

**THE INFLUENCE OF ECOLOGICAL FACTORS ON STRATEGY WITHIN
LARGE-SCALE MANUFACTURING FIRMS IN NAIROBI.**

BY

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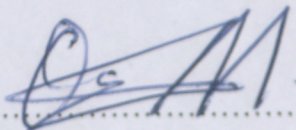
DECLARATION

THIS MANAGEMENT RESEARCH PROJECT IS MY ORIGINAL WORK AND HAS NOT BEEN SUBMITTED FOR ANY OTHER DEGREE QUALIFICATION AT THIS OR ANY OTHER UNIVERSITY.

SIGNED: 
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THIS MANAGEMENT RESEARCH PROJECT HAS BEEN SUBMITTED FOR EXAMINATION WITH MY APPROVAL AS THE UNIVERSITY SUPERVISOR.

SIGNED: 
for PROFESSOR EVANS AOSA.
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DATE: 1/12/2008

ACKNOWLEDGMENTS

DEDICATION

I would like to extend my appreciation to my supervisor, Family, colleagues, friends, and all those who contributed tremendous input towards the completion of this research project.

For my Daddy who believed in the infinite power of knowledge and to God for giving me sufficient grace throughout the entire course. I am also grateful to my perfect supervision, guidance and positive criticism at all times.

To my mother Christine who has aided by me throughout the years. I am also grateful to my husband James who sacrificed in every way possible and without whom I would not have completed this project.

Finally to my fellow colleagues whose assistance cannot be overestimated. I remain indebted for your support. However, I wish to acknowledge all respondents for their time and responses in filling out the questionnaire.

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CHAPTER ONE: INTRODUCTION

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1.1.1 Chapter of Key, 2's manufacturing sector

Finally to my fellow colleagues whose assistance cannot be overlooked. I remain indebted for your support. Moreover, I wish to acknowledge all respondents for their time and co-operation in filling out the questionnaires.

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KIRDI	KENYA INDUSTRIAL RESEARCH AND DEVELOPMENT INSTITUTE
NCP	NATIONAL CLEANER PRODUCTION PROCESS
NEAP	NATIONAL ENVIRONMENTAL ACTION PLAN
NEMA	NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY
SAPS	STRUCTURAL ADJUSTMENT PROGRAMS
SHE	SAFETY, HEALTH, ENVIRONMENT AND QUALITY DEPARTMENT

ABSTRACT

ABBREVIATIONS

COMESA -	COMMON MARKET FOR EASTERN AND SOUTHERN AFRICA
EAC -	EAST AFRICAN COMMUNITY
ECMA-	ENVIRONMENTAL MANAGEMENT COORDINATION ACT
GDP -	GROSS DOMESTIC PRODUCT
IGAD -	INTER-GOVERNMENT AUTHORITY ON DEVELOPMENT
KAM -	KENYA ASSOCIATION OF MANUFACTURERS
KIRDI -	KENYA INDUSTRIAL RESEARCH AND DEVELOPMENT INSTITUTE
NCPC -	NATIONAL CLEANER PRODUCTION PROCESS
NEAP-	NATIONAL ENVIRONMENTAL ACTION PLAN
NEMA -	NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY
SAPS -	STRUCTURAL ADJUSTMENT PROGRAMS
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ABSTRACT

Concerns over ecological factors have evolved through several distinct phases from the 1960's when movements focused on pollution and energy conservation to to-date when ecological factors are seen as a source of competitive advantage as comprehensive strategies continue to be adopted. With oil and energy prices rising and expected to rise more and with the growing awareness of the intensity of change that is being wrought on our planet and the centrality of human effort in provoking this change, pressures in the global market place require firms to develop universally-applied standards of care of the ecological environment hence the manufacturing industry landscape is changing, as are the views of the professionals within it. At the same time, the issue of climate change has sparked a debate weighing the benefits of limiting industrial emissions. Where ecological factors were once seen as little more than a necessary evil, today the business case for environmental initiatives is taking the fore in the public consciousness and the thinking of business leaders.

With these imperatives in mind, the study examined the influence of ecological factors on strategy within large-scale manufacturing firms located in Nairobi. The objectives of the study were to establish the extent to which ecological factors were evident in the espoused and enacted strategies of large-scale manufacturing firms in Nairobi and to determine how these ecological factors influenced strategy of the large-scale manufacturing companies.

To explore the issues, primary data was collected via mail questionnaires distributed to senior executives and managers. Findings were then analyzed using descriptive statistics. Frequency tables, percentages and graphs were used to present the findings. The study sample comprised of 50 large-scale manufacturing companies based in Nairobi out of which 26 companies responded representing a 52% response rate. The rest were either unwilling to respond due to the fact that they considered the issues sensitive and confidential or took too long to fill the questionnaires. Majority of the companies that responded were predominantly foreign owned.

The study established that there was a general recognition that the ecological environment had gained attention and focus in the past few years with manufacturing companies trying to find potentially win opportunities. Majority of the respondents displayed consistency to the fact that they did have reasonable commitment from their top management on ecological issues. Ecological factors were evident in the espoused strategies of most large-scale manufacturing firms but there still seemed to be conflict in implementation as ecological initiatives adopted were more of minimization rather than elimination strategies. The overriding attitude was that although majority of companies had formal departments like the environmental and safety departments, these departments were expected to deal with ecological issues and not interfere with core business. At the same time most respondents saw ecological initiatives as costly as respondents felt that resources were still limited therefore it was unrealistic to expect huge capital investments just for the environment. Lack of awareness and knowledge on ecological issues stood out as a key barrier to integration.

The research study was broad hence the level of detail it could delve into given the two objectives was limited, while a more comprehensive study was desirable, this could not be entirely possible in view of the limited resources at the researcher's disposal. The other limitation was that the study was based on a sample limited to Nairobi area and sample limited to large-scale manufacturing firms. At the same time references and comparisons made were mainly from studies done in other countries since no previous research had been done exactly on this topic in the Kenyan context. The study used questionnaire method and ignored other methods of data collection hence there was likely to be questionnaire bias in that respondents may have misunderstood some questions or gave biased opinions. The reluctance of some managers to respond was also a major limiting factor.

There is need for replication of the study to be done on other sectors of the economy since the research concentrated on the manufacturing sector. There is also need to research on other large-scale manufacturing firms outside Nairobi since this research concentrated only on companies located within Nairobi area.

To conclude, the importance of developing effective ecological policies was recognized. The success and profitability in the future requires thinking and acting today and staying ahead of the game through good research into the latest technologies and strategies. There is also a need for progressive, developmental and workable models and information that make the area more accessible for companies across industry sectors. These could be used to identify and share best practice at overcoming the barriers for integration of ecological factors into corporate strategy. This implies that the role of environmental legislation in companies needs to be further investigated as well as its role and effectiveness in protecting the ecological environment.

CHAPTER ONE: INTRODUCTION

1.1 Background

Degradation of the natural environment continues at a pace beyond that which the planet cannot sustain (Pedersen and Sitinson, 2006). Yet until the beginning of the 1990's, standard theory has assigned a passive role to business in ecological issues. That is why, industry in the developed world is advocating voluntary solutions by firms to ecological concerns, while environmental interest groups and government regulators have chosen instead to curtail environmental degradation using regulation and economic instruments, but policy instruments are subject to failure, as violations may not be detected, and regulations may fail to be sufficiently enforced.

Kotler (2003) observed that further turbulent environmental changes can render yesterdays winning business solutions obsolete. Therefore, organizations need to have the right fit between their internal structures and their external environment in order for them to function effectively and efficiently. In order to realize competitive advantage through adopting and promoting ecological factors, companies need a more complex approach to deal with ecological issues within organizations than the all-or-nothing one that is used so far. Hart (1997) emphasized on the need for companies to look beyond the greening effort to a more comprehensive strategy.

1.1.1 Ecology and strategy

Ansoff (1987) noted that the environment is constantly changing and organizations have to continuously adapt their operations in order to survive the environmental challenges. The environment presents firms with opportunities and constraints but rarely does a single firm exert any meaningful reciprocal influence. Since ecological factors are one of the factors that constitute the environment of the firm, companies need to adapt to the challenges posed by this environment. The natural environment needs to be treated as an opportunity and no longer as a threat. Hence a strategic approach must be adopted for a new frontier to be crossed and for companies to truly benefit and as Andrews (1994) states, strategic decision making is concerned not only with what an organization might

do, can do, or may want to do. Here, what a company should do appears as a fourth element of the strategic decision.

Incorporating ecological factors into the strategic planning process requires that firms do more than merely comply with existing laws and requirements. As a consequence, managers responsible for strategic planning must increase the extent to which they consider life-cycle impacts of their products on the ecological environment. They cannot afford to assume that other groups will take the initiative in controlling and planning for environmental costs. In addition, society and corporate boards have increasingly higher expectations for corporate environmental performance. The implementation of these initiatives reflects a widespread and increasing public sophistication regarding ecological impacts. In all likelihood, companies will continue to experience pressure to include ecological issues in their strategic decision-making. This is because today business as usual approaches are very difficult to justify as leading aggressive firms are no longer in a sufficient power position to establish the style and pace of progress or to control their own destinies.

Many companies now consider explicit environmental issues when evaluating both ongoing programs and strategies for the future. Traditionally, an Environment, Health & Safety department was responsible only for ex post legal compliance with regulations and laws, not for factoring current and future ecological costs into operations analysis and planning, that is why many industries face the contemporary challenge of expanding from the traditional, compliance-focused orientation to include a prospective orientation. Compliance is still important as a basic tactic, but compliance without the strategic evaluation of environmental impacts and costs often lead to incomplete strategies. Some firms have used information about environmental performance not only in internal planning but also in external publications. In part, this is done to manage public and private perceptions of the firm. Also, a pure compliance-oriented reporting strategy may be insufficient if competitors are regularly making more extensive disclosures voluntarily. Consequently, many firms benchmark their environmental disclosures against the disclosures of other firms.

