STRATEGIC RESPONSES TO ENVIRONMENTAL CHALLENGES ARISING FROM CLIMATIC CHANGES BY THE WILDLIFE FOUNDATION

By
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DECLARATION

I declare that this is my original academic work, and have not been submitted before for any academic purposes to an institution of higher learning, College or University.

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This academic research work was submitted for academic purpose under my instruction as supervisor**.**

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DEDICATION

His work is dedicated to my beloved family led by my grandfather Simon S. Mutunkei who offered all I needed during my childhood, together with my departed mother. May the LORD God establish his throne in your lives.

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ABSTRACT

This study focuses on ascertaining the strategic responses to the environmental challenges arising from climate change, with emphasis on the ecological biodiversity of the wildlife foundation's Nairobi National park ecosystem. In its natural outlook, Nairobi National Park suffer a great deal due to many environmental challenges arising from atmospheric shifts resulting in global warming and long range experience climate change realities.

The study aims to achieve the following two objectives; to identify the various environmental challenges arising from climate change, and to find out the appropriate strategic responses adopted by the wildlife foundation, that would be appropriate in addressing the said challenges.

The study design used is case study and data shall be collected using interview guide instrument and content analysis is used in analyzing and summarizing the qualitative data. Findings of this study are used to draw conclusions that show the various strategic response options and mechanisms adopted in order to address the various challenges arising from climate change.

From the study, it is concluded that the wildlife foundation is strategically gathering resources that go a long way in engaging the local community in practicing the wildlife conservation lease program, the predator consolation scheme, civic education as well as adaptation and mitigation measures as strategic response practices used to address environmental shifts such as reduced wildlife population, lost wildlife and livestock grazing space, reduced vegetation and forest cover and land use system and human

encroachment, while coping with climate change. Further, the study recommends that the wildlife foundation and other organizations must develop clear and realistic strategic response plans that directly correspond to the climate change phenomena and the resulting environmental impact. The study further suggests that a study should be contacted in order to find out the strategic responses that would enhance a successful adaptation and mitigation practices to climate change.

CHAPTER ONE: INTRODUCTION

1.1 Background of the study

The environment is constantly changing, making it imperative for organizations to continuously adapt their operations in order to succeed. In order to survive in this dynamic environment, organizations need strategies to focus on their activities and deal with the emerging environmental challenges (Ansoff, 1987). The Kenyan (business) environment has been undergoing drastic changes for a while now. Some of these changes include the accelerated implementation of economic reforms, the liberation of the economy, removal of price controls, privatization and commercialization of the public sector and increased competition in all spheres of business. In this changing environment, organizations have to constantly adapt their operations and internal configurations to reflect the new external relations. Failure to do this may jeopardize the future success of the organizations (Aosa, 1998). Strategic responses require organizations to change their strategy to match the environment and also to transform or re-design their internal capability to match this strategy. The organization, therefore, has to harness both its tangible and intangible assets to maintain strategic fit in its environment and strategy (Ansoff et al, 1990). There has to be a fit between the existing strategy and the prevailing environment for the organization to remain successful (Ansoff, 1990). Strategy responses are concerned with the long-term strategy of an organization, involving high investments and embracing the organization as a whole. Other responses may be *ad hoc*, involving a part or division of an organization (Daily Nation, June, 2003).

Since the 1960s, issues of pollution and environmental degradation have been overriding themes of social concerns and much of the blame has been put on industry. Corporations have restructured their operations in response to pressures for change, not only from intensified global competition and new technological inputs (Gertler 1 988), but also from changing consumer and environmental demands (Brown 1992). Issues of pollution and waste reduction have become predominant environmental concerns as the environment's absorptive capacity for waste is being reached. In the last decade, there has been a surge of environmentally related product development as consumer and regulatory pressures have caused many companies to design products that polluted less and consumed fewer resources (Schmidheiny 1992).

1.1.1 Strategic Responses

Pearce et al (1988) defined strategic responses as the set of decisions and actions that result in the formulation and implementation of plans designed to achieve a firm's objectives. It is thus a reaction to what is happening in the environment of organizations. Porter (1991) pointed out that an organization needs to know the underlying sources of competitive pressure to develop an actionable strategic agenda. When firms face unfamiliar discontinues in the environment, there's need to revise their strategies. Strategic responses are the choices that firms make in an attempt to address key issues arising from internal and external analysis of the firm and its business environment. They involve changes in a firm's strategic behavior to ensure success in transforming future environment (McDonnell et al, 1990).

“Strategy (Robinson et al 1997) can be seen either as the building of defenses against competitive forces, or as the finding positions in the industry where competitive forces are weakest”. Grant (2000) adds that the ability to identify and occupy attractive segments of an industry is critical to the success of an organization. Hill and Jones (2001) conclude that the strategies an organization pursues have a major input on its performance relative to its peers. According to Grant (2000), survival and success for an organization occurs when an organization creates and maintains a match between its strategy and the environment, and also between its internal capability and strategy. The environment is not static but turbulent, discontinuous and uncertain.

1.1.2 Environmental Challenges

It is difficult to define precisely the environment, but in general, it embraces the social, geographical, physical and biochemical conditions under which we live. Conceptually, it can be divided into the social and the natural environment. The former is created by human activities, including industrial complexes, cities, and villages, while the latter is a system comprising the atmosphere, hydrosphere, lithosphere, crystosphere and biosphere. The components of the natural environment undergo changes on a range of temporal and spatial scales, which impact upon the social and economic activities of human society.

The environment consists of variables that form the context within which firms exists (Hunger et al, 1995). Environment conditions affect and influence strategies developed by an organization for its survival and success. Environmental factors (Hussey, 1990) affect strategic management practices. The environment within which companies operate

is constantly changing and firms have to respond to these changes. Strategic planning is developed as a response to increasing challenges caused by high levels of environmental turbulence. Strategy helps firms to cope with change by designing appropriate strategic responses (Pearce et al, 1988). Successful firms continually scan their environment in order to identify future economic, competitive, technological and political discontinuities, which could affect its operations (Ansoff et al, 1990). In every industry, a successful firm continuously reassesses competitive factors, which will bring future success. Whenever historical strategies do not match the future success factors, the firm develops new strategies or leaves the industry. Ansoff et al (1990) observed that strategic diagnosis helps determine the firm's strategic responses which will ensure success.

A profound feature of the environment is that its processes take place over a wide range of time scales, from micro-seconds to millions of years, and even billions of years if geographical processes are also considered. The spatial domain of the environment depends upon the time scales we are interested in. in the new millennium, human society faces unprecedented challenges arising from environmental changes brought about by natural and human – induced processes. Some of the major challenges are described as; population growth, global warming, desertification, water resources, air, water and soil pollution, natural disasters, among others (Peng et al, 2002).

