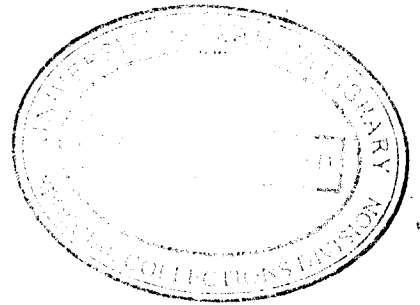


**AN APPRAISAL OF THE ENVIRONMENTAL IMPACT ASSESSMENT IN  
ZAMBIA**

By

**CHEELA MUYUNDA**

**(27053695)**

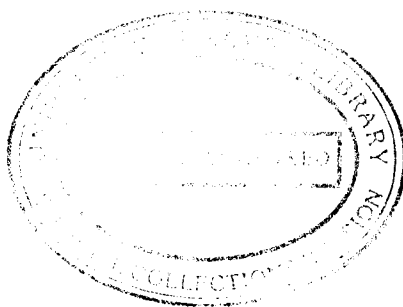


A dissertation submitted to the University of Zambia in partial fulfillment of the requirements of  
Bachelor of Laws degree (LLB)

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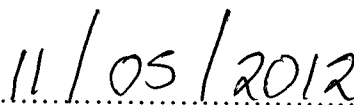
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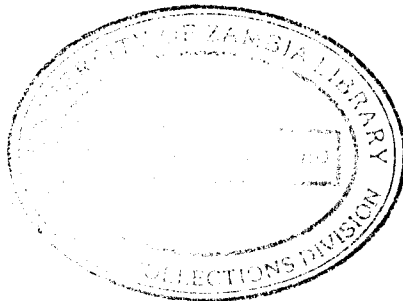
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## **DEDICATION**

To my Mother Getrude Manda; this work was inspired by your endless support and encouragement to me. Therefore it is only proper that this work stands as one of many attributes to your presence in my life.

## ACKNOWLEDGEMENTS

I wish to acknowledge and extend my gratitude to my family for their resolute support. I also wish to acknowledge Aunty Rachael, Gogo Ireen, and Mr. F. Mudenda for their tremendous contribution to this research. I extend my heartfelt gratitude to some specific friends Kombe, Namusanje, Mwelwa, Apton and Vanessa for their presence in my stay at University of Zambia and their direct or indirect contribution to this research. I also acknowledge and appreciate the direct or indirect contributions, of all the other persons that have not been mentioned, to this research.

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## ABSTRACT

An environmental impact assessment (EIA) is an assessment of the possible positive or negative impacts that a proposed project may have on the environment, together consisting of the environmental, social and economic aspects. Generally the rationale behind environmental impact assessment is to ensure that decision makers as well as the relevant stakeholders consider the ensuing environmental impacts when deciding whether to proceed with a developmental project. Environmental impact assessment is recognized as an essential component in the promotion of sustainable development. However, it is argued that, there is lack of definitive utilization of the mechanism of environmental impact assessment in Zambia. Therefore, it is necessary to determine to what extent the mechanism of Environmental Impact Assessment as provided by the Pollution Control (Environmental Impact Assessment) Regulations: statutory instrument No. 28 of, 1997 is achieving it's intended objective.

This paper discusses the Law relevant to Environmental Impact Assessment, in order to establish the extent of Zambia's commitment to the environmental protection goals embodied under the Environmental Impact Assessment mechanism. This paper establishes that in theory, to a large extent Zambia has shown its commitment to these goals by enacting regulations and environmental protection laws that cover the fundamental sectors of the economy and types of environmental degradation. The paper also examines internal and external response to the Environmental Impact Assessment in Zambia. However, the dissertation establishes that in practice, the general Zambian law on environmental impact assessment is not as effective as it is required to be as a result of the need to achieve economic development goals at the cost of achieving environmental protection goals embodied in the environmental impact assessment mechanism. The dissertation also establishes that this has resulted in using it as a decision aiding tool for economic develop. This dissertation also shows the criticisms, weaknesses, challenges and inadequacies of the practical application of the existing Environmental Impact Assessment mechanism in Zambia.

Finally, recommendations have been made regarding how to address the inadequacies of the Environmental Impact Assessment mechanism in Zambia so as to improve it and ensure that its goal of promoting sustainable development is adequately and effectively achieved. A conclusion is drawn showing that in Zambia there is a situation where survival takes precedence over environmental protection resulting in a situation where environmental protection goals embodied under the Environmental Impact Assessment mechanism are undermined. It has also been shown that environmental protection can coexist with developmental goals. This can be achieved by putting in place a proper mechanism that can ensure that trade and developmental activities results in sustainable development. It has also been stated that ideally, this can best be achieved through a well organised system of environmental impact assessment.

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## **CHAPTER 1**

### **THE ENVIRONMENTAL IMPACT ASSESSMENT MECHANISM**

#### **1.1 INTRODUCTION**

Trade and developmental activities are the main aspect of Zambia's economy. This has inspired a multitude of changes that have influenced environmental protection both positively and negatively. This is because trade and development depend on the environment in order to succeed as the panacea to Zambia's economic doldrums. Therefore, various pieces of legislation have been passed and abolished in order to respond to both social and economic factors prevailing in the country. At the core of environmental protection is the process of environmental impact assessment. The aim of this research is to make an appraisal of the environmental impact assessment process in Zambia.

The problems, implications and motivations of enacting the Pollution Control (Environmental Impact Assessment) Regulations Statutory Instrument No. 28 of, 1997 cannot be discussed in isolation; therefore, an examination of the different issues surrounding environmental impact assessment deserves attention. Secondly, the rationale behind environmental impact assessment will be briefly highlighted. This will be done to draw attention to the transformation of environmental protection paving way for a firm appreciation of the process of environmental impact assessment.

#### **1.2 PROBLEM STATEMENT**

It is argued that, there is lack of definitive utilization of the mechanism of environmental impact assessment in Zambia mainly as a result of the need of economic development at the cost of

achieving environmental protection goals. Environmental protection is viewed as an obstacle to development and trade. Therefore, it is necessary to determine the extent to which the Pollution Control (Environmental Impact Assessment) Regulations: statutory instrument No. 28 of, 1997 is achieving its intended goals.

### **1.3 THE PURPOSE OF THE STUDY**

The purpose of this study is to investigate the factors that have lead to the existence of many projects in Zambia which in the recent past and at present have caused damage to or are an eminent threat to the environment despite the fact that Zambia has laws and policies in the relevant field of environmental protection via the process of environmental impact assessment.

### **1.4 OBJECTIVES OF THE RESEARCH**

The ultimate objective of this research is to evaluate the process of environmental impact assessment in Zambia and to highlight the environmental effects of trade and development. What are the challenges and limitations faced and what are the proposed solutions? In order to determine this, the following benchmarks will be addressed:

- i. A review of the views of the national and international community on environmental impact assessment and the environmental effects of trade and development.
- ii. Review the effectiveness of the implementation and enforcement mechanisms of the environmental impact assessment.

- iii. Review of the salient provision of the Environmental Impact Assessment Regulations in a bid to discover whether there is need to reform the law to meet the current challenges.
- iv. The importance of development that is sustainable.

## **1.5 RATIONALE AND JUSTIFICATION OF RESEARCH**

There are a number of activities relating to trade and development that have caused damage or posed an eminent threat to the environment in Zambia. This is against a background of what can be looked at as a volume of legislation and policies relating to environmental protection. The rationale of this research is to find out why environmental impact assessment is not achieving its objectives by looking at its limitations and challenges.

### **1.5.1 RATIONALE OF THE ENVIRONMENTAL IMPACT ASSESSMENT**

Environmental impact assessment procedures are defined by statute with guidance as to when these are to be applied and how. The purpose of Environmental impact assessment is to give the environment its due place in the decision making process by clearly evaluating the environmental consequences of a proposed activity before an action is taken. Environmental impact assessment ensures that the environment is a priority: all levels of governance and all public or private agencies must take environmental assessment into account during decision making. It encourages public participation: The public is consulted and encouraged through meetings, hearings and public inquiries to participate actively in the decision making process. This mechanism also provides for recourse in terms of injury or injustice: It provides for avenues for appeal against an official decision as well as against apparent irregularities in

administration. The process of decision making exists, allowing administrative and judicial review and dispute resolution.<sup>1</sup>

Environmental impact assessment provides a procedure for the full consideration of possible adverse effects, environmental impacts of policy program, activities and projects before any decision to proceed. Therefore it precludes behind closed door decisions in the public and private sector. There is an opportunity to present recommendations to the decision maker on the suitability of the policy or projects on environmental grounds. For proposals that proceed, there is an opportunity to present the incorporation of conditions of consent that mitigate some adverse environmental effects. It is an avenue for the public to contribute to the decision making process. The whole process of development is open to scrutiny for the benefit of the key players resulting in better thought out projects therefore unsatisfactory projects or those on wrong sites tend to weed themselves out before advancing far into the environmental impact assessment process.<sup>2</sup>

This research is important because it will address the limitations and challenges of environmental impact assessment in Zambia so as to pave way for the intended goals and rationale behind it to be achieved. Furthermore, the research will postulate on ways to ensure that the process of environmental impact assessment effectively guarantees and promotes trade and developmental activities that result in development that is sustainable. This research is timely because it will enable that the challenges being faced are corrected now so that the ability of future generations to meet their own developmental needs is not compromised or desolated.

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<sup>1</sup> Gilpin A. *Environmental impact Assessment* (Cambridge: Cambridge University Press, 2000)p.3

<sup>2</sup> Barry Dalal Clayton "Environmental Impact Assessment" Microsoft® Encarta® Encyclopedia 2000

## 1.6 SPECIFIC RESEARCH QUESTIONS

- i. What are the main trade and developmental activities in Zambia and what are their environmental effects?
- ii. Does environmental impact assessment ensure adequate awareness to stake holders on the importance of sustainable development?
- iii. Is there an adequate number of stake holders participating in environmental impact assessment?
- iv. Is there an effective implementation and enforcement mechanisms for the environmental impact assessment?
- v. Are the current trade and development policies comprehensively addressing and balancing trade and development with the environment?
- vi. Are trade and development compatible imperatives with the goals and rationale of environmental impact assessment?