Today governments have initiated policies geared to encourage the development of 'green' technology or environmental programs. For example the Montreal Protocol restricts chlorofluorocarbons and other ozone-depleting chemicals, while the Kyoto Protocol adopted in 1997 aims at reducing greenhouse gas emissions (including carbon dioxide) that lead to global warming in an effort to prevent climate change. ISO 14001, the International Standards Organization (ISO) environmental standards series, provide guidelines and evaluate the environmental impact of a company and its products. It is designed to help set targets to meet requirements, develop and prioritize environmental response plans, document policy and procedures, implement ongoing measurements against targets, and provide guidelines for internal audits. At the same time governments are examining incentives to prompt business recognition of the new reality that ecological responsibility can co-exist with financial success for example manufacturing companies need to reconsider their product design, human resource development, marketing and operations management strategies in light of ecological responsibility. Some incentives-based and polluter-pays strategies include load-based licensing and tradable permits to encourage reduction of pollution, efficient resource management, innovative design and cleaner production e.g. elimination, reduction, recycling, and reuse of chemicals and water, proper waste control and treatment of chemicals. Other such incentives include vehicle emission quotas and 'green taxes' such as carbon taxes (as in Denmark), congestion taxes (in Singapore).

At Hewlett-Packard, for example, their environmental strategies and solutions program confirmed that sustainability does offer companies a strategic competitive advantage. Incorporating ecology into its core business strategies would enable HP to transform potential environmental liabilities such as climate change, resource exhaustion and the energy crisis into strategic business opportunities. Similarly, a number of companies have been successful in employing a strategy of environmental product differentiation. Reinhardt (2000) points out that such a strategy will be successful if consumers are prepared to pay more, if the benefits can be communicated readily and if the innovation is unique and long enough for a profit to be made.

Ecological investments should be made for the same reasons as other investments which are because they either expect them to result in a positive financial return or to reduce their perceived risk and thus creating a suitable company image.

1.1.2 Overview of Kenya's manufacturing sector

High level of concentration characterize the Kenyan manufacturing sector with a few large companies accounting for a large proportion of the sectors output and employment. The growth of this sector has been constrained by low purchasing power, high energy costs, insecurity, poor infrastructure, escalating prices of raw materials and threat of low cost imported goods. The Kenya Association of Manufacturers (KAM) classifies manufacturers into 12 key industrial sectors in addition to affiliate associations. Sectors are classified by the type of raw materials or the products they manufacture.

The industrial sector's share of monetary GDP has remained at about 15-16 per cent over the last five years with manufacturing activities accounting for the greatest share of industrial production and forming the core of the industry. The manufacturing sector's contribution to GDP grew by an annual average of 5.5 per cent between the period 2003 and 2007, with a growth of 6.2 per cent in 2007. The value of manufacturing output rose by 8.1 per cent in 2007 while 1.88 million people were employed in both the formal and informal sectors. Besides its contribution to employment generation, this sector is one of the leading foreign exchange earners having accounted for 34 per cent of the total export earnings in 2007 (GOK, 2007).

Kenya's industrial and manufacturing sector has gone through a transition largely as a result of a turbulent macro-economic environment. After independence the Kenyan government tried to develop the local manufacturing industry by emphasizing on industrialization strategies. It protected local manufacturers through price controls, import restriction and subsidies. The government published the Restrictive Trade Policies, Monopolies and Price Control Act (1988) to guard against exploitation of smaller firms by larger enterprises.

Until the early 1990s, the Kenyan government pursued a strategy of import-substitution industrialization (ISI). ISI sought to stimulate local manufacturing capacity by blocking manufacturing imports from abroad. Although ISI has been effective in certain contexts, international financial institutions have criticized it severely for facilitating the development of inefficient firms that did not have to compete with their foreign counterparts. The policy was biased towards protection of domestic industries at the expense of their competitiveness, which in turn enabled manufacturers to make profits even in cases of under utilized capacities resulting in higher prices and poorer quality goods for domestic consumers.

The Government then had to change from this policy of import substitution to export promotion in order to acquire more foreign exchange resources and increase employment and productivity. It adopted the World Bank international monetary funding acts – Structural Adjustment Programs (SAPs) which emphasized export promotion, improved availability of imported inputs and elimination of privatization policies. In accordance with the conditions outlined in the various SAPs, the government replaced ISI with a strategy of export-oriented industrialization. The latter is premised on the idea of stimulating manufacturing industries by engaging in competition and free trade.

Determined to create and maintain a favorable investment climate for enterprises to thrive, the government also put in place policy measures like removal of price controls, rationalization and reduction of import tariffs and freeing of the shilling exchange rate to be determined by the market forces. To encourage manufacturing in Kenya for exports, the government established manufacturing under-bond program open to both local and foreign investors and export processing zones (EPZ). Over the years the signing of regional and global treaties among governments has ushered in a new era of global economic cooperation thus reflecting the desire to operate in a fairer and more open multi-lateral trading system.

The manufacturing and industrial sector has been identified as one of the major cause of environmental degradation especially due to pollution and poor effluent and toxic waste disposal leading to threats to our life supply ecology e.g. acid rain resulting from coal

burning and the green house effect causing climate change. Therefore it is only by taking the lead that the manufacturing industry can communicate the message that it is capable of sustaining effective environmental management, but it must define the scope and nature of these efforts. Looking at Nairobi's industrial area for example, there is massive air pollution from industrial fumes not to mention other pollutants due to use of non biodegradable material. Another threat is water pollution as industrial waste is leaked or dumped into water- ways for example the Nairobi river has become a major threat. Land pollution due to disposal of industrial toxic wastes in underground sites has also resulted in endangered ecology. The Kenyan government has realized this scenario and hence the enactment of the Environmental Management Coordination Act (1999), under The National Environment Management Authority (NEMA) which is the focal point for all national environmental issues. ECMA provides for co-operative environmental governance by establishing principles for decision-making on matters affecting the environment. Another key policy; The Environmental Impact Assessment and audit Regulation enacted in 2002 is a systematic examination conducted to determine whether or not a program, activity or project will have any adverse impacts on the environment. Under the auspices of the Ministry of trade and industry, Kenya recently launched the National Cleaner Production Centre (NCPC) to guide the manufacturing industry on methods of reducing waste in their production processes and hence improving on their profitability. The approach is expected to bring forth better performance across the country's industrial fabric as we strive to search for ecologically superior products.

1.2 Statement of the Problem

According to Grant (2000), survival and success of an organization occurs when it creates and maintains a march between its strategy and the environment. Strategic response therefore requires organizations to change their strategy to meet the needs of the environment. With skyrocketing oil and energy prices, a growing need for constant innovation, increased risk, environmental regulations and endlessly evolving technologies, the current climate can be a daunting one for managers. It is no wonder many executives are searching for advice on how to strategically deal with the next phase

in the ecological evolution. It is therefore crucial that best practices be developed and shared, and studies highlighting both success stories and potential pitfalls get shared.

With the growing awareness of the intensity of change that is being wrought on our planet and the centrality of human effort in provoking this change, the issue of climate change has sparked a debate weighing the benefits of limiting industrial emissions of greenhouse gases against the costs that such changes would entail. Climate change is now accelerating so fast that even critics of the Kyoto Protocol agree that global warming has massive costs and that the developing countries will be hit much harder (Orssatto, 2001). Beck (1996) argues that since many of these ecological impacts are global, incalculable in scale, uninsurable and irreversible, coping with them is beyond the capacity of the traditional institutions and systems. Since companies are one of the major contributors to environmental degradation, they are particularly targeted and increasingly expected to change the way they operate and be more ecologically benign.

An organization geared to innovation is ready to translate ecological issues into market issues and can exploit the potentially huge market that ecological sustainability, in particular, represents. With increased public awareness, customer and market expectations are looking to more responsible products and services. They want companies to go beyond their traditional goal of maximizing shareholder value and consider broader societal goals. Therefore it is important to understand how decision-makers in the manufacturing sector interpret the relationship between the biophysical environment and their organization. The question is whether they take a proactive attitude or adopt strategies of revenue protection.

Whilst there is evidence in literature of a general agreement that the natural environment should become core to businesses and that value lies in proactive strategies. There is little evidence of widespread integration of environmental decisions into the strategy process. Kenyan studies that I have come across are based on the firm's operating and industry environment in different sectors of our economy.

There are also many studies done on the manufacturing sector for example works of Aosa (1992), Nyamwange (2001) and Arithi (2001) but most of this research is based on areas of strategic planning and competitive strategy. Some studies like that of Obuya (2003) and Kalama (2007) have touched on green marketing practices but none has researched directly on the ecological environment of the firm. It is on this premise that this study seeks to answer the following fundamental questions; are large-scale manufacturing firms in Nairobi committed to ecological sustainability? Do they have written ecological plans which can be communicated and does top management support these ecological issues? If so, to what degree have they integrated ecology into the strategic planning process and what strategic actions are influenced by these ecological concerns?

1.3 Objectives of the Study

The objectives of this study were:

- To establish the extent to which ecological factors were evident in the espoused and enacted strategies of large-scale manufacturing firms in Nairobi.
- To determine how ecological factors influenced strategy in large scale manufacturing companies in Nairobi.

1.4 Importance of the Study

The manufacturing sector is a very important sector, hence this study will enable industry players and stakeholders understand emerging trends in order to take a more proactive stance on ecological factors affecting the sector. It shall also provide further insight to the managers of these manufacturing firms on how the factors could influence their corporate strategies.

