industry towards environmentally sustainable development.

Concerted efforts need to be made to integrate a company's environmental management functions into regular business functions that have an influence on decisions made throughout the life-cycle of a company's products and services. This includes finance and accounting, research and development, purchasing, inbound logistics like transportation and storage, marketing and advertising, and global standards.

•Company employees are a company's key resource in reducing environmental impacts. They need to be trained and motivated to identify and manage environmental risks and hazards. The research shows that only:

- 44% train their employees
- 36% have integrated environment into most departments
- 24% appraise employees on the basis of their environmental performance.

Companies should invest more in staff training, integrate environment in all their departments beyond those directly concerned with environmental issues, and make environmental improvement part of employee appraisal to spur innovation at the firm level.

•Companies should take a number of actions to reconcile higher standards of commercial and environmental performance and enhance profitability. These include:

1. Building up the company infrastructure for dealing with environmental issues. This would include developing a policy statement, an internal network of individuals with environmental responsibilities, and a formal environmental management system.
2. Communicating environmental information to stakeholder groups-communities, investors and customers in order to build up trust and credibility.
3. Building environmental criteria into research and development and the appraisal of new products and processes.
4. Extending the environmental impact of production processes to cover product stewardship (taking into account the environmental impacts of goods and services over their entire life cycle).
5. Maintaining a good public affairs capacity with respect to environmental issues.

Industry associations should take a lead in:

1. Developing voluntary codes of conduct
2. Encouraging members to make environmental improvement a core priority
3. Creating forums for exchange of ideas and information
4. Identifying areas where business is going to make short-term cost savings to get real commitment (such as energy efficiency, waste prevention)

Recommendations For Further Research.

Since corporate reputation is the main incentive and benefit of corporate environmentalism, company efforts at improving their environmental image runs the risk of "greenwash". To determine the degree of commitment and genuineness; future research should focus on developing indicators of real environmental performance.

A lack of social discussion or agreement on key environmental objectives often means that industry is left to determine what indicators of environmental performance it should track.

Research on environmental performance indicators should resolve this.

Research on how environmental considerations affect consumer behavior for various classes of products and services should be given priority. This is because consumers are a powerful market driver towards sustainability. A mismatch between company and consumer perceptions should be breached.

The correlation between corporate reputation and other corporate benefits like: access to credit, lower insurance premiums, customer loyalty, and improvements in recruitment should be explored further.

The role of different stakeholders in influencing corporate environmental governance should be investigated with a view of determining critical points of interventions that guarantee significant changes in corporate behavior. Of particular importance is the role of the media, shareholders and investors, insurers, bankers, civil societies, local communities, and consumers

Recommendations to the Civil Society

Corporate environmentalism is likely to lose momentum if public interest does not exist or fades over time, giving poor environmental performers a competitive edge over those investing in measures to reduce their environmental impacts. Public interest groups (such as Environmental Groups, Community Based Organizations, and consumer Organizations) have an essential role to play. Recommendations include:

- Encourage and assist companies and industry associations in developing voluntary codes to improve environmental performance.
- Help draw public and government attention to industries making worthwhile efforts in developing and implementing voluntary initiatives.
- Publicly recognize those companies that are making real progress in environmental performance and those which are not making any effort.

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QUESTIONNAIRE

PREAMBLE

You have been selected to participate in this study because of your known concern for the environment – expressed through best environmental management practices and support for environmental protection projects. The study would like to share your experiences.

Every effort will be made to ensure utmost confidentiality for all the information. Moreover, the information will **ONLY** be used for academic purposes.

Thank you for your participation.

SECTION A: INTRODUCTION

1. Company name _____

2. Physical Address _____

3. Respondent Name (Optional) _____

Designation _____

4. Industry Sector (please tick one)

Manufacturing

Service

5. Which of the following company certification do you have? (Please tick as appropriate)

ISO 9002

ISO 14001

BS 7750

EMAS

Any other. Please Name _____

6. Name any environmental award(s) you have won _____

7. Please name any environmental project(s) you have participated in/or supported / or initiated in the recent past. _____

SECTION B: DRIVERS OF CORPORATE ENVIRONMENTAL MANAGEMENT

1. The following are some of the reasons why companies take up environmental management as a core business issue. From your own experience, tick the ones applicable to you.