The environmental (PESTEL) factors include the political, economic, socio-cultural, technological, ecological and legal factors (Barbette, 2008). The goal of every organization is to operate with success and keep its operations continuous. In spite of this

aspiration, organizations are faced with enormous (environmental) challenges and need to align with the turbulent environment. Heresy (1996) noted that organizations do not exist in a vacuum, but are continually affected in numerous ways by changes in the external environment and The Wildlife Foundation is not an exception.

In most cases, organizations have little or no control over economic, social, political, technological and ecological factors in their environment of operation. Organizations are open systems that depend on the environment as a source of inputs in the form of resources and as outlets for their outputs after a transformation (porter, 1985). Cole (1990) stated that open systems are those that interact with their environment in which they rely for obtaining essential inputs and then discharge of their systems outputs. The environment is composed of political, legal, socio-cultural, economic, customer, technological, competitive and ecological factors.

1.1.3 Climate Change

Climate change is considered one of the most serious threats to sustainable development globally. Studies have shown that about 90% of all natural disasters afflicting the world are related to severe weather and extreme climate change events. Impacts of the projected climate change are expected in many sectors such as environment, human health, food security, economic activities, natural resources and physical infrastructure (IPCC, 2007).

Climate change is a phenomenon that to a great extent is beyond human control. It all depends on whether humans (either individually or groups) are prepared to respond

proactively or react afterwards to the challenges brought about by climate change. The impact of climate change on ecosystems and the natural resource base will disrupt the livelihoods of the billions of people who rely on land, water, forests and fisheries for their survival. The promotion of development activities and poverty reduction is difficult enough in much of Asia, Africa and Latin America, but climate change constitutes a major additional threat, bringing increasing variability and extremes (disasters). To face the consequences of climate change, a significant additional effort is required. Enhancing the capacity of different relevant stakeholders is essential. From individual and household to organizations – governments, NGOs, private enterprises, and all other relevant stakeholders – all will have to adapt (IPCC, 2007).

Climate change is one of the most serious environmental threats facing the world today. It is said that the main reason for climate change is increasing concentration of greenhouse gas emissions. Man-made global greenhouse gas emissions have grown markedly in the past 30 years rising to 70 percent between 1970 and 2004. As humans emit more carbon dioxide and other greenhouse gasses into the atmosphere the greenhouse effect becomes stronger. This causes the earth's climate to change unnaturally.

Consequently, the main human influence on global climate is emissions of the key greenhouse gases- carbon dioxide, methane and nitrous oxide. The accumulation of these gases in the atmosphere strengthens the greenhouse effect. At present, just over 7 billion tonnes of carbon dioxide is emitted globally each year through fossil fuel use and an additional 1.6 billion tonnes are emitted by land use change, largely by deforestation. The

concentrations of these gases in the atmosphere have now reached levels unprecedented for tens of thousands of years (IPCC, 2007).

1.1.4 The Wildlife Foundation

The Wildlife Foundation is a Non-government Not for profit organization registered in Kenya under the NGO Act 1999 with an obligation of supporting agricultural and wildlife conservation the Machakos and Kajiado districts of Kenya**.** Its main objective is to carry out activities that promote open space and encourage conservation in the biodiversity of Nairobi National Park's eco-system.

The vision is to be a reputable NGO with diverse strategic options with long range sustainability mechanisms. The mission is to make wildlife conservation impact through Wildlife Conservation Leases. The main objective is to establish a grazing and migratory space (corridor) that makes ecological sense in the sustainability of Nairobi National Park. The foundation is mandated to promote open space that enhances the ecology of Nairobi National Park. Nairobi National Park among the many National Parks and game reserves in the country is highly considered an important ecological area, being the only protected area in the world proximate to a capital city. This makes both the city and the protected area quite significant yet facing serious economic and environmental challenges that pause phenomenal threats.

Together with a wide range of conservation organizations that form a synergy of resources that go towards the sustainability of the park, the Wildlife Foundation largely focuses on introducing a Payment for Eco-system (PES) program that promotes open space for wildlife and livestock grazing, through the Wildlife Conservation Lease

Program, in a biodiversity that faces serious threat arising from competition for water and pasture. Competition for pasture, water and grazing space is an illustration of the wide range climate change has impacted on the world patterns whence introducing diverse regrettable environmental frustrations across the universe. Important water points have gradually dried up, forest covers significantly destroyed, rivers and catchments areas dried up, and shift in rain patterns, human popular increase, change in land use systems and political landscapes and hence increase in human activities such as industrialization and urbanization are all critical citations of the historic and gradual climate change that continue to undermine the core existence of animals and mankind. Most evident of all is features of global warming that has been felt and witnessed in the atmosphere through rise in temperature to degrees above the normal in most parts of the world that saw most wet climates dry up, snow and mountain picks, lakes and sub-lakes drying up. Again, the existence of the prolonged drought in most parts of Africa and the rest of the world that gradually increased over the years (Osano, 2009).

1.2 Statement of the Problem

Firms often respond to environmental changes through strategic responses and operational responses (Bartol et al, 1998). Where as operational responses are short term and concerned with efficiency of operations, strategic responses are long term in nature and embrace the entire organization. Strategic responses involve large amounts of resources and decisions relating to them are usually made at corporate and business levels (Byars, 1991). In selecting a strategic response, Porter (1980) suggests that a firm can

choose, depending on its internal capability, between three generic competitive strategies, namely; cost leadership, differentiation and focus.

With the above background, strategic responses will be phenomenal in guiding TWF in developing strategic responses necessary in addressing environmental challenges arising from climate change. In the year 2001, TWF introduced a PES program referred to as the Wildlife Conservation Lease Program (WCLP) that is meant to promote the biodiversity conservation of Nairobi Nation Park. The WCLP is a simple arrangement designed to meet the economic concerns of the local pastoralists who share the ecological environmental ecosystem with the park. Farmers are paid money to compensate their land parcels that are largely used by wildlife, in form of lease agreement entered in to by both the land owner and The Wildlife Foundation. Though the WCLP approach, poverty which arises as an economic concern generated from ecological factors (changes in the environment) is addressed through lease exchange, therefore meeting the economic needs of the local people. The Wildlife Conservation Lease Program is a key strategy approach and response mechanism upon which The Wildlife Foundation and other environment concerned entities uses to address the macro-economic factors that relates to ecological functions of the environment (Osano, 2009).

Several studies have been carried out on strategic responses of firms to the changes in the environment in various industries. Mugambi M.G (2003) studied the strategic response of tourist hotels to the changes in the environment. Julia W. (2003) studied the responses of bottled water companies in Kenya to the threat of substitute products. Chepkwony (2001)

did a study on the strategic responses of oil industry in Kenya to the changes in the environment. Bett (1995) carried out a study on the impact of economic reforms on the dairy industry in Kenya. A study on the strategic responses of East Africa Breweries Limited to the changes in the environment was done by Njau (2000). Kombo (1997) carried out a study on the strategic responses of motor vehicle franchise holders in Kenya. Thiga (2002) studied the responses of airline industry to the changes in the environment.