The study will also be useful in the academic field as it will act as a guide for future research and boost academic knowledge. Scholars will find this study especially useful for reference and further empirical research on how factors in the remote environment can affect a firm. It will also be a reference for further studies touching on the manufacturing sector.

Policy makers like government and other regulatory bodies who determine and formulate policies governing organizations including manufacturing industry will find the research useful as it brings to light a number of issues and challenges facing industry. This study shall provide insight to ecological issues in the manufacturing sector which remain largely unaddressed.

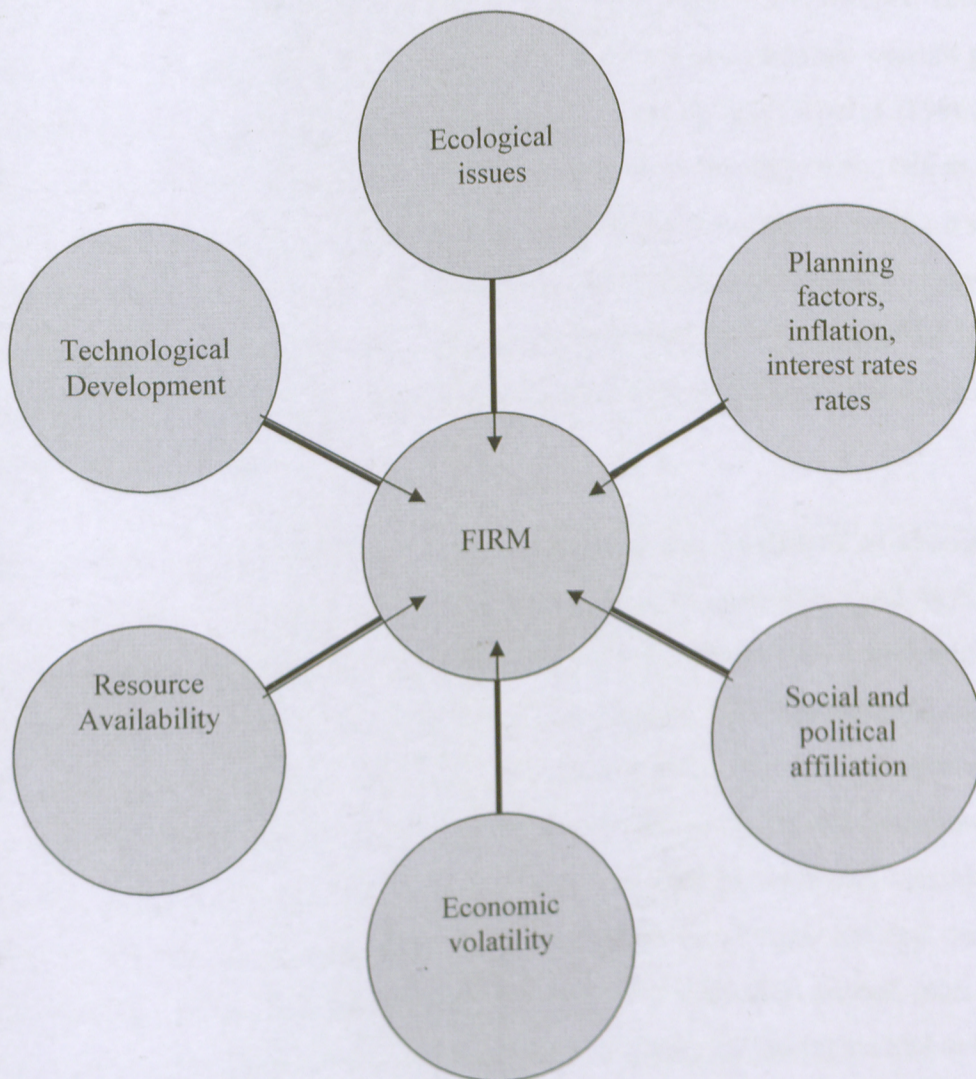
CHAPTER TWO: LITERATURE REVIEW

2.1 The Ecological Environment

The word ecology is often used as a synonym for the natural environment or environmentalism. Likewise ecological is often taken in the sense of environmentally friendly. Ecological factors include geological, geographical, hydrological, and climatological parameters as well as relations between species. Pearce and Robinson (2000) state that the environment of a firm consists of two main segments; they are the external and internal environment. In his strategic management model, the external environment consists of three interactive segments; factors in remote, industry and the operating environment. It comprises factors that originate beyond and usually irrespective of any single firms operating situation, they are economic, social, political, technological and ecological factors. Concerns over these ecological factors have evolved through several distinct phases from the 1960's when movements focused on pollution and energy conservation to to-date when ecological factors are seen as a source of competitive advantage.

The turbulence of recent years and likely future changes reinforce the need of considering the ecological factors by beginning with the recognition that the firm is apart of its natural environment as depicted in figure 1. The environment dependence phenomenon thus stipulates that whenever environmental changes occur, they create pressure in the organizations strategy. The organization then needs to make adjustments if it has to sustain its survival over time. Bartol and Martin (1991) further observe that an organizations effectiveness is influenced by its external environment where the external environment refer to the major forces outside the organization that have the potential of significantly impacting on the likely success of products and services. This external environment can be stable, changing or turbulent.

Fig 1. The Environment of the Firm



Source: Stoffels, J.D. (1994), Strategic issues management: A comprehensive guide to environmental scanning. Planning forum, Pergamon, USA. Page 6.

2.2 The Concept of Strategy

Ansoff and Mc Donnel (1990) define strategic management as a systematic approach to a major and increasingly important responsibility of general management to position and relate the firm to its environment in a way which will assure its continued success and make it secure from surprises. Strategy seeks to bridge the gap between current positions of the organization to its future intended direction. Johnson and Scholes (1996) explain strategy as the direction and scope of an organization over the long term, which achieves advantage for the organization through its configuration of resources within a changing environment to meet the needs of the market and fulfill stakeholders' expectations. strategies come about in a number of ways such as; the result of managerial intent and planning. This brings about intended strategy which is the expression of desire to move in a certain strategic direction.

Strategy is a potentially powerful tool for coping with the conditions of changes which survives the firm today, but it is complex, costly to introduce and also to use. Nevertheless, this is evidence that it more than pays for itself. It is a tool which offers significant help for coping with turbulence confronted by organizations. Mintzberg (1994), points out that people use strategy in several ways, the most common being: a plan, a pattern, a position and finally a perspective, that is, vision and direction. He also argues that strategy emerges over time as intentions collide with and accommodate a changing reality. Thus, one might start with a perspective and conclude that it calls for a certain position, which is to be achieved by way of a carefully crafted plan, with the eventual outcome and strategy reflected in a pattern evident in decisions and actions over time. This pattern in decisions and actions defines what Mintzberg called "realized" or emergent strategy.

Steiner (1969) noted that strategy is that which top management does that is of great importance to the organization. It refers to basic directional decisions and important actions necessary to realize these directions. Strategy answers the question: What should the organization be doing? Andrews (1980) presents corporate strategy as the pattern of decisions in a company that determines and reveals its objectives, purposes, or goals,

produces the principal policies and plans for achieving those goals, and defines the range of business the company is to pursue and the nature of the economic and non-economic contribution it intends to make to its shareholders, employees, customers, and communities. While Porter (1985) argues that strategy is about a competitive position, about differentiating yourself in the eyes of the customer. Aosa (1988) defined strategy as solving a strategic problem which is a mismatch between the internal characteristics of an organization and its external environment.

From the above definitions it seems strategy, then, has no existence apart from the ends sought. It is a general framework that provides guidance for actions to be taken and at the same time, is shaped by the actions taken. All of the above writers postulate that resource to strategy is necessary when rapid changes occur in the environment of the firm.

2.3 The Developments of Corporate Ecological Strategies

In seeking to explain and theorize this change in the business environment there is a growing trend in the management literature which recognizes the ecological constraints placed upon organizations by the natural environment and reports the process of organizational response and adaptation to this change some examples include (Anderson and Bateman, 2000; Aragon-Correa, 1998; Menguc and Ozanne, 2005; Porter and Linde, 1995). In some of the literature about business and the natural environment, writers have focused on descriptive studies of environmental strategies and the evolution of environmentalism while trying to identify and explain the drivers of corporate environmental practice. A common theme that seems to run through the extant research is the unanimity in stating that stakeholder pressure is a major determinant of ecological responsiveness in firms. Researchers have also suggested that stakeholders, regulations and intensity of competition are major determinants of environmental orientation. Aragon-Correa (1998) asserts that the role of the natural environment has until recently received little attention in business literature. Organization theories concerning the need for firms to adapt to their contexts have consistently ignored the importance of the natural environment. This, despite the wider view of strategy as the economic and non-economic contribution the firm intends to make to its stakeholders (Hax, 1994).

Literature on business development up to the 1980's showed market forces and environmental interests as irreconcilable, and the views of the business community as placing environmentalism in the realms of being 'anti-business', 'anti-industrialization', and 'anti-civilization' (Menon and Menon, 1997). During the latter stages of the 20th century, however, attitudes from business changed with growing recognition of the need to respond to the demands of customers. Academic literature during this time included a number of works on environmentalism from a strategic perspective (e.g. Maxwell et al, 1997, Hutchinson 1992). Environmental orientation is defined by Banerjee (2001) as the corporate environmental value, which identifies the degree to which corporate environmentalism is adopted. This means the recognition of the importance of the ecological environment by business organizations and its integration into strategic decision making also referring more specifically to the recognition of the strategies that are enacted with respect to ecological responsibility by organizations. Other managerial literature like Minzberg and Quinn (1996) and Montgomery and Porter (1991), include mention of environmental regulation and/or impact of product safety and environmental standards. This literature has been explicitly advocating the integration of environmental issues into business strategy and the strategic planning process.

