

**GLOBAL WARMING: A CHALLENGE FOR ZAMBIA'S
ENVIRONMENTAL PROTECTION LAWS AND INSTITUTIONAL
FRAMEWORK.**

BY

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**AN OBLIGATORY ESSAY SUBMITTED TO THE SCHOOL OF LAW
OF THE UNIVERSITY OF ZAMBIA IN PARTIAL FULFILMENT OF
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UNIVERSITY OF ZAMBIA

SCHOOL OF LAW

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Be accepted for examination. I have checked it carefully and I am satisfied that it fulfils the requirements relating to format as laid down in the regulations governing Directed Research Essays for the award of the Bachelor of Laws (LL.B) degree by the University of Zambia.

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DECLARATION

I, Dumisani Jedidiah Ngoma, Identity Number 25019341 do hereby declare that I am the author of this Directed Research Paper entitled: “**Global Warming**: A challenge for Zambia’s Environmental Protection Laws and institutional framework.” I further declare that this is a work of my own ingenuity and that due acknowledgement has been made where other people’s works have been referred to. I truly believe that this research has not been previously presented to the school of law for such academic works.

I therefore bear the absolute responsibility for the contents, errors, defects and any omissions herein.

DATE: 13/02/09 SIGNED Dumisani

DEDICATIONS

To my parents

This essay is dedicated to first of all my parents, Happy and Elizabeth Ngoma. They have loved, cared and supported me throughout my life. I really thank God for them.

To my sister

I also wish to dedicate it to my one and only young sister, Lomthunzi Bonnie Ngoma. Thank you for your love.

To my grandparents

Thank you for your shelter in my greatest time of need.

ABSTRACT

The subject I have undertaken to write on is one that has become a global concern. Recent years have seen an appreciable growth in the level of understanding of dangers facing the international environment and an extensive range of environmental problems is now the subject of serious international concern. The economic, social, and developmental consequences of climate change have received increasing recognition worldwide. Before then countries focused their energies on relentless industrial development with little or no attention to its impact on the environment.

The Earth continues to experience record-breaking temperatures caused by increased concentrations of carbon dioxide (CO₂) and other greenhouse gases in the atmosphere. This buildup is the result of human activities, especially our use of fossil fuels in, for example, automobiles and industries. The impacts of this unprecedented warming-increased floods and drought, rising sea levels, spread of deadly diseases such as malaria and dengue fever, increasing numbers of violent storms-threaten to be more severe and imminent than previously believed. An urgent global response is essential because when a problem manifests in this manner all cognate disciplines including the law must be deployed to tackle and reduce its effects and design a framework which achieves the best in the circumstances. The success of this battle depends on concentrated efforts from all sectors of society namely, legal, political, economic and social sectors.

However, most developing countries, including Zambia, have weak laws in so far as environmental protection is concerned. Therefore, there is need for such countries to

quickly emulate the developments in other countries that have managed to put in place laws capable of protecting the environment and the ability for an individual to enforce his rights to a clean and healthy environment. This paper researches on this subject matter, and provides recommendations on the way forward.

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I am grateful for the excellent faculty at University of Zambia School of law, where I had the privilege of learning for about 3 years. Special thanks to Mr. Palan Mulonda for his advice, suggestions and corrections regarding this work. Sir, you have no idea how much I value your critical mind and your willingness to read what I have written.

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Rio Declaration on Environment and Development 1992

Stockholm Declaration of the UN Conference on Human Environment 1972

United Nations Framework Convention on Climate Change (UNFCCC) and its Kyoto Protocol.

Vienna Convention for the protection of the Ozone Layer

OTHER LEGISLATION

South African Air Quality Act (Act No. 490 of 2004)

South African National Environment Management Act (Act No. 107 of 1998 as amended by Act No. 56 of 2002)

ACRONYMS

CDM	Clean Development Mechanism
CERs	Certified Emission Reductions
EIA	Environmental Impact Assessments
GEF	Global Environment Facility
GHGs	Green Houses Gases
MDGs	Millennium Development Goals
NAPA	National Adaptation Programme of Action
OECD	Organisation for Economic Co-operation and Development
UNFCCC	United Nations Framework Convention on Climate Change (UNFCCC)

CHAPTER ONE

GENERAL INTRODUCTION

1.0. Introduction

“Often we need a crisis to wake us to reality. With the climate crisis upon us, businesses and governments are realizing that far from costing the earth, addressing global warming can actually save money and invigorate economies. While the estimated costs of climate change are incalculable, the price tag for fighting it may be less than any of us thought. Some estimates put the cost at less than one per cent of the global gross domestic product – a cheap price indeed for waging a global war.”¹

Recent years have seen an appreciable growth in the level of understanding of the dangers facing the international environment² and an extensive range of environmental problems is now the subject of serious international concern.³ These include atmospheric pollution, marine pollution, global warming and ozone depletion, the dangers of nuclear and other extra-hazardous substances and threatened wildlife species.⁴

1.1. Statement of the Problem

1.1.1. The Environment and Human Rights

According to Article 67 of the Mung’omba Draft Constitution (2005) Parliament shall enact legislation which are reasonable in order to achieve the progressive realization of the economic, social and cultural rights referred to in Articles 68-75. In terms of the environment, Article 75 of

¹ The Post, 5 June 2008

² V.P. Nanda, *International Environmental Law and Policy*. (New York, 1995)

³ This may be measured by the fact that in July 1993, the International Court of Justice established a special Chamber to deal with environmental questions. It has as yet heard no cases.

⁴ M.N. Shaw, *International Law*. 4th ed. (Cambridge: At the University Press, 2004).p.585

the 2005 Draft Constitution states that, every person has the right (a) to an environment that is safe for life and health; (b) to free access to information about the environment; (c) to compensation for damage arising from the violation of the rights recognized under this Article; and (d) to the protection of the environment and future generations.

Additionally, it has been argued that there now exists an international human right to a clean environment.⁵ Every citizen has a right to a clean environment⁶ but deteriorating environments are a deadly threat to human survival, making environmental protection an urgent task for the whole world. There are, of course, a range of general human rights provisions that may have a relevance in the field of environmental protection, such as the right to an adequate standard of living, right to health, right to food and so forth, but specific references to a human right to clean environment have tended to be few and ambiguous.

The preamble to the seminal **Stockholm Declaration** of the UN Conference on the Human Environment 1972 noted that the environment was '*essential to...the enjoyment of basic human rights- even the right to life itself*', while Principle 1 stated that '*Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being.*' Article 24 of the **African Charter of Human and Peoples' Rights 1981** provided that '*all people shall have the right to a general satisfactory environment favourable to their development*', while article 11 of the Addition Protocol to the **American Convention on Human Rights 1988** declared that '*everyone shall have the right to live in a healthy environment*' and that '*the states parties shall promote the protection, preservation and improvement of the environment*'. Article 29 of the **Convention on the Rights of the Child 1989**

⁵ M.N. Shaw, *International Law*, 4th ed. (Cambridge: At the University Press, 2004)

⁶ National Environmental Action Plan (NEAP) Fundamental Principle

explicitly referred to the need for the education of the child to be directed *inter alia* to 'the development of respect for the natural environment'.

However, the references to human rights in the **Rio Declaration on Environment and Development** adopted at the UN Conference on Environment and Development in 1992 are rather sparse. Principle 1 declares that human beings are '*at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature*'. Beyond this tangential reference, human rights concerns were not, it is fair to say, at the centre of the documentation produced by the 1992 conference. In fact, as Shaw states "it is fair to say that the focus of the conference was rather upon states and their sovereign rights than upon individuals and their rights".⁷

Nevertheless, in 1994, the final report on Human Rights and the Environment delivered to the UN Sub-Commission on Prevention of Discrimination and Protection of Minorities contains *inter alia* the notion that '*human rights, an ecologically sound environment, sustainable development and peace are interdependent and indivisible*' and that '*all persons have the right to secure, healthy and ecologically sound environment. This right and other human rights, including civil, cultural, economic, political and social rights are universal, interdependent and indivisible*'. It remains to be seen whether this initiative will bear fruit.

It is from this premise that in recent years, environmental law has become seen as a critical means of promoting sustainable development. There is therefore ongoing political and public debate worldwide regarding climate change and what actions should be taken to reduce or reverse future warming or to adapt to its expected consequences.

⁷ M.N. Shaw, *International Law*, 4th ed. (Cambridge: At the University Press, 2004).p.588

Dramatic changes in global climate have helped to wake up the consciousness of States on the significance of environmental issues in the last forty years. Before then countries focused their energies on relentless industrial development with little or no attention to its impact on the environment. Climate change has been subjected to considerable debate for some time now. However, in Zambia the topic has attracted dismal attention as people are trying to grasp the subject and its implication on human life and the surrounding environment.⁸ “We are talking about the adoption of Kyoto agreement by major industrialized countries but we seem to neglect the pollutions that take place in Africa. The efforts being made to cut down carbon emission in order to solve the global warming problem should be directed mostly to Africa because the effects are more disastrous in Africa than in the developed countries.”⁹

The question that must therefore be answered is this: - *Does Zambia need laws requiring industry to cut emissions of global warming pollution?*

1.2. Purpose of the Study

With the increase in industrial activity especially in the mining sector as well as the increase in the number of vehicles on our roads the pollutions that take place in Zambia can no longer be neglected. It is time for the government to create strong laws to cut global warming pollution, i.e. the reduction in greenhouse emissions. Voluntary measures and piecemeal reforms are not enough to achieve the pollution reductions scientists say we need to fight global warming. For example in the United States, Congress is now considering fresh proposals to cap emissions of carbon dioxide and other heat-trapping pollutants from America's largest sources i.e. power plants, industrial facilities and transportation fuels.

⁸ The Sunday Post, August 17 2008

⁹ Vegetarianism in Africa, [http:// www.ivu.org/members/council/Vegetarianism](http://www.ivu.org/members/council/Vegetarianism). visited on 26/06/2008

1.2.1. Meaning and causes of climate change

According to The Wikipedia Encyclopaedia,¹⁰ Climate change is any long-term significant change in the “average weather” that a given region experiences. Average weather may include average temperature, precipitation and wind patterns. It involves changes in the variability or average state of the atmosphere over durations ranging from decades to millions of years. The term refers to both natural and human-induced changes.

The United Nations Framework Convention on Climate Change (UNFCCC) defines climate change as: “a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods”. In other words, the UNFCCC uses the term Climate Change to mean only those changes that are brought about by human activities.

1.2.2 Factors Affecting Global Climate:

There are many factors, both natural and of human origin, that determine the climate of the Earth.

(a) Human influences on climate change

The Intergovernmental Panel on Climate Change (IPCC) is an international group of thousands of scientists, established by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO) in 1988, to assess scientific information about climate change relevant to international and national policy formulation. According to the third IPCC

¹⁰ http://en.wikipedia.org/wiki/climate_change. 26/06/2008

assessment report, released in January 2001, “there is new and stronger evidence that most of the warming observed over the last 50 years is attributable to human activities.”¹¹

Proclamation 4 of the 1972 **Stockholm Declaration** states that “in the developing countries most of the environmental problems are caused by under-development”. Thus Africa from its internal activities inevitably contributes to the degradation of its own environment. Clear examples can be drawn from the use of fuel wood for energy generation and the poaching of endangered species. The use of fuel wood as an energy source contributes to deforestation and could result in respiratory tract infections when it is burnt in poorly ventilated areas. Yet fuel wood is the most used source of energy in the Africa’s rural areas. The use of fuel wood is due to lack of access to modern sources of energy-another indicator of underdevelopment.¹²

Anthropogenic factors are human activities that change the environment and influence climate. In some cases the chain of causality is direct and unambiguous (e.g., by the effects of irrigation on temperature and humidity), while in others it is less clear. Various hypotheses for human-induced climate change have been debated for many years, though it is important to note that the scientific debate has moved on from scepticism, as there is scientific consensus on climate change that human activity is beyond reasonable doubt as the main explanation for the current rapid changes in the world's climate.¹³ Consequently in politics, the debate has largely shifted onto ways to reduce human impact and adapt to change that is already 'in the system.'¹⁴

¹¹ IPCC, Working Group I Third Assessment Report, *Climate Change 2001: The Scientific Basis*, January 2001. Summary for Policymakers, p.6, see <http://www.ipcc.ch/pub/reports.htm>. site visited on 26/06/2008

¹² *What is the Place of Practice of Environmental Law in Africa's Development?* www. HG.org Worldwide Legal Directories

¹³ IPCC, *Climate change 2007: the physical science basis* (2007) summary for policy makers.

¹⁴ http://en.wikipedia.org/wiki/climate_change. 26/06/2008

The biggest factor of present concern is the increase in Carbon Dioxide (CO₂) levels due to emissions from fossil fuel combustion, followed by aerosols (particulate matter in the atmosphere), which exert a cooling effect, and cement manufacture. Other factors, including land use, ozone depletion, animal agriculture¹⁵ and deforestation, also affect climate.

However, not all energy-induced environmental damage to Africa's environment originates from within. Reduced soil fertility, reduction in biodiversity and the depletion of Africa's water resources have been linked to climate change. A 2001 publication by the American Space Agency, NASA, shows that in 35 years, as a result of cumulative climate change, Lake Chad has been to about 1/20th of its size. Industrialized economies account for the massive carbon emission which has been held primarily responsible for climate change. The impact is global. The direct consequence of this situation is that the protection of the African environment cannot be achieved exclusively from within the continent.

(b) Non-climate factors driving climate change

Greenhouse Gases:

Current studies indicate that radiative forcing by greenhouse gases is the primary cause of global warming. Greenhouse gases are also important in understanding Earth's climate history.¹⁶ According to these studies, the greenhouse effect, which is the warming produced as greenhouse gases trap heat, plays a key role in regulating Earth's temperature. A number of minor gases in the atmosphere, although relatively transparent to sunlight, absorb most of the infrared heat energy transmitted by the Earth towards space. Some of the sun's energy absorbed by the earth is radiated back into the atmosphere and is absorbed by gases such as water vapor, carbon dioxide, methane, halocarbons, ozone, and nitrous oxide (known as "greenhouse gases"). These heat-trapping gases

¹⁵ W. F. Ruddiman, *Plows, Plagues and Petroleum: How Humans Took Control of Climate*, (Princeton: At University Press, 2005)

¹⁶ http://en.wikipedia.org/wiki/climate_change. site visited on 26/06/2008

in turn radiate heat back to the earth further warming the surface. This so-called “greenhouse effect” maintains the earth’s surface temperatures at levels that are conducive to life, as we know it. Recent increases in the concentration of some of these greenhouse gases particularly carbon dioxide (CO₂) are significantly intensifying this effect, altering the earth’s climate.¹⁷

During the modern era, the naturally rising carbon dioxide levels are implicated as the primary cause of global warming since 1950. According to the Intergovernmental Panel on Climate Change (IPCC), 2007, the atmospheric concentration of CO₂ in 2005 was 379 ppm³ (parts per minute) compared to the pre-industrial levels of 280 ppm³. Climate Trends which are an analysis of temperature records shows that the Earth has warmed an average of 0.5°C over the past 100 years. The warming is real and significant though its intensity has varied from decade to decade, from region to region and from season to season.

1.2.3. GENERAL OBJECTIVE

This research therefore seeks to investigate whether Zambia’s existing Environmental Protection Laws are adequate to cope with the challenges posed by climate change and whether there is need to introduce Environmental friendly and Clean Energy legislation for united efforts against global warming. An evaluation of any matter incidental to the aforesaid will also be undertaken

1.2.4. SPECIFIC OBJECTIVES:

- (a) To Promote and facilitate multisectoral and integrated coordination of environmental policies, legislation and regulations.

¹⁷ <http://www.ec.gc.ca/climate/overview>. site visited on 25/09/2008

- (b) To identify reasons for Weak enforcement of environmental standards and regulations owing to the lack capacity of enforcement agencies.

1.3. Significance of the Study (Rational)

1.3.1. Seriousness of climate change and its effects on Zambia

Scientific evidence has shown that unbridled development leads to loss of environmental capital, sometimes an irreversible phenomenon. As a result, many treaties and a flurry of municipal legislations have come into both the domestic and international arena. A wide variety of non-legislative instruments dealing with the threat of environmental degradation resulting from economic growth have also come into play.

The problem of global warming and the expected increase in the temperature of the earth in the decades to come has focused attention on the issues particularly of the consumption of fossil fuels and deforestation. In addition, the depletion of the stratospheric ozone layer, which has the effect of letting excessive ultraviolet radiation through to the surface of the earth, is a source of considerable concern.¹⁸ Section 2 of the **Environmental Protection and pollution Control Act**¹⁹ and Article 1(1) of the **Vienna Convention for the protection of the Ozone Layer** 1985 defines this area (the ozone layer) as ‘the layer of atmospheric ozone above the planetary boundary layer’. This area would thus appear particularly in the light of the global challenge posed by ozone depletion and climate change to constitute a distinct unit with an identity of its own irrespective of national sovereignty or shared resource claims.²⁰ UN General Assembly resolution 43/53, for example, states that global climate change is ‘the common concern of mankind’.²¹ Whatever the

¹⁸ M.N. Shaw, *International Law*, 4th ed. (Cambridge: At the University Press, 2004).p. 610

¹⁹ Environmental Protection and Pollution Control Act (Ozone Depleting Substances) Regulations, 2000

²⁰ M.N. Shaw, *International Law*, 4th ed. (Cambridge: At the University Press, 2004).p. 610

²¹ The Noordwijk Declaration of the Conference on Atmospheric Pollution and Climate Change 1989.

precise legal status of this area, what is important is the growing recognition that the scale of challenge posed can only really be tackled upon a truly international or global basis.

Action with regard to the phenomenon of global warming has relatively been slow. As mentioned above, General Assembly resolution 43/53 (1988) and 44/207 (1989) recognized that climate change was a common concern of mankind and determined that necessary and timely action should be taken to deal with this issue. It also called for the convening of a conference on world climate change, as did the UNEP Governing Council Decision on Global Climate Change of 25 May 1989. In addition, the Hague Declaration on the Environment 1989, signed by twenty-four states, called for the establishment of a new institutional authority under the auspices of the United Nations to combat any further global warming and for the negotiation of the necessary legal instruments. The United Nations Framework Convention on Climate Change (UNFCCC) was adopted in 1992 and its Kyoto Protocol.²²

The object of the Convention is to achieve stabilization of greenhouse gases in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system and such level should be achieved within a time-frame sufficient to allow ecosystem to adapt naturally to climate change, to ensure food production is not threatened and to enable economic development to proceed in a sustainable manner.²³

The UNFCCC sets out the framework for multilateral cooperation to tackle climate change, including provisions on the reporting of greenhouse gas emissions and providing assistance to developing countries to adapt to the adverse impacts of climate change. The UNFCCC also

²² 31 ILM, 1992,p.849

²³ Article 2.

requires developed countries to stabilise their carbon dioxide emissions at 1990 levels by the year 2000.

At the third session of the Conference of the Parties to the UNFCCC (COP-3) in Kyoto, Japan, on 11 December 1997, Parties adopted the text of the Kyoto Protocol to the UNFCCC. The Kyoto Protocol is the next step in achieving the ultimate objective of the UNFCCC. It sets greenhouse gas emission limitation targets for developed countries, requiring an overall reduction in their emissions of around 5% by 2008-2012 compared to 1990 emission levels. The entry into force of the Kyoto Protocol is subject to ratification, acceptance, approval or accession by Parties to the Convention. It entered into force on the ninetieth day after the date on which not less than 55 Parties to the Convention, incorporating developed country Parties which accounted in total for at least 55 % of the total carbon dioxide emissions for 1990 from that group, deposited their instruments of ratification, acceptance, approval or accession.

Developed and industrialized countries have at least devised means to curtail or postpone the impending catastrophes that will result as a karmic debt for the ill treatment of our environment. The European Union, one of the drivers of the international climate change process, is elaborating and implementing a series of policies and measures to reduce the Union's greenhouse gas emissions. These measures include the elaboration and implementation of a greenhouse gas emission allowance trading scheme.

But here in Africa we are deep in this trouble and show no sign of getting ready to finding the solutions.²⁴ The efforts being made to cut down carbon emission in order to solve the global warming problem should be directed mostly to Africa because the effects are more disastrous in Africa than in developed countries.

²⁴Vegetarianism in Africa, [http:// www.ivu.org/members/council/Vegtarianism](http://www.ivu.org/members/council/Vegtarianism). visited on 26/06/2008

The Climate Change Convention 1992 defines adverse effects of climate change as ‘changes in the physical environment or biota resulting from climate change which have significant deleterious effects on the composition, resilience or productivity of natural and managed ecosystem or on the operation of socio-economic systems or on human health and welfare’.²⁵

The economic, social and developmental consequences of climate change have received increasing recognition worldwide. The *Stern Review* (2006) notes that climate change is a serious and urgent problem, global in its cause and consequence. The economic challenges are complex and will require a long-term international collaboration to tackle them.²⁶ Although some scientific uncertainty remains as to the degree that the temperature will change and when these changes will occur, there is consensus among the overwhelming majority of scientists that concentrations of greenhouse gases are increasing at an unprecedented rate, and that changes in the earth’s climate are now underway and will continue. Scientists predict that climate change will result in a rise in the sea level, an increase in the number of extreme storm events, disruption of fresh water and food supplies, impacts to the vitality and health of forests and other natural areas, and potential impacts to human health and wildlife.²⁷

Africa is the continent that will suffer most under climate change. Global warming is affecting Africa more than the industrialised world despite being the inhabited continent least to blame for the greenhouse effect.²⁸ Professor Francis Yamba, director of centre for Energy Environment and Engineering Zambia Limited explains that though climate change is a global challenge, it has adverse effects on developing countries like Zambia.

²⁵ Article 1(1)

²⁶ International Trade and Climate Change: *Economic, Legal and Institutional Perspective*. (Washington, DC: The World Bank, 2008).p.1

²⁷ U.S. Global Change Research Program, U.S. National Assessment Synthesis Team, 2000, *Climate Change Impacts on the United States: The Potential Consequences of Climate Variability and Change*, see <http://www.usgcrp.gov/>

²⁸ Steve Conno, ‘Africa Suffering Worst effects of global warming’. The Independent, 29 July 2003

“Historically, a lot of carbon dioxide has been pumped into the atmosphere. If we don’t do something about it, there will be calamities like floods and drought. According to the science of climate change, Zambia pumps about 450 to 500 ppm (parts per million) of carbon dioxide in the atmosphere. This is not bad compared to the United States but we are reaching a level where the carbon dioxide, which is emitted into the atmosphere, is not completely absorbed by plants in Zambia. Now the question is; “what happens to the excess greenhouse gases in the atmosphere?” he asks.²⁹

A study by scientists at Britain's Hadley Centre has found that the tell-tale signature of global warming is significantly stronger in Africa than in other continents such as Europe and America.³⁰ But because Africa is not as industrialised as most other continents it does not produce the pollutants, such as aerosol particles, that can help to shield against the sun, said Peter Stott, a climate researcher at the centre. "While Africa is not a region that has been pumping out carbon dioxide, it's still seen a clear warming signal, Dr Stott said. “In the industrial countries part of the warming has been offset by cooling due to aerosols.”

Temperature rise will trigger "sharp declines in crop yield in tropical regions", estimated at 5 to 10 per cent in Africa with an associated increase in undernourishment, malnutrition, malaria and related deaths. 50 per cent of all malnutrition-related deaths (4 million annually worldwide) occur in Africa, while a 2°C rise in temperature will increase the people affected by hunger, potentially by 30 to 200 million worldwide.³¹

²⁹ Sunday Post, 17 August 2008

³⁰ Steve Conno, ‘*Africa Suffering Worst effects of global warming*’. The Independent, 29 July 2003

³¹ U.S. Global Change Research Program, U.S. National Assessment Synthesis Team, 2000, Climate Change Impacts on the United States: *The Potential Consequences of Climate Variability and Change*. [http:// www.usgcrp.gov/](http://www.usgcrp.gov/).

Most Africans rely heavily on subsistence farming for their food and other economic obligations. Global warming has caused extreme temperatures in many countries in Africa and this has affected the agriculture production of many African countries.³² Agriculture is becoming an increasingly important sector in the Zambian economy since the mineral sector, which was the backbone of the economy from post-independence times (1964) till the late 1980s, has declined. The agriculture sector generates about 18% to 20% of the country's GDP and provides a livelihood for more than 60% of the population. It employs about two-thirds of the labor force. Zambia has an estimated nine million hectares of land (12% of its total land area) suitable for cultivation and 16 million hectares suitable for rangeland grazing.³³ However, local communities in Zambia are being hard hit by climate change, a new report has concluded. **The World Conservation Union (IUCN)** found that communities in the African country (Zambia) are aware of climatic changes but knowledge about why they occur is not widespread.³⁴ It is predicted that climatic changes are likely to increase in Zambia. According to the report by **The World Conservation Union (IUCN)**,³⁵ these will negatively affect "the natural, physical, financial, and human resources that are crucial for people's livelihoods" and will lead "to increased food insecurity and health issues. "The severity of current impacts (many communities have lost almost all their crops this years due to climate hazards, and there are high current levels of hunger, malnutrition and diseases) points out the communities' high vulnerability to climate change and variability," the report states. Zambia has experienced an increase in drought frequency and intensity in the last 20 years. The droughts of 1991/92, 1994/95 and 1997/98 worsened the quality of life for vulnerable groups such as subsistence farmers.³⁶

³² 'Vegetarianism in Africa'. [http:// www.ivu.org/council/vegetarianism](http://www.ivu.org/council/vegetarianism) visited on 18/06/2008

³³ Policy Note prepared by M de Wit based on Jain (2006), An empirical economic assessment of impacts of climate change on agriculture in Zambia, *CEEPa Discussion Paper No. 27*, CEEPA, University of Pretoria.

³⁴ Environmental News Service. [http:// www.ens-newswire.com](http://www.ens-newswire.com)

³⁵ *Zambia 'hard hit' by climate change*. Inthenews.co.Uk , 21 May 2007

³⁶ Policy Note prepared by M de Wit based on Jain (2006), An empirical economic assessment of impacts of climate change on agriculture in Zambia, *CEEPa Discussion Paper No. 27*, CEEPA, University of Pretoria.

Zambian scientist Dr. George Kasali, an independent consultant who works with a local environmental group, the Energy and Environmental Concerns of Zambia, states that due to climate change, farmers in Sub-Saharan Africa are no longer certain when the rains will begin and when to plant. He admits that Zambia is among the countries that have been affected by food insecurity as a result of the warming climate. He said that countries in sub-Saharan Africa, including Zambia, are in the process of developing a National Adaptation Programme of Action on Climate Change (NAPA), there is a need to engage all stakeholders in the consultative process. “We need to organize more activities around the issue of climate change.” said Dr. Kasali.

Furthermore, new disease vectors emerging from climate change may make households more vulnerable. Exogenous shocks, such as floods or hurricanes, can also wipe out household assets and contribute to loss of life.³⁷ According to the 2007 report: *"Impacts, Adaptation and Vulnerability"* by the Intergovernmental Panel on Climate Change (IPCC) of the United Nations, it is estimated that by 2020, between 75 million and 250 million people in Africa are projected to be exposed to an increase of water stress due to climate change.”

1.4. Methodology

This has been carried out by consulting both primary and secondary sources. This included both desk research and field investigations. The desk research was conducted through collection of secondary data in the form of journals, books, Law Reports, newspapers, legislation both local and foreign, unpublished materials as well as the Internet. Field investigation was in the form of open ended interviews conducted with relevant officials and institutions with an expertise on environmental issues.

³⁷ Poverty and the Environment: *Understanding the Linkages at the Household Level*. (Washington, DC: The World Bank, 2008). p.6

CHAPTER TWO

DEVELOPMENT AND THE ENVIRONMENT

2.0. INTRODUCTION

“Environmental law is a body of law, which is a system of complex and interlocking statutes, common law, treaties, conventions, regulations and policies which seek to protect the environment which may be affected, impacted or endangered by human activities. Some environmental laws regulate the quantity and nature of impacts of human activities: for example, setting allowable levels of pollution or requiring permit for potentially harmful activities. Other environmental laws are preventive in nature and seek to assess the possible impacts before the human activities can occur. While many countries worldwide have since accumulated impressive sets of environmental laws, their implementation has often been woeful. In recent years, environmental law has become seen as a critical means of promoting sustainable development (or “sustainability”).”³⁸

The aim of this chapter is twofold; first the chapter seeks to investigate and establish a link between development and the environment as well as the link between climate change and development.

2.1. The link between development and the environment

The use of the term *sustainable development* during the past decade or so appears to have become a growth industry. It has been recognised that the sources of conceptual confusion surrounding the expression are linked closely to the lack of agreement regarding exactly what is to be sustained, for whom, and by what means.³⁹ The goal of sustainability at times refers to the resource base itself,

³⁸ *Environmental Law*. <http://en.wikipedia.org/wiki/>. Site visited on 26/06/2008

³⁹ M. Redclift, ‘The multiple dimensions of sustainable development’ *Geography* (1991), 76:36–42.

while at other times has been used to refer to the human livelihoods and benefits that are based on ecosystem goods and services inferred from the resource base. Although the concept is often used as if consensus exists concerning its precise meaning and application, ecologists, developmentalists, planners, economists and environmental activists very often mean different things when they use the term. This is a reflection of disciplinary biases, distinctive paradigms and ideological disputes.⁴⁰

This larger issue (i.e. sustainable development) relates to questions with the relation between developing and developed countries. The developing countries want development; the developed countries have interests (at least in part) in the developing countries' preserving their resources. How can the two goals be reconciled? Preservation alone would maintain the present disparity among earth's peoples; exploitation alone fails to recognize the interests of the environment.⁴¹

One response, proposed by a 1989 G7 (the group of leading industrial nations that includes the United States, Britain, France, Germany, Canada, Japan and Italy) conference called to address bioethical issues, stressed sustainability, stewardship and quality of life. The proposal recommended:

Sustainable development, defined not as a fixed state of harmony, but as a process of changes in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are constantly readjusted to reconcile present and future needs. Sustainable development is a process of social and economic

⁴⁰ Hounscome and Ashton, *Sustainable Development for the Mining and Minerals Sector in Southern Africa, Position paper for the Minerals, Mining and Sustainable Development, Southern Africa project, (2001)* Available at: <http://www.mining.wits.ac.za/Peterob.doc>

⁴¹ B.R.Reichenbach and V. Elving Anderson, *On Behalf of God: A Christian Ethic for Biology*. (Grand Rapids, Michigan: William B. Eerdmans Publishing Co., 1995).p. 105

betterment that satisfies the needs and values of all interest groups, while maintaining future options and conserving natural resources and diversity.⁴²

But as if playing catch-up with the other regions of the world, the environmental problems of the African continent in the last few decades have been exacerbated by reckless exploitation and use of non-renewable natural resources, improperly planned urbanization and industrialization. While causes so far named are all anthropogenic not all are a result of economic growth. For instance, urbanization is not directly related to development and is more likely to result from rapid population growth and lack of planning. Urban growth rate in Africa is nearly four percent per year which is about double the world average.

Not all environmental degradation is anthropogenic. Desertification another real threat to Africa's environment occurs without any human influence. It is a fact that the environment could benefit from or be harmed by development and that environmental degradation could occur irrespective of development. It is also a fact that Africa's transitional economies would inevitably interfere with the environment in the course of their development. Environmental management is aimed at minimizing this interference, by achieving optimum development with minimum interference to the environment. The President of the Republic of Ghana, Mr. John Kufuor embraced this ethos in a visionary preface to a recent report.⁴³

'Our forests, our trees, our rivers and lakes are not commodities we can abuse. We do not own the land; we hold it in trust for generations yet unborn. We inherited at birth, a beautiful land, blessed with thick forests, precious minerals and varied animals. We have a

⁴² "A Code of Environmental Practice," Sixth Economic Summit Nations Conference on Bio-Ethics, Brussels, 10-12 May 1989; Printed in *Environmental Dilemmas: ethics and Decisions*, ed. R.J. Berry (London: Chapman & Hall, 1992), p.256.

⁴³ A. Gadzekpo & L. Waldman, *Environmental Considerations in the Ghana Poverty Reduction Strategy*. Study initiated under the Poverty and Environmental Partnership (PEP) and jointly funded and managed by CIDA, DFID, and GTZ. Jan. 2005.

right to make use of these and other natural gifts to enhance the quality of our lives. But we do not have the right to degrade the environment, we do not have the right to turn, our once forest lands into desert just because we want to sell more timber. Nor do we have the right to denude our lands or seas or rivers of the animals and fish indiscriminately. Let us learn to take care of our environment. We cannot claim to love our land, when in the pursuit of extracting precious metals, we leave the land polluted and poisoned. We cannot litter, we cannot leave our surroundings dirty and call ourselves patriots."⁴⁴

His words clearly capture the vision of sustainable development, the goal of environmental law practice. Let us now examine the factors which determine the place of environmental law practice in achieving sustainable development. Perceptions of the word environment differ from one society to another. For the vast majority of Africans, especially for the very poorest, it is above all a question of reality and of survival. In fact, it is a development tool.

In the poorest countries, this reality immediately conjures up that shocking idea, often cited in development cooperation circles: "Poverty is the number one enemy of the environment." Does this mean that if we stamped out poverty all over the world, our planet would at last be protected from all the damage that is being done to its environment? Of course not! The proof is that there are also extremely serious environmental problems in the rich countries of the North. But this reality nevertheless forces us to link the concepts of 'environment' and 'development.'⁴⁵

States that are currently attempting to industrialise face the problem that to do so in an environmentally safe way is very expensive and the resources that can be devoted to this are

⁴⁴ Saji Awogbad, What is the Place of Practice of Environmental Law in Africa's Development? Published November 9, 2006 - Nigeria [www. HG.org](http://www.HG.org) Worldwide Legal Directories.

⁴⁵ Saji Awogbad, What is the Place of Practice of Environmental Law in Africa's Development? Published November 9, 2006 - Nigeria [www. HG.org](http://www.HG.org) Worldwide Legal Directories.

extremely limited.⁴⁶ Until recently, the concepts of development and environment were generally considered to be antagonistic, even irreconcilably opposed or contradictory, because the success of one generally entailed the impoverishment of the other. In sum, economic development implied "quantitative growth in the productivity of goods and services," with the search for profit as the sole incentive. And this operation naturally necessitated increased pressure on; or tapping of; the planet's ecosystems, considered an unlimited reservoir of exploitable resources. Clearly, it was impossible to implement such development while 'respecting' the environment (that is to say, the capacity of the planet's natural ecosystems to maintain themselves).

However, the truth of the matter is that development impacts the environment. This is illustrated by how the exploitation of natural resources for developmental purposes affects nature. In the Niger Delta area of Nigeria major environmental problems have been linked to oil spill, gas flaring and deforestation inherent in oil exploitation in the region. The exploitation of oil is also largely blamed for carbon emissions in Nigeria which in 2001, stood at 23.5 metric tones accounted for by gas (53.3%), oil (46.6%), and coal (0.1%)⁴⁷

A similar link between development and the environment is manifest in South Africa, where air pollution and carbon dioxide emissions are caused primarily by the use of coal for electricity generation. Tanker spills, leaks at refineries and fuel plants also contribute to the pollution of South Africa groundwater and marine environment. Also, the release of oil into the marine

⁴⁶M.N. Shaw, *International Law*, 4th ed. (Cambridge: At the University Press,2004).p. 589

⁴⁷ Saji Awogbad, *What is the Place of Practice of Environmental Law in Africa's Development?* [www. HG.org](http://www.HG.org) Worldwide Legal Directories

environment in the course of transportation damages natural habitats such as seabeds, wetlands and mudlands worldwide.⁴⁸

Proclamation 4 of the 1972 **Stockholm Declaration** states that “in the developing countries most of the environmental problems are caused by under-development”. Thus Africa from its internal activities inevitably contributes to the degradation of its own environment. Clear examples can be drawn from the use of fuel wood for energy generation and the poaching of endangered species. The use of fuel wood as an energy source contributes to deforestation and could result in respiratory tract infections when it is burnt in poorly ventilated areas. Yet fuel wood is the most used source of energy in the Africa’s rural areas. The use of fuel wood is due to lack of access to modern sources of energy-another indicator of underdevelopment.

Thus, climate change is the biggest sustainable development challenge the international community has had to tackle to date. It is for this reason that UN Secretary-General, Ban Ki-moon stated that “the developing world needs to stop viewing climate change solely as an environmental issue, and begin approaching it as a development concern. Our changing climate is a result of unsustainable development practices. And it is a serious threat to human progress everywhere.”

2.2. The Link between Poverty and Climate Change

"Climate change does not act in isolation in Africa but, instead, is just one additional stressor, because we are already contending with a lot of problems, including poverty, food insecurity, civil wars and conflicts." ⁴⁹ Only a few degrees of increased temperature separate us from dangerous climate change. The consequences of this will be devastating, especially in poor countries where

⁴⁸ Saji Awogbad, *What is the Place of Practice of Environmental Law in Africa's Development?* www. HG.org Worldwide Legal Directories

⁴⁹ Singy Hanyona, '*Climate Change threatens Southern Africa's Food Security*' .(Environmental News Service. <http://www.ens-newswire.com>.) site visited on 26/06/2008

poverty will increase and development will go into reverse. In some ways global challenges like poverty and climate change can be seen as great dividers – exposing the degrees of separation between people who can afford to cope and people who cannot. But equally, they can bring distant communities together, united against a common threat. Although it is the world's poorest countries that face the greatest challenge, we live in an increasingly globalised world; we're all in this together. Tackling poverty and climate change is a priority for us all.⁵⁰

Climate change scenarios generally indicate higher temperatures for most of Africa, although precipitation trends vary from slight increases in West Africa to slight decreases in Southern Africa.⁵¹ There is a general consensus about a higher climate variability, which will lead to an increase in drought (both inter and intra seasonal) and flood events, and more uncertainty about the onset of the rainy seasons. This impacts on the social as well as cultural and economic development of rural poor communities.

However, the greatest development challenge facing our increasingly globalized world is the long-term sustainable development of Africa's rural poor. Since 2000 (UN 2000), the energies of development partners worldwide have focused on achieving measurable targets through the time bound (2000-2015) Millennium Development Goals (MDGs). Whilst significant progress has been made towards these goals in the less developed regions of the America's and Asia, the dryland regions of sub-Saharan Africa have not (UN 2005). This is principally because they have not been able to generate sustained economic growth of the type that now characterizes much of Asia. Indeed for much of Africa the situation is actually getting worse.

⁵⁰ Degrees of Separation. Climate change: Shared Challenges, Shared opportunities. Department for International Development for International Development (DFID). www.dfid.gov.uk

⁵¹ *SUSTAINABLE DEVELOPMENT (SD) AND CORPORATE SOCIAL RESPONSIBILITY (CSR) IN THE ZAMBIAN MINING ENVIRONMENT.* http://www.bench-marks.org.za/research/desktop_zambia.pdf

Unfortunately, the *Stern Review* (2006) notes that efforts to develop African economies and achieve the MDGs must contend with the increasing challenge of climate variability. Most scientists now agree that global warming is inevitable, and that it will have major impacts on the climate worldwide and agricultural productivity, particularly in sub-Saharan Africa.

In a ministerial statement, former Tourism, Environment and Natural Resources Minister, for Zambia, Honourable Michael Kaingu said global warming effects had the potential to frustrate the smooth implementation of development strategies including the Fifth National Development Plan (FNDP) and the Vision 2030.⁵²

He said there was need to make people understand what was happening in order for them to take precautions when building or farming in flood prone areas such as valleys.

Mr Kaingu said climate change threatened to reverse gains that had been scored in several sectors of many economies including poverty reduction efforts in most developing countries like Zambia.

He said climate change would affect people's access to water, food production, health and the environment adding that Government was doing a lot in dealing with the threat of climate change. The minister said the sectors that had been identified as the most vulnerable to adverse effects include agriculture, health, water and energy as well as forests and wildlife.⁵³

The key environmental issues identifiable in Zambia can be classified into the following:

Pollution, biodiversity, community participation, land use planning, institutional development and coordination, and monitoring and evaluation. Moreover, the importance of the linkages between the environment and poverty in Zambia is underpinned by four factors: firstly, that the poor live in places that are ecologically more vulnerable and that they are forced to earn their living from low-

⁵² The Times of Zambia, November 21 2007

⁵³ The Times of Zambia, November 21 2007

productivity natural resources; secondly, that poor households, especially in rural areas, derive their livelihood from natural resources; thirdly, that the intensity of suffering of the poor from the adverse impacts of environmental shocks is much higher than that of the rich; and fourthly, that the poor damage the environment, essentially due to lack of alternatives.⁵⁴

Drought is a re-current feature of the southern African agricultural climate both between and within seasons⁵⁵. In fact, it is increasingly unusual for drought not to occur somewhere in southern Africa each year,⁵⁶ and it is universally accepted that climate influences development and must be integrated into the African development agenda.

Most small-scale farmers in southern African countries like Mozambique, Zambia, Malawi and Zimbabwe, have historically been able to adapt to normal climatic variability with creative and indigenous practices. However, the recent droughts have affected these traditional systems and thrown farmers into a state of confusion.⁵⁷

While farmers in the developed world can often make up for short rainy seasons by using man-made water sources, farmers in Southern Africa often labor without the most basic of irrigation systems. Burdened by decades of underdevelopment and impoverishment, the agricultural industry so crucial to African economies is now increasingly crippled by periodic droughts.

⁵⁴ Cited from *Executive Summary Position Paper prepared by civil society in Zambia as input into the Fifth National Development Plan (FNDP), 2006-2011, being formulated by the Zambian Government through the Ministry of Finance and National Planning.*

⁵⁵ *SUSTAINABLE DEVELOPMENT (SD) AND CORPORATE SOCIAL RESPONSIBILITY (CSR) IN THE ZAMBIAN MINING ENVIRONMENT.* http://www.bench-marks.org.za/research/desktop_zambia.pdf

⁵⁶ United Nations Environment Programme (UNEP) Annual report of 2002.
http://www.unep.org/pdf/annualreport/UNEP_Annual_Report_2002.pdf.

⁵⁷ Report on the Impact of Climate Change on the Mosi-oa-Tunya World Heritage Site. <http://whc.unesco.org/uploads/activities/documents/activity-471-10.doc>

In addition to its high environmental impact, climate change in Sub-Saharan Africa is made even direr by the region's limited resources. The capacity of most developing countries to respond to rapid environmental changes is diminished by infrastructures and budgets already strained by a multitude of competing challenges.

2.3. Conclusion

“Confronting climate change is our shared challenge. Dealing with it could be our shared opportunity. Tackling it must be our shared achievement.”⁵⁸ Zambia is a party to more than 16 legal instruments advocating environment conservation and management, however, there is need to domesticate these conventions into national policies, laws and programmes. As an integral component of the domestication process, preventing further climate change is vital to securing long-term growth for developing countries. Achieving it depends on action from people, organisations and governments all over the world, to reduce global levels of carbon emissions. Because people in rich countries emit the most carbon, they must lead the way in securing a global agreement to tackle climate change. Developing in a climate-smart way means reducing dependency on fossil fuels and their contributions to climate change. Climate-smart development will help developing countries sustain their growth and secure a route out of poverty.

⁵⁸ Douglas Alexander, (Secretary of State for International Development Internationally), Degrees of Separation. Climate change: Shared Challenges, Shared opportunities. Department for International Development for International Development (DFID). www.dfid.gov.uk

CHAPTER THREE

LEGAL AND INSTITUTIONAL CAPACITY TO MANAGE ENVIRONMENTAL POLICY IN ZAMBIA

3.0. Introduction

The field of law has in many ways, been the poor relation in the world-wide effort to deliver a cleaner, healthier and ultimately fairer world. We have over 500 international and regional agreements, treaties and deals covering everything from protection of the ozone layer to the conservation of the oceans and seas. Since 1972 a number of multilateral treaties relevant to Africa have been completed in response to the problem of environmental degradation, however, these conventions accord with the tenor of other international conventions on the environment. They declare the right to a good quality environment, but stop short of creating binding obligation on states. Moreover, non-state entities and individuals cannot enforce the right to a sound environment on the basis of these declarations. Their relevance lies in exciting the consciousness of the international community on the need to take environmental protection seriously. International environmental law therefore is largely inchoate. It is therefore not an effective legal weapon for achieving sustainable development.⁵⁹

The aim of this chapter therefore is to find out whether or not Zambia has built institutional capacity to monitor, manage and integrate international conventions and climate change considerations in decision making and operations.

There is immense pressure on developing countries to start green house gas (GHG) mitigation activities and even take on climate commitments. Governments have a significant role to play in

⁵⁹ Saji Awogbad, What is the Place of Practice of Environmental Law in Africa's Development? Published November 9, 2006 - Nigeria [www. HG.org](http://www.HG.org) Worldwide Legal Directories.

environmental management, but this role tends to be less clear than in other areas of their work. The institutional set-up of the environmental sector is often weak, and the technical and analytical capacity for addressing environmental opportunities and challenges is limited. While it is in the interest of developing countries to work towards mitigating climate change, these countries have limited means and institutional capacity to do so. Thus, equity issues pertaining to sharing the burdens of mitigation and adaptation are pivotal to climate negotiations.⁶⁰ There is need therefore to provide a detailed guide to the international legal framework relating to climate change and its adaptation in developing countries such as Zambia, as well as examining national environmental governance, and the integration of climate change mitigation into sustainable domestic development policies. “Governments, businesses and civil society in developing countries require not only incentives to mitigate climate change, but also a great deal of practical assistance, both in terms of navigating the myriad of international environmental agreements and learning how to implement and financially benefit from emissions reduction.”⁶¹

3.1. Environmental Governance in Zambia

Environmental governance relates to the structure and functioning of the state and the institutional arrangements and processes that govern the management regime of the environment. Environmental governance therefore draws on the institutional, legal, and administrative frameworks in which environmental management is practiced.⁶² The management of the environment in Zambia can be examined by considering the institutional framework and the environmental policies and instruments that are currently in operation.

⁶⁰ Ambuj Sagar et al, ‘Climate Change, Energy and Developing Countries.’ *Vermont Journal of Environmental Law* 7 (2005-2006).

⁶¹ Pia Ximena Rodriguez, International Development Law Organization environmental Law specialist and Head of Francophone Programs. www.idlo.int.

⁶² The Times of Zambia, November 21 2007

3.1.1. The Institutional Framework

Issues of environmental governance are vested in the Ministry of Tourism, Environment and Natural Resources (MTENR). It is therefore, the focal point for issues related to climate change, biological diversity and combating desertification. The Ministry has five Departments, namely:

i) Environment and Natural Resources Management

The MTENR is responsible for all environmental and natural resources management issues. It, therefore, has a strategic function through the Environment and Natural Resources Management Department, for the overall policy formulation on environment, natural resources, and pollution control as well as climate change activities. The Department monitors and evaluates the operations of the executive agencies that execute policies on behalf of the Government.

ii) Tourism Development

The Poverty Reduction Strategy Paper (PRSP) and Transition National Development Plan (TNDP) identified the tourism sector as playing a critical role in economic growth and development through foreign exchange earnings and creation of employment opportunities. The Department of Tourism Development is responsible for the development, management and coordination of the implementation of tourism policies and strategies.

iii) Planning and Information

The Planning and Information Department main function is formulating sectoral plans based on the national plans and government's long-term vision on the sector. It also monitors and evaluates the impact and implementation of these plans at a macro level, as well as developing and maintaining an information management system.

iv) Forestry

The Forestry Department is in charge of the management of forest resources in the country. The main functions of the Department are research, restoration of degraded and depleted areas and extension services. The Extension Services Section is responsible for the rehabilitation of degraded and depleted areas, community participation and public awareness on the values and benefits of the forest as a natural resource, agro-forestry and surveys as well as extension services.

v) Human Resources and Administration

In addition, the Ministry runs the Mwekera Forestry College located in Kitwe on the Copperbelt. The Ministry is also responsible for 5 statutory bodies. These are:

1. Environmental Council of Zambia
2. Zambia Wildlife Authority
3. Zambia Tourist Board
4. National Heritage Conservation Commission
5. Museums Board

The Environmental Council of Zambia and the Zambia Wildlife Authority are statutory organs, which are directly involved in the management and conservation of natural and biodiversity resources.

3.1.2. Environmental Policies and Instruments

The policy framework is characterized by a number of policy instruments, strategies and plans that have been developed. These policies and instruments are both homegrown and international commitments to conventions. These have direct bearing on and of great import in the NAPA process. These include, inter alia, the following:

(a) Homegrown Policies and Instruments

In examining policies and instruments we consider some of the objectives of these instruments as outlined under each instrument, which includes:

1. National Environment Action Plan (NEAP, 1994)

Through the NEAP government recognised the need for embracing sustainable policies aimed at caring for ecosystems, essential ecological processes and the biological resources of the country. It also gave an overview of Zambia's environmental problems, existing legislation and institutions, and strategy options for enhancing environmental quality. As well as providing a policy environment for environmental management the NEAP also incorporates policies on climate change. It has identified soil degradation, deforestation, wildlife depletion, inadequate sanitation and air pollution as environmental problems Zambia is experiencing.

2. Poverty Reduction Strategy Paper (PRSP 2002- 2004)

The PSRP provided a framework of national strategies to reduce extreme poverty levels through enhanced food security, it recognized the poverty-environment nexus; Advocated for the pro-poor/pro-environment programmes within the existing and future policy frameworks; Advocated for the development of a framework for assessing the environmental impacts of sector-specific poverty reduction strategic policies, programmes and action plans.

3. Transitional National Development Plan (TNDP, 2002)

The TNDP targets the reversal of Zambia's deteriorating socio-economic conditions and stimulating economic growth, creating employment and thereby reducing poverty as its priorities. One of the strategies is to set up and regularly monitor performance standards for all institutions

involved in facilitating investments such as Ministry of Lands, Ministry of Tourism, Environment and Natural Resources and Local Authorities.

4. Forestry Policy (1998)

The Forestry Policy's main areas of concern include resource management and development, resource allocation, capacity building and gender equality.

5. Zambia Forest Action Plan (ZFAP, 1995)

ZFAP aims at creating a framework for strategic planning in forestry and for raising awareness of issues related to the forestry sector. This also includes the preparation and updating of the forest policy, preparing specific action programmes/projects and mobilizing financial and political support to implement the initiations.

6. National Biodiversity Strategy and Action Plan (1999)

The outputs of the National Biodiversity Strategy and Action Plan comprise the following:

Guaranteeing the conservation of a full range of Zambia's natural ecosystems through a network of protected areas. Conservation of genetic diversity of Zambia's crops and livestock. Enhancement of the legal and institutional framework and human resources to implement the strategies for conservation of sustainable use and equitable sharing of the benefits from biological diversity. Sustainable use and management of biological resources. Development of an appropriate legal and institutional framework and the required human resources to lessen the risks of the use of genetically modified organisms (GMOs). Guaranteeing equitable distribution of benefits from the use of Zambia's biological resources.

7. Zambia National Action Programme for Combating Desertification (2002)

The aim of the NAP is to contribute to sustainable environmental management through the reduction/control of land degradation thereby contributing to poverty reduction, food self-sufficiency, and ultimately contributing to economic growth.

8. Disaster Management Action Plan, 2005

Reduction of the loss of life and damage to natural resources and property by protecting vulnerable communities from human induced and natural disasters. Promotion of sustainable development among vulnerable communities improves their resilience, thus making them contribute more to the national development

(b) International Conventions

1. Convention on Biological Diversity (CBD)

Zambia is party to the Convention on Biological Diversity (CBD). The CBD was signed and ratified in 1992 and 1993 respectively. Apart from committing to conserving genetic, species and ecosystem diversity, Zambia was required to prepare the National Biodiversity Strategy and Action Plan. The main focus of the Strategy and Plan is to:

Guarantee the conservation of the full range of Zambia's natural ecosystems through a network of protected areas; Conserve the genetic diversity of Zambia's crops and livestock; Improve the legal and institutional framework and manpower resources to implement the strategies for conservation, sustainable use and equitable distribution of benefits from biodiversity management; Sustainably manage and use Zambia's biological resources and finally develop an appropriate legal framework

and human resources competence to minimize the risks associated with use of genetically modified organisms (GMOs).

2. United Nations Framework Convention on Climate Change (UNFCCC)

This Convention was signed and ratified in 1992 and 1993 respectively. Among other things it calls for Parties to address issues of green houses gases (GHGs) by conducting inventories of GHG emissions and preparing adaptation and mitigation measures to climate change.

3.2. Implementation of institutional capacity to monitor, manage and integrate international conventions and climate change considerations in decisions making and operations.

Zambia is party to the Kyoto Protocol, a legally binding instrument put within the international framework of dealing with climate change. The country ratified it on July 7, 2006 and came into force on October 5, 2006 and sets emission reduction targets for over 35 industrialised nations in Annex 1. Zambia as a developing country without significant gas emissions is a non-Annex 1 country and therefore has no obligatory emission reduction.

Therefore, the implementation of the climate change convention in Zambia has placed adaptation to climate change as a priority. Mitigation and adaptation are the two strands to any strategy for tackling the threat posed by climate change. Mitigation is about minimizing future climate change by weakening the link between economic growth and carbon emissions. Adaptation is about-facing up to the fact that climate change is inevitable and that many of the most threatened countries have the least capacity to adapt.⁶³

⁶³ Ambuj Sagar et al, 'Climate Change, Energy and Developing Countries.' Vermont Journal of Environmental Law 7 (2005-2006).

3.2.1. Clean Development Mechanism

The country is participating in reducing Green House Gas emissions through flexible mechanisms under the Kyoto's **Clean Development Mechanism** (CDM). The designated national authority for the approval of Clean Development Mechanism (CDM) projects has been established, formed by an Ad-Hoc board of the most relevant national stakeholders to the CDM process, and hosted by the Ministry of Tourism, Environment and Natural Resources.

The Clean Development Mechanism (CDM) is defined in Article 12 of the treaty. The implication of the CDM is that Annex 1 Parties may sponsor projects that reduce emissions in non-Annex 1 Party territories, in exchange for certified emission reductions (CERs). Such projects may be, for example, power generation through solar energy. Under the CDM therefore, developed country parties can invest in projects that result in reducing emissions in developing country host parties. According to Allan Dauchi a natural resources development officer at the Ministry of Tourism, Environment and Natural Resources, big industries in the West that emit a lot of greenhouse gases will be compelled to invest in environment programmes such as afforestation and conservation farming programmes in countries like Zambia.⁶⁴ The CER will then be credited to the Annex 1 Party for the purpose of meeting its Protocol emission reduction targets. For a project to qualify as CDM it must be approved by all Parties involved and this may be obtained from designated national authorities (DNAs) which are to be set up by each Annex 1 and non-Annex 1 Party. The establishment of the envisaged DNAs and the creation of the framework for CDM projects will provide for the African environmental lawyer, an opportunity to contribute to the achievement of sustainable development.⁶⁵ The CDM is still in its developmental stages, and there is yet no known fully documented transaction.

⁶⁴ The Times of Zambia, November 21 2007

⁶⁵ Saji Awogbad, What is the Place of Practice of Environmental Law in Africa's Development? Published November 9, 2006 - Nigeria www. HG.org (Worldwide Legal Directories)

3.2.2. National Adaptation Programme of Action

Furthermore, the Zambia Government has deemed it fit to develop the **National Adaptation Programme of Action** (NAPA) through the financial mechanisms of the Global Environment Facility (GEF) under direction of the United Nations Framework Convention on Climate Change (UNFCCC). The NAPA was submitted to the UNFCCC Secretariat in 2007. The NAPA, specifically addresses immediate, pressing adaptation priorities in food security, and public health. The NAPA also pointed out that there is evidence of Climate Change affecting other sectors, such as forestry and wildlife, land management, energy and Tourism; we now require resources to implement the NAPA.

National adaptation programmes of action (NAPAs) provide a process for least developed countries (LDCs) to identify priority activities that respond to their urgent and immediate needs to adapt to climate change – those for which further delay would increase vulnerability and/or costs at a later stage. National Adaptation Action Programme (NAPA) on climate change is a timely development that will assist the country to access funds under the United Nations Framework Convention on Climate Change (UNFCCC) Adaptation Fund. The coming into effect of the Climate Adaptation Fund was a timely development that will add value to the effective implementation of the National Adaptation Action Programme (NAPA), which was meant to address the effects of climate change. Access to the fund would enhance Zambia's efforts in implementing climate change adaptation programmes and fulfill the vision of poverty reduction as enshrined in the Fifth National Development Programme.

Focus of NAPAs

The NAPAs focus on urgent and immediate needs – those for which further delay could increase vulnerability or lead to increased costs at a later stage. NAPAs should use existing information; no new research is needed. They must be action-oriented and country-driven and be flexible and based on national circumstances. Finally, in order to effectively address urgent and immediate adaptation needs, NAPA documents should be presented in a simple format, easily understood both by policy-level decision-makers and by the public.

The NAPA process

The steps for the preparation of the NAPAs include synthesis of available information, participatory assessment of vulnerability to current climate variability and extreme events and of areas where risks would increase due to climate change, identification of key adaptation measures as well as criteria for prioritizing activities, and selection of a prioritized short list of activities.⁶⁶

The development of a NAPA also includes short profiles of projects and/or activities intended to address urgent and immediate adaptation needs of LDC Parties. As an example, Niger's overall objective of the NAPA is to contribute to the alleviation of the adverse effects of climate variability and changes on the most vulnerable populations with the prospect of a sustainable development. In this area, some adaptation measures, consistent with the orientations of the Poverty Reduction Strategy Papers (PRSP) contained in the Rural Development Strategy, were identified.⁶⁷

The Bhutan Poverty Reduction Strategy Paper (BPRSP) and Millennium Development Goals both emphasize on eradicating extreme poverty and hunger by year 2015 by building infrastructure and access to remote communities and villages; to achieve universal primary education; reduce child

⁶⁶ UNFCCC 2007

⁶⁷ Republic of Niger, National Adaptation Programme of Action. (National Environmental Council for Sustainable Development, 2002).

sensitization and national consensus building. To this end the national capacity self assessment for the implementation of the Rio Convention was completed by the UNFCCC focal point in 2007. The assessment identifies the gaps in national capacity for the effective implementation of the United Nations Conventions on Biodiversity (UNCBD), Desertification (UNCCD) and Climate Change (UNFCCC), and proposes a strategy and an action plan to address such gaps.

According to the Ministry of Tourism, Environment and Natural Resources, Zambia has put in place an institutional framework to facilitate the implementation of these projects while eight projects are still at proposal level. They have been endorsed by the government to proceed to formulate full projects for approval.

3.3. Conclusion

In many developing nations such as Zambia, the recognition of the global impacts of climatic changes on the livelihood of the people has informed the decision for the need to put in place strategies for people to adapt to these changes and mitigate the impacts. This is the reason why the Global Environment Facility (GEF) supports least developing countries (LDCs) in developing National Adaptation Programmes of Action (NAPA). This is reflected in Decision 28/CP.7 which states: *“National adaptation programmes of action will serve as simplified and direct channels of communication for information relating to the urgent and immediate adaptation needs of the LDCs.”* There is also need to ensure that public knowledge on issues of climate change is enhanced and the opportunities presented in the Clean Development Mechanism fully implemented.

CHAPTER FOUR

WEAKNESSES IN THE ENFORCEMENT OF ENVIRONMENTAL LAW RIGHTS IN

ZAMBIA

4.0. Introduction

Significant to the relationship between globalization and international trade, new research is consistently reinforcing the reality that environmental degradation - and its many impacts - is neither limited to, nor recognized by international borders. The expanding scope of these global environmental problems has caused both domestic and international environmental laws to increase upon early safeguards, incorporating broader protections to address this new reality. The growth of the environmental law edifice is realized through a multiplicity of international environmental treaties and conventions, as well as many other international covenants; namely international trade agreements.

The aim of this chapter is to highlight the weaknesses of the enforcement mechanisms available to an individual wanting to enforce his environmental rights in Zambia.

4.1. Enforcement of Environmental Law

International environmental treaties and conventions originated from necessity, and have since developed a baseline of environmental protection based upon the creation of environmental norms and principles. These norms and principles underlie what has now become international environmental law, and have also been utilized by countries throughout the world as a foundation upon which domestic protections have been developed. The **Stockholm Declaration of 1972**⁶⁹ was the first widely accepted effort to set forth basic environmental concepts and principles,

⁶⁹ Declaration of the United Nations Conference on the Human Environment, June 16, 1972, reprinted in 11 I.L.M. 1416 (hereinafter "Stockholm Declaration").

including the integration of the environment and development. Subsequent international environmental declarations, such as the **Rio Declaration on Environment and Development**,⁷⁰ served to reinforce and expand upon the environmental concepts and principles first established at Stockholm. Two of the principles that came out of these declarations are the polluter pays principle and the precautionary principle, both of which are fundamental in the relationship between trade and the environment.

The polluter pays principle is codified in Principle 16 of the Rio Declaration, and is designed to internalize environmental externalities by shifting the cost of environmental harm from society to the person causing the harm.⁷¹ Although originally recommended by the Organisation for Economic Co-operation and Development (OECD) Council in May 1972, it is still highly controversial, particularly in developing countries where the burden of internalizing environmental costs is perceived as being too high.⁷² Nevertheless, it is a fundamental tool in safeguarding the environment as it integrates environmental protection and economic activities, ensuring that full environmental and social costs are reflected in the ultimate market price for a good.⁷³ The polluter pays principle is critical in harmonizing environmental standards across countries, and is endorsed in Agenda 21 by urging governments to use "free market mechanisms in which the prices of goods and services ... increasingly reflect the environmental costs."⁷⁴

⁷⁰ Rio Declaration on Environment and Development, June 13, 1992, reprinted in 31 I.L.M 876 (hereinafter "Rio Declaration").

⁷¹ J. Martin Wagner, 'International Investment, Expropriation and Environmental Protection' Golden Gate U.L. Rev. 29 (1999) 465, 468at 469

⁷² OECD Council Recommendations on Guiding Principles Concerning International Aspects of Environmental Policies, May 26, 1972, C(72) 128.

⁷³ David Hunter et. al., International Environmental Law and Policy. 3rd ed. (New York: Foundation Press, 2007).p. 412

⁷⁴ United Nations Conference on Environment and Development, Agenda 21, UN. Doc. A/ Conf. 151/26, 30.3 (1992), available at [www. Un. Org/ esa/sustdev/agenda 21text. htm](http://www.Un.Org/esa/sustdev/agenda21text.htm)

In turn, the precautionary principle addresses how environmental decisions are made in the face of scientific uncertainty.⁷⁵ Principle 15 of the Rio Declaration offers the most widely accepted elaboration of the principle, providing in part: "[w]here there are threats of serious or irreversible damage, lack of scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation." Thus, the focus is on avoiding delay and acting before environmental harm occurs. Principle 15 forbids using scientific uncertainty as a reason for postponing cost-effective measures to prevent environmental harm. This doctrine does not prescribe what policy measures should be taken, only when.⁷⁶

Therefore, both the polluter pays principle and the precautionary principle serve as guiding doctrines of international environmental law, and are fundamental to a country's ability to protect the environment. These, as well as other concepts and principles of environmental protection have been widely accepted internationally, and have been integrated at both the domestic and international level.

4.2. Offshore Litigation

Climate change is a serious environmental problem that requires a legal response. For example areas of law implicated in the regulation and reduction of greenhouse gas emissions include tax, capital markets, trade, corporate, property, administrative, tort, criminal, finance and environmental. A multidisciplinary approach is essential to anticipating and successfully managing the risks inherent in this field. The perceived failure of democratic process to hold governments

⁷⁵ David Hunter et. al., International Environmental Law and Policy. 3rd ed. (New York: Foundation Press, 2007).p. 405

⁷⁶ David Hunter et. al., International Environmental Law and Policy. 3rd ed. (New York: Foundation Press, 2007).p. 406

and international organizations to account for decisions resulting in environmental damage has resulted in a rise in interest in using court proceedings at the national and international level.⁷⁷

African countries have a surprising number of environmental rights, but in the vast majority of cases the institutional capacity to protect and enforce those rights are lacking. While Zambia has statutes, regulations and other provisions to protect the environment, they are often not enforced. On the face of it, the legislative framework on the environment in Zambia appears quite well structured, comprehensive and thorough. Obviously, the “proof of the pudding” will lie in the “eating” (the application and enforcement of the legislation). As well as acting as a safety net, constitutional provisions elevate environmental protection to a fundamental human right and it is for this reason that two-thirds of African nations have a constitutional right to a healthy environment. However, few African courts have applied these rights. For example, under the Directive principles of State policy in the Zambian constitution, provisions relating to a healthy environment are not justiciable and shall not thereby, by themselves, despite being referred to as rights in certain instances, be legally enforceable in any court, tribunal or administrative institution or entity.⁷⁸

Furthermore, as a result of the incipient nature of environmental framework and hence the dispute resolution approaches thereto, most African countries have not evolved the jurisprudence that accords the right weight to environmental damage. This inspires ‘forum shopping’ by litigants, the most likely destination being the United States of America.

⁷⁷ Farhana Yamin, NGOs and International Environmental Law: A Critical Evaluation of their Roles and Responsibilities. (Blackwell Publishers Ltd, 2001).p. 159

⁷⁸ Article 111 of the Zambian Constitution (Chapter One of The Laws of Zambia).

Under the **Alien Torts Claims Act (ATCA)**⁷⁹ of the United States of America, non-U.S. citizens have a standing to file actions against multi-nationals (whether U.S. citizens or not) to remedy environmental damage on the basis of the provision that District Courts shall have original jurisdiction over any civil action by an alien for a tort only, committed in violation of the law of nations or a treaty of the United States.⁸⁰ Certain conditions however must be fulfilled for U.S. courts to assume jurisdiction under ATCA. They are:⁸¹

- The balance of the interests of the United States and of the foreign state to keep jurisdiction must tilt in favour of the former. This determination is purely at the discretion of the courts.
- Plaintiff must show that United State courts are the more adequate forum to litigate the matter. Corruption, weak, judicial systems, or dictatorship could make the country where the tort took place inappropriate. Since the courts in the country where the damage occurred are in a better position to assess the harm, the plaintiff must prove in what way the U.S is a better forum, otherwise the doctrine of forum non-convenience would be invoked to decline jurisdiction.
- In addition, the plaintiff must prove the existence of a customary international right to a healthy environment (RHE) which has been violated.⁸² The text of the conventions mentioned above indicates that *opinio juris* among states is yet to emerge as there is no duty to protect a right to a healthy environment. *Opinio juris* is a psychological element which approximates to the consideration by states that an existing rule of law requires it to act in a certain way. In *Florez v.*

⁷⁹ 28 U.S.C. §1350

⁸⁰ C. Shaw, 'Uncertain Justice: Liability Under the Alien Torts Claims Act' Stanford Law Review 1364 (2002).

⁸¹ Rogue Romero, *Using of the US Alien Tort Claims Act for Environmental Torts: The problem of Definability of the Right to a Healthy Environment*, Vol.16, Article 7, CEPMLP Internet Journal,(2005)

⁸² Ibid.

*Southern Peru Copper Corporation*⁸³, jurisdiction was declined under ATCA on the ground that general principles of environmental law as embodied in international instruments and treaties do not constitute international norms enforceable for ATCA purposes.

It is uncertain whether having regard to the decision in Florez case, the medium presented by ATCA is still open to African causes of action.

4.3. Private Law Rights and Environmental Protection

Under the principles of common law, environmental damage could either be litigated as negligence, as nuisance or as contractual obligations. Nuisance is an unreasonable disturbance of the comfortable enjoyment of property. Remedies of injunction and damages are available if the tort of nuisance is established. An obvious restriction on the use of nuisance for the management of the environment is the condition that an action for nuisance may be brought only by those with a recognized interest in the land affected by the nuisance. The remedy of injunction available in nuisance is sometimes used to force a defendant to adopt clean technology by prohibiting the continuation of a particular process until the method of carrying out the activity is changed.⁸⁴ Another inadequacy of the current state of the law is that in a preponderance of cases damages is only awarded for injury to affected land as some authorities maintain that damages is not recoverable for personal injury or damage to moveable property that is not connected with injury to land.⁸⁵

Liability in negligence arises if a person fails to exercise reasonable care, where there is foreseeable risk of injury. For liability to arise, one person must owe the other a duty of care. In the

⁸³ 253f. Supp.2d 510 (S.D.N.Y. 2002).

⁸⁴ See for instance *Shortts hon. Co. v. Higgs* (1882) 9 R (HL) 78

⁸⁵ *Hunter v. Canary Wharf Ltd* (1997) 2 WLR 684

context of environmental protection, it may be onerous to establish the requisite degree of proximity that will prove the existence of the duty of care. For instance, would a court ever hold that a duty of care exists between a company in South Africa which emits greenhouse gas and a farmer in Ghana whose cattle suffer the impact of the emissions? Another question is whether a person who breaches his duty of care but meets the statutory standard is still liable?

In Nigeria, negligence has provided a platform for defendants to recover damages following an oil spill. In *Shell Petroleum Development Company Nigeria Ltd v. Chief T Kille*,⁸⁶ the Plaintiff recovered damages for injury caused to the environment for oil spillage from the Defendants' flow station. The same result was achieved in *Shell Petroleum Development Ltd. v. Amao*⁸⁷ and in *Nigeria National Petroleum Corporation (NNPC) V Chief Stephen Sele*.⁸⁸ In all these cases the Plaintiff's losses were made good by the courts. However, in none was any order made for the clean-up of the spillage or the defendant required to apply the sum recovered as damages to remediation of the environment. As such action in negligence is usually of limited value to the impacted or damaged environment.

A contractual nexus is sometimes valuable as a route. Due to the distinctive relationship between trade and the environment, provisions have been written into many international trade agreements that are designed to offer a variety of environmental safeguards. In theory, such protections would allow "environmentalists" to breathe a sigh of relief. In recent times various contracts and memoranda have been exchanged between stakeholders in the government, industry and community. These contracts generally set out a scheme of the relationship among stakeholders and form the basis of the interaction. Concession agreements, production sharing contracts may also be

⁸⁶ (2000) 10 NWLR (Pt. 675) 248.

⁸⁷ (2000) 10 NWLR (PT. 675) 248

⁸⁸ (2004) 5 NWLR (PT. 866) 379

utilized to impose environmental protection mechanisms. Uniquely, contracts present an opportunity for the government (protector of the environment) and the private developer (essentially much interested in profit) to achieve a synergy as to how much interference with the environment is permissible. However, as applied, many of these protections are undercut by other conditions within the trade agreements that favor trade at any cost; and in some cases even undercut existing international and domestic environmental protections. The latter of these phenomena has been an unexpected.⁸⁹

For example, reliance on international environmental concepts and principles, such as the polluter pays principle and the precautionary principle, clearly face significant challenges when confronted with provisions of international trade agreements designed to protect investor rights. Although investment security should not be marginalized, it must be contended that there is a balance to be struck. Countries must be allowed to take measures necessary for the protection of the environment and human health. While every effort should be made to ensure that such measures are not disguised as restrictions on trade, countries should be able to champion international environmental principles without fear of a suit. Perhaps the correct answer is also one of the simplest. International expropriation provisions should parallel modern takings jurisprudence, limiting compensation to the taking of real property that denies all economically beneficial or productive use, and allowing regulations to advance legitimate state interests- conceivably striking a balance between trade and the environment.⁹⁰

It is for this reason that more countries enact laws requiring developers to assess the environmental impacts of proposed projects, environmental impact assessments (EIAs) hold the promise of

⁸⁹ Kyle Tisdell, Trade and the Environment: How Free Trade at Any Cost is Undercutting Environmental Protection. (2005)

⁹⁰ Saji Awogbad, What is the Place of Practice of Environmental Law in Africa's Development? Published November 9, 2006 - Nigeria [www. HG.org](http://www.HG.org) Worldwide Legal Directories.

moving us toward a more sustainable future. EIAs can force developers to assess the environmental impacts of proposed projects, identify alternatives to proposed projects and measures to reduce their environmental impacts, and give affected communities an opportunity to participate in decisions about their future.

Unfortunately, EIAs do not always fulfill their promise. Government agencies working with limited resources or feeling political pressure too often “rubber stamp” inadequate EIAs. EIA documents are often lengthy and technical. Often, public interest environmental lawyers and communities in developing countries have little or no experience reviewing EIAs and evaluating their adequacy.

It is evident from what has been said in the other chapters that while created norms on which the principles of sustainable development can be built, it has not initiated the rules by which enforcement can be based especially in emerging economies such as Zambia. International law has not evolved norms which could be enforced by environmental lawyers in Africa for the purpose of environmental protection. The limitations of the Kyoto Protocol and the Alien Torts Claims Act have already been noted. With the coming into force of the Kyoto Protocol and its flexible mechanisms of Joint implementation and emission trading should constitute a nice playground for the lawyer in Annex 1 Parties to participate in achieving sustainable development.

A panoramic view of the national laws of Nigeria, South Africa, and Ghana shows that environmental regulation in Africa is still emerging. Another common denominator is the command and control structure of environmental governance entailing the establishment of

institutions with seemingly overbearing powers.⁹¹ This structure which has many upsides, suffers some peculiar downsides in terms of ability of the institutions to cope with their remit. Preponderantly, assigned functions are not performed except they lend themselves to other uses of a-not-strictly enviro-centric nature. The lack of sanctions or the non-enforcement of those existing in the statute books, severely short changes the environment and persons having a professional interest in the enforcement of rules.

In South Africa, for instance, an international NGO, the Environmental Investigation Agency says local authorities have done little in the way of monitoring air pollution and enforcing environmental standards. It records that in 2001, of the 284 South African municipalities, only 131 performed air quality monitoring and of those, only 97 took steps to assure compliance and there was no penalty imposed for no-compliance. In Nigeria, the Ogoni Community has protested against what they perceive as government acquiescence to environmental degradation by non-enforcement of environmental law and regulations.⁹² If this setting is representative of the African attitude the environmental lawyer has a severely diminished place in the framework.⁹³

4.4. Conclusion

Zambia has poor environmental regulations and polices compared to developed countries. In the past, despite the initiation of the National Conservation Strategy in 1985, legal requirements and regulations for controlling mining environmental impacts have been secondary. The mining companies had no obligation to follow the law, and the government did little to enforce it. This

⁹¹ Soji Awogbad, What is the Place of Practice of Environmental Law in Africa's Development? Published November 9, 2006 - Nigeria [www. HG.org](http://www.HG.org) Worldwide Legal Directories.

⁹² Soji Awogbad, What is the Place of Practice of Environmental Law in Africa's Development? Published November 9, 2006 - Nigeria [www. HG.org](http://www.HG.org) Worldwide Legal Directories.

⁹³ Ibid.

changed slightly when the **Environmental Protection and Pollution Control Act**⁹⁴ was enacted in 1990. The Act provided regulations for protection and pollution control as well as the creation of a support institution, the Environmental Council of Zambia (ECZ). In 1992 the Ministry of Environment and Natural Resource was developed, however, questions arise as to how well the local council implemented the law.

Climate change is an example of a common problem in environmental law: delayed harm, where environmental harm only manifests itself long after the human activity that causes it. Delayed harm poses specific challenges to environmental policymakers: It makes causation difficult to establish or prove, making the use of liability systems difficult. It poses significant political obstacles to the establishment of regulatory systems to address the harm, because of the entrenchment of economic interests, myopia, and endowment effects. And perhaps most importantly, it poses significant challenges to the maintenance of regulatory programs after they are created - even if the regulatory program succeeds at eliminating the human activity causing the harm (perhaps at great cost), the harm will continue to persist for an extended period of time because of the delay.⁹⁵

It is no secret that mining can have some detrimental effects on the environment. Most importantly, a non renewable resource is being exhausted. Environmental impacts are seen in all stages of the mining process; exploration, disposal of waste rock, ore processing, tailings (processing wastes) and plant operations.⁹⁶ Negative impacts include soil erosion, vegetation

⁹⁴ Chapter 204 of the Laws of Zambia

⁹⁵ Eric Biber, The Sting of the Long Tail: Climate Change, Backlash and the Problem of Delayed Harm. (California: University of California, 2008)p. 1

⁹⁶ C.N Boocook, Environmental Impacts of Foreign Direct Investment on mining sector in Sub-Saharan Africa. OCED Global Forum on International Conference on Foreign Direct Investment and the Environment. (January 2002)

removal, contamination of underground water and acid drainage.⁹⁷ Because some of these effects are not seen immediately, it can be easy to ignore them; however, apparent signs may indicate that it is too late. With all these impacts, it is important to implement policies that can effectively manage the environment.

⁹⁷Ibid

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.0. CONCLUSION

It must be pointed out that reducing emissions in industrial countries is just one side of the story. It is becoming increasingly clear that developing countries will drive the future of global economic growth. Estimates show that by 2030, about half or more of the purchasing power of the global economy will stem from the developing world. Their share in world GDP could reach 60 percent in terms of purchasing power parity and their share in world trade almost 50 percent.⁹⁸ These increases have important implications for both green house gas emissions and any future climate change regime. Though developed countries remain the largest per capita emitters of green house gases today, the growth of carbon emissions in the next decades will come primarily from developing countries, which are following the same energy-and carbon-intensive development path as their rich counter parts have done.⁹⁹ It is projected that, between 2020 and 2030, developing country emissions of carbon from energy use will exceed those of developed countries. It is for this reason that any kind of post-Kyoto international regime that will emerge to address climate change cannot ignore these startling facts.

Customary international law imposes several important fundamental obligations upon states in the area of environmental protection. The International Court reinforced this approach, by emphasizing in the Corful Channel¹⁰⁰ that it was the obligation of every state 'not to allow knowingly its territory to be used for acts contrary to the rights of other states'. The court also noted in the Request for an Examination of the Situation in Accordance with Paragraph 63 of

⁹⁸ . *Global Economic Prospects 2007: Managing the Next Wave of Globalization*. (Washington, DC: World Bank, 2007b.p.3.

⁹⁹ *Global Economic Prospects 2007: Managing the Next Wave of Globalization*. (Washington, DC: World Bank, 2007b. p. 3

¹⁰⁰ Corful Channel Case (Merits), I.C.J.Rep.1949

aims to control air pollution, emission of greenhouse gases and ozone-depleting pollutants. The later Act extends civil and criminal penalties for polluters, initially provided for in Section 34 (7) of the **Natural Environment Management Act**. Unlike Zambia's environmental legislation, South Africa's legislation is fairly comprehensive and its emission control provisions are particularly instructive. Notwithstanding, South African courts still come under criticism for their lenient enforcement posture which is capable of rendering legislation ineffective.

5.1. RECOMMENDATIONS

While the implementation of the Kyoto Protocol may have brought to light some inherent conflicts between economic growth and environmental protection, the objectives of Kyoto also provide an opportunity for aligning development and energy policies in such a way that they could stimulate production, trade, and investment in cleaner technology options. How then can this be done?

5.1.1. Promotion and facilitation of multisectoral and integrated coordination of environmental policies, legislation and regulations.

There is need to strengthen the institutional mechanisms for enforcement of environmental standards and the sustainable management of natural resources. This can be achieved by building the capacity of environmental authorities to enforce standards that promote sustainable natural resources management. Such support can enhance Government's capacity to negotiate with commercial and industrial firms to contribute towards cleaning the environment. In this way the many environmental international conventions to which Zambia has acceded will have been internalised through legal reforms, new regulatory frameworks and improved enforcement and reporting.

5.1.2. Increase and encourage the diffusion of clean technology into Zambia

Access to climate-friendly clean energy technologies is especially important for the fast-growing developing economies. It would thus be necessary to streamline intellectual property rights, investment rules, and other domestic policies to aid in widespread dissemination of clean technologies in Zambia. Firms sometimes avoid tariffs by undertaking foreign direct investment (FDI) either through a foreign establishment or through projects involving joint ventures with local partners. While FDI is the most important means of transferring technology, weak intellectual property rights (IPR) (or perceived weak IPR) regimes in developing countries including Zambia often inhibit diffusion specific technologies beyond the project level.¹⁰⁵ Developed country firms, which are subject domestically to much stronger IPRs, often transfer little knowledge along with the product, thus impeding widespread dissemination of the much needed technologies. Further, FDI is also subject to a host of local country investment regulations and restrictions. Most non-Annex 1 countries such as Zambia have low environmental standards, low pollution charges, and weak environmental regulatory policies. These are other hindrances to acquisition of sophisticated clean energy technologies. Therefore there is need to introduce Environmental friendly and Clean Energy legislation for united efforts against global warming.

5.1.3. Encourage education and research

Education for Sustainable Development seeks to enable individuals to take informed and responsible decisions and actions, now and in the future. Educating about climate change contributes to building the skills and attitudes needed to question the way we think, the values we hold and the decisions we make in the context of sustainable development. Improving awareness about sustainability concerns such issues as the impact of human activities on Earth systems,

¹⁰⁵ *Global Economic Prospects 2007: Managing the Next Wave of Globalization*. (Washington, DC: World Bank, 2007b). p. 100

control of greenhouse gases, land and energy use, consumption patterns, pollution and transport, all of which have direct connections to educating for sustainable development.¹⁰⁶

Higher education and research in Africa are key to solving problems caused by climate change. For years the world has talked about primary education for Africa, but Africans are telling a different story. Frankly, they have the capability to provide primary education—it is higher education and research skills that they require to compete on international markets. Instead of Japan investing in building of 1,000 schools, it should invest in children's laptops that can hold 1000 books and connect universities with higher-band width, low-cost internet so that new intellectual leadership can grow for Africa and its burgeoning academia can share in the information economy and keep up-to-date on advanced knowledge.

5.1.4. Raise awareness

There is need to ensure that public knowledge on issues of climate change is enhanced and the opportunities presented in the Clean Development Mechanism (CDM) fully implemented. By many accounts, African environment media remained in a pristine state even after centuries of human plunder, use and abuse. The abysmal ignorance of basic issues of environmental significance at all levels in the continent is a major cause of the problems hitherto highlighted in this paper. Where awareness exists, the willingness to do what is right is the next obstacle. The reasons for this reluctance are invariably subjective. What is clear is that by the combined effect of both low levels of knowledge and unwillingness to act, a lot of harm is done not just to environmental media, but to people as well. In most of the world, expressions such as 'not in my back yard' otherwise known as the nimby ensure that environmental damage is keenly watched

¹⁰⁶United Nations Decade for Education for Sustainable development. <http://portal.unesco.org/education/>

and the perpetrator pays fully for it.¹⁰⁷ Where the damage can be prevented, stringent action is taken to ensure that the harm is not done.

This essay has tried to identify whether or not Zambia's environmental legal and institutional framework can effectively tackle the challenges posed by climate change. It is hoped that the development of the **National Adaptation Programme of Action** (NAPA) through the financial mechanisms of the Global Environment Facility (GEF) under direction of the United Nations Framework Convention on Climate Change (UNFCCC) will provide a process for Zambia to identify priority activities that respond to their urgent and immediate needs to adapt to climate change. However, as things stand climate change or is it global warming pose a serious threat to Zambia's environment and thus a great challenge to the environmental law regime.

¹⁰⁷ Saji Awogbad, *What is the Place of Practice of Environmental Law in Africa's Development?* www. HG.org Worldwide Legal Directories

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