- To comply with environmental legislation and standards
- To reduce energy and material consumption and improve efficiency
- Recognition of competitive opportunities in pollution prevention, clean technologies, and environmentally responsible products and services
- Concerns about safeguarding the health and safety of employees and the general public.
- To improve corporate reputation or image to a wide range of audiences e.g. customers, local communities, and business partners.
- To be ethical and environmentally responsible corporate citizens.
- To meet the needs of customers for environmentally responsible products and services.
- Concerns about impacts on ecological systems of corporate activities
- Requirements by insurers, lenders, and investors.
- To avoid future risks and liabilities from environmental accidents.
- Any other _____

2. From the above or any other, name the most important.

SECTION C: CORPORATE ENVIRONMENTAL ACTIVITIES

The following are some of the activities that corporations do as part of their responsibility towards the environment. Tick the ones applicable to you.

1. We have a corporate environmental policy YES/NO

2. We have an environmental management system YES/NO

3. We report on our environmental impacts and initiatives YES/NO

If YES;

3a. How often are the reports?

- Annually
- Semi-annually
- When necessary

3b. Whom do you produce the reports for? (Tick as appropriate)

- General public
- Investors / shareholders
- Regulators
- Company Board of Directors

3c. Are the reports

- Separate from company annual reports
- Part of company annual reports

4. We carry out periodic environmental audits/reviews YES/NO

5. The environment is part of our business strategy YES/NO

If YES; Tick as appropriate

5 Our products/services are labelled to show their environmental friendliness

5b We demand that our business partners are environmentally responsible

5c Our new investments must meet environmental targets

5d Environmental factors influence product design and service delivery

5e Our purchasing policies are adjusted for environmental factors (e.g. avoid endangered species, scarce resources etc)

5f Packaging and transportation targets are set to reduce their adverse impacts

5g Our accounting practices continuously include environmental impacts

6. We comply with environmental laws and standards YES/NO

7. Answer YES or NO to the following

7a. Do you have an environmental department/unit YES/NO

7b. Do you train your employees on environmental issues YES/NO

7c. Are environmental issues integrated into all departments YES/NO

7d. Is environmental performance part of employee appraisal YES/NO

8. We recycle/reuse our wastes YES/NO

9. We support Conservation projects YES/NO

10. We support local communities YES/NO

SECTION D: BENEFITS OF CORPORATE ENVIRONMENTALISM

1. From the following list of benefits of corporate environmental management, tick the ones applicable to you.

- Improved corporate image and public relations record
- Financial savings from eco-efficiency
- Market growth and expansion from innovation of “green” products and services
- Attracting, retaining and motivating top talent in recruitment
- Lower insurance premiums due to reduced risk exposure, liability and improved safety
- Attracting investors and improvement in share value
- Community acceptance and support
- Better and easier access to credit from banks
- Customer satisfaction and reduced risk of consumer backlash from unacceptable environmental behaviour
- Improved product/service quality and brand
- Any other _____

2. From what you have indicated above or any other, which is the most important benefit to you.

- END -

APPENDIX A.2: SAMPLE 1

CODE	COMPANY
M01	PANPAPER
M02	KENGEN
M03	TOTAL (K)
M04	ATHI RIVER MINING
M05	KENYA BREWERIES LTD
M06	CENTRAL GLASS INDUSTRIES LTD
M07	MOBIL (K)
M08	SHELL & BP
M09	CALTEX (K)
M10	TWIGA CHEMICALS INDUSTRIES LTD
M11	BIDCO
M12	UNILEVER
M13	SPINNERS&SPINNERS
M14	GENERAL MOTORS
M15	TETRA PAK
M16	BAT
M17	BAMBURI CEMENT

APPENDIX A.3: SAMPLE 2

CODE	COMPANY
S01	NATION MEDIA GROUP
S02	SAFARICOM
S03	POSTAL CORPORATION
S04	KENYA AIRWAYS
S05	SAROVA HOTELS
S06	UCHUMI SUPERMARKETS
S07	SERENA HOTELS
S08	STANDARD CHARTERED

APPENDIX A.4

EXAMPLES OF CORPORATE COMMITMENT TO THE ENVIRONMENT



BIDCO & the environment



As a company relying on agriculture produce, BIDCO has a personal stake in nurturing the environment and natural resources. BIDCO's refining facility has effective controls that keeps all emissions & effluents to the lowest possible limits. Their production systems ensure that there is zero wastage.

BIDCO has been conceived, designed and maintained from inception as an environmentally friendly company. BIDCO actively deploys environment oriented cost management (EOCM) practices to play it's role in safe guarding the environment. The company has adopted the Japanese 5S Shop Floor management concept, ensuring impeccable cleanliness and environmental health. All BIDCO products are packed and delivered in Eco-friendly & fully recyclable packaging. By using new communication technologies to reduce paper usage, BIDCO promotes forest conservation.