## 1.7 HYPOTHESIS

Some of the hypothetical factors that might be the cause of why environmental impact assessment is not achieving its objects are:

- i. Corruption, political influence and financial constraints.
- ii. That the number of stakeholder's participating in the environmental impact assessment is not adequate nor are they aware of their role; which is a relevant factor because most projects undergoing this assessment have huge long term effects on the environment.

- iii. Stakeholders lack of adequate education and awareness on sustainable development and the long term effects of trade so that they make well informed decisions.
- iv. That policies and incentives to encourage trade and developmental activities tend to suppress environmental protection goals.

## **1.8 METHODOLOGY**

In order to realise the objectives of this dissertation, the following methodology was adopted:

- i) Literature relating to the subject of the research was reviewed.
- ii) Applicable laws, Judicial decisions or case law were studied and analysed
- iii) Some Environmental Impact Assessments were studied
- iv) Questionnaires were used sparingly, and only where it was absolutely essential.

Most of the literature that was reviewed relied upon information gathered from the following key documents:

- i) The National Environmental Action Plan of 1994
- ii) National Policy On Environment 2005
- iii) Zambia Environment Outlook Report 3 (2008)
- iv) Zambia National Environment Situational Analysis Report 2005
- v) Zambia Poverty Reduction Strategy Paper, 2002–2004.
- vi) Millennium Development Goals Progress Report 2003.
- vii) State of Human Rights Report in Zambia: Human Rights and the Environment (2010).
- viii) Text books, journal articles, student's dissertations, internet sources.

## **1.9 CONCLUSION**

In conclusion, this chapter has shown among other things the relevance of this research, how it was carried out and its objectives. It can therefore be said that this study to appraise the environmental impact assessment process in Zambia cannot be over emphasized.

## CHAPTER 2

### LEGAL, POLICY AND INSTITUTIONAL FRAME WORK PERTAINING TO ENVIRONMENTAL IMPACT ASSESSMENT

#### 2.1 INTRODUCTION

The aim of this research is to appraise the environmental impact assessment process in Zambia. The main issue that has to be determined in order to achieve the aim of this research is whether environmental impact assessment in Zambia is effectively achieving its intended goal. One aspect of the afore mentioned issue will be determined in this chapter by highlight the legal, policy and institutional frame work pertaining to environmental impact assessment by looking at relevant provisions from the Constitution of the Republic of Zambia, relevant provisions from the Zambia Environmental Management Act No. 12 of 2011, and the the Environmental Protection and Pollution Control (Environmental Impact Assessment) Regulations, 1997. This is important because it is a fundamental requirement to the test of Zambia's commitment to sustainable development that it has a proper legislative mechanism put in place to ensure that the desired outcome through environmental impact assessment is achieved.

#### 2.2 THE CONCEPT OF ENVIRONMENTAL IMPACT ASSESSMENT

##### HISTORICAL DEVELOPMENT

In the broad sense the word environment embraces the conditions or influences under which any individual or thing exists, lives, and develops. Their surroundings can be placed into three categories<sup>3</sup>:

- i. The combinations of physical conditions that affect and influence the growth and development of an individual or community.

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<sup>3</sup>Barry Dalal Clayton "*Environmental impact assessment*" Microsoft® Encarta® Encyclopedia 2000

- ii. The social and cultural conditions that affect the nature of an individual or community.
- iii. The surroundings of an inanimate object of intrinsic social value.

The European commission defined the environment as the combination of elements whose complete interrelationship make up the settings, the surroundings and the conditions of life of the individual and of society as they are or as they are felt. Environment is defined in the Environmental Management Act<sup>4</sup>: as the natural or manmade surrounding at any place, comprising air, water, land, natural resources, animals, buildings and other constructions. All these approaches have humanity at the center of things with room for compassion for other species that are in any way related to humanity.

Environmental impact assessment on the other hand is defined by the same Act in section 2 as a systematic examination conducted to determine whether or not an activity or project has or will have any adverse impacts on the environment. (The extent of adverse impact on the environment has not been defined.) An environmental impact assessment (EIA) is an assessment of the possible positive or negative impacts that a proposed project may have on the environment, together consisting of the environmental, social and economic aspects.

The purpose of the assessment is to ensure that decision makers consider the ensuing environmental impacts when deciding whether to proceed with a project. The International Association for Impact Assessment (IAIA) defines an environmental impact assessment as "the process of identifying, predicting, evaluating and mitigating the biophysical, social, and other relevant effects of development proposals prior to major decisions being taken and commitments made."<sup>5</sup> EIA's are unique in that they do not require adherence to a predetermined environmental

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<sup>4</sup> Environmental Management Act No. 12 of 2011 section 2

<sup>5</sup> Barry Dalal Clayton "Environmental impact assessment" Microsoft® Encarta® Encyclopedia 2000

outcome, but rather they require decision makers to account for environmental values in their decisions and to justify those decisions in light of detailed environmental studies and public comments on the potential environmental impacts of the proposal.

EIAs began to be used in the 1960s as part of a rational decision making process. It involved a technical evaluation that would lead to objective decision making. EIA was first made legislation in the United States in the National Environmental Policy Act (NEPA) 1969. It incorporated a requirement for assessing the environmental impact of major federations significantly affecting the quality of human environment. During this period in time other countries like Canada and Europe incorporated environmental impact assessment either relating to a specific law or in the town and country planning policies.<sup>6</sup> Environmental impact assessment is recognized as an essential component in the promotion of sustainable development. This view can be confirmed by the Brundtland Commission (World Commission on Environment and Development). It is seen as the most viable mechanism to ensure that trade and development activities result in sustainable development.<sup>7</sup>

Zambia's first move to develop a National Policy on Environment was done through the National Conservation Strategy (NCS) of 1985. The two main outputs from the NCS were a legislative review and a comprehensive environmental education programme. The legislative review resulted in the Natural Resources Act and drafting of the Environmental Protection and Pollution Control (EPPCA) Act. The latter established the Environmental Council of Zambia to become a focal point for environmental affairs and to implement the EPPCA. The EPPCA also facilitated the enactment of the current legal framework on environmental impact assessment in the

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<sup>6</sup>Peter Tarr, *Environmental impact assessment in southern Africa*, (Windhoek: SAIEA, 2003)p.98

<sup>7</sup> Gilpin A. *Environmental impact Assessment* (Cambridge: Cambridge University Press, 2000) p.1

Pollution Control (Environmental Impact Assessment) Regulations Statutory Instrument No. 28 of 1997.<sup>8</sup>

At present there is the Environmental Management Act No. 12 of 2011 which repealed and replaced the Environmental Protection and Pollution Control (EPPCA) Act of 1990. The Environmental Management Act No. 12 of 2011 under section 29 and 30 also provides for environmental impact assessment for projects that may have an adverse effect on the environment. This is facilitated by SI number 28 of 1997 which is still in force by virtue of section 15 of Chapter 2 of the laws of Zambia which provides that; where any Act, Applied Act or Ordinance or part thereof is repealed, any statutory instrument issued under or made in virtue thereof shall remain in force, so far as it is not inconsistent with the repealing written law, until it has been repealed by a statutory instrument issued or made under the provisions of such repealing written law, and shall be deemed for all purposes to have been made there under.

## **2.3 LEGISLATIVE AND INSTITUTIONAL FRAMEWORK**

### **2.3.1 THE CONSTITUTION OF THE REPUBLIC OF ZAMBIA**

The Constitution of Zambia<sup>9</sup>, enshrines matters that relate to the environment and natural resource management thus providing the keystone to the National Policy on Environment. In Article 112 the Constitution affirms that the State shall:

1. Endeavour to provide clean and safe water; adequate medical and health facilities and decent shelter for all persons and take measures to constantly improve such facilities and amenities.

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<sup>8</sup> Bertha OseiHwedie, *Environmental protection and economic development in Zambia*, journal of social development in Africa 1996 p.67

<sup>9</sup>Chapter 1 of the Laws of Zambia.

2. To provide a clean and healthy environment for all.
3. To promote sustainable development and public awareness on the need to manage the land, air and water resources in a balanced and suitable manner for the present and future generations.

Article 113 provides that every citizen shall contribute to the well-being of the community where that citizen lives, including observance of health controls and that the provisions are intended to guide the State in the development and implementation of national policies; enactment of laws and application of the Constitution and any other law. However these provisions are not justiciable therefore a citizen cannot take the government to court to make them accountable or to compel them to ensure that their policies comply. As the issue of environmental protection via environmental impact assessment is a very important mechanism to be used by the government to ensure that trade and developmental activities result in sustainable development, it is imperative that a constitutional mechanism should be available to compel the government to use this mechanism for the intended purposes

### **2.3.2 THE ENVIRONMENTAL PROTECTION AND POLLUTION CONTROL (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS, NO. 28 1997.**

Environmental management in Zambia starts with Environmental Impact Assessment (EIA), thereafter, licensing and compliance monitoring follow in accordance with various regulations. The Zambia Environmental Management Agency (ZEMA) as established by Environmental Management Act is the lead agency in matters of environment in Zambia. It is empowered

through the EIA Regulations, Statutory Instrument no. 28 of 1997 to identify projects, plans and policies for which Environmental Impact Assessments are necessary.<sup>10</sup>

An EIA is a thorough investigation of conditions within the environment of a proposed development or project followed by an assessment of the impacts that the development or project will have on the environment in its totality for instance physical, biological and social-economic aspects. The purpose of conducting an EIA in this regard is to enhance quality by ascertaining the environmental acceptability of the development or project long before it is implemented.