Jaworski and Kohli (1993) note that business development now gears to respond to changing market place needs that might be expected to include any customer expectation of demonstrable commitment to environmentalism. Therefore companies have accepted that the boundaries of business and of doing business are being redefined by environmentalism and that adjustments must be made accordingly and as Hart (1997) states, companies need to look beyond the greening effort to a more comprehensive strategy. Berry and Rondinelli (1998) suggest that progressive companies are already moving forward from simple compliance to proactive strategies and management of the environment. However, it is highlighted that within the managerial literature on strategy, the term 'environment' appears generally to be taken to refer to the organization's wider external operating environment (e.g. De Wit and Meyer, 1994; Johnson and Scholes, 1999) rather than to the 'natural' environment.

The financial benefits of environmentally sound activities propounded by some, for example (Forte and Lamont, 1998; Gifford, 1997), showed that organizations that took proactive measures to implement environmental business practices produced higher levels of profitability and protected their stock value better than those that were reactive or inactive. Gifford (1997) takes this concept further and describes an 'environmentally-friendly strategy' that he identifies as investment recovery, whereby non-working assets are identified, reused, or remarked. In that way, not only is there a positive environmental impact but also a significant impact on the bottom line as any returns from this process go directly to the bottom line. Porter and Van Der Linde (1995), even propose an interesting and controversial approach to consideration of the environmental/economic paradigm. They propose that the environment vs. economic interest debate has been so far 'framed' incorrectly and that the alternative is a dynamic environment-economic paradigm based on innovation. They propose that environmental legislation, rather than constraining business, acts as a trigger for companies to realize their competitive advantage through innovation. This innovation not only results in superior products and processes but also reduces costs as operations become more efficient. They support the idea that this will be at no real cost to the companies.

However, Palmer et al (1995) think differently. They do not agree that companies systematically overlook opportunities, or that governmental action in legislating for environmental action will correct this 'failure'. Xepapadeas and Zeeuw (1999) also support this view, stating that if opportunities do exist, companies do not need the 'incentive' of extra costs in order to recognize them. Further, Palmer et al (1995) expresses concern for the situation in which environmental regulation may cause some companies to fall into bankruptcy, indicating that the resulting innovation is not a 'free meal' after all.

Therefore though in some of the literature there seems to be a consensus that environmentalism should be proactively pursued, some of the discussions provide no explicit explanation as to how this contributes to the achievement of the overall strategic goals of the company. And in a situation where consumer pressure and legislative

frameworks are on the increase and companies have to cope with these, the question is whether they take a proactive attitude or adopt strategies of revenue protection. Ultimately, the corporate world seems to be still most sensitive to factors that affect the financial bottom line and issues of sustainability still follow an economic rationale (Banerjee, 2001). There seems to still be a divide between 'business strategy' and 'environmental strategy', with the two existing within 'parallel systems' rather than within an integrated business model. With organizations presented as viewing their environmental responsibilities as being a balancing acts between taking care of 'mother earth' on the one hand and pleasing profit-hungry shareholders on the other.

Though Forte and Lamont (1998) agree that companies that take a proactive stance as regards to environmental protection often would reap economic benefits as well as the added bonuses of customer loyalty, a stronger reputation for the company, risk minimization for expensive regulatory penalties, competitive advantage, enhanced organizational learning and increased employee skills, is not always the case though in developing countries, because sometimes even if governments have the intention to protect the natural environment, they might lack the financial and technical resources to effectively enforce environmental regulations. Multinational enterprises do sometimes take advantage of the resulting "cross-country" differences in environmental regulations by moving production capacity to the country most willing to use lax environmental standards as an investment inducement (Sukhbir, 2000). The reality here is that deregulation and privatization have replaced state intervention and the accepted orthodoxy is that policies of neo-liberalism such as free trade will shift resources to underdeveloped countries, which will in turn increase their wealth and by embracing globalization, developing countries can share in economic progress and efficiency. It is through a near blind acceptance of these economic ideals that we have reached a situation whereby the complex and global operations of financial markets and major corporations has threatened to go beyond the power of our local governments. Yet, faced with the prospect of industrial flight, the argument continues, will developing countries continue to be forced to enter a race to the bottom" and become pollution havens or risk high levels of unemployment and the erosion of their tax base?

2.4 Forces Driving Ecological Sustainability

External pressures of the firm come from governments, community members, consumers, customers and market expectations, other corporations, industry associations, and other non-governmental organizations. There is increased pressure on corporate bodies to employ better assessment and measurement techniques in activities relevant to ecological sustainability. Accordingly, governments have become involved in the setting of targets, reporting requirements, standards and a variety of other initiatives designed to effect change in corporate behavior. More recently, the internal drivers e.g. corporate leaders, employees, shareholders, marketing, human resource and operations managers and change agents who see the benefit of the business case for sustainability are now making decisions influenced by ecological factors. The most obvious internal pressure on managers in this context is cost avoidance. But the firm now needs to consider costs to its reputation in the eyes of its employees as well as external stakeholders such as shareholders, suppliers and consumers. The costs of non-compliance can be devastating for corporations because being competitive means reducing costs. Most governments impose penalty measures for non-compliance.

More informed shareholders are demanding a role in corporate decision-making. Not only can shareholder activism be extremely damaging to the reputation of the corporation, but shareholders are now using sustainability as a measure of financial success. Sustainability indices such as the Dow Jones Sustainability Index are outperforming other indices (Henderson, 2001). The financial markets are generally requiring more information on standards of accountability and service industry is now under considerable pressure to provide for ethical investment. Other forces driving the corporate shift to sustainability are the formation of new alliances. In this new global reality, alliances and networks are forming between environmentalist, business, local government, community and other social actors.

The media, information systems and ad hoc 'coalitions of opposites', such as those between NGOs and business organizations, are increasingly influential in all aspects of society including the ecological environment.

The argument that regulation can force or 'enlighten' corporations to employ the natural environment as a 'competitive opportunity' has been taken up by some governments. The 'Porter Hypothesis' is that better designed regulation can lead to greater innovation, reduce uncertainty, raise corporate awareness and signal areas of potential resource inefficiency (Porter and van der Linde 1995). There seems to be a different picture to be seen, where companies tailor their environmental program to comply with government mandates rather than to adopt a proactive approach. This can be witnessed today as companies continue to react to legislative pressure in accordance with other stakeholder's pressure and not in isolation of them.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Research Design

The research problem was studied through the use of a descriptive survey. Mugenda and Mugenda (1999) define descriptive research as a process of collecting data in order to answer questions regarding the current status of the subjects in the study. Surveys allow for the collection of large amount of data from a sizable population in a highly economical way. It also produces a comprehensive basis of analysis of data using descriptive statistics because the researcher gets to know about people's feelings, attitudes, values, characteristics or preferences concerning one or more variables.

3.2 Population

A population is the collection of elements about which we wish to make some references. The target population of this study consisted of all large-scale manufacturing firms located in Nairobi. Kenya Industrial research institute (KIRDI) defines the manufacturing industry as a sector of the economy that is concerned with the production of goods from raw materials using organized labour and production systems with the aid of machinery.

The determination of the size of firms was based on the number of employees, whereby large-scale manufacturing companies comprised of 50 or more employees. Previous researchers used similar considerations e.g. Yego (1996), Maina (2001) and Owuor (2005). Other measures of size and capital employed, volume of sales turnover and level and type of technology and employee commitment could also be used.

According to the categorization shown in table 1 below, large-scale manufacturing companies comprised of class code C to F. Therefore, 267 large-scale manufacturing companies from KIRDI's directory of manufacturing industries (1997) thus constituted the target population of the study.

Table 1: KIRDI categorization of manufacturing companies.

Size class code	Number of employees
A	5-19
B	20-49
C	50-59
D	100-199
E	200-499
F	over 500

Source KIRDI directory of manufacturing industries (1997)

The choice of large-scale manufacturing companies was appropriate for my research due to the fact that each one was in a high impact industry meaning that they had significant ecological impacts and environmental laws and public attitudes could affect them in significantly different ways. On the other hand, the small-scale manufacturers neither have the resources nor the willingness to be ecologically responsive. The choice of Nairobi area was appropriate as it consisted of a fair representation of all sectors of manufacturing concerns and was also convenient in terms of accessibility in data collection given time constraints.

3.3 Sampling

Due to diversity within the manufacturing sector across- sector of manufacturers were selected. The basic idea about sampling is that by selecting some of the elements of a population, we draw conclusions about the entire population (Cooper et al., 2003).Simple random sampling was used to pick units to be studied from each stratum.

A sample size of 50 manufacturers was used from the sample frame this was large enough to give a general view. Dixon and Leach (1984), advised that adequacy and

resource considerations should determine the size of the sample. Previous researchers like Wanjere (2003) used sample of 40 while Arithi (2001) used a sample size of 50.

3.4 Data Collection

Primary data were collected via mail questionnaire. The advantage of this method was that it was less costly and reduced biasing error that might have resulted from the personal characteristics of interviewees. Hard copies of the questionnaires were also delivered by hand through the 'drop and pick later' method. To enable the drawing of inferences about perceptions of different people in relation to the same issues, data were collected by way of semi-structured and structured questionnaires.

The questionnaire (herein attached as appendix 2) was divided into three parts. Part one being closed ended was designed to obtain information regarding the general profiles of the companies under study while part two were structured questions collecting data regarding the extent to which ecological factors were evident in the espoused and enacted strategies of large-scale manufacturing firms in Nairobi. Part three collected information determining how ecological factors influenced strategy in the large scale manufacturing companies.

The respondents were chief executive officers or managing directors and other senior managers of the manufacturing firms. These respondents were deemed as the most suitable persons to provide the relevant information as they participated in company decision making.