Even the logo representing BIDCO as it's corporate statement uses the environmental friendly colours, each representing a vital part of their production: Green - Natural products & agribusiness, Yellow - Natural Oils, Blue - Soaps & Detergents. BIDCO benefits from providing the best of nature's goodness, and believes in returning this benefit to nature.

Ensuring quality throughout the supply chain.



Our commitment to the environment

Underlying all the manufacturing operations of Unilever Kenya Ltd. is our commitment to the environment. The quality of products, manufacturing processes as well as their impact on the environment are strictly controlled and strictly monitored through audits to meet stringent corporate standards.

Care for the environment is at the core of our business. We believe in instituting measures that lead to continuous improvement through environmental performance indicators.

Our environmental management systems address air emissions, effluent, solid wastes and noise emanating from our operations. Energy efficiency is monitored continuously.

Our use of water per unit of production has reduced over the years. We also ensure that the effluent discharge to natural watercourses and sewer system also meets agreed standards.

Measures put in place for solid waste includes waste minimisation programme. Options for recycling and reuse of waste are continuously being looked for both internally and externally.

Unilever Kenya works closely with organisations like the Kenya Association of manufacturers and other professional bodies to care for the environment.

It is our policy to encourage our suppliers to develop environmentally sound processes and materials and co-operate with other stakeholders for the purposes of improving the overall environmental performance and impact.

It is vital that we all take care of our environment. We are committed to playing our role in this respect.

POSTA IN SUPPORT OF PROTECTION AND PRESERVATION OF NATURE

RELEASE OF TURTLES STAMP ISSUE

Sea Turtles have swam the warm waters of East African Coast and the Islands of the Western Indian Ocean for over 90 million years. Some of these species include Loggerhead, Olive Ridley, Leatherback, Hawksbill and Green Sea Turtles.

Due to increased human activities that have encroached on their habitat, these rare creatures are now facing extinction.

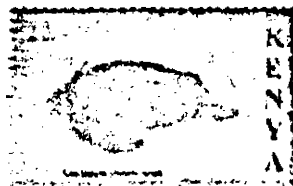
Postal Corporation of Kenya has always been associated with the conservation of Kenya's Fauna and Flora by issuing postage stamps that sensitise the policy makers and the general public on the importance of preservation and protection of our heritage. In this regard PCK joins Kenya Wildlife Service and other organisations to create awareness on the plight facing the five species of turtles by issuing a set of five stamps on **13th April, 2000**.

The stamps and first day covers will be available for sale at all major post offices and the Stamp Bureau located at PCK Headquarters.

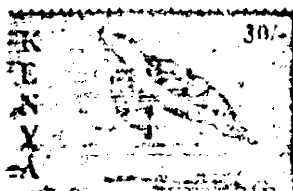
We invite all our esteemed customers to acquire these memorable and valuable items.