In the above studies, findings generally found out that firms made adjustments to their strategic variables depending on their uniqueness to ensure survival. However, no study has been carried out on the factor changes on the ecological environment; the strategic responses put in place to address the ecological environmental challenges arising from climate change. This study therefore focuses on the ecological environment and the existing gap. What environmental factor changes have taken place and what strategic responses are organizations applying to the changes arising primarily from climate change?

1.3 Objectives of the study

This study aims at achieving the following important objectives;

a) To identify the various environmental challenges affecting The Wildlife Foundation
b) To identify the various strategic response mechanisms employed by The Wildlife Foundation while addressing the above challenges.

1.4 Importance of the study

This study aims at benefiting the government of Kenya, through the Ministry of Environment and Natural Resources and the Ministry of Forestry and Wildlife, which will identify the various strategic response mechanisms that might be employed while addressing long range environmental challenges.

The Wildlife Foundation which be able to ascertain the various environmental challenges and design the appropriate response strategies such as adaptation and mitigation mechanisms besides the practice of the wildlife conservation leases as a PES mechanism.

Academicians who will gain from a wide array of reviewed literature that gives impetus to the strategic response capability of individual organizations as well as particular industries.

Farmers and Pastoralists who will be familiarized with the various environmental challenges arising from climate change, and learn the various adaptation options and strategies such as the already popular PES which helps in addressing the complex macro-economic factors surrounding their livelihoods.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This section consists of the various theoretical arguments that are relevant to the subject under discussion, and provide conceptual support to the conceptual discussion in relation to the study objectives. It consists of strategic responses, the external environment, factors affecting the external environment, the ecological environment, climate change, and the strategic responses to environmental challenges.

2.2 Strategic Responses

An organization needs to understand which decisions facing a business are strategic and thus needs strategic management attention (Robinson et al, 1988). Strategic issues have the following dimensions; first, they require top management decisions. This is because strategic decisions over arch several areas of the organizations operations. Second, they require large amounts of the firm's resources. They involve substantial allocation of people, physical assets, or moneys that either must be re-directed from internal sources or secured from outside the firm. Third, they often affect the firm's long-term prosperity. Strategic decisions ostensibly commit the firm for a long time, typically five years or more. However, the importance of such decisions often lasts much longer. Fourth, strategic issues are future oriented. Strategic decisions are based on what managers can forecast rather than what they know. It involves projections that will enable the firm select a strategy that is appropriate. Finally, strategic issues involve considering the firm's external environment. Business firms are open systems that affect and are affected by external conditions. This makes it important for firms to look beyond their operations (Pearce et al, 1988).

Firms need strategy for direction, focusing of effort, to define the organization and to provide consistency (Mintzberg, 1987). Aosa (1992) observed that the modern approach to strategic planning has developed as a response to increasing challenges caused by high levels of environmental turbulence. Strategy helps an organization cope with changes in the environment (Pearce et al, 1988). Schneider et al (1991) stated that assessment of environment threats and opportunities and organization's strengths and weaknesses are core to developing strategic responses. Strategic diagnosis helps the organization in determining changes to be made to its strategies and internal capabilities. Boynton et al (1991) observed that organizations need to respond to changes with stable and long-term, yet flexible and responsive process capabilities. Strategies should generally avoid any fundamental changes in character of a business as well as major changes of the business interface with the customers.

2.3 External Environment

Environment is key to the success of any organization. Any environment can be relatively stable or turbulent. Hersey (1996) observes that organizations do not exist in a vacuum, but are continually affected in numerous ways by changes in the external environment. External environment consists of all the conditions and forces that affect its strategic options and define its competitive situation (Pearce et al, 1997). Most writers categorize the external environment both domestic and global into three subcategories; remote environment, industry environment and operating environment. Most organizations have

little or no influence on or control over the economic, social, political, technological and ecological factors in the remote environment.

According to Johnson et al (2001), understanding the environment is made difficult by its many diverse influences, secondly is the element of uncertainty and thirdly is the way organizations cope with complexities posed by the uncertain environment.

According to Johnson et al (2001), many macro-environmental factors are country specific and a PEST analysis will need to be done for each industry of interest. Identifying PEST influences is a useful way of summarizing the external environment in which a business operates. However, it must be followed by consideration of how a business should respond to these influences.

According to Kotha (1995), the external environment plays a significant role in the growth and probability of firms. Most firms face external environments that are growing more turbulent, complex and global, which make them increasingly more difficult to interpret. To cope with what are often ambiguous and incomplete environmental data, and to increase their understanding the general environment, organizations engage in a process called external environmental analysis. This process includes four activities that are, scanning, monitoring, forecasting and assessing (Hitt, 1997).

2.4 Factors affecting the external environment

The environmental (PESTEL) factors include the political, economic, socio-cultural, technological, ecological and legal factors (Barbette, 2008). The goal of every

organization is to operate with success and keep its operations continuous. In spite of this aspiration, organizations are faced with enormous (environmental) challenges and need to align with the turbulent environment. Heresy (1996) noted that organizations do not exist in a vacuum, but are continually affected in numerous ways by changes in the external environment.

2.4.1 Political Factors

The political factors define the legal and regulatory parameters involved (Pearce et al, 1997). Political constraints are placed on firms through monopolies, legislation, political stability, environmental protection and regulation, tax policy, trade regulations and tariffs, pricing regulations, government laws and competition regulation. The political/legal factors of PEST deals with the effects of government policy. In as much as government policy is worked out through legislation, it encompasses all legal elements of this analysis. This includes items such as government stability, taxation policy and government regulations (Anthony, 2008).

2.4.2 Economic Factors

Concern the nature and direction of the economy in which a firm operates. These factors affect the firms through economic growth, monetary policy, interest rates, inflation, money supply, government spending, unemployment rates, disposable income, efficiency of financial markets and infrastructure quality (Pearce et al, 1997). Key economic indicators include interest rates, disposable income, unemployment rates, retail price index (inflation), gross domestic product (GDP), and exchange rates (Anthony, 2008).

2.4.3 Socio – Cultural Factors

Factors that affect a firm involve, population demographics, income distribution, social mobility, education, beliefs, values, culture like gender roles, and attitude to work and leisure (Pearce et al, 1997). Brown (1998 p 9) defines organizational culture as "the pattern of beliefs, values and learned ways of copying with experience that have developed the course of organization's history and which tend to be manifested in its material in its material arrangements in the behaviors of its members".

2.4.4 Technological Factors

To avoid obsolescence and promote innovation, a firm must be aware of technical changes that might influence its industry. Creative technological adaptations can suggest possibilities for new products, for improvements in existing products etc. (Pearce et al, 1997). Without doubt, some of the major (environmental) changes takes place in the general environment that are impacting the competitive environment are technological (Anthony, 2008).