### **THE ENVIRONMENTAL IMPACT ASSESSMENT PROCESS IN ZAMBIA**

In order to ensure that the EIA process is implemented smoothly and in a satisfactory manner, it should meet all the following essential requirements:<sup>11</sup>

- Identify the different interested and affected parties (IAPs).
- Be open and involve all interested and affected parties (IAPs).
- Focus on major positive and negative impacts of the project to facilitate decision making based on the range of alternative courses of action.
- Create effective co-ordination and communication avenues amongst planners, project proponents, government, private sector, NGOs and the community.
- Include inbuilt environmental monitoring and auditing to ensure adherence to selected options and performance standards

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<sup>10</sup>The Environmental Management Act. No. 12 of 2011 Sections 29 and 30

<sup>11</sup> Barry Dalal Clayton "Environmental impact assessment" Microsoft® Encarta® Encyclopedia 2000 United Nations

- Quantify and evaluate identified impacts, where possible, for resource accounting purposes

## **MAJOR PLAYERS IN THE ENVIRONMENTAL IMPACT ASSESSMENT PROCESS**

The primary stakeholders in the administration of the EIA process in Zambia include:

**The Developer:** The responsibility of the developer includes preparation of the project document, completing the EIA, meeting management requirements resulting from EIA recommendations and meeting the expectations of the public or interested and affected Parties.

**Sectoral Agencies or Planning Authorities:** Sectoral or authorising agencies refer to any government ministry or department, public corporation, local authority or public officer in which, or whom any law regulation or by-law vests power and functions to authorise, control or manage any aspect of proposed or existing government policy legislation. Their main responsibility is to ensure that the proposed project meets all the sectoral requirements, for which the agency is mandated. ZEMA implements the administration of the EIA process as outlined in the EIA Regulations, S.I. No. 28 of 1997 as provided by the Environmental Management Act No. 12 of 2011.

**The Secondary Stakeholders in the administration of the EIA processes in Zambia include:** The General Public and all interested and affected Parties (IAPs): The Public and IAPs are very important parties in the EIA process. Growing public concern for the environment spells out the need for involving the public in decision making. This allows the developer to inform the public and IAPs about the project and afford them opportunity to express their concerns so as to include them into the project management plans.

## **ENVIRONMENTAL IMPACT ASSESSMENT PROCEDURES**

All development/project proponents are required under the EIA regulations before commencing of a proposed project to submit an Environmental Project Brief (EPB) or an Environmental Impact Statement (EIS) to ZEMA for review. All developmental projects listed under schedule one and two of the EIA regulations of 1997 and all projects not specified on these schedules that the ZEMA determines an EIA should be carried on. Projects that existed prior to the commencement of the EIA regulations of 1997 are also required to undertake an EIA. Factors such as the nature and location of the project determine whether the developer should prepare an EPB or EIS. Projects likely to have significant negative impacts on the environment tend to fall under the EIS category.

### **1. Environmental Project Brief**

A developer submits six complete copies of the EPB to the ZEMA for review and pays a statutory review fee to ZEMA. Submission is upon payment of review fees which are prescribed in schedule 5 of the EIA regulations. One copy of the EPB is transmitted to the authorizing agency for comments within seven days of receiving the EPB. The authorising agencies make comments and submit them to the ZEMA within 30 days of the receiving the EPB failure to which ZEMA proceeds to consider the EPB.<sup>12</sup>

ZEMA then considers the EPB and comments received. If ZEMA is satisfied that the project will have no significant impact on the environment, or that the project brief discloses sufficient mitigation measures to ensure the acceptability of the anticipated impacts, ZEMA shall within 40

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<sup>12</sup>The Environmental Protection and Pollution Control (Environmental Impact Assessment) Regulations, No. 28 1997 regulations 3 to 5

days of receiving the EPB from the developer, issue a decision letter, with conditions as appropriate to the effect to the authorising agency.<sup>13</sup>

## **2. Environmental Impact Statement (EIS)<sup>14</sup>**

A developer submits to ZEMA 12 complete copies of the EIS in accordance with Terms of Reference prepared by the developer in consultation with the ZEMA and pays a statutory review fee to ZEMA. Within 7 days of receipt of the EIS transmits a single copy of the EIS to the authorising agency for comments. The authorising agent makes comments and transmits them to ZEMA within 30 days of receiving the EIS failure to which ZEMA proceeds to consider the EIS. ZEMA then further distributes copies of the EIS to relevant Ministries , local government units, parastatals, NGOs and IAPs.

ZEMA places copies of the EIS in public buildings in the vicinity of the site of the proposed project for the general public to access and make comments and notifies the public on these locations. ZEMA may organise or cause to be organised public meetings in the locality of the proposed project. Any person wishing to make a comment on any copy of the EIS sends the comments to ZEMA within 20 days from the date of the last notification of display of the EIS.

The ECZ may extend the period for receipt of the comments if many contentious issues have arisen indicating the sensitive nature of the project or if the remoteness of the project location causes logistical problems for the consultation process. However, the normal approval period for the EIS is 65 days. The ZEMA then considers the EIS and all comments received or may hold a public meeting if as a result of the comments received, the ZEMA is of the opinion that a public

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<sup>13</sup>Environmental Protection and Pollution Control (Environmental Impact Assessment) regulation 3 to 5

<sup>14</sup>The Environmental Protection and Pollution Control (Environmental Impact Assessment) Regulations, No. 28 1997 regulations 7

meeting will enable it to make a fair and just decision or if it considers it necessary for the protection of the environment.<sup>15</sup>

Taking into account the whole EIA review process and comments received the ZEMA may decide to approve a project subject to a developer meeting stipulated conditions or reject a project with a reason. The information required in an EPB or EIS are outlined under the EIA regulations 4 and 11 respectively.

### **3. Decision Letter**

A ZEMA decision on a proposed project is given in the form of a decision letter informing the developer on the outcome of the EIA review of the project. The decision letter contains conditions under which the project should operate to minimise effects it might have on the environment.<sup>16</sup>

## **2.4 CONCLUSION**

The acknowledgement of the importance attached to control of deterioration of the environment is symbolized by the enactment of a national environment law which provides for the environmental impact assessment mechanism. These regulations appear to be comprehensive in that they cover the fundamental sectors of the economy and types of environmental degradation, including water, air, land and noise pollution. However, it has not been harmonized with the newly enacted Environmental Management Act No. 12 of 2011. Furthermore, implementation of the Act as well as the Environmental Protection and Pollution Control (Environmental Impact Assessment) Regulations, No. 28 1997 regulation is the biggest test of Zambia's commitment to

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<sup>15</sup>The Environmental Protection and Pollution Control (Environmental Impact Assessment) Regulations, No. 28 1997 regulation 16

<sup>16</sup>Environmental Protection and Pollution Control (Environmental Impact Assessment) regulation 21

sustainable development. It is also the principal determinant of whether environmental impact assessment in Zambia is effectively achieving its intended goal.

## CHAPTER 3

### INTERNAL AND EXTERNAL RESPONSE TO ENVIRONMENTAL IMPACT ASSESSMENT: IS ENVIRONMENTAL IMPACT ASSESSMENT AN OBSTACLE TO TRADE AND DEVELOPMENT?

#### 3.1 INTRODUCTION

The aim of this chapter is to resolve the notion of whether environmental impact assessment is an obstacle to trade and development in Zambia. This is another aspect of whether environmental impact assessment is effectively achieving its intended goal; that has to be determined. In determining these issues, the internal and external response to environmental impact assessment of trade and development in Zambia will be looked at.

#### 3.2 INTERNAL RESPONSE TO ENVIRONMENTAL IMPACT ASSESSMENT IN ZAMBIA

It is important to begin a consideration of these issues by making clear that both economic income and environmental quality are worthy objectives. The United Nations Conference on the Human Environment of 1972 highlighted global concern for environmental degradation. The Conference emphasized the concept of sustainable development which establishes linkages between development and environment instead of analysing the two as distinct issues of human concern.<sup>17</sup>

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<sup>17</sup>Jeffrey Frankel *Environmental effects of International Trade*, Harvard University: Expert Report number 31 to Sweden Globalisation Council

The Brundtland Commission Report of 1987 avoided the mistake of treating in isolation issues of environment, economic development and human needs. The Report argues that developmental and environmental issues cannot be separated as the process of development negatively impacts on environmental resources on which they must draw from and environmental degradation undermines economic development programmes. Similarly, the Report illustrates a reciprocal relationship between poverty and environmental degradation: poverty is a major cause of (global) environmental problems just as environmental deterioration perpetuates the dismal conditions of the poor. Henceforth, the Report views sustainable development in terms of meeting present needs without undermining the choice of future generations to meet their basic needs as well.<sup>18</sup>

The initial assumption was that environmental problems were not prevalent in developing countries given the low levels of industrial growth. This, of course, has proved to be inaccurate. In actual fact, developing countries have been more preoccupied with promotion of economic development in order to catch up with the developed world, and to improve the livelihood of their people than with ensuring a habitable and healthy environment. This, coupled with inadequate resources at the disposal of developing countries, made it hard for them to commit themselves to environmental protection. Thus, it is argued that the governments of the developing states did not see any linkage between economic development and a clean environment.<sup>19</sup>

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<sup>18</sup>Jeffrey Frankel *Environmental effects of international trade*, Harvard University: Expert Report Number 31 to Sweden Globalisation Council

<sup>19</sup>Najam, Adil , Halle, Mark & Meléndez-Ortiz, Ricardo, (2007) *Trade and Environment: A Resource Book*. [http://www.iisd.org/pdf/2007/trade\\_and\\_env.pdf](http://www.iisd.org/pdf/2007/trade_and_env.pdf) p.17

It is acknowledged that developing countries face two types of crises: the crisis of development and the crisis of environment. These two crises mutually cause and reinforce each other. The economic crisis in developing countries, arising from declining export revenues and leading to structural adjustment programmes, has made both governments and the mass of population to concentrate more on economic survival than protection of the environment.<sup>20</sup> This is the situation Zambia is faced with.

Needless to say, in theory Zambia has shown remarkable appreciation of, and realisation for, environmental protection. Currently it is party to a number of treaties relating to environmental protection in deferent fields of specialization. Further and most importantly, Zambia currently has a number of pieces of legislation relating to environmental protection including the Environmental Management Act No. 12 of 2011 being at the centre of them all as provided by section 3 of the same Act. Through this piece of legislation, it has also shown its commitment to the importance of Environmental protection via environmental impact assessment which is generally seen as the most viable mechanism to ensure that trade and development activities result in sustainable development. It also has an enabling legal framework that lays out the manner in which this particular mechanism is to be carried out through the Pollution Control (Environmental Impact Assessment) Regulations of 1997.