3.5 Data Analysis

Data were first edited for accuracy, uniformity, and completeness then cross-tabulated and classified into sub-sections according to common characteristics. The open-ended questions were coded by grouping responses according to common themes in order to facilitate analysis.

CHAPTER FOUR: FINDINGS AND DISCUSSIONS

4.1 Introduction

This chapter contains summary of data, findings, together with their possible interpretations. Data were collected from large-scale manufacturing firms within Nairobi. The objectives of this study were to establish the extent to which ecological factors were evident in the espoused and enacted strategies of large-scale manufacturing firms in Nairobi and to determine how ecological factors influenced strategy in large scale manufacturing companies.

Out of a sample size of 50 large-scale manufacturing firms, 26 companies responded representing a 52% response rate which was a fairly good result given the time constraints. Previous researchers like Aosa (1992), got a response rate of 15%, Wasame (2002) 20% and Achuo (2005) achieved 38%. Data collected was analyzed using descriptive statistics. Frequency tables, percentages, modes and charts were used to draw conclusions on the influence of ecological factors on strategy of large-scale manufacturing firms within Nairobi. The chapter is divided into three major sections; the first section addresses the general profiles of the companies under study while the other two sections address the two main objectives of the study

4.2 General Profiles

4.2.1 Profile of respondents

Respondents were corporate level and senior executives e.g. manufacturing or industrial engineers, quality, operations and supply chain executives from Large-scale manufacturing companies involved in the strategy planning process. Of the 26 respondents, 8 were industrial and utilities engineers, 5 were general managers, 3 supply chain coordinators or managers another 3 were operation managers, 2 were senior

management accountants, 2 administrative managers, 1 company secretary, 1 media and public relations officer while the other just cited senior executive.

4.2.2 Summary as per sector

The questionnaire required respondents to indicate the sector of the economy in which their firms were operating in. The objective was to give a general view of the companies under study as well as to verify whether companies that responded cut across all sectors and draw any possible relationship between the sectors and any other variables for example relationship between strategy, size, sector or age of the firm.

Figure 2: Summary as per company size

Table 2: Distribution of firms by sub-sector

SECTOR	FREQUENCY	PERCENTAGE
Food beverages and tobacco	8	31%
Chemicals, pharmaceuticals and medical equipment	6	23%
Building construction and mining	4	15%
Rubber and plastic products	3	11%
paper, paper products and printing	2	8%
petroleum products/energy	2	8%
wood and wood products	1	4%
TOTAL	26	100%

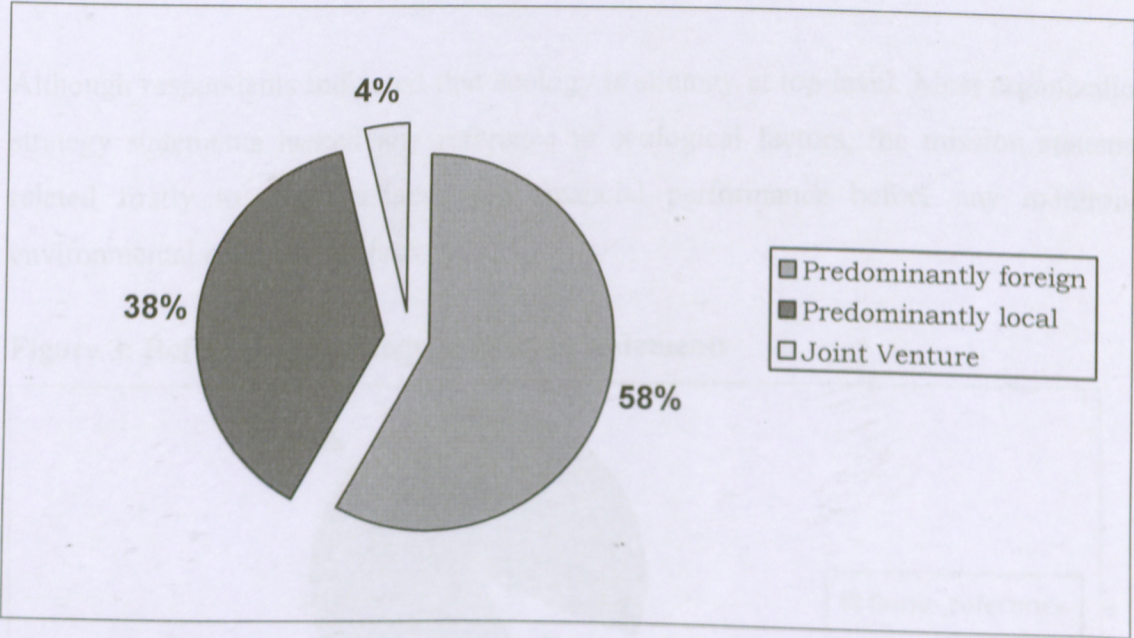
Source: Research data

As illustrated in table 2 above, by sector, 31% of respondents represented Food beverages and tobacco, 23% chemicals, pharmaceuticals and medical equipment, 15% from building, construction and mining, 11% from rubber and plastic products, 8% paper, paper products and printing, another 8% petroleum products/energy and 4% from wood and wood products.

4.2.3 Summary as per company ownership

Nature of ownership was important to this study because it gave the general characteristics of the firms under study. Figure 2 below depict that 64% of the companies that responded were predominantly foreign, 32% were predominantly locally owned while the remaining 4% were joint ventures. Majority of the companies that responded promptly were predominantly foreign owned to which the researcher attributed to the fact that multinationals had environmental policies and structures in place. Therefore were in a better position to synthesize ecological concerns than their local counterparts.

Figure 2: Summary as per company ownership



Source: Research data

4.3 Ecology and Strategy

When it came to strategy, many areas were discussed. The strategies that most companies had adopted were more of minimization rather than elimination strategies. The environment still appeared not to be a significant risk and therefore still not a priority concern.

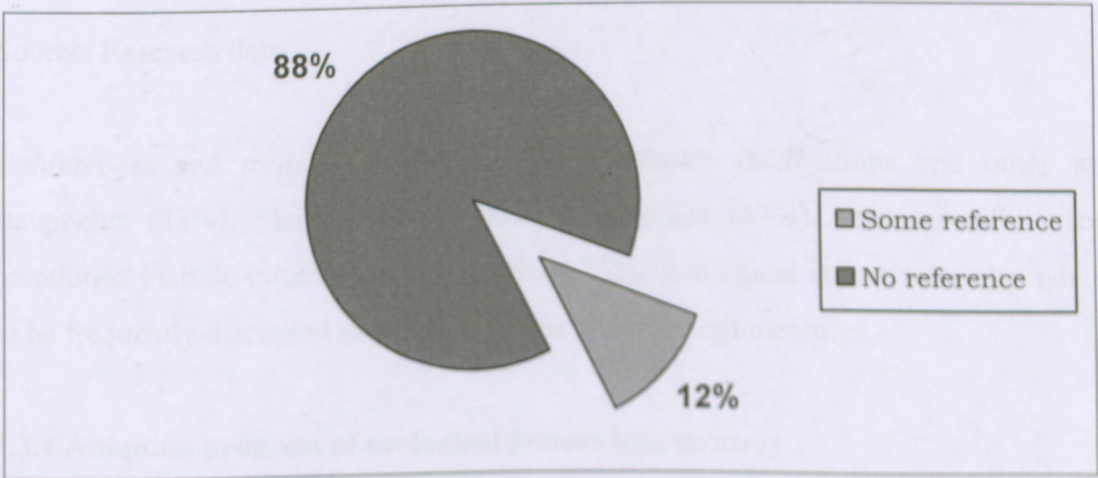
4.3.1 Top management commitment

When the future of ecological initiatives was studied, executive commitment was identified as the number one key focus area. The picture was more positive with many respondents recognizing that top management was committed to ecological responsibility or at least increasing in appreciation of environmental opportunities. There seemed to be a consensus that ecology is strategy at top level whether it was lower down was a different matter hence top management needed to be responsible for integrating these factors into strategy albeit majority of respondents indicated that all employees should participate in selling these objectives.

4.3.2 Reference of ecology in mission statements

Although respondents indicated that ecology is strategy at top level. Most organizational strategy statements lacked any reference to ecological factors, the mission statements related firstly to core business and financial performance before any mention of environmental and societal factors.

Figure 3: Reference of ecology in mission statements



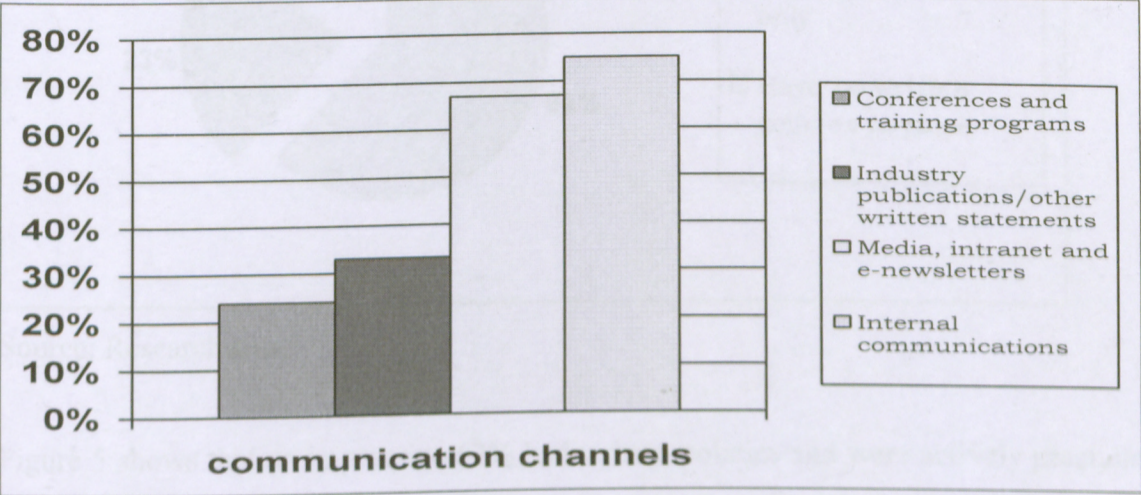
Source: Research data

Figure 3 above shows that 88% of the mission statements lacked any mention of ecological factors with only 12% having some reference.