2.4.5 Ecological Factors

According to P.R. Yadar (2004), the environmental (ecological) factors may be defined as the whole complex of climatic, edaphie, and biotic factors that act up on organism or an ecological community and ultimately determine its form and survival. On the other hand, organisms react to differences or changes in their environment in several characteristic ways, either by trying to avoid harmful situations or by being able to adjust physiologically, within their genetic limits, to adverse factors.

In ecological studies, the total environment is said to be made of some non-living compounds, thus making non-living components as well as nonliving environment and living environment respectively. The nonliving environment includes the nonliving factors both physical and chemical, which influence the life of organisms. They are temperature, light energy, water atmosphere, including atmospheric gases and air current etc, fire, gravity, topography, (the configuration of the earth's surface), soil, Ph, and nutrients etc. The living environment includes the living or biotic factors, i.e., animals and plants. Global warming will impact brands in the future and may already be doing so at present in ways yet different to pinpoint (Babette, 2008).

2.5 Ecological Environment

According to A.K. Raina (2005), the environment in our surrounding is a complex of so many things like light, temperature, soil, water etc. These surroundings form an organism and any external force or a substance or a condition, which affects the life of an organism, becomes a factor of this environment. These factors have been termed in a simple sense as ecological factors. Various ecological factors have been grouped and classified in two groups; the direct factors, which include light, temperature, humidity, soil air, soil water, and soil nutrients in an atmosphere and the indirect factors include soil structures, soil organisms, attitude, wind, slopes etc. Apart from these factors, two-more factors, i.e., Edophic factors and Biotic factors also plays an important role as the constituent of ecological factors. Edophic factors deals with the formation of soil, its physical and chemical properties and details of related aspects. While the biotic factors

relates to all kinds of interaction between different forms of life like plant, animals and natural inhabitants (A.K. Raina, 2005).

2.6 Climate Change

Climate change is a change in the "average weather" that a given region experiences. Average weather includes all the features we associate with the weather such as temperature, wind patterns and precipitation. When we speak of climate change on a global scale, we are referring to changes in the climate of the Earth as a whole. The rate and magnitude of global climate changes over the long term have many implications for natural ecosystems.

A natural system known as the "greenhouse effect" regulates the temperature on earth. Human activities have the potential to disrupt the balance of this system. As human societies adopt increasingly sophisticated and mechanized lifestyles, the amounts of heat-trapping gases in the atmosphere have been increased. By increasing the amount of these gases, humankind has enhanced the warming capability of the natural greenhouse effect. It is the human-induced enhanced greenhouse effect that causes environmental concern. It has the potential to warm the planet at a rate that has never been experienced in human history.

An international scientific consensus has emerged that our world is getting warmer. Abundant data demonstrate that global climate was warmed during the past 150 years. The increase in temperature was not constant, but rather consisted of warming and cooling cycles at intervals of several decades. Nonetheless, the long term trend is one of

net global warming. Corresponding with these warming, alpine glaciers have been retreating, sea levels have risen, and climatic zones are shifting. That is; the 1980s and 1990s are the warmest decades on record, the 10 warmest years in global meteorological history have all occurred in the past 15 years and the 20th century has been the warmest globally in the last 600 years

Most experts agree that average global temperatures could rise by 1 to 3.5 degrees Celsius over the next century. In Canada, this could mean an increase in annual mean temperatures in some regions of between 5 and 10 degrees. Climate change is more than a warming trend. Increasing temperatures will lead to changes in many aspects of weather, such as wind patterns, the amount and type of precipitation, and the types and frequency of severe weather events that may be expected to occur. Such climate change could have far-reaching and/or unpredictable environmental, social and economic consequences (Natural Resource Canada, 2007).

2.7 Strategic responses to environmental challenges

Organizations are environment dependent. No organization can exist without the environment, they all depend on the environment for their survival and they have to scan the environment in an effort to budding trends and conditions that could eventually affect the industry and adapt them (Thompson et al, 1993). Failure to do this will lead to serious strategic problem characterised by the maladjustment of organizations output and the demands of the external environment (Ansoff, 1984). Pearce et al (1991) define strategic responses as the set of actions that result in the formulation and implementation of plans designed to achieve a firms objectives. Strategic responses are therefore organizational

actions that are long-term in nature. They are more embracing of an organization as a whole as opposed to departmental decisions.

Ansoff (1990) put into perspective the role of general management in a firm's strategic response. General management is the propensity and ability of the firm to engage in behavior, which optimizes attainment of the firm's near and long-term objectives. He aptly puts it that "general management is about setting the right climate (will to respond), competence (ability to respond) and capacity (volume of response). He argues that, the three components are essential if the firm is to implement as strategic responses. Climatic setting involves talents, skills and knowledge, while capacity entails the personal and organizational capability to accommodate the various management challenges as may arise from time to time.

"Strategy (Pearce et al, 1997) can be seen either as the building of defenses against competitive forces, or as the finding positions in the industry where competitive forces are weakest". Grant (2000) adds that the ability to identify and occupy attractive segments of an industry is critical to the success of an organization. Hill et al (2001) conclude that the strategies an organization pursues have a major input on its performance relative to its peers.

Thompson (1997) defines strategic adaptations as changes that take place over time to the strategies and objectives of an organization. Such change can be gradual or revolutionary. Ansoff et al (1990) noted that strategic responses involve changes to the organization's strategic behavior. Such responses may take many forms depending on the organization's capability and the environment in which it operates. Well-developed and targeted

strategic responses are formidable weapons for a firm in acquiring and sustaining a competitive edge. These strategic responses include; restructuring, marketing, information technology, and cultural changes. According to Thompson et al (1993), environmental scanning enables managers to identify potential developments that could have an important impact on industry conditions teaching to the emergence of opportunities and threats. This will help the managers to develop appropriate strategies given the industry's competitive situation.

According to Thompson et al (1993), organizations depend on the environment for their survival and they have to scan it in an effort of building trends and condition that could eventually affect the industry and adapt to them. As Ansoff (1987) observed, the change in the macro-environmental factors may require new strategies, which in turn, call for reformed organizational capability. Thompson et al (1997) noted that one way to predict future driving forces is to utilize environmental scanning techniques. Such scanning involves studying and interpreting social, political, economic, technological and ecological events in an effort to spot budding trends and conditions that could eventually affect an organization's operations and continued success. Muturi (2000) argued that environmental scanning raises a manager's awareness of potential developments that could have an important impact on industry conditions posing new opportunities and threats.