In practice, like many other developing countries, Zambia faces constraint in balancing the need for environmental protection with that of economic income. Geographically Zambia has an area of 752,614 km<sup>2</sup> located at an altitude between 2,164m and 350m with an equable climate, largely

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<sup>20</sup> Bertha OseiHwedie, *Environmental Protection and Economic Development in Zambia*, Journal of Social Development in Africa, 1996. p.58

on the Central African Plateau, with four major biomes consisting of forest, woodland, grassland and aquatic systems. These encompass large parts of the Zambezi and Congo drainage systems and it is thus probably the best watered country in Africa. It is endowed with a wealth of natural resources within sixteen ecosystems with landscapes that include extensive forests, grassy plains, hills and steep escarpments; huge lakes and rivers, deep valleys and ecologically rich wetlands together with areas of anthropic origin such as crop land, plantation forests and urban settlements. Zambia undertakes development programmes against an environmental background that is highly dependent upon these natural resources. Above all, the country is mainly a primary commodity producer of non-renewable resources.<sup>21</sup>

At present, the country faces daunting challenges affecting the balance between environmental protection and economic income. Zambia has a fast growing population with the drive to meet goals set out in the national development strategies and in international conventions, most recently defined in the Millennium Development Goals (MDG). In September 2000, Zambia was among 190 other countries that signed the Millennium Declaration at the United Nations Millennium Summit where eight development goals, underpinned by eighteen targets and forty eight indicators, were formulated for achievement by the year 2015. Goal 8: encouraged to develop a global partnership for development to develop further an open trading and financial system that includes a commitment to good governance, development and poverty reduction nationally and internationally.

Zambia's main and current economic activities are largely copper and colbalt mining. Copper is the mainstay accounting for approximately 80% of export earnings. Zambia is also directly

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<sup>21</sup>Tarr P., *Environmental Impact Assessment in Southern Africa*, (Windhoek: SAIEA, 2003)p.270

dependant on biodiversity and includes agriculture, forestry, wood products, wild life, tourism and fisheries. Difficulties in economic management since independence compounded by decline in copper prices and variable weather conditions have lead to poor economic performance and deepening poverty within Zambia. The high levels of debt have made the situation worse.<sup>22</sup>

In 2000 Zambia was eligible for debt relief under the heavily indebted poor countries initiative. Furthermore, the human development index falls within the low development classification. Owing to this state of affairs, the country has much further to go to attain desirable levels of human development that will guarantee a better standard of living for all Zambians. It can therefore be seen that government's efforts to control environmental degradation through enactment of a comprehensive environmental law and structures for that purpose faces and will continue to face a serious drawback compounded by financial constraints and low priority accorded to this area in the face of an economic crisis making it difficult to realise the goal of environmental protection.

It goes without saying that this would most likely be a serious constraint to the effectiveness of the environmental impact assessment process. Environmental impact assessment as a viable mechanism to ensure that trade and development activities result in sustainable development has a role in environmental protection that can never be over emphasized. However, in Zambia, due to the dismal state of the economy, Environmental impact assessment is seen as the servant of development. It is seen as a means to promote more lucrative development projects. At best it is basically a tool for supporting economic growth. The main factor that encourages this is the fact that the whole process is a creature of the government and is subject to political pressures and

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<sup>22</sup>Tarr P., *Environmental Impact Assessment in Southern Africa*, (Windhoek: SAIEA, 2003) p.270

corruption. This means that key players within government have no security of employment. Officers of integrity have little or no chance when confronted by a combination of hostile interests at a political level. Sadly, the mechanism of environmental impact assessment has therefore been seen to be used as a process which endorses environmental degradation in order to promote economic income.<sup>23</sup>

As a result of the failure to balance these two objectives of environmental protection and economic income, there have been numerous adverse effects to the environment. Every sector of the economy causes some environmental problems. Industrialisation, urbanisation and population growth as products of trade and development have serious negative consequences on the environment as each makes demands on natural resources. The environmental problems are highlighted in the National Environmental Action Plan (1994) and in the Current State of the Environment Report (2001). These include: water pollution, inadequate sanitation, deforestation, soil degradation, air pollution more especially in the Copperbelt towns, wild life depletion, solid waste management and energy consumption to mention just a few. These environmental problems were also highlighted at the opening of the 9<sup>th</sup> National Assembly in January 2002, by President Mwanawasa in his speech. The source of these can be seen from an example of some economic activities which are seen as some of the major culprits in this issue.

### **3.2.1 Mining Sector**

The mining industry pollutes the atmosphere by releasing sulphur dioxide (SO<sub>2</sub>). The mining of copper, which contains sulphide, produces large amounts of sulphur dioxide into the atmosphere

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<sup>23</sup>Gilpin A. *Environmental impact Assessment* (Cambridge: Cambridge University Press, 2000)p.3

during the smelting of copper. It is the threat posed by sulphur dioxide to human life which is of great concern. Sulphur dioxide is hazardous to people's health. It damages the ecosystem, vegetation and infrastructure. Sulphur dioxide is responsible for bronchial, eye and skin diseases, especially for residents of the area where the mines are situated. Konkola township in Mufulira as the hardest hit by sulphur dioxide emissions, where residents are reported to suffer from respiratory diseases, are unable to grow vegetables in their backyards, and have paint peeling off from their houses.<sup>24</sup> Recently there has been increased mining activity at Chambeshi and Lumwana mines which will most likely also result into these long term effects.

In addition to air pollution, copper mines cause water pollution. The waste product produced during the mining process is disposed into rivers, especially the Kafue River and its tributaries on the Copperbelt province. Such wastes include heavy chemical metals like mercury. The Kafue River, which stretches from the Copperbelt to the Central Province, is not only a dumping ground for waste products from the mines, but also a source of water and fish for households. It is argued that rivers on the Copperbelt province have a high copper content which is 80 times higher than the accepted standard. This poses danger to both humans and animals.<sup>25</sup>

Mining also causes land deterioration. Not only is the waste dumped into rivers, it is also disposed of on land. Such solid wastes include waste rocks, tailings (slimes), Slag and toxic hazardous chemical wastes. Waste causes land sterilisation, making land unproductive and creating ugly scenery of dumps in mining towns. In the rainy season, the dumps become muddy

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<sup>24</sup> Bertha OseiHwedie, *Environmental Protection and Economic Development in Zambia*, Journal of Social Development in Africa, 1996. p.63

<sup>25</sup> Bertha OseiHwedie, *Environmental Protection and Economic Development in Zambia*, p.63

and sometimes are washed away by rain into surrounding water supplies and farmlands/gardens. Open pit mining at some Zambian mines, like in Mufulira, causes damage to the environment in the form of caving in of land. Holes excavated to mine copper permanently scar the landscape and make it unproductive.<sup>26</sup> The State of Human Rights Report In Zambia<sup>27</sup> recognized these effects and gave an example of the courts intervene where Konkoloa Copper Mines Plc was fined for polluting the Kafue river contrary to section 24 and 91(1), 85(1) of the EPPCA Chapter 204 of the Laws of Zambia.

### **3.2.2 Manufacturing Industries**

Like copper mining, manufacturing industries also cause air, water and land pollution. The most important industries which cause environmental problems are those which produce fertilizers, clothing, shoes and cement. Nitrogen Chemicals which is located in Kafue, Central Province is an example. It discharges nitric oxide into the atmosphere. Dust is another pollutant of the atmosphere. Operations of Lafarge cement (formally known as Chilanga cement) and Zambezi cement naturally discharge cement dust while Ndola Lime lets out lime dust, just as quarrying releases a lot of dust into the air as a result of crushing stones: as do maize milling companies and road construction. Dust is not only an irritant but also causes health problems. Common ailments from dust are sneezing, coughing and bronchitis.<sup>28</sup>

Similarly, waste from industrial plants is thrown into the Kafue River endangering human and animal life through contamination of water and food. For example, Kafue Textiles dumped its

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<sup>26</sup> Bertha OseiHwedie, *Environmental Protection and Economic Development in Zambia*, Journal of Social Development in Africa, 1996. p.64

<sup>27</sup> State of Human Right Report In Zambia: Human Rights and the Environment, 2010 p.29

<sup>28</sup> Chipungu, P &Kunda, D, *State of Environment in Zambia*, (Lusaka: Plintech, 1994) p.32

chemical waste from dyeing cloth into the Kafue River. Bata Shoe Company also releases chromium waste from the tannery into the Kafue River.<sup>29</sup> In terms of electricity, old transformers, many of which contain Poly Chlorinated Biphenyls (PCB's) are highly toxic. In the recent past there were no safe disposal sites but the construction of a temporary storage site for the disposal of the PCB's contaminated waste was funded. Furthermore, releases from the itezhi – tezhi Dam for the Kafue upper hydro electric power station can have devastating effects on the social ecology of the Kafue flats.<sup>30</sup>

The State of Human Rights Report In Zambia<sup>31</sup> also recognized environmental degradation caused by manufacturing industries and gave an example of the courts intervene which was initiated by Environmental council of Zambia where Indeni Petroleum Company Limited was charged with one count of discharging pollutants into the aquatic environment in excess of prescribed standard contrary to subsection 91 (1) of the EPPCA as read together with section 24 of the same Act.

### 3.2.3 Over Population

Poor sanitation and waste management is yet another way of environmental degradation. It is caused by high population growth especially in areas with increased industrial activity which are affected by unplanned settlements especially Lusaka province.<sup>32</sup> This illustrates the importance of incorporating environmental policies in town and country planning and ensuring that they are effectively applied, enforced and implemented throughout the country.

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<sup>29</sup>Chipungu, P &Kunda, D, *State of Environment in Zambia*, (Lusaka: Plintech, 1994) p.32

<sup>30</sup>Tarr, P. *Environmental Impact Assessment in Southern Africa*, (Windhoek: SAIEA, 2003) p.112

<sup>31</sup> State of Human Right Report In Zambia: Human Rights and the Environment, 2010 p. 29

<sup>32</sup>Report No. SWE 1-3, *Informal Land Tenure In Lusaka*, Zambia, a Joint Project between Sida and Swede survey, Benita Nordin, Gavle Sweden, July 1998 at page 17.