Leatherback Turtle
KShs. 17/-



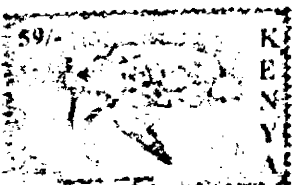
Green Sea Turtle
KShs. 20/-



Hawksbill Turtle
KShs. 30/-



Olive Ridley Turtle
KShs. 47/-

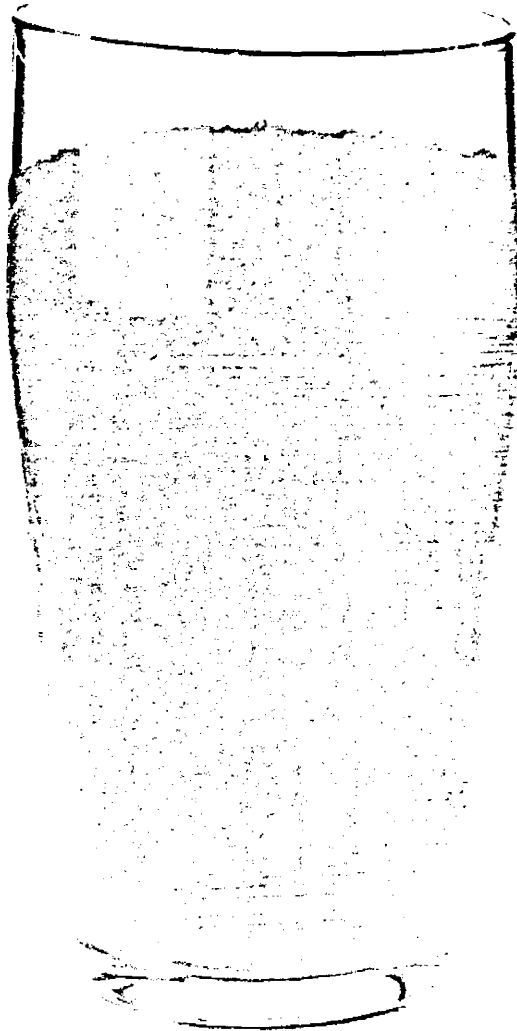


Loggerhead Turtle
KShs. 59/-

POSTA
Yours Truly

POSTAL CORPORATION OF KENYA
P.O. BOX 34567 NAIROBI. TEL. 012334

We don't fence in the Aberdare forest now;



This is what we'll be drinking in the near future.

Due to the constant threat of illegal loggers, the forest's water resources could be all but bare within a decade - a dire and frightening consequence.

As Nairobi's only source of water, we should be

concerned. We should 6 million other Kenyans whose health and survival depends on water from the forest.

By logging in the whole forest, we'll keep the loggers and the wildlife in

We've already build 107km of electrified fence, now we need your help to build the remaining 150kms. A contribution of 1,500/- will buy one metre of electrified fence and 400/- buys a post. It's not a huge sum to help secure our future water supply and economic stability.

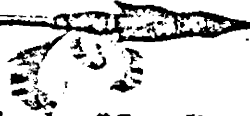
Contributions of any size will be greatly appreciated and put to immediate use. These can be made to the Nation Media Group - Aberdare Forest Fund

Contributions are payable to the Nation Media Group
Aberdare Forest Fund, Sarakini Street, Nairobi
N. 0112627150/11, via The Nation Media Group
PO Box 47630-0010 Nairobi, Kenya



Name: _____
Company: _____
Address: _____
City: _____
Postcode: _____

Guardians of our Forests



The following organizations are recognized as "Guardians of our Forests" - A Roll of Honour for their outstanding contribution to forest rescue in Kenya (as at 24.09.2002).

The "Mahogany" Award (Over 1 Million Shillings)

1. James Finlay (Kenya) Ltd
2. Environment Liaison Centre International
3. Nation Media Group
4. Safaricom Ltd

The "Camphor" Award (Kshs. 500,000 - 999,999)

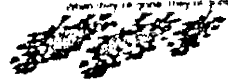
1. East African Standard

The "Elgon Teak" Award (Kshs. 100,000 - 499,999)

- | | |
|--------------------------|-----------------------------------|
| 1. Regional Air | 10. Konrad Adenauer Foundation |
| 2. Silver Bullet | 11. Lake Naivasha Riparian Assoc. |
| 3. Windsor G & C Club | 12. Golf Options |
| 4. Ayton Young & Rubicam | |
| 5. 3Mice Interactive | |
| 6. Watamu Association | |
| 7. Twiga Chemicals Ltd | |
| 8. Matbronze | |
| 9. TBWA Creative | |

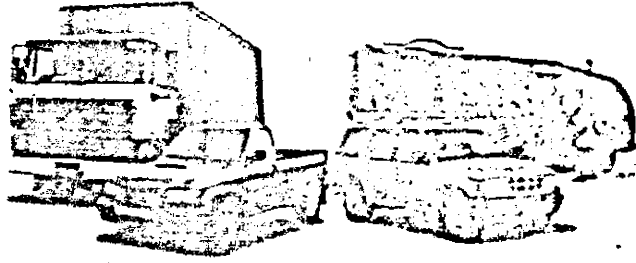
You may join our "Roll of Honour". Send us an appropriate donation (Cheques to East African Wild Life Society)
P.O. Box 20110, 00202 Nairobi. For further information call
574145 Email: kfwg@wananchi.com
Space kindly donated by the East African Standard

forests



APPENDIX A.5

EXAMPLES OF GREEN ADVERTS



NOW, YOU HAVE A CLEAR CHOICE!

High Sulphur Diesel

HSD causes increased wear and tear, fuel consumption, maintenance costs and reduces the life of your engine.