According to Porter (1996), companies must be flexible to respond rapidly to environmental changes, which in turn pose challenges to the organization. Hofer et al

(1978) observed that for organizations to be effective and hence successful, they should respond appropriately to the changes that occur in their respective environments. Consecutively, they need strategies to focus on their customers and deal with emerging environmental challenges. Response by an organization to challenges brought about by the various variables of the organizations environment of operation can be both strategic and operational. While strategic responses are long-term in nature and embrace the entire organization, operational organization are concerned with transformation process, which takes inputs and converts them into outputs, together with various support functions closely associated with these tasks (Brown, 1998). Strategic responses are therefore the choices that firms make in an attempt to address key issues that arise from internal and external analysis of the firm and its environment (Migunde, 2000). These strategic responses include restructuring, marketing, diversification, information technology, culture change, integration, acting defensively, pricing, keeping focus on powerful customers, improvement in quality of products and services, relationship marketing and lastly the Porter (1985) generic strategies of cost leadership, differentiation and focus (Lalampaa, 2006).

Porter, (1980), first coined the concept of industry environment in an article in the Harvard Business Review (1979) where; according to him, there are five forces that shape competition in an industry. The five forces model is a strategic response tool that helps firms in an industry to remain competitive and overcome their rivals strategically. The “five forces model” for industry analysis (Porter, 1980) is now a standard tool used by both academics and practitioners when conducting strategic management studies. In

the past decade, this competitive positioning approach has been augmented by the resource-based perspective, which has focused on the accumulation of valuable, knowledge-based assets by individual firms. An integrative synthesis of this work has recently been developed by Teece et al (1997) and Teece et al (1998). They have proposed a "dynamic capabilities" approach as the key to strategy development for the modern business firm. Such an approach focuses on the specific ways in which capabilities are renewed as a response to shifts in the environment relevant to the firm.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter is divided into five sub-sections which consist of research design, data collection and data analysis. These sub-sections consist of the methodology developed in the research design, the analytical details of data collection methods, techniques and instruments used, and data analysis.

3.2 Research Design

The research design adopted in this study is case study since it attempts to carefully study some social unit (as a corporation or division within a corporation) that attempts to determine what factors led to its strategic success in addressing the existing environmental challenges, yet provide a detailed content analysis of the strategic responses adopted from an environmental management point of view. However, since the study adapts a content analysis scenario, it therefore has no section on target population and sample design.

3.3 Data Collection

Data collection instrument was mainly comprised of an interview guide since verbal collection technique is suitable in collecting primary data. Data was collected from the executive governing board who have ideal experience on matters relating to environment and related challenges in carrying out their task. The director of conservation, who is a governing board member directly responsible for conservation and environmental affairs,

was interviewed together with the chief executive officer whose views are largely expected to confirm the responses of the conservation director. These are senior executives with broad long-term knowledge on conservation, biodiversity and natural resource integration, and have many years experience in designing sustainable policies and strategies that help cub environmental challenges in the Nairobi National Park open ecosystem.

3.4 Data Analysis

Data was analyzed qualitatively by analyzing content of the cases, situations and the responses given during the interviews. The reports shall be based on the findings through content analysis of the findings. Content analysis is a research tool used to determine the presence of certain words or concepts within texts or sets of texts.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This Chapter consists of three sections which form the two parts of the interview guide; Section A is the respondent's details, Section B is the environmental challenges arising from Climate change occurrences and Section C is the strategic responses for the challenges mentioned in section B.

4.2 Data Results and Analysis

From the study, data results were collected using an interview guide as the instrument of data collection. The study targeted to interview the chief executive officer or his representative and the director of conservation or his representative with vast knowledge of the Nairobi National Park biodiversity. The chief executive was represented by secretary to the governing board and advisor to the chair. The person has over twelve years in conservation particularly at the Nairobi National Park, having worked in many different capacities in different wildlife conservation organizations. Currently he's working as Project Manager to the African Wildlife Foundation Kitengela conservation project. Similarly, the conservation director was represented by a development co-coordinator, a senior executive whom too have been among the pioneers of the wildlife foundation. She's been the vice-chair for the mother organization –friends of Nairobi national park for long and has been an active member since inception. Data is analyzed qualitatively through content analysis of the findings. From the study, the following responses were obtained from the relevant respondents;

4.3 Environmental Challenges facing the wildlife foundation.

This section is divided into three sub-sections that grouped together various environmental shifts with commonalities. The first sub-section focuses on reduced wildlife population; the second sub-section focuses on high temperatures, droughts, atmospheric pressure and reduced vegetation cover; and the third sub-section focuses on land use and high population density and human encroachment and reduced wildlife and livestock grazing space.

4.3.1 Reduced wildlife population.

From the study, the respondents stated that over the years, there have been significant reductions of wildlife population in the whole world. This is attributed to the fact that, there have been complaints raised against factories, farmers, construction sites, bars and restaurants, hotels, night clubs, hospitals, schools and colleges, local authorities, foreign developers, transport companies and others within and outside the Nairobi National Park ecosystem. Investigations have been carried out on the impact of these parties on waste quality, air quality, peace and tranquility, forest resources, water management, and land use policies.

As a result, the following impact has been noticed; water, a crucial natural resource, is under increased pressure as a consequence of pollution, over – abstraction, deforestation in water catchment areas and water towers, among others; air quality has been affected in many ways including among other actors, emission by factories and motor vehicles; the proliferation of bars, restaurants, hotels, and night clubs in residential areas has had impacts on the peace and tranquility in these areas, not only by the amount of noise they

generate but also by the increased number of the persons who patronize these establishments who pass through these residential areas. The loss of water resources and catchment areas had driven away wildlife from their natural habitat to other areas in search of water, pasture and tranquility. These have witnessed change in habitat areas, wildlife population and migration patterns for migrating species like wildebeest and zebra over the years. Waste missions and noise from factories, bars and restaurants from the neighboring trading centers had also driven away most wildlife and often witnessed the killing of wildlife by the intoxication of their water points and pastures. Again, since 1995, the tradition wildebeest migration – often viewed as one of the wonders of the world - was lost and populations of wildebeest, zebra and antelope (common wildlife species) significantly reduced.

4.3.2 High Temperatures, Droughts, Atmospheric Pressure and Reduced vegetation and forest cover.

The respondents also stated that fluctuating temperatures, extreme and prolonged cold and extreme and prolonged heat during the day and sometimes during the night, is evident environmental shifts in temperatures and there has been temperature rise from 1 degree for the last 50 years. Air quality compromised from dust and pollution is evidence of high atmospheric pressure. High pressure influences the shifts in the ozone layer the prepare the coming or delay of rainfall in time and often long inadequate condensation of air that would result on rainfal. This is characterized by more frequent droughts in the subsequent years of late 1990’s and the years 2000 to 2009 with little or no rain in

between the normal expected rain seasons, resulting in migration and frequent movement of livestock and fast drying up of water bodies in the region over a long period.

Overpopulation of humans – as witnessed in high birth rates and disproportionate levels death rates, overstocking of livestock with short rangelands had increased pressure on land and influenced the decrease in vegetation and forest cover. This is witnessed by increased plantation of non-indigenous species such as eucalyptus trees and non-environmental friendly tree species in the area. Overpopulation density increases pressure on land as witnessed in cultivation and fencing activities that revert the original land into practically new uses and introduce non-natural uses and non-indigenous trees.