### 3.2.4 Agricultural activities

The primary source of pollution in agriculture is the use of chemical fertilizers, pesticides and mass deforestation of land for farming. Most food and cash crops grown in Zambia require fertilizers and pesticides to ensure a good harvest, especially of maize, cotton and tobacco. Due to the pressure to achieve developmental goals, there has been an increase in the use of these. However, although chemical fertilizers, and pesticides result in increased national harvests, they pose a danger to the environment. They are detrimental to land as they kill soil nutrients and are likely to be washed into rivers thereby contaminating water and in most cases cause soil erosion, deforestation and loss of pasture land.<sup>33</sup>

It is incumbent that whilst recognizing the imperative of economic income in addressing the underlying causes of poverty, the resulting deterioration in the environment should be highlighted by the realisation that unfettered development, while it may yield immediate benefits in the short-term gain, can undermine the development process; mainly by causing irreparable damage to the natural resources that support it. Optimising development and maintaining its sustainability, will only be possible by safeguarding the environment through conserving nature and its life support systems.<sup>34</sup> It is therefore important to recognize the rationale behind environmental impact assessment and utilize it in its proper manner in order to ensure that trade and development activities result in sustainable development. The role of environmental impact assessment in this context can therefore never be over emphasized.

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<sup>33</sup> Bertha OseiHwedie, *Environmental Protection and Economic Development in Zambia*, Journal of Social Development in Africa, 1996. p.65

<sup>34</sup> National Policy on Environment: (Ministry of Tourism, Environment and Natural Resources; Zambia 2005) p.11

### 3.3 EXTERNAL RESPONSE TO ENVIRONMENTAL IMPACT ASSESSMENT.

It is inevitable for any country with economic activities with harmful effects to the environment to have transboundary environmental impacts. Furthermore, the production of goods that are imported and exported will often have environmental effects. But will these effects increase or decrease with expanded trade? Will they affect the exporting nation, the importing nation, or the world as a whole? And whose responsibility is it to respond to environmental problems associated with trade and development?

International attention was first focused on these issues in 1991, when the Mexican government challenged a United States law banning imports of tuna from Mexico in *the Tuna Dolphin case*<sup>35</sup>. The U.S. Marine Mammal Protection Act prohibited tuna fishing methods that killed large numbers of dolphins, and banned tuna imports from countries that used such fishing methods. The Mexican government argued that this U.S. law was in violation of the rules of the General Agreement on Tariffs and Trade (GATT).

According to the free trade principles that provided the basis for GATT and for its successor, the World Trade Organization (WTO), countries cannot restrict imports except in very limited cases such as protection of the health and safety of their own citizens. A GATT dispute panel ruled that the U.S. could not use domestic legislation to protect dolphins outside its own territorial limits.

Although Mexico did not press for enforcement of this decision, the tuna/dolphin decision opened a major controversy over issues of trade and environment. In a similar case in 1999, the

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<sup>35</sup>U.S.—*Restrictions on Imports of Tuna from Mexico* (Tuna I) (1993)

World Trade Organization ruled in the *Shrimp Turtle case*<sup>36</sup> that the U.S. could not prohibit shrimp imports from countries using fishing methods that killed endangered sea turtles.

The implications of this and the earlier tuna/dolphin decision could affect many other international environmental issues, such as forest protection, ozone depletion, hazardous wastes, and global climate change. All these issues are linked to international trade and development.

To address these questions, there is need to examine the theory and practice of international trade and development. Most economists believe that expanded trade is generally beneficial, promoting increased efficiency and greater wealth among trading nations. But what if expanded trade causes environmental damage?

At the national level, the standard economic policy response to environmental impacts is to implement policies that internalize externalities. At the international level, however, the picture is more complicated. The burden of environmental externalities associated with trade may be borne by importers, exporters, or by others not directly involved in the production or consumption of traded goods. The authority to formulate and enforce environmental policies usually exists only at the national level. This can create significant problems when environmental impacts are transnational, since most international trade agreements do not include any provisions for environmental protection.<sup>37</sup>

The notion of a race to the bottom is perhaps the strongest basis for fearing that international trade and investment will put downward pressure on countries' environmental standards and thus damage the environment across the global system. Leaders of industry, and of the unions whose

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<sup>36</sup> *US – Import Prohibition of Certain Shrimp and Shrimp Products* – WTO Appellate Opinion SupplVol III p. 354 (10/98)

<sup>37</sup> United Nations Environment Programme, *Environment and trade: A handbook*, IISD, 2005 p.110

members are employed in industry, are always concerned about competition from abroad. When domestic regulation raises their costs, they fear that they will lose competitiveness against firms in other countries. They warn of a loss of sales, employment, and investment to foreign competitors. Thus domestic producers often use competitiveness as a way of applying political pressure on their governments to minimize the burden of regulation. The “race to the bottom” concern is that, to the extent that countries are open to international trade and investment, environmental impact assessment standards will be lower than they would otherwise be.<sup>38</sup>

It is conceded that the goals of environmental protection and promoting economic growth need to be balanced against each other. It is in this light that it is argued that Environmental concerns though important can be an excuse for protectionism. If policy makers give in to protectionist arguments and erect trade barriers, less growth in trade and development will be the outcome. Import-competing corporations in sectors that may themselves not be particularly friendly to the environment, sometimes seek to erect or retain barriers to imports in the name of environmental protection, when in reality it is their own pocketbooks they are trying to protect. In other words, environmentalism in such a case would be an excuse for protectionism.

In addition, under the world trade organization, member states are obligated to adhere to the process and production methods (PPM) rule. This rule removes an important potential weapon for international environmental protection in that if a nation fails to act to protect its own environment, other countries have no trade leverage to promote better environmental practices. It is only if a specific multinational environmental agreement (MEA), such as the Convention on International Trade in Endangered Species (CITES), is in place are import restrictions

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<sup>38</sup> Jeffrey Frankel, *Environmental Effects of International Trade*, Harvard University: Expert Report number 31 to Sweden globalisation Council

permissible. This principle was an issue in the tuna/dolphin and shrimp/turtle decisions mentioned earlier, in which trade authorities ruled that nations had no jurisdiction over extraterritorial environmental issues. However in an increasingly globalized world, such issues are more and more common. Simply waiting for the producing country to “clean up its act” is likely to be insufficient.

With Zambia, having eight neighbours, it is inevitable to have transboundary environmental impacts from economic activities: such as bad air quality in the Copperbelt provinces as a result of air pollution from the mining activities, both to and from the democratic republic of Congo; in relation to lake Kariba which is shared with Zimbabwe: resettlement, water pollution overfishing, downstream land use in catchments flowing into the Zambezi, weed control, water and electricity demand. Tourism activities at Vitoria falls primarily related to visual and noise impacts. Overfishing and pollution in Lake Mweru and lake Tanganyika to mention but a few.<sup>39</sup>

As a result of these transboundary environmental effects, a few countries now conduct *ex ante* environmental impact assessments. The United States, European Union countries and Canada are examples of countries which carry out environmental impact assessment of its investments and negotiations; They also carry out environmental impact assessment of all their trade negotiations. The European union goes beyond to consider any impacts occurring in partner countries since most environmental impacts manifest in smaller countries signing any agreements. The North American agreement on Environmental Co-operation has mandate to monitor NAFTA's ( trade

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<sup>39</sup>Tarr, P. *Environmental Impact Assessment in Southern Africa*, (Windhoek: SAIEA, 2003)p.27

agreement between Mexico, Canada and USA) environmental effects on an ongoing basis. This is a form of environmental assessment that is unique to that agreement.<sup>40</sup>

The problem of transboundary environmental effects can also be addressed through the formation of multilateral agreements which can form environmental regulations and carry out environmental impact assessments of activities that can adversely affect the environment. It is important to carry out integrated environmental impact assessments of trade related policies and agreements because these may also affect a countries environmental and social structures. The importance was recognized in the Doha Ministerial Declaration. It also encouraged the sharing of expertise and experience between members to support the performance of environmental reviews.

### **3.4 CONCLUSION**

It can be concluded that environmental protection via environmental impact assessment is not an obstacle to trade and development. This is because Economic development and environmental protection are mutually inclusive goals of a good livelihood. However, tension arises when both compete for scarce natural resources and when survival takes precedence over environmental protection as is the case in Zambia currently. Unfettered trade activities and development, may yield immediate benefits in the short-term gain but the end result of permanently deteriorating the environment cannot be properly called development. This means that trade and development has to and can exist without being destructive if a proper mechanism is put in place that can ensure that trade results in sustainable development. This can best be achieved through a well organized system of environmental impact assessment. It can be seen from the forgoing chapter that it is inevitable to have transboundary environmental impacts from economic activities. It has

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<sup>40</sup> United Nations Environment Programme, *Environment and trade: A handbook*, IISD, 2005 p.98

been shown that Environmental impact assessment can be internal and it can also be international through trade agreements and multilateral agreements to deal with these transboundary environmental impacts of trade and development.

## **CHAPTER 4**

### **DOES ZAMBIA HAVE A WELL ORGANIZED SYSTEM OF ENVIRONMENTAL IMPACT ASSESSMENT?**

#### **4.1 INTRODUCTION**

It is evident from the foregoing chapters that in Zambia there is general acknowledgement of the importance attached to control of deterioration of the environment and it is symbolised by the enactment of a national environmental law incorporated in the environmental impact assessment mechanism. The fundamental sectors of the economy and types of environmental degradation, including water, air, land and noise pollution seem to be comprehensively covered in this process. It can also be seen that trade and development has to and can exist without being destructive if a proper mechanism is put in place that can ensure that trade results in sustainable development. This can best be achieved through a well organized system of environmental impact assessment. The aim of this chapter is to determine how well organized the system of environmental impact assessment in Zambia is, by making an appraisal of the policy, legal and institutional frame work relating to environmental impact assessment.