Gold Low Sulphur Diesel

by  Kenol  Kobil

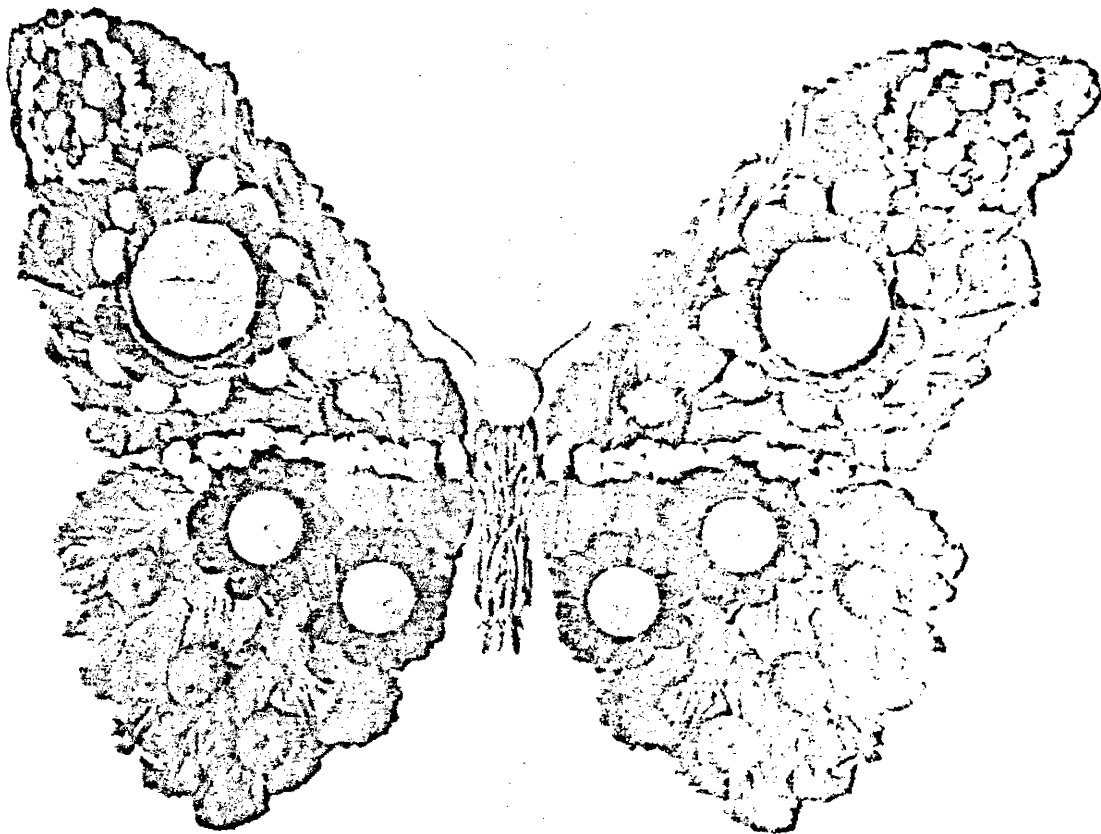
improves fuel efficiency, gives more power and extends the life of your engine.

GLSD also protects the health of you and your family from sulphur related toxins that cause health hazards including skin diseases, cancer and asthma. It even saves the environment from sulphur emissions that cause acid rain by improving the quality of the air all around.

 Kenol  Kobil *Cares for you!!!*

List of participating service stations: Kobil Gigiri service station, Kenol Gigiri service station, Kenol Thika road service station, Kobil Lusaka road service station, Kobil Enterprise service station, Kenol Hurlingham service station, Kobil Jengo road service station, Kenol Boilevue service station, Kenol Makutano service station, Kenol Nyayo service station, Kenol Ngong service station, all service stations in Mombasa, all service stations in Mt. Kenya.

Caltex D-C-Tron Plus.
The breakthrough crop protection
that delivers healthy profits and
a healthy environment.



Caltex D-C-Tron Plus is a biodegradable petroleum based spray oil that offers you the following benefits:

- Meet both the European Union and EPA (USA) requirements.
- Cost effective to use compared to other pesticides
- Safe to handle
- Pests do not develop resistance to it.
- Leaves no harmful residues
- Won't harm beneficial insects

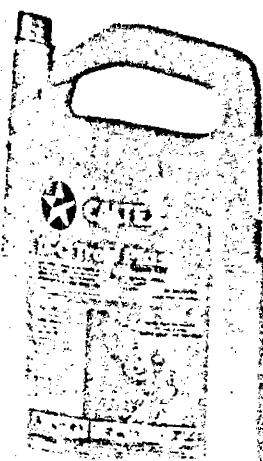


CALTEX

Available at Caltex Depots in Mombasa, Nairobi, Nakuru, Eldoret and Kisumu.

For further details please contact Caltex Lubricant Marketing

Department on Nairobi Tel: 218666.