4.3.3 Land Use, High Population Density and Encroachment and Reduced wildlife and livestock grazing space.

The respondents also stated that land use policies have changed significantly over the years, as had been affected by the increased applications for change-of-user permits for development in agricultural areas and urban centers and these have had negative impacts on the quality of the land and the uses to which the land could be put, as well as compromising development plans and zoning; and the impacts on environmental degradation have also been noticed regarding tourism, commercial activity, wildlife conservation among others. High population density as a result of sprouting urban centers have created negative impacts on the land use in the entire ecosystem and influenced the planning patterns for purposes of zoning.

On the other hand, significantly high levels of human encroachment, land fragmentation and irregular sale and sub-division have taken away all wildlife and livestock grazing space living both livestock and wildlife with no option that would salvage them from death. Again, by 2004 an unpublished ILRI's report shows that 16% of kitengela ecosystem was under fences cover, pausing a threat and even difficulty in the movement of wildlife and livestock in search of resources like water and pasture or even migration.

As a result, daily occurrences of predation cases, crop destruction and fight for water and pasture are platform for human-wildlife conflicts in the fenced areas as well as in the entire ecosystem. Cases of human-wildlife conflicts have risen over the years as a result tension on common resources like water and pasture, on the rise with consolation scheme statistics started in 1998 and daily occurrences of the conflicts from predator incidences. Geographic presentation of the reality on the ground in a map show that all over the ecosystem, settlements are too numerous and have no particular arrangement or order, sprouting from the neighboring urban centers into the wildlife corridors and dispersal areas.

Practically, change in land use is occurring at higher rates due to market pressure arising from the neighboring Nairobi city and its suburbs hence creating sprouting urban centers as witnessed in the cases of Kitengela and Ongata Rongai townships. Scientific projections of the future of Nairobi National Park ecosystem show that at this rate in the levels and speed of encroachment, human population and settlement, the ecosystem will soon be completely lost.

4.4 Strategic responses to the environmental challenges.

This section is divided into three sub-sections that grouped together various strategic responses with commonalities for the above mentioned environmental shifts. The first sub-section focuses on responses to reduced wildlife population; the second sub-section focuses on responses to high temperatures, droughts, atmospheric pressure and reduced vegetation cover; and the third sub-section focuses on responses to land use and high population density and human encroachment and reduced wildlife and livestock grazing space.

4.4.1 Reduced wildlife population.

To respond to the reduced wildlife population, The Wildlife Foundation has adopted several strategies which include; the wildlife conservation lease program, the predator consolation program, community education, fund raising campaigns and corporate engagement as a wildlife conservation and protection tools used outside a protected area. Historically, the wildlife statistics and migration patterns show that throughout the years, wildlife population for different species had been significantly larger in most times of the year outside the protected area than in the protected area. Many reasons attribute to this, but mainly this is due to adequate grazing and open space outside the national park.

The wildlife conservation lease program is a simple financial lease agreement between the landowner and the wildlife foundation to live part or whole of his/her land open for wildlife grazing and dispersal at a fee. The Wildlife Foundation aims to ‘compensate’ land owners for the use of their private land by wildlife, as a motivation mechanism for future accommodation of wildlife in the land parcels. The agreement prohibits the land

owner from selling, developing, fencing, quarrying or sub-dividing the land into little fragments that would encourage development or fencing of the little fragments. On the other hand, it expects the land owners to conserve wildlife while grazing in their land. It is an anti-poaching approach for land owners who directly deal with wildlife for trade or consumption and completely discourages poaching and wildlife killing.

As a complementing practice, the predator consolation program was also established alongside the wildlife conservation lease program to compensate the livestock killed by wildlife in their search for food. It was called 'consolation' by virtue of its consoling nature to the land owners, for the compensation price paid for each livestock killed is far much less than the market value of the livestock, and so the compensation is viewed more as a consolation than true compensation. Consolation would also persuade the land owners and pastoralists to stop the killing of wildlife as retaliatory action against their livestock killed by predators. These approaches among other indirect non-routine practices have seen increased in wildlife population and smooth co-existence of wildlife and neighboring communities.

Community education and sensitization on the importance of wildlife for conservation, survival and for future generation is also a strategic response to the reduction of wildlife in the Nairobi National Park ecosystem. Through varied wildlife forums, The Wildlife Foundation has created sensitization opportunities for communities to appreciate wildlife and view it as an asset and opportunity, and not a threat or enemy. This has helped change the community's perception of wildlife which has historically been negative and tainted. Community education has been a focal point of communicating the economic value of wildlife between the wildlife foundation together with its synergy partners who

share common interest on wildlife and natural resources value for the last few years. The partners are those organizations which over the years share the same values with The Wildlife Foundation, and have committed immense resources top the sustainability of the biodiversity and shared ecosystem. Communities are taught the value of wildlife besides and subjected to positive contribution as well as the possibility of sharing scarce resources such as water, pasture and grazing space with little or conflicts in the ecosystem.

Beside the above three programs, the wildlife foundation also initiated fundraising campaigns that finance its conservation programs and generate a 'return on investment' over the scarce economic resources. The fund raising campaigns are meant to engage the indigenous peoples in promoting the biodiversity of Nairobi National Park open ecosystem through the creation of open migratory corridors or dispersal areas for wildlife and livestock movements on the payment for the ecosystem services through a synergy arrangement of the wildlife conservation lease program. The funds are used to construct community social amenities such as schools (the Empakasi Primary School), the digging of boreholes for the community (at Kitengela and Empakasi) and sponsoring children education by supporting school visits to the local game parks and reserves, the animal orphanage and safari walk at the KWS headquarters. This is meant to encourage the community in engaging in conservation economic benefits through payment for ecosystem services.

As a matter of corporate strategic response involvement, the wildlife foundation also influences synergy partners and other environmentally friendly organizations to commit balance sheet resources, that is, commitment of capital to strict and higher standards of

environmental compliance. That is, organizations are challenged to show clearly how they can adapt to environmental shifts and how they can mitigate to climate change. An illustrating point for this is the engagement of the African Wildlife Foundation in the spearheading the process of designing the Land Use Master Plan for the Kajiado district, which had successfully been formulated, officially gazette after the government approval, and now awaiting implementation through the Olkejuado County Council. Another illustration is the recent scientifically guided remote sensing mapping exercise spearheaded by the International Livestock Research Institute, which now provides a complete set of maps needed for the land and wildlife conservation ground truth picture.