#### **4.2 LEGISLATIVE REVIEW**

Zambia's body of environmental law is spread over more than twenty international treaties and over thirty Acts of Parliament. The Responsibility for this is dispersed amongst a number of line Ministries. This poses a great challenge to government when it comes to implementation and enforcement due to the large number of players each pursuing its own sectoral policy that may which lead to uncoordinated overlap of jurisdiction with that responsible for environmental

impact assessment under the Pollution Control (Environmental Impact Assessment) Regulations Statutory Instrument No. 28 of 1997.<sup>41</sup>

In addition, there is lack of coordination between planning and environmental protection at government Ministry level. Trade and developmental activities cause high population growth especially in areas with increased industrial activity which are affected by unplanned settlements especially Lusaka province.<sup>42</sup> This illustrates the importance of incorporating environment impact assessment policies in town and country planning and ensuring that they are effectively applied, enforced and implemented throughout the country. The Town and Country Planning Act is an inherited colonial piece of legislation which has not been revised so as to adequately incorporate these issues.

One other significant weakness in existing law is the lack of codification of international treaty agreements into national law. Much of the relevant international law is unenforceable as it has not been incorporated into national law.<sup>43</sup>

In addition, another weakness that can be seen in the environmental impact assessment process is that; with the importance of this process, it is unsurprising that most people have a poor grasp of the law relevant to this area. This would be of little concern were it not for the fundamental importance of this legislation. However the Act and SI have not been translated into the vernacular despite the fact that it has adverse implications for the poor who cannot afford, or do

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<sup>41</sup>Tarr, p. *Environmental Impact Assessment in Southern Africa*, (Windhoek: SAIEA, 2003) p.274

<sup>42</sup>Report No. SWE 1-3, *Informal Land Tenure In Lusaka, Zambia*, a Joint Project between Sida and Swede survey, Benita Nordin, Gavle Sweden, July 1998 at page 17.

<sup>43</sup>Tarr, p. *Environmental Impact Assessment in Southern Africa*, (Windhoek: SAIEA, 2003) p.274

not understand, but are most affected in the process of environmental impact assessment. The State of the Environment Report 2001 affirms this in that a bias exists in environmental impact assessment between more developed areas of the country and rural and remote areas where it is more frequent to find approved trade and developmental activities which are potentially dangerous to the environment, mainly due to lack of effective public participation in these rural areas.<sup>44</sup> On the other hand, there is greater degree of awareness among communities who live in developed areas where the communities ensure their voices are heard.

There are also inadequate provisions for participation by local communities and the general public. The environmental impact assessment regulations provide for public participation when the council can receive comments from the public after the environmental impact statement has been submitted. The Council may organise, or cause to be organised, public meetings in the locality of the proposed project or developmental activity.<sup>45</sup> The public are not involved in the stages of enforcement and implementation of the terms and conditions of the approved assessment in terms of environmental impact audits. These are largely dependent on the developers' ability to comply with the requirement to submit reports to the council in order to monitor compliance.

Fines and penalties under the statutory instrument are outdated, they do not tally with prevailing conditions as the environmental impact assessment regulations have not been revised since 1997. Therefore it would be cheaper to violate the law and face the penalties than to actually take preventive measures or mitigatory measures as prescribed.

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<sup>44</sup>Environmental Council of Zambia: State of The Environment Report 2001

<sup>45</sup> Pollution Control (Environmental Impact Assessment) Regulations Statutory Instrument No. 28 of 1997, Regulation 16

The provisions in the Constitution<sup>46</sup> relevant to environmental protection are not justiciable. The environment is an issue that concerns all people of Zambia and all activities that can have an adverse effect on the environment are controlled by the government; the issue of the environment should have Constitutional recognition that is justiciable. This is so that the government can be held accountable and be compelled to ensure that its trade and development policies result in sustainable development. Furthermore, they must be held accountable in order to ensure that the environmental impact process is effective and used for the intended purposes.

The issue of adverse effect on the environment has not been defined clearly in the environmental management Act and in the SI. This means that effects that are adverse can actually be evaded meticulously in the absence of a clear definition. This can easily lead to corruption. Furthermore, in most of the stages of the environmental impact assessment there is much discretionary power given to the agency. This is dangerous in that it invariably lead to arbitrariness which then renders the process ineffective in the end. All the processes must be clearly stipulated giving the agency little or no discretionary power.

#### **4.3 INSTITUTIONAL REVIEW**

Zambia Environmental Management Agency currently has no presence at district level and institutional strengthening. This means there is no decentralization of administration of the environmental impact assessment process to facilitate adequate and effective participation.<sup>47</sup> Currently, the environmental educational programmes, both formal and informal, are undertaken by the Zambia Environmental Management Agency and institutions of learning, Ministries and non-governmental organizations. Each follows its own syllabus without much

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<sup>46</sup>The Constitution, Chapter 1 of the laws of Zambia Article 112 and 113

<sup>47</sup>Tarr, p. *Environmental Impact Assessment in Southern Africa*, (Windhoek: SAIEA, 2003) p.285

coordination. It is not clear whether or not such education reaches the mass of peasants or includes input from the public. Past experience suggests that ideas or programmes from government or otherwise, rarely succeed unless the grassroots are involved in initiation. Ideally, educational campaigns would be more fruitful if they included policymakers involved in the planning of development projects. This is important in so far as determination of environmental impact of projects at initial planning stage is concerned.

Furthermore, as a corporate body accountable to the Ministry of Environment and Natural Resources, the ZEMA is likely to be constrained in implementation of its functions. There is need to streamline the responsibilities of the ZEMA and the Ministry to avoid duplication and conflict, especially interference from the Ministry. It is common in Zambia for ministries to interfere in operations of corporations or parastatal organizations under their jurisdiction.

There is also lack of implementation of approved environmental impact assessments with conditions to implement post assessment or environmental audits. This implementation is not effectively regulated mainly because of lack of regional staff, low retention of skilled human resources in government departments including the Zambia Environmental Management Agency is the main cause of this. This can further be attributed to poor remuneration by comparison with the private sector which is a fertile ground for corruption. In addition, as a result of concentration on increasing economic development by promoting more trade and developmental activities, there is less funding to support Zambia Environmental Management

implement environmental audit projects and this results in insufficient equipment to carryout the required duties efficiently.<sup>48</sup>

It can also be argued that, implementation is sensitive to the state of economic development. This can be seen in situations where some developers comply with the stipulated regulations as well as terms and conditions given while others do not. In these situations officials are often aware of the problem but have largely responded inadequately as a result of the demand for continuing economic growth superseding environmental consideration.<sup>49</sup> This explains why ECZ (now ZEMA) despite having been in existence for over 15 years has done very little in the area of litigation. It is not true that the situation is as a result of good compliance levels. The State of Human Right Report In Zambia<sup>50</sup> mentioned that the criminal proceedings against the local authority (LCC) for operating the Chunga landfill contrary to the provisions of the EPPCA was one of the very few examples of cases initiated by ECZ. In this case the Lusaka City Council was ordered to remedy the defects at the site.

There have been challenges relating to access to environmental justice. The communities who are usually victims of environmental problems caused by developers have little access to environmental justice due to high litigation costs, the issue of *locus standi* and fear of retaliation as a result of economic dependence on these developmental activities. This has lead to fill participation in relation to public interest litigation against the polluter or the institutions for failure to execute statutory duties.

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<sup>48</sup>Tarr, p. *Environmental Impact Assessment in Southern Africa*, (Windhoek: SAIEA, 2003) p.275

<sup>49</sup> Managi S. and Kaneko S. *Chinese Development and the Environment* (London: Edward Elgar Publishing Limited, 2009) p. 14

<sup>50</sup> State of Human Right Report In Zambia: Human Rights and the Environment, 2010 p. 29

The results of the Zambia National Situational Analysis on Environment confirm a systemic failure of environmental and natural resource management with characteristic weak leadership, conflicting policies, incomplete and outdated legislation, inadequate finance, weak and divided institutions, inadequate capacity, inadequate resource management, poor information flow, inadequate planning, implementation failure, insufficient awareness and education, and inadequate private sector participation.<sup>51</sup> Essentially the issues remain the same as they were ten years ago, at the start of the National Environmental Action Plan.

#### **4.4 POLICY REVIEW**

Environmental Impact Assessment (EIA) as it is practiced today, is being used as a decision aiding tool rather than decision making tool. There is growing dissent on the use of EIA as its influence on development decisions is limited and there is a view it is falling short of its full potential. There is a need for stronger foundation of EIA practice through training for practitioners, guidance on EIA practice and continuing research.<sup>52</sup>

Currently, relatively little attention is paid by policy makers who encourage and give incentives to developers (investors): to actual and potential impacts on environment by development projects. Evaluations of development projects are guided mostly by economic criteria.<sup>53</sup> The biggest drawback to public educational programmes is the economic condition. In view of the crippling economic situation prevailing in Zambia, the people and the government do not accord environmental issues a very high priority. Both are more preoccupied with economic survival, even to the extent of damaging the environment.

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<sup>51</sup> Environmental Council of Zambia :The Zambia national situational analysis on environment 2005

<sup>52</sup> Gilpin, A. *Environmental impact Assessment* (Cambridge: Cambridge University Press, 2000) p. 3

<sup>53</sup> Gilpin, A. *Environmental impact Assessment* p. 3

Environmental Impact Assessments (EIA) have often been criticized for having too narrow spatial and temporal scope. At present no procedure has been specified for determining a system boundary for the assessment. The system boundary refers to 'the spatial and temporal boundary of the proposal's effects'. This boundary is determined by the applicant and the lead assessor, but in practice, almost all EIAs address the direct, on-site effects alone.<sup>54</sup>

However, as well as direct effects, developmental activities cause a multitude of indirect effects. The indirect effects of developmental activities put together are often an order of magnitude higher than the direct effects assessed by EIA. In addition, the environmental impact assessment process can be seen to endorse most of the activities that have caused and continue to cause environmental degradation in Zambia. This is done through providing acceptable standards for environmental degradation that are not accompanied by the polluter pays principle. This means developers will continue to degrade the environment and will not be liable as long as they are in the acceptable standards provided.<sup>55</sup>

#### 4.5 CONCLUSION

It is evident that the government of Zambia has recognized the importance of the protection of the environment through the promotion of sustainable development via the mechanism of environmental impact assessment by putting in place a legislative, institutional and policy framework. However it is apparent from the foregoing chapter that environmental issues would remain relegated into the background, in spite of the declared policy of the government. This is because despite this effort it is not effective. It is observed that, in order for it to operate properly, it needs to be given '*life*' by putting in place all the relevant mechanisms to effectively

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<sup>54</sup> Barry Dalal Clayton "Environmental impact assessment" Microsoft® Encarta® Encyclopedia 2000

<sup>55</sup> Dolomite Aggregates Limited v Lihusha and 102 others 2005/HP/0669

enforce it and implement it. The legislative, institutional and policy framework lack this '*life*'. It is therefore now acknowledged that the actions taking place that are supposed to ensure a well organized system of environmental impact assessment have fallen far short of what is required to ensure that the development process remains sustainable and that environmental integrity is maintained.

## CHAPTER 5

### GENERAL CONCLUSION AND RECOMMENDATIONS

#### 5.1 GENERAL CONCLUSION

It can be seen from the forgoing chapters that Environmental protection via environmental impact assessment is not an obstacle to trade and development. It has also been shown that the reason for this is that Economic development and environmental protection are mutually inclusive goals of a good livelihood. In actual fact trade and development depend on the existence of natural resources. However, tension arises when both compete for scarce natural resources and when survival takes precedence over environmental protection as is the case in Zambia currently. It has also been shown that unfettered trade activities and development, may yield immediate benefits in the short-term gain, however, the end result of permanently deteriorating the environment cannot be properly called development.

It has been shown in the foregoing chapters that environmental issues in Zambia will remain relegated into the background, in spite of the declared policy of the government. A policy can be declared and a comprehensive legal framework can be put in place but in order for it to operate properly, it needs to be given *life* by putting in place all the relevant mechanisms to effectively enforce it and implement it. It is evident that the government has recognized the importance of protection of the environment through the promotion of sustainable development via the mechanism of environmental impact assessment. It can be seen that the failure of environmental impact assessment is as a result of the existence of government policies on trade and Economic development that facilitate and enhance survival of the country's economy taking precedence over environmental protection as well as other factors which just worsen the situation. This most

certainly acts as a drawback to Zambia's commitment to sustainable development via the mechanism of environmental impact assessment. It is therefore now acknowledged that these actions have fallen far short of what is required to ensure that the development process remains sustainable and that environmental integrity is maintained.<sup>56</sup> This means that trade and development has to and can exist without being destructive if a proper and effective mechanism to ensure an efficient environmental impact assessment is put in place so that its goal of achieving sustainable development can be realised.

## **5.2 RECOMMENDATIONS**

### **5.2.1 Legislative Reform**

The Pollution Control (Environmental Impact Assessment) Regulations Statutory Instrument No. 28 of 1997 was enacted in line with the objectives of the now repealed and replaced Environmental Protection and Pollution Control Act Chapter 204 of the Laws of Zambia. The objectives of the newly enacted Environmental Management Act No. 12 of 2011 have increased as compared to those of the repealed Act. It is therefore imperative that the Pollution Control (Environmental Impact Assessment) Regulations Statutory Instrument No. 28 of 1997 should be harmonised with the expanded objectives of the Environmental Management Act No. 12 of 2011.

For there to be a proper system of implementation and enforcement of the mechanism of environmental impact assessment, the mechanism should be provided for in one main piece of legislation that provides for its applications in all the relevant fields of trade and development

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<sup>56</sup> ECZ, National Policy on Environment: Zambia May 2005 p.11

that would have an impact on the environment. Furthermore, the main or original goals of environmental impact assessment should be enshrined in all developmental policies and the sectoral policies pursued by different players. This is to avoid the washing down effect on the goals of environmental impact assessment caused by overlapping legislation and the large number of players each pursuing its own sectoral policy that may not recognise the principles of environmental impact assessment.<sup>57</sup>

There should be coordination of environmental law and Town Planning at ministerial level. This can be done by incorporating environment impact assessment policies in town and country planning and ensuring that they are effectively applied, enforced and implemented throughout the country. The Town and Country Planning Act is an inherited colonial piece of legislation which has not been revised so as to adequately incorporate these issues, therefore it also has to be reformed to deal with the current prevailing issues.

There should be translation of the law and other material relating to environmental awareness and environmental impact assessment into vernacular and this should be made easily available so that the poor and illiterate who cannot afford, or do not understand, but are most affected in the process of environmental impact assessment may be taken into account in the process and ensure their voices are heard.

There should also be more provisions for participation by local communities and the general public in the environmental impact assessment process. It is recommended that ZEMA should organise, or cause to be organised, mandatory public meetings in the locality of the proposed

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<sup>57</sup> Peter, Tarr. *Environmental Impact Assessment in Southern Africa*. (Windhoek: SAIEA, 2003) p.274

project or developmental activity.<sup>58</sup> It is also recommended that the public should be involved in the stages of enforcement and implementation. They are not involved in the stages of enforcement and implementation of the terms and conditions of the approved assessment in terms of environmental impact audits. These are largely dependent on the developer's ability to comply with the requirement to submit reports to ZEMA in order to monitor compliance.

The Environmental impact assessment regulations should be reformed to be in synch with the prevailing times and conditions. This also includes the issue of fines and penalties under the statutory instrument. They should tally with prevailing conditions by increasing them so as to avoid the situation where it is cheaper to violate the law and face the penalties than to actually take preventive measures or mitigatory measures as prescribed.

There should be provisions on the goals of environmental impact assessment which should have constitutional recognition that is justiciable. The environmental is an issue that concerns all people of Zambia and all activities that can have an adverse effect on the environment are controlled by the government; it is imperative that the government be held accountable and be compelled to ensure that its trade and development policies result in sustainable development. Furthermore, they must be held accountable in order to ensure that the environmental impact process is effective and used for the intended purposes.

The issue of adverse effects on the environment should be defined clearly in the environmental management Act and in the SI: so as to avoid the meticulously evasion of the process caused by the absence of a clear definition which can easily lead to corruption. Furthermore, it is

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<sup>58</sup> The Environmental Protection and Pollution Control (Environmental Impact Assessment) Regulations, No. 28 1997 regulation 16

recommended that discretionary power that is in most of the stages of the environmental impact assessment given to the agency must also be reduced. This is so as to avoid diluting of the environmental impact assessment process by arbitrariness which has lead to corruption. It is recommended that all the processes must be clearly stipulated giving the agency little or no discretionary power.

All environmental law related legislation or legislation that is ordinarily supposed to have environmental consideration should be reformed so as to be in line with the newly enacted Environmental management Act in order for environmental impact assessment to have proper legal effect in other areas of law and to prevent overlap of jurisdiction caused by such unaligned legislation.

### **5.2.2 Institutional Reform**

Zambia Environmental Management Agency must be decentralized to ensure that the process of environmental impact assessment is monitored and carried out effectively. It is also recommended that there should be decentralization of administration of the environmental impact assessment process to facilitate adequate and effective participation especially by the grassroot level to be involved in initiation. Educational campaigns should be more fruitful by including policymakers involved in the planning of development projects. This is important in so far as determination of environmental impact of projects at initial planning stage is concerned.

Streamlining the responsibilities of the ZEMA and the Ministry to avoid duplication and conflict is recommended, especially interference from the Ministry and overlapping jurisdiction caused

by the operations of other line Ministries responsible for other environmental law legislation and or legislation that should take into account environmental impact assessment.

It is recommended that the government should allocate more funding to the environmental impact assessment process to curtail the problems caused by lack of implementation of approved environmental impact assessments with conditions to implement post assessment or environmental audits. Availability of adequately allocated finances to the sector would also curtail ineffective implementation caused by lack of regional staff and law retention of skilled human resources in the Zambia Environmental Management Agency.

Most of the times, officials are often aware of the problem of non compliance of environmental impact assessment conditions but have largely responded inadequately as a result of the demand for continuing economic growth superseding environmental consideration. It is recommended that this should be balanced by ensuring that all economic development policies take into account environmental considerations. Furthermore, it is recommended that the officials should undergo intensive environmental awareness education so as to be effectively prudent in carryout their functions.

### **5.2.3 Policy Reform**

Currently, relatively little attention is paid by policy makers who encourage and give incentives to developers (investors): to actual and potential impacts on environment by development projects as a result of high priority accorded to development. It is recommended that the people and the government should accord environmental issues a very high priority in the national agenda. This can only be achieved by overall change of mindset through a rigorous national

system of environmental awareness of the short term benefits of harmful developmental activities which have devastating long term environmental impacts. This can also be achieved by placing strong penal measures to deter such bad environmental practices. This will also curtail the practice today of using the environmental impact assessment process as a decision aiding tool for endorsing economic activities rather than its original goal of ensure sustainable development.

Environmental Impact Assessments (EIAs) should have a larger scope. It is recommended that a procedure should be specified for determining a minimum system boundary for the assessment. The system boundary refers to 'the spatial and temporal boundary of the proposal's effects'. The current boundary is determined by the applicant and the lead assessor, but in practice, almost all EIAs address the direct, on-site effects alone. EIA procedures should be cost effective, appropriate, reasonable and commensurate with the size, scope and relative impacts of the project or programme in question.

However, as well as direct effects, harmful developmental activities cause a multitude of indirect effects through activities like consumption of goods and services, production of building materials and machinery, additional land use for activities of various manufacturing and industrial services, mining of resources to mention but a few. The indirect effects of developmental activities are often an order of magnitude higher than the direct effects assessed by EIA. It is recommended that this should change as the other effects also came to manifest and affect the environment in a devastating way as well, therefore a good and prudent environmental impact assessment mechanism should take them into account.

It is recommended that Environmental impact assessment should also be taken into account in trade agreements and multilateral agreements to deal with transboundary environmental impacts

of trade and development so that the stated national environmental policy is not relegated into the background.

It should be stated that over and above all, there must be a prevailing political will to ensure environmental protection so as to have an effective environmental impact assessment mechanism or else environmental protection will continue to be relegated to the background. This will ensure that the legislative reform, institutional reform and policies are given life. This is so because, if the political regime has a stated will to place economic development over and above environmental protection, there is no way that legislative, institutional and policy reforms will operate effectively to ensure the required outcome of the mechanism of environmental impact assessment namely; sustainable development. In short, no matter what can be said and done, the system will only operate to achieve its intended goals under a political will and ideological regime that holds environmental protection at the core.

### **5.3 CONCLUSION**

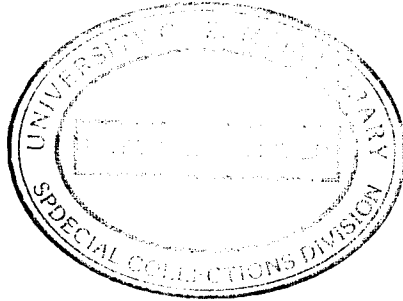
This research has shown that the current and prevailing mechanism of environmental impact assessment is not effective as it is being used as a development aiding tool and not as an environmental impact vigilance tool. It has however been shown that developmental activities can occur without causing adverse effects to the environment. A proper mechanism must be put in place that can ensure that trade and developmental activities result in sustainable development. It has also been stated that ideally, this can best be achieved through a well organized system of environmental impact assessment.

It has been shown that in Zambia this can be done through the implementation of developmental policies that ensure sustainable development. This has been recommended to be achieved through reformation of the legislative, institutional and policy regime that deal with developmental activities and environmental issues to operate in a coordinated and regulated effort to enhance the principles of environmental impact assessment to ensure sustainable development. Finally it has also been stated that over and above all, the system has to be given life in order for all the well organized mechanisms put in place to operate effectively and achieve the intended goals of sustainable development. It has to operate with the full support of the political will and ideological regime.

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**AN APPRAISAL OF THE LEGAL AND INSTITUTIONAL FRAMEWORK DEALING WITH DISASTER MANAGEMENT IN ZAMBIA.**



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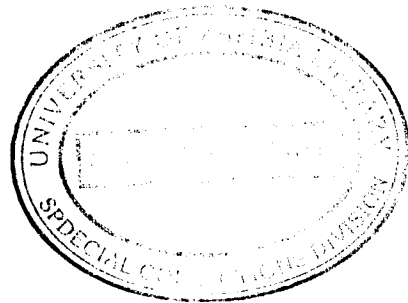
**KATINDO MWALE**

A paper presented in partial fulfillment of the requirements for the Award of the Degree of Bachelor of Laws of the University of Zambia.

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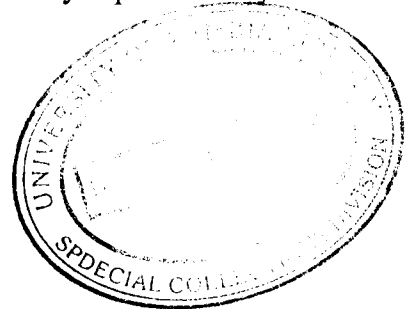
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Date:.....

**MRS ANNIE CHEWE CHANDA**

## ABSTRACT

The dissertation highlights the salient features of the Disaster Management Act and makes analysis as to its adequacy in dealing with disasters in the country. In approaching this subject matter the research starts by examining and identifying what a disaster is, giving the different types of disasters and their effects. It also highlighted that disaster management should be prioritized especially for a less developed country like Zambia as a disaster has the effect of retarding a country's economic growth.

The dissertation gives the salient features of the Disaster Management Act which makes provision for the existence of an institutional framework. The institutional framework forms the basis for disaster management activities in the country. The Act also prescribes their powers and functions defining the roles and responsibilities of each institution. This has the effect of preventing duplication of efforts among institutions in disaster management. The new system is also compared with the old institutional framework that was in place and a determination is made on this basis as to whether the new framework is adequate to deal with disasters. In addition the dissertation analyses whether the Act has followed the disaster management cycle which forms the basis of any disaster management system. A determination is made as to the compliance of the Act with the disaster management cycle.

The dissertation looks at the frequent disasters that have occurred in Zambia, these being floods, deforestation and droughts. The dissertation analyses the institutional framework put in place to deal with these disasters. The dissertation also makes recommendations as regards the latest practices in disaster management such as the guarantee of citizens' rights to information regarding disaster management. Further recommendations include the right of citizens to be compensated for failure by authorities to act to prevent disasters which are reasonably foreseeable from happening.

## **ACKNOWLEDGEMENTS**

Heartfelt thanks go to my Supervisor, Mrs. Annie Chanda, for her supervision and guidance without which, it would not have been possible to put up this scholarly work. Many thanks also go to Mr Kabwiku for his guidance. Many thanks also go to Natasha Hadunka and Florence Kafwimbi for proof reading the dissertation and ensuring that all the corrections that were highlighted by Mrs.Chanda are taken care of.

Finally, the author is indebted to the scholastic prowess prevailing in the School of Law at the University of Zambia. The invaluable contributions of the learned women and men lecturing in the School of law have inspired me to become a Lawyer. Their sacrifice and dedication is surely an example to be followed by all.

## **DEDICATION**

This dissertation is dedicated to Annie Chisanga Mwale for all that you sacrificed to ensure that I have a good education. To Mr Steven Mwale for inculcating the spirit of hard work in me thank you. To my friends who gave me their support and understanding because I could not join them in having fun because of the dissertation. To my God who has been with me throughout this journey. Many times I thought I had reached the end of the road but indeed God takes care of his children. Thank you above all.

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United Nations International Strategy for Disaster Reduction 1999

United Nations Convention on Climate Change 1992

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## CHAPTER ONE

### 1.1 INTRODUCTION

A disaster is an event that is associated with the impact of a human induced, natural hazard or a complex emergency which causes a serious disruption in the functioning of a community or society causing widespread human, material or environmental losses which exceed the ability of the affected community or society to cope using its own resources. A disaster is declared when its management goes beyond the capacity of the local community or one single government agency and requires the intervention and co-ordination of the state in order to mobilize resources at a national level<sup>1</sup>.

A disaster must be differentiated from an emergency which is a situation where the community is capable of coping. It is a situation generated by the real or imminent occurrence of an event that requires immediate attention of emergency resources while a disaster is a situation in which the community is incapable of coping. It is a natural or human-caused event which causes intense negative impacts on people, goods, services and the environment, exceeding the affected community's capability to respond, therefore the community seeks the assistance of government and international agencies<sup>2</sup>.

Disasters can be classified in two types; these are man-made and natural disasters. Natural disasters occur in proximity to and pose a threat to people, structures or economic assets. They are caused by biological, geological, seismic, hydrological or meteorological conditions or

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<sup>1</sup>Nathan Carter, *A Disaster Manager's Handbook* (Manila: Alfa publications, 1991), 7

<sup>2</sup>Paul West and Keith Thomas, *Introduction to Disaster Management* (Boston: Earth Works Press, 2010), 14

processes in the natural environment<sup>3</sup>. Examples of natural disasters include cyclones, earthquakes, tsunami, floods, landslides and volcanic eruptions.

The second type of disaster is the man-made disaster. These are disasters or emergency situations of which the principle direct causes are identifiable to human actions, deliberate or otherwise. Apart from technological disasters this mainly involves situations in which the civilian population suffers casualties, losses of property, basic services and means of livelihood as a result of war, civil strife or other conflicts or policy implementation. In many cases, people are forced to leave homes, giving rise to congregations of refugees or externally or internally displaced persons as a result of civil strife, an airplane crash, a major fire, oil spill, epidemic or terrorism<sup>4</sup>.

In addition disasters can also be classified according to the speed of onset. There is a sudden onset and a slow onset. A sudden onset has little or no warning and minimal time to prepare for. First the situation develops, the second level is an emergency and the third level is a disaster. The main hazards a region is or may be vulnerable to will depend on the geographical location of a country<sup>5</sup>.

There are three broad categories of disasters that have afflicted Zambia. These are: human induced disasters, natural disasters and complex humanitarian emergencies. The major human induced hazards that Zambia has to deal with are epidemics, famine, influx of refugees, internally displaced persons, fires, deforestation and accidents. The major natural disasters that

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<sup>3</sup>Paul West and Keith Thomas, *Introduction to Disaster Management*, 14

<sup>4</sup>Paul West and Keith Thomas, *Introduction to Disaster Management*, 17

<sup>5</sup>Paul West and Keith Thomas, *Introduction to Disaster Management*, 1

Zambia is faced with include floods, droughts, plant pests, livestock disease and plant parasite invasions. Lastly Zambia also faces disasters associated with complex humanitarian emergency. This is a human crisis in a country, region at international level or society where there is total or considerable breakdown of authority resulting from internal or external conflict. Even though Zambia has not really experienced such situations, the instability caused by the Lenshina uprising, the Mushala rebellion and cases of serial killers have potential to lead to complex emergencies<sup>6</sup>. However this paper has focused on three main disasters that Zambia continues to face, these are droughts, floods and deforestation.

The impact of each occurrence of a disaster has been devastating. This has led to effects which include loss of life, injury, damage to and destruction of property, disruption of lifestyle, damage to national infrastructure and disruption to governmental systems, sociological and psychological after-effects<sup>7</sup>.

Therefore preparing for disaster situations and if possible preventing them, is considered by many as an integral part of development planning, focusing on achieving sustainable growth, poverty reduction and environmental balance. It is therefore required that modern disaster management is very much an ongoing national obligation important to governments and people alike. It has special significance today because of increasing dangers to the world environment posed by natural hazards and their effects on economic development. To be effective, disaster

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<sup>6</sup>Disaster Management Policy. Office of the Vice President. August 2005 , 11

<sup>7</sup>Paul West and Keith Thomas, *Introduction to Disaster Management*, 17

management should be implemented as a comprehensive and continuous activity, not as a periodic reaction to individual disaster circumstances<sup>8</sup>.

The problem of disasters is not just in Zambia; therefore at the international level various international instruments have been promulgated to address the problem of disasters in order to mitigate the effects of such disasters on countries. Zambia is a signatory to some of these international instruments, some of which include the United Nations Convention on Climate Change (UNFCCC) of the year 1992 whose objective is to stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Another international convention that Zambia is a signatory to, is the United Nations International Strategy for Disaster Reduction (UNISDR) of the year 1999 which is designed to respond to the disaster reduction need by moving from protection against hazards to the management of risk through the integration of risk reduction into sustainable development.

These instruments demonstrate the importance that state parties have attached to disaster management and mitigation in order to be able to prepare, prevent and respond to disasters when they occur. Indeed most