Indigenous to Kenya

Teclea nobilis, one of about 30 species is indigenous to, and is widely distributed within Kenya. Similarly, TOYOTA EAST AFRICA LTD reaches out to satisfy as many customers as possible by supplying a comprehensive range of vehicles to suit Kenyan conditions, well as a large stock of Toyota Genuine Parts and professional vehicle servicing through an extensive Toyota approved dealer network.

So Toyota owners can rest assured that Toyota is firmly entrenched in Kenya and that they have not only bought the best vehicle but are supported by the best service.

Toyota East Africa, managed by Toyota Japan, will ensure that all its customers are well looked after - everywhere, always. Because *You're in Toyota Country.*

You're in
 **TOYOTA** *Country*

Toyota East Africa Ltd. P.O. Box 3391, Nairobi. Tel: 530070/6 Fax: 543873
www.toyotaea.com

Shell Unleaded Petrol.

Better for the environment.

Better for your engine.

Better for all of us.

Keeping the environment clean is a huge task. But it's a must. After all, it also affects our health in many ways. And that's a priority for everyone. That's why Shell is the first company in Kenya

to introduce Unleaded petrol. It's called Shell Unleaded. It means less harmful pollution because it has no lead. Which means cleaner air. That's better for the environment.

Better for your engine. And better for all of us. Shell Unleaded. Let's make a clean start.

Waves of change





Better Colour Consistency

World renowned high quality light fast
pigments and the latest computerized colour
mixing systems. Dura Coat quality paints could be
the consistency you've always had. Ever
since Dura Coat white was first. The Dura Coat range
can be found in a variety of shades to suit your needs.
Dura Coat brings the essence of nature into your home.



*Inspired by nature
Perfected by Dura Coat*

Available at all leading reputable paint dealers

You have just ensured food, shelter and education for me



Thank YOU

"By buying this roll of tissue you have ensured that
my parents are kept in employment, my school
fees are paid for and I have a healthy meal. Not
forgetting the environment which is kept clean."

VELVEX RO'S TOILEX
Nice & Soft Beauty

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FROM YOUR OWN LOCAL RAW MATERIALS
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APPENDIX A.6: CASE STUDIES

CASE STUDY 1: DOW CHEMICALS

In April 1999, Dow Chemicals completed a two-year collaboration with United States environmentalists to reduce toxic emissions at its Midland, Michigan site - the company's original chemical facility - in a Michigan Source Reduction Initiative (MSRI). This initiative set aggressive goals: 35% cuts in both the generation of a specific list of wastes and in emissions to air and water.

By April 1999, the site was on track to cut waste generation by 37%, and to reduce emissions by 43% - beating the original targets. From an investment of \$3.1 million, the company expected to save nearly \$5.4 million every year. Again, competitive gains were based on environmental improvements.

Dow has been in the forefront of the move to eco-efficiency - working on a strategy of waste minimization and reporting on its environmental performance. It launched its *Waste Reduction Always Pays* (WRAP) Programme in 1987, which achieved huge and highly cost-effective cuts in pollution. In 1991, it announced it would cut emissions of 58 pollutants by a further 50% from 1988 levels by 1995: all of these reductions were achieved well ahead of schedule.

Meanwhile, it is stressing eco-efficiency - concentrating not just on cleaning up its processes, but on the effects its products will have on the planet over the whole of their lifetimes, from manufacture, through use to disposal as waste.

[Based on Fussler, C. (1999) "Clean=Competitive". *Our planet*, 10(4). Pp11-12]

CASE STUDY 2: INTERFACE

Interface, a worldwide carpet company with its headquarters in Atlanta, Georgia, has undergone profound changes since 1994. Over a four-year period, Interface's Yorkshire mills reduced their landfill needs by 44 percent. Virtually everything that can be recycled is recycled. Each year, over 150 tones of Shelf's waste yarn is carded back into nylon, and then incorporated into new carpets. In 1997, over 290,000 cardboard cones were sent to landfill. Now the company uses plastic cones that can be used up to 20 times.

All the paper used in the pleating process at Shelf is recycled, as is most of the cardboard. Even the dust produced in the manufacturing process is saved and transformed into a packing material, and waste plastic is made into a hard - wearing floor tile.

Eliminating waste also means eliminating emissions, and since 1994, Interface has got rid of 48 of its 287 smoke stacks around the world. At Shelf the volatile organic compounds from the pleating machine used to go into the atmosphere. Now they are distilled into a liquid, which is used to make motorway cones.

Interface's 7800 workers – or associates as the management prefers to call them – have played a key role in changing the way the company behaves. Roughly 400 new projects aimed at improving the eco-efficiency of the business have been instituted in the past four years, and many of these have come from the shop floor.

In practical terms, interface's achievement has been considerable. Not only has the company cut its waste and emissions, it has also reduced the amount of raw materials used per unit output by around 20 per cent. Environmental improvements have so far helped interface to save over \$80 million, which has been good not just for the company but also the workforce who receive an annual bonus related to environmental achievement.

Interface is leading the way in redesigning commerce – providing services rather than products – leasing carpets rather than selling carpets, the idea being that at the end of the carpets' useful life, the company will reclaim and recycle them.

Interface's vision is to be a restorative company i.e. intends to repay its debts to nature.

According to Chief Executive, Ray Anderson:

"If successful... we will spend the rest of our days harvesting yesterday's carpets, recycling old petrochemicals into new materials, and converting sunlight into energy. There will be zero scrap going into landfills and zero emissions into the biosphere. Literally, our company will grow by cleaning up the world, not by polluting or degrading it. We'll be doing well by doing good. That is the vision."

[Based on Pye-Smith, C (1999) "Carpeting the world Green". *People and the Planet*, 8(3) pp12-13]

CASE STUDY 3: 3M and XEROX

3M and Xerox are widely recognized as being at the forefront of the movement to green industry from within.

3M's "Pollution Prevention Pays" programme dates from 1975. The pollution prevention programmes vary from the relatively simple to the technologically complex. A classic example of the latter involved the redesign of spraying booths. These used to generate some 500,000 pounds of over-spray a year, and this has to be incinerated. The amount of residue has now been dramatically reduced and has helped 3M save around \$125,000 a year.

Since 1993, 3M has cut its volatile organic emissions by 75% and its waste generation by a quarter. Just as significantly, it has reduced the amount of energy it uses per unit of production by 15%. 3M's environmental policies are undoubtedly reaping financial dividends, and it claims to have saved over \$800 million and prevented 771,000 tonnes of pollutants from entering the atmosphere since 1975.

Xerox has a similarly long-standing commitment to eco-efficiency and has set itself the ambitious goal of producing waste-free products for "waste-free" offices. At its Mitcheldean plant in the Forest of Dean, England, 27,500 old carcasses-spent machines are broken down each year into their constituent parts. Virtually every bit is either reused in new machines or recycled in one form or another.

Xerox's asset management programme has significantly reduced its consumption of raw materials, saving it some \$50 million since 1996. Its landfill requirements have been reduced by three-quarters since 1993 and over 90 per cent of its waste is now recycled.

As far as Xerox and 3M are concerned, good environmental practice makes good business sense, and this is a point of view, which they try to instil in their suppliers. Both companies have also involved their workers in their war on waste and their quest for greater efficiency. 3M has encouraged its employees to participate in its pollution

reduction programmes and Xerox provides financial bonuses that ensure that its service engineers return old machines for recycling.

[Based on Pye-Smith, C (1999) "A Tale of Two Companies". *People and the Planet*, 8(3): 14]

CASE STUDY 4: NIKE CORPORATION

For many years, Nike, the Oregon-based maker of athletics footwear and clothing has been a target of a variety of interests: activists, athletes, consumers, competitors, reporters, and regulators. The company's workplace, environmental, and human rights practices have been the focus of sharp criticisms. According to its critics, Nike has engaged in a variety of practices that has exploited the third world workforce who make its products as well as the communities and the natural environment where they live.

Nike has now set sights on the lofty goal of "sustainability" - conserving resources, doing no harm, and creating no waste in the manufacture, use and disposal of its products. To achieve this, Nike has undertaken a broad range of initiatives, harnessing the company's culture of innovation to re-invent its products and the way they are made. For example, the company has begun using sustainability as a design criteria to reduce the use of toxins and the generation of waste in its manufacturing.

Nike eliminated the use of 800,000 gallons of solvents in its adhesives in one year and had a goal of reducing its use of volatile organic compounds per unit of production by 90 per cent by 2001.

The company is working to support the development of organic cotton farming, including providing incentives to farmers to switch to organic production. Nike T-shirts already include a small portion of organic cotton, which the company plans to gradually ratchet up as supplies become more plentiful and reliable.

The Company's ultimate goal is to "close the loop" on its products by recycling materials from old products into new ones. Nike sees its "Reuse a shoe" program as a first step in this direction. Under this programme, Nike takes back old products and finds a new use for them as raw materials for building playgrounds in inner cities.

But it may be its Asian factories that Nike's commitment to improving its performance may be most evident. The company has embarked on an effort to embed sustainability principles within its nearly 40 footwear-manufacturing facilities in six Asian countries. Nike's goal was that every footwear factory was to have a functioning environmental management system in place by 2001. Nike's interest in the environmental performance of its Asian suppliers was spurred in part by questions from customers about what chemicals were used in its shoes. Many consumers were trying to avoid chemical sensitivities and allergies.

[Based on Makower, J (1999) "Best Foot Forward". *People and the Planet*, 8(3): 16-17]

CASE STUDY 5: BAMBURI

A pioneer "green" company in Kenya is **Bamburi Cement Limited**, founded in 1952. As early as 1959, it nipped an emerging environmental catastrophe in the bud by rehabilitating its vast limestone quarries- into what is now **Boabab Ltd**, a fully-fledged subsidiary company in 1977. Ten years later, the company was bestowed with the prestigious "*Global 500 Roll of Honour for Environmental Achievement*" award by UNEP.

Today Bamburi, East Africa's largest cement manufacturer with an annual capacity of 2.4 billion tons is well known for its best environmental management, and the award-winning Haller Park; a reputation the company jealously protects as an identity.

In a supplement (*Sunday Standard, February 23, 2003*), the company reports on a successful restructuring programme started in 1998 at its Mombassa plant which has increased production efficiency and created an environmentally friendly atmosphere that perfectly captures the co-existence of industry and nature. The company further reports that of the twelve sources of fugitive dust identified in 1998, ten have been successfully tackled. Replacing the old, redundant and noisy equipment with modern machinery compliant with European standards has dramatically reduced noise pollution.

APPENDIX A.7.....

Critical Values of Chi Square

Degrees of freedom	Significance level				
	0.1	0.05	0.01	0.005	0.001
1	2.71	3.84	6.64	7.88	10.83
2	4.60	5.99	9.21	10.60	13.82
3	6.25	7.82	11.34	12.84	16.27
4	7.78	9.49	13.28	14.86	18.46
5	9.24	11.07	15.09	16.75	20.52
6	10.64	12.59	16.81	18.55	22.46
7	12.02	14.07	18.48	20.28	24.32
8	13.36	15.51	20.09	21.96	26.12
9	14.68	16.92	21.67	23.59	27.88
10	15.99	18.31	23.21	25.19	29.59
11	17.28	19.68	24.72	26.76	31.26
12	18.55	21.03	26.22	28.30	32.91
13	19.81	22.36	27.69	30.82	34.53
14	21.06	23.68	29.14	31.32	36.12
15	22.31	25.00	30.58	32.80	37.70
16	23.54	26.30	32.00	34.27	39.29
17	24.77	27.59	33.41	35.72	40.75
18	25.99	28.87	34.80	37.16	42.31
19	27.20	30.14	36.19	38.58	43.82
20	28.41	31.41	37.57	40.00	45.32
21	29.62	32.67	38.93	41.40	46.80
22	30.81	33.92	40.29	42.80	48.27
23	32.01	35.17	41.64	44.18	49.73
24	33.20	36.42	42.98	45.56	51.18
25	34.38	37.65	44.31	46.93	52.62
26	35.56	38.88	45.64	48.29	54.05
27	36.74	40.11	46.96	49.65	55.48
28	37.92	41.34	48.28	50.99	56.89
29	39.09	42.56	49.59	52.34	58.30
30	40.26	43.77	50.89	53.67	59.70
40	51.81	55.76	63.69	66.77	73.40
50	63.17	67.51	76.15	79.49	86.66
60	74.40	79.08	88.38	91.95	99.61
70	85.53	90.53	100.43	104.22	112.32
80	96.58	101.88	112.33	116.32	124.84
90	107.57	113.15	124.12	128.30	137.21
100	118.50	124.34	135.81	140.17	149.45

Reject H_0 if calculated value of chi square is greater than the critical value at the chosen significance level.

APPENDIX A.8: SPSS Kruskal-Wallis Test Results

Ranks

	sector	N	Mean Rank
Drivers	manufacturing	17	15.26
	service	8	8.19
	Total	25	
corporate activities	manufacturing	17	15.97
	service	8	6.69
	Total	25	
Benefits	manufacturing	17	14.50
	service	8	9.81
	Total	25	

Test Statistics^{a,b}

	Drivers	corporate activities	Benefits
Chi-Square	5.198	9.372	2.267
df	1	1	1
Asymp. Sig.	.023	.002	.132

a. Kruskal Wallis Test

b. Grouping Variable: sector