4.3.2 High Temperatures, Droughts, Atmospheric Pressure and Reduced vegetation and forest cover.

To respond to the climate change shifts in temperatures, resulting droughts and atmospheric pressure are natural factors, which are to a great extent beyond human capability to control, the wildlife foundation drew an adaptation and mitigation response strategy that is guiding the community in coping with the climate change implications which directly complements with their resilient livelihood to cope with the phenomena. Adaptation is the practical means through which the community can adjust to the changes in the environment by employing practicable solutions that enabled them to live with the environmental challenges. Adaptation calls for change of lifestyle of the pastoral communities by reducing livestock numbers, which has significantly reduced the impact of over stocking that destroys vegetation and forest cover, increase the size of grazing

space, and reduce conflicts arising from competition for pasture and water. Overstocking clears away all or most vegetation cover that would be a component of rain attraction and air cleaner. Vegetation and forest cover completes the hydrological cycle of rain in forested areas, which disappears away quickly as a result of human activities such as overstocking and deforestation. Again, communities are encouraged to plant more indigenous trees like acacia that are immune to droughts. Practically, trees act as wind breakers, provide shades during hot summers, hold the soil together against immense soil erosion and attract rainfall.

Besides, the communities are taught cheap water conservation methods as adaptation strategic response measures. Water conservation methods like dams construction, help provide water for livestock in the dry places, as well as provide drinking water for the families. Again, harvesting rain water using simple portable water tanks is another practicable solution to providing water to the community in the dry places. The wildlife foundation engages other corporate institutions lake banks and microfinance institutions which engage in community projects, to donate water tanks to women and self help groups. Besides providing water for household consumption, the water tanks has also reduced conflicts in the river-lines whenever livestock go for watering in the river that has see livestock killing by wildlife predators.

Apart from the adaptation strategic response approach, the wildlife foundation has adopted a mitigation strategy. Mitigation is the practice of reducing the greenhouse gas emissions in the atmosphere. Communities are influenced to use the cheaper energy sources that discourage the use of firewood from the low density bush and river lines as well as the falling down of trees. Charcoal and firewood burning produce carbon gases

that have side effects on the ozone layer, by distorting the condensation process and vanish of rainfall. This is a lee way for delayed rain and prolonged drought. As an alternative to the falling down of trees for firewood, the community is challenged to use cheap energy sources like biogas and cheap solar technology believed to be cost free and user friendly. Mitigation through cheap energy sources has seen quick growth of trees to improve vegetation and forests cover that has attracted rainfall.

On the other hand, waste from factors, construction sites, bars and restaurants, hotels, night clubs and others has been challenged to be harvested and dumped appropriately to avoid pollution in the river and water points, factories again must be forced to cab their industrial pollution in the air. The planting down of trees can be practiced at all levels of settlement, including in schools, hospitals, homesteads, playing grounds and all open lands including in the national parks.

4.3.3 Land Use, High Population Density and Encroachment and Reduced wildlife and livestock grazing space.

In responding to land use challenges, the wildlife foundation adopted through the wildlife conservation lease program, community training on sustainable lands use and the use of Land Use Master Plan upon its subsequent implementation.

The wildlife conservation lease program influences the sustainable land use through the social land lease process. The lease agreement or contract focuses on discouraging land sale, fencing, cultivation, development, partitioning or subdivision whatsoever that can encourage non sustainable use of the land or create room for land destruction. In the lease

pact, the use of land becomes communal in the sense that even though the land belongs to the owner, the use apparently goes beyond ownership, allowing wildlife grazing and roaming in the land, livestock sharing and may act as habitat species should the need arise.

Through the lease process, the community is trained on sustainable land use systems that have a return on investment, so they can avoid non-sustainable uses such as sale, development, subdivision, fencing of land. Water harvesting initiatives are also employed by the construction of dams so the pastoralist's livestock can avoid walking long distances to the river for water and facing predation challenges. During dry seasons, dams are dug in the land owners parcels to harvest rain water during flood periods, which can be shared by both livestock and becomes part of the land property.

Civic education on population density and overpopulation is carried out as another response strategy organized by the local authorities to sensitize the community on population growth and the resulting population density and overpopulation, and encouraging the community to address population demographics in an informed position.

The Land Use Master Plan which had been spearheaded by the African Wildlife Foundation and the International Livestock Research Institute has been recently documented and gazette, is hoped to play a significant role in guiding the recovery and physical planning of the Kitengela area so there is in principle, areas that are designate to specific economic activities such as agriculture, low density settlement, industrial and commercial areas and pastoral lands. The main concept behind the land use master planner is the zoning of the area to ensure that lands that are prone to livestock

production shall not be overtaken by sprouting urban population or disorganized land sub-division. Livestock and wildlife grazing space can mainly be protected through a policy document such as the Land Use Master Plan which was effectively adopted through a legal procedure. Proper land use is viewed as a proper tool of addressing human-wildlife conflicts which had seen numerous cases in the past of the conflicts in an area of high population density and vast human settlements.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter have the following subs- sections; the summary of findings which gives a brief narrative of the study results and their analysis, conclusions of the results to the study, recommendation, limitations of the study and suggestions for further study.

5.2 Summary of Findings

From the study, the wildlife foundation has adopted various strategic response initiatives in order to address the environmental shifts that pose challenges in the Kitengela and Nairobi National Park ecosystem. To respond to the reduced wildlife population, The Wildlife Foundation has adopted several strategies which include; the wildlife conservation lease program, the predator consolation program, community education, fund raising campaigns and corporate engagement as a wildlife conservation and protection tools used outside a protected area.

To respond to the climate change shifts in temperatures, resulting droughts and atmospheric pressure are natural factors, which are to a great extent beyond human capability to control, the wildlife foundation drew an adaptation and mitigation response strategy that is guiding the community in coping with the climate change implications which directly complements with their resilient livelihood to cope with the phenomena.

In responding to land use challenges, the wildlife foundation adopted through the wildlife conservation lease program, community training on sustainable lands use and the use of

the Land Use Master Plan upon its subsequent implementation. Besides, the wildlife foundation designed strategic response initiatives, in order to mobilize resources to involve the local community primarily through adaptation and mitigation strategies that attract conservation benefits as a practical means of addressing climate change and related environmental change occurrences that have detrimental effects to the ecological environment and the designated ecosystem in particular.

5.3 Conclusion of the Study

The study have be an informed basis of providing practical strategic response measures that would be adopted in order to adapt and mitigate the environmental challenges arising out of climate change. Directing resources to champion for the promotion of open corridors is a strong approach to ensure that grazing space is available, vegetation and forest cover largely retained so the rain cycle would natural and regularly operate, and water points and river lines continuously wet.