4.3.3 Communication of policies

Since lack of information had been identified by previous researchers as one of the main barriers to the adoption of ecological strategies, respondents were asked what their best resources for communicating ecological information or policies were. Multiple responses indicated that companies used one or a combination of communication channels as represented in table 4 below.

Figure 4: Communication of policies



Source: Research data

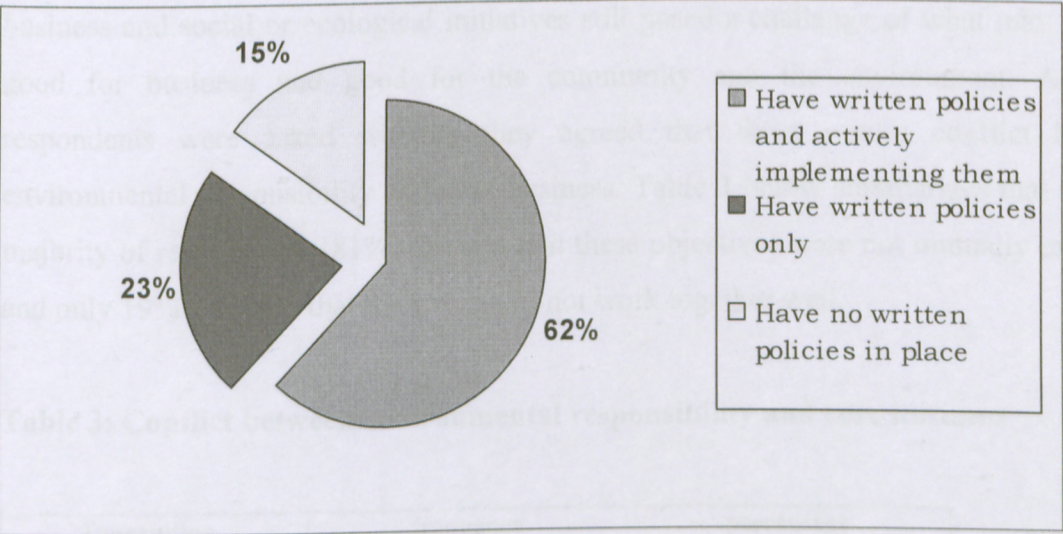
Conferences and training programs (24%), industry publications and other written statements (33%), Media, intranet and e-newsletters (67%), other specific resources mentioned include internal communications 75%. Ecological issues were also perceived to be frequently discussed at board or senior management meetings.

4.3.4 Adoption progress of ecological factors into strategy

To find out exactly how far along the companies surveyed were in terms of the adoption and implementation of ecological issues and initiatives, executives were asked to indicate

where their company currently stood with respect to environmentally-preferable policies and practices.

Figure 5: Adoption of ecological factors into overall strategy



Source: Research data

Figure 5 shows that an impressive 62% had written policies and were actively practicing them, a further 23% had written policies only at the time, however, 15% of respondents had no ecological policies in place or were in the process of developing policies

Still in relation to this topic, respondents were also asked to state whether they had a department or formal system of handling ecological issues. Majority cited that ecological issues were handled by the safety, health, environment and quality department (SHE) the researcher further noted that a huge percentage (86%) of those that had a formal system or department were predominantly foreign owned while the remaining 24% were locally owned. A good percentage of the predominantly locally owned companies cited that such issues were left to administration or human resource and some few handled by the legal affairs departments .A few however had environmental committees put in place.

4.3.5 Compatibility of business objectives and environmental responsibility

One of the aims of the survey was to determine how the company’s perspective on ecological initiatives in general impacted on the adoption and implementation of manufacturing initiatives. In part this was to explore whether the stigma against mixing business and social or ecological initiatives still posed a challenge of what may be both good for business and good for the community and the environment. As such, respondents were asked whether they agreed that there was a conflict between environmental responsibility and core business. Table 3 below summarizes that the vast majority of respondents (81%) thought that these objectives were not mutually exclusive and only 19% agreeing that the two could not work together well.

Table 3: Conflict between environmental responsibility and core business

Description.	frequency	percentage
Agreed	5	19%
Disagreed	21	81%
Total	26	100%

Source: Research data

Did they see a shift from traditional views in terms of incorporating the two?
73% responded that yes, there was a shift from the traditional approach since ecological issues were gaining attention as efficient manufacturing and internationally accepted technologies continued to be accepted. 27% indicated that they did not necessarily see a shift because profit maximization and shareholder value remained a key priority (see table 4).

Table 4: Shift from traditional approach on ecological issues

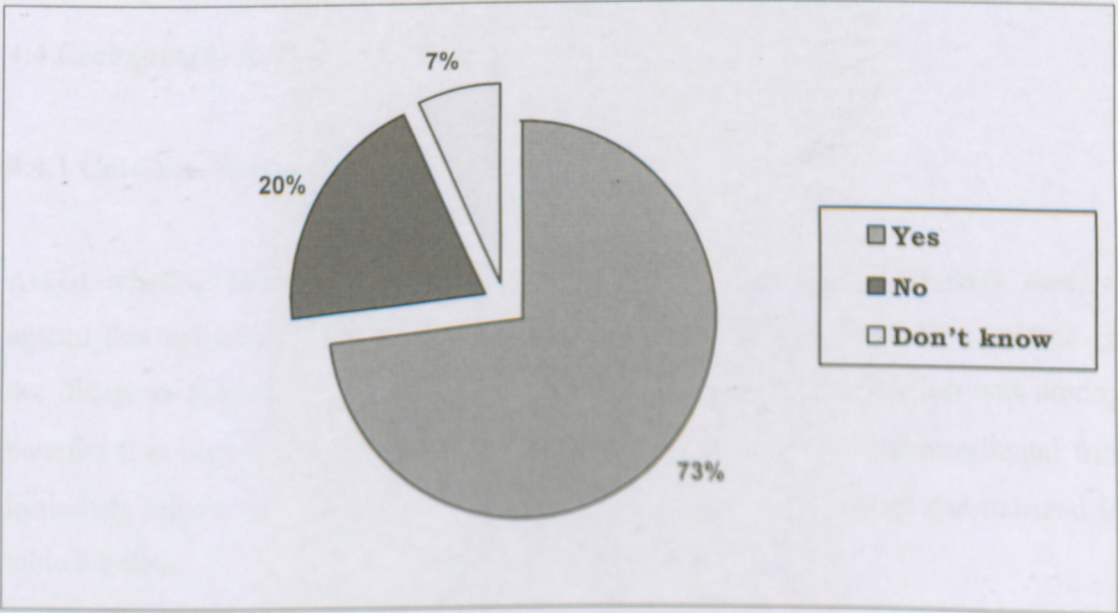
Description	frequency	percentage
Yes	19	73%
No	7	27%
Total	26	100%

Source: Research data

4.3.6 Integration of ecological factors into optimization strategy

Encouragingly, when asked how they viewed ecological initiatives, the findings as summarized in figure 6 below shows that 73% of respondents reported that yes they thought the initiatives were part of an overall optimization strategy, only 20% said they didn't while 7% did not know. This implies that environmental programs were becoming part of the standard arsenal of strategies employed to optimize operations.

Figure 6: Integration of ecological factors into optimization strategy



Source: Research data

Majority of the respondents also highlighted that ecological factors were given prime consideration in strategic planning with only 8% citing that these factors were not considered although it was in the long term interest of the companies to consider ecological issues in planning.

4.3.7 Barriers to integration of ecological factors into corporate strategy

Some of the reasons the companies cited as barriers to integrating ecological factors into strategy were cost implications, lack of information and awareness, limited research carried out in this area, lack of co-operation from other organizations, lack of policy mechanism or poor mechanism put in place, poor implementation of written policies ,

Other reasons given were lack of empowerment from those responsible for ecology or government not encouraging through provision of incentives to prompt business recognition of the new reality of ecological responsibility. Also the attitude of board members was considered a setback to adoption of these policies by some companies. The respondents also felt that resources were still limited therefore it was unrealistic to expect huge capital investments just for the environment.

4.4 Ecological Influences on Strategy

4.4.1 Cost-benefit analysis of eco-products

Asked whether they viewed ecological responsibility as an unnecessary cost, many agreed that environmentalism was a cost to business. 58% agreed, 29% neither agreed nor disagreed however 13% disagreed and when asked if cost reduction was among the benefits that their companies expected to gain from investing in environmental friendly initiatives only a negligible number agreed. The findings have been summarized in the table 5 below.

Table 5: Cost-benefit analysis of eco-products

Description	Frequency	percentage
Agreed	15	58%
Neither agreed nor disagreed	8	29%
Disagreed	3	13%
Total	26	100%

Source: Research data

From further analysis, two groups became evident. Those who felt that the cost was necessary and those who perceived that investment principles were used to justify rejecting environmental initiatives. The first group ascribed to the view that environmental responsibility costs money that could otherwise be saved or used elsewhere. However, they also realized that in some instances the company had to spend on certain environmental initiatives due to legislation or because it was the right thing to do. The second group did not support the fact that ecological initiatives and activities needed justification in the same way as other operational initiatives claiming that they thought that it was always good for business even if it did not help their bottom line directly. By and large executives agreed that environmental initiatives were there to stay. 77% of the respondents agreed to the statement, with only 23% disagreeing.