The maintenance and conservation of the natural resources have a direct impact on natural calamities such as droughts, rain patterns, wetlands and river-lines and wildlife demographics, which are seen as the main contributing factors to climate change as a result of dominance of greenhouse gas emissions in the atmosphere, which have multiple effects of the livelihoods of the people living in the area. The environmental shifts arising from climate change are numerous and long range. Long term atmospheric pressure influences the rain patterns that cause rain levels to slow down or drop significantly causing prolonged droughts, reduced vegetation cover over long period of time, and

significant loss of wildlife population and grazing space. Scientific studies would perhaps provide more concrete basis of justification, even though not a lot was available. The Wildlife Foundation's wildlife conservation lease program is no doubt an important component of the sustainability efforts that help promote synergy of events for the survival of the ecosystem and the successful approach to dealing with the environmental challenges and offering a practical solution. In a nutshell, therefore, the strategic responses to the environmental challenges in the Nairobi National Park ecosystem is a success story, and would be a reference point for similar challenges in other ecosystems.

5.4 Recommendation of the study

As was found out in the study, the environmental shifts arising from climate change are numerous and long range. Long term atmospheric pressure influences the rain patterns that cause rain levels to slow down or drop significantly causing prolonged droughts, reduced vegetation cover over long period of time, and significant loss of wildlife population and grazing space. This study however recommends that each organization must develop clear and realistic strategic response plans that directly correspond to the climate change phenomena and the resulting environmental impact. The Wildlife Foundation must continuously improve the wildlife conservation lease program as an economic payment for ecosystem tool, the Ministry of Environment and Natural Resources and the Ministry of Forestry and Wildlife must design potential adaptation and mitigation measures to climate change, farmers and pastoralists must also develop and adopt climate change adaptation practices that would complement their resilient livelihoods.

5.5 Limitations of the Study

This study is mainly limited to availability of scientific statistical information that would support historic projections of the ecological trends that would demonstrate the current state of affairs. Most of these statistics would however be available under special request from the scientific laboratories of the designate ecosystem partners such as the international livestock research institutes' GIS department and the Kenya Wildlife service research department, except that a lot of time would be spend gathering, sorting, analyzing and interpreting the information to fit into the purposes of this study. Time limit was therefore a major factor to this study, besides the challenge and difficulty in booking an appointment to interview the two target board members who are always on the move. Again, the whole process from the conception to completion of this study was tedious and tiresome, and calls for a lot of personal sacrifice. It is also quite an expensive exercise if the current economic fluctuations are anything to go by.

5.6 Suggestions for Further Research

Results of this study would form a basis for further studies in the related area of study. Future studies should focus on strategic responses that would enhance chances of a successful adaptation and mitigation practices to climate change. Future researchers must examine the possible strategic responses to the environmental challenges that would guarantee the success in adaptation and mitigation practices to climate change.

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Appendix I: Interview Guide

Section A: Respondent's Details

Name of Respondent (Optional) _____

Position Held in the organization _____

Years worked in the organization _____

Area of ecosystem response _____

Section B: Environmental Challenges

Has your organization observed any of the following environmental shifts in your designated ecosystem? *(Please tick).*

High temperatures? [ ] Please explain

.....

.....

Drought? [ ] Please explain

……

……

Reduced wildlife population? [ ] Please explain

.....

.....

Reduced wildlife and livestock grazing space? [ ] Please explain

……

…….

Human-wildlife conflict? [ ] Please explain

……

……..

High population density and human encroachment? [ ]

……

…….

Atmospheric pressure? [ ] Please explain

……

……

Reduced vegetation and forest cover? [ ] Please explain

.....

.....

Section C (1) Strategic Responses

Please explain the various strategic responses in which your organization put in place in order to address the occurrences you had mentioned in (1.) above.

High temperatures? [ ] Please explain

.....

.....

Drought? [ ] Please explain

……

……

Reduced wildlife population? [ ] Please explain

.....

.....

Reduced wildlife and livestock grazing space? [ ] Please explain

……

……

Human-wildlife conflict? [ ] Please explain

……

……

High population density and human encroachment? [ ]

……

……

Atmospheric pressure? [ ] Please explain

……

……

Reduced vegetation and forest cover? [ ] Please explain

.....

.....

Which environmental challenges would you consider as having the greatest impact to climate change?

.....

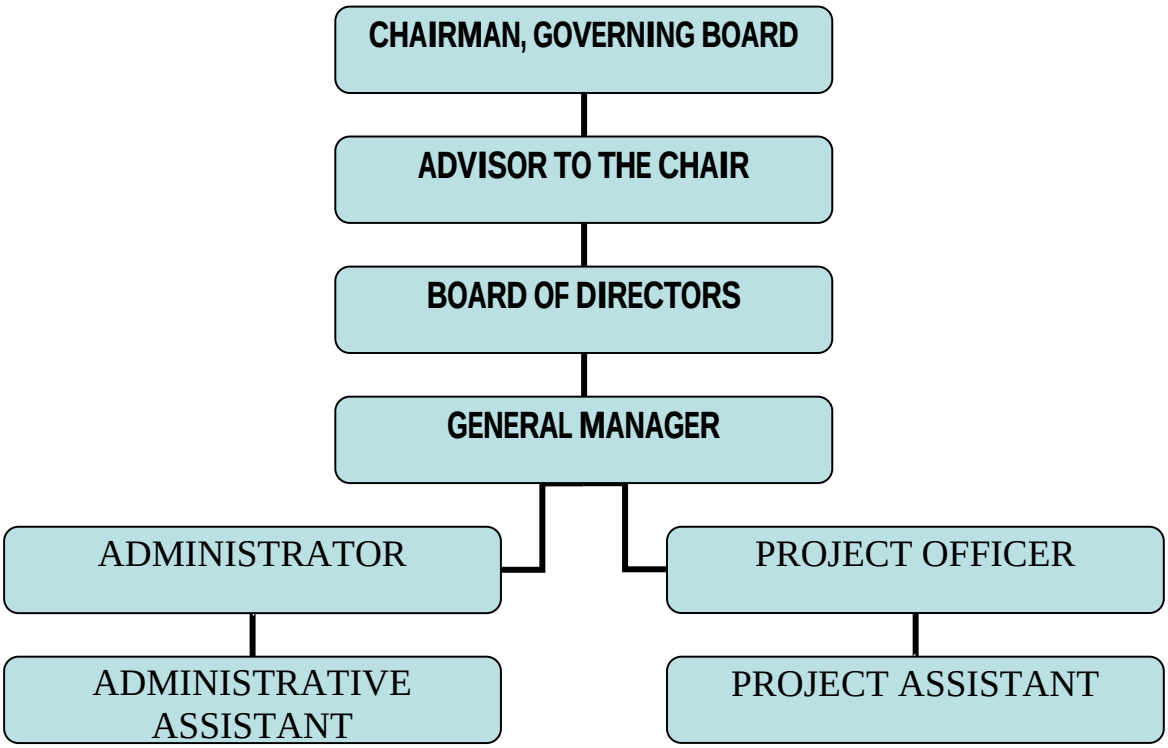
.....

What strategic advice would you give to corporate entities whose aim is not quite to protect the environment from degradation, but still face the degradation challenges?

……

……

Appendix II: The Structure of The Wildlife Foundation



(Source: Author, 2010)