4.4.2 Corporate drivers for environmental concerns.

The key drivers to the implementation of ecological initiatives were one of the areas the research established. Item analysis was performed on the statements and likert type summarized rating method used. Respondents cited that one of the most pragmatic factors that propelled ecological responsiveness in organizations was the need to comply with international environmental standards especially for multinationals. According to the results depicted in table 6, company image received the highest score while regulations were reported to be a motivator but were perceived to act as a minimum standard.

Table 6: Key drivers for ecological concerns.

Description	Total score received(out of 130)	Percentage
Company image	119	92%
Top management commitment	107	82%
Industry trend	107	82%
Corporate social responsibility	101	78%
Customer expectation	101	78%
Legislation and regulations	99	76%

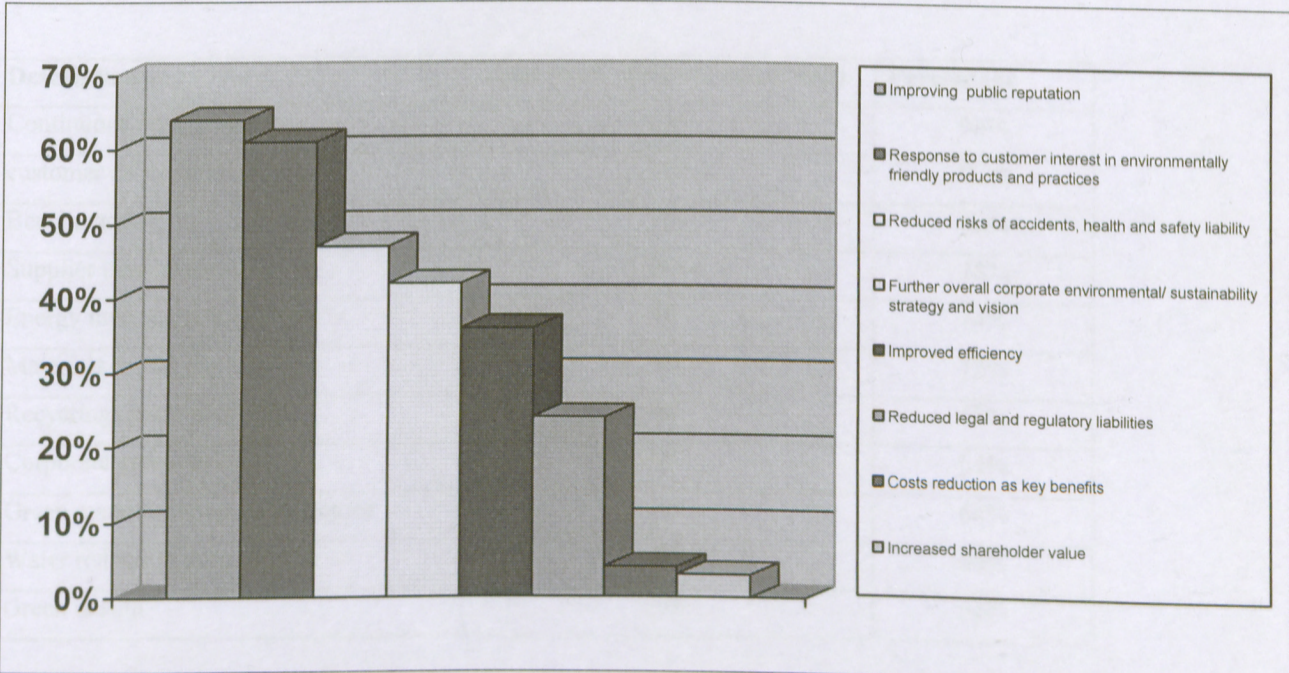
Source: research data

4.4.3 Benefits of Ecological initiatives.

Amidst continued scrutiny over ecological adoption, the researcher wanted to isolate the benefits companies expected when they invested in environmental initiatives. Including multiple responses, 64% felt they were improving their public reputation, 62% saw these initiatives as a good response to customer interest in environmentally friendly products and practices, 47 % saw reduced risks of accidents, health and safety liability, 42% of executives expected ecological initiatives to further their overall corporate environmental/ sustainability strategy and vision. Efficiency and ecology go hand in hand hence 26% of the respondents surveyed agreed that ecological initiatives had improved their efficiency and product quality while 24% responded to reduced legal and regulatory liabilities. Very few noted increased shareholder value or cost reductions as key benefits. (See summary in Figure 7).

Figure 7: Benefits of Ecological initiatives

Table 7: Adoption of eco-friendly processes



Source: Research data

4.4.4 Adoption of eco-friendly processes in manufacturing operations.

The extent to which companies adopted strategic procedures used to help green manufacturing operations was also reported as multiple responses. This was in order to examine which initiatives were working for businesses. The findings from the rankings as presented in table 7 below show that continuous improvement received highest score while green design received the lowest score.

Table 7: Adoption of eco-friendly processes.

Description	Total score received(out of 130)	Percentage
Continuous improvement	125	96%
customer satisfaction surveys	119	92%
Benchmarking	104	80%
Supplier management	101	78%
Energy management	96	74%
Materials management	94	72%
Recycling/ reuse programs	88	68%
Corporate green teams	83	64%
Green manufacturing technologies	83	64%
Water reduction programs	78	60%
Green design	70	54%

Source: Research data

Other initiatives mentioned were emissions monitoring and cleaner production

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS.

5.1 Introduction

This chapter summarizes the results of my research work. It also discusses its conclusions and recommendations. The objectives of this study were to establish the extent to which ecological factors were evident in the espoused and enacted strategies of large-scale manufacturing firms in Nairobi as well as determine how these ecological factors influenced strategy in large scale manufacturing companies in Nairobi.

5.2 Summary of Findings

A sample of 50 large scale manufacturing firms in Nairobi were picked for this study out of which 26 responded hence a response rate was 52% was achieved. Respondents were corporate level and senior executives involved in the strategy planning process or decision making. They included industrial and utilities engineers, general managers, supply chain coordinators or managers' operation managers, senior management accountants, administrative managers, company secretary and media and public relations officers.

5.2.1 Evidence of ecology in strategy

The general observation was that ecological strategy was strategy at the top, which was then somehow transferred down through the organization. Majority of the respondents from the large-scale manufacturing companies accepted the fact that the subject of ecology was putting increasing pressure on them. There was some evidence from many of the respondents of significant eco-efficiency initiatives and integration of these into corporate, business or functional strategy. Ecological factors were evident in the espoused strategies of most large-scale manufacturing firms though there was still a gap in enacted strategies as the strategies that most companies adopted were more of

minimization rather than elimination strategies. Most policy statements also lacked any mention of the ecological environment though many respondents agreed that there was a shift from traditional views on ecological issues.

Respondents recognized that they needed more knowledge and training on some ecological aspects in order to be more responsive. Previous research by Omidé (2006), on the link between corporate social responsibility and corporate strategy among companies listed on NSE also found out that most of the organizations had corporate strategies and objectives with regard to the impact of their activities on the natural environment like pollution which were mainly funded by providing for them in the budget.

5.2.2 Ecological influences on strategy

There was a general consensus that environmental initiatives, especially if they were to be innovative, needed time, effort and resources to realize them yet the companies didn't always have these resources at their disposal. Ecological projects were undertaken to comply with legislation or corporate standards, to save costs, or to be seen as good. The pressure from customers was still in its infancy and not significant enough to concern companies, though they said they were planning ahead for it.

There was a general feeling from the respondents that environmental activities were not to interfere with their core business. Interestingly though, whereas most companies saw the natural environment as a challenge, few companies were beginning to see it as an opportunity and had embraced it. Most of the predominantly foreign owned companies had evidence of incorporating ecological initiatives into strategy as well as adoption of eco-friendly processes in their manufacturing operations which was not so evident in the locally owned companies.

5.3 Limitations of the Study

This study was based on a sample limited to Nairobi area and sample limited to large-scale manufacturing firms. At the same time references and comparisons made were mainly from studies done in other countries since no previous research had been done exactly on this topic in the Kenyan context.

The study used questionnaire method and ignored other methods of data collection hence there was questionnaire bias. It was likely that respondents may have misunderstood some questions or gave biased opinions. Another point to note was that because of the scope of the research, time was a major limitation. While a more comprehensive study was desirable, this could not be entirely possible given resource limitations. The reluctance of some managers to respond because either they were unwilling, lacked sufficient knowledge on ecological issues or perceived the topic as a sensitive one was also a major limiting factor.

5.4 Suggestions for Further Studies.

There is need for replication of the study to be done on other sectors of the economy since the research concentrated on the manufacturing sector. There is also need to research on other large –scale manufacturing firms outside Nairobi since this research concentrated only on companies located within Nairobi area.

This study can also be replicated some years to come in order to establish the state of knowledge on the influence of ecological environment on strategy in the future and progress towards integration of these ecological factors.

5.5 Recommendations

Many manufacturing firms face the contemporary challenge of expanding the role of SHE engineers (safety, health, environmental and quality departments) from the traditional, compliance-focused orientation to include a prospective orientation. This has very serious implications for the natural environment and the ecological progress, as legislation does not, and does not aim to, cover every minute aspect of environmental protection. This in turn implies that the role of environmental legislation in companies needs to be further investigated as well as its role and effectiveness in protecting the natural environment. There is also a need for progressive, developmental and workable models and information that make the area more accessible for companies across industry sectors. These could be used to identify and share best practice at overcoming the barriers for integration of ecological factors into corporate strategy.

5.6 Conclusion

The manufacturing industry landscape is changing, as are the views of the professionals within it. With oil and energy prices rising and expected to rise more, pressure to be ecologically responsible is increasing. Nonetheless, the success and profitability in the future requires thinking and acting today and staying ahead of the game through good research into the latest technologies and strategies. There was some evidence from many of respondents of significant eco-efficiency initiatives and integration of these into corporate, business or functional strategy. Some companies were starting to adopt eco-friendly products and new processes as a result of regulatory pressure but not yet integrated into the business strategy.

To conclude, the importance of developing effective ecological policies was recognized, but the motivation within companies was mainly reactive, depending on the expected legislation. Hence organizations need to establish strategies, structures, and systems that could effectively help managers in making environmentally responsible decisions without necessarily sacrificing the economic interests of the firm to any great extent.

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APPENDICES QUESTIONNAIRE

APPENDIX 1: INTRODUCTION LETTER

C/o MBA. office.
School of Business,
University of Nairobi.
P.O. Box 30197
Nairobi.
October, 2008.

Dear Sir/Madam,

RE: REQUEST FOR RESEARCH DATA

I am a postgraduate student at the University of Nairobi, pursuing a master of business administration degree (MBA). In order to fulfill the degree requirements, I am undertaking a management research project titled: **The influence of ecological factors on strategy within large-scale manufacturing firms in Nairobi.**

The purpose of this letter is to request you to respond to the attached questionnaire. I assure you that the information you give will be treated with highest confidentiality and will only be used for academic purposes. At no time will your name be used or referred to in the final report. A copy of the findings will be availed to you upon request.

For any clarifications on this matter, I can be reached on **0722 666 111**.

Your kind assistance and corporation will be greatly appreciated.

Thank you.

FAITH KOSGEL
MBA STUDENT

Supervisor.
PROFESSOR E. AOSA.

APPENDIX II: QUESTIONNAIRE

PART A: General information

1. (a)Manufacturing company name
(b)Position of
respondent.....
2. Year of company establishment in Kenya
3. Number of employees in Kenya (2008)
4. Approximate value of annual turnover.....
5. Classification of ownership
- | | |
|-------------------------------------|-----|
| Predominantly local (51% or more) | { } |
| Predominantly foreign (51% or more) | { } |
| Joint venture | { } |
6. In which of the following categories does your company fall under. Please tick.
- | | |
|--|-----|
| a) Food, beverages and tobacco processing | { } |
| b) Textile, apparel and leather | { } |
| c) Manufacture of wood and wood products | { } |
| d) Manufacture of paper, paper products, printing and publishing | { } |
| e) Manufacture of chemicals | { } |
| f) Manufacture of rubber and plastic products | { } |
| g) Non metallic mineral products | { } |
| h) Fabricated metal products, machinery and equipment | { } |
| i) Other | { } |

PART B

SECTION: I- EXTENT TO WHICH ECOLOGICAL FACTORS ARE EVIDENT IN STRATEGY.

1. Does your manufacturing company have a mission statement if yes please state

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2. Where does your company currently stand with respect to ecological policies and practices or green manufacturing? Please tick
- Have written/clearly documented policies only []
 - Have written policies and are actively practicing/implementing them []
 - Have no written policies in place. []

3. Who participates in selling these objectives/policies?
- Directors []
 - Senior managers []
 - Technical Managers []
 - All of the above []
 - Other. []

4. How do you communicate these policies?

.....

.....

.....

5. How often are ecological issues and activities discussed at your board or senior management meetings?

Never [] Rarely [] Frequently []

6. Does the company have a department or a formal system for monitoring proposed regulatory changes and for handling compliance with changing environmental regulation? Specify

.....

.....

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.....

.....

7. Indicate the extent to which the following factors are considered in planning.

Rate on a scale of 1-5 with 1-not considered, 5 given prime consideration

	1	2	3	4	5
Social and cultural issues					
Political and legal developments					
Technological advancements					
Ecological factors					
General economic trends					

8. Do you think ecological programs or initiatives have been entrenched into the overall optimization strategy?

Yes [] No [] Don't Know []

9. For each of the following, Please indicate by ticking the number which best represents your level of agreement: **1=strongly agree 2=agree 3=neither agree nor disagree 4=Disagree 5= strongly disagree**

	1	2	3	4	5
A. The only effect of spending on ecological conservation activities to the company is the reduction of the shareholders profits.					
B. Corporations exist only to make profits					
C. Ecological responsibility is a cost					
D. Governments should merely pass the environmental laws and regulations they want followed and should not expect companies to go beyond the law in solving ecological problems.					
E. It is in the long term interest of the organization to consider the ecological issues in strategic planning.					
F. The natural environment is perceived to present potential opportunities to the company.					
G. A strategic approach is essential for environmental management to be seen as a perceived opportunity by the company.					
H. There is conflict between environmental responsibility and core business.					
I. Environmental issues do appear to be subdued in the company.					
J. Environmental issues should only be considered as a CSR activity.					
K. Ecological initiatives are here to stay.					

10. What do you perceive as barriers of integrating ecological factors into strategy?

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11. In your view what structures or processes enable such integration?

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12. Who do you think should be responsible for the integration?

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.....

SECTION: II- ECOLOGICAL INFLUENCES ON STRATEGY.

1. On a scale of 1-5 how would you rank the following in order of importance concerning your manufacturing process? **1= very important** **5=least important**

	1	2	3	4	5
▪ Profit maximization	☐	☐	☐	☐	☐
▪ Quality of the product	☐	☐	☐	☐	☐
▪ Ease of production	☐	☐	☐	☐	☐
▪ Consumer expectations	☐	☐	☐	☐	☐
▪ Eco-friendliness	☐	☐	☐	☐	☐
▪ Other					

2. In regard to incorporating ecological factors into aspects of business do you see a shift from traditional views?

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3. Please indicate the extent to which your company has adopted the following environmental friendly strategic processes in its manufacturing operations.

1=very small extent 2=small extent 3=uncertain 4=Great extent 5=Very great extent

PROCESSES	1	2	3	4	5
Recycling/reuse programs					
Water reduction programs					
Material management					
Supplies management					
Corporate green teams					
Green manufacturing technologies					
Bench- marking					
Green design					
Customer satisfaction surveys					
Continuous improvements					

4. What are some of the other company's eco –efficiency initiatives/programs?

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.....

.....

.....

5. Please state whether you agree or disagree that the following benefits are what your company expects when it invest in environmental friendly initiatives.

	agree	Disagree
The initiatives further the overall corporate environmental/ sustainability strategy and vision.		
The initiatives are a good response to customer interest in ‘environmentally friendly’ products and practices.		
Initiatives improve company’s public reputation.		
Cost reductions is a key benefit,		
Initiatives lead to improved efficiency and better product quality		
Reduced risks of accidents; reduce liability and lower health, safety costs.		
Initiatives increase shareholder value		
Initiative result in better design and engineering as a result of greener practices		
Reduced legal and regulatory liabilities		

Are there any other benefits of these initiatives?

.....

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6. What factors prohibit the company from being more ecologically responsive?
Please indicate;

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7. What are the antecedents/drivers to environmental concerns for your company?

Please rank in order of priority.

1=lowest 5=highest

	1	2	3	4	5
Company image					
Corporate agenda (top management commitment)					
Corporate social responsibility (CSR)					
Competitiveness / industry trend					
Public concern and customer expectation					
Regulatory forces (legislation)					

8. Does the company have an objective assessment of the effectiveness of its environmental programs? Please specify

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9. Has your company received any local or international recognition? Please specify?

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THANK YOU FOR YOUR TIME.

APPENDIX III

SAMPLE OF LARGE - SCALE MANUFACTURING COMPANIES

1. ASSOCIATED BATTERY MANUFACTURERS E.A LTD
2. BAMBURI CEMENT LTD
3. BAT KENYA.
4. BAUMANN ENGINEERING LTD
5. BETA HEALTH CARE PRODUCTS K. LTD
6. BIDCO OIL REFINERIES.
7. BOMBIL INDUSTRIES
8. BOC LTD.
9. CLAY WORKS LTD
10. COLGATE- PALMOLIVE E.A LTD
11. COOPERS KENYA LTD
12. COSMO PLASTICS LTD
13. CROWN PAINTS & BUILDING PRODUCTS
14. DEEPA INDUSTRIES
15. E.A PAPER- BAG MANUFACTURERS LTD
16. EAST AFRICA HYDRAULIC AND METAL INDUSTRIES
17. EAST AFRICAN BREWARIES
18. EAST AFRICAN PORTLAND CEMENT
19. FARMERS CHOICE LTD.
20. GABRO WORKS LTD
21. HACO INDUSTRIES.
22. HENKEL CHEMICALS E.A LTD
23. HOUSE OF MANJI LTD
24. IMPALA GLASS LTD
25. INTERPRODUCTS KENYA. LTD.
26. INTER-SILK GARMENTS
27. KAPA OIL REFINERIES
28. KARTASI INDUSTRIES LTD
29. KENPOLY MANUFACTURERS
30. LABORATORY AND ALLIED LTD
31. LYONS MAID E.A. LTD
32. MABATI ROLLING MILLS LTD
33. MANSON HART K. LTD
34. MASTERMIND TOBBACO

35. NESTLE FOODS K. LTD
36. ORBIT SPORTS LTD
37. PRINTING & PACKAGING CORPORATION LTD
38. RECKITT BEKINSER LTD
39. SMITHKLINE BEECHAM.
40. STANDARD NEWSPAPERS
41. TETRA PACK LTD
42. TIGER SHOES COMPANY
43. TIMSALES LTD
44. TRUFOODS LTD
45. TWIGA CHEMICAL INDUSTRIES
46. UNGA MAIZE MILLERS
47. UNILEVER EAST AFRICA LTD
48. VITA FOAM LTD
49. WRIGLEYS CO E.A LTD
50. YANA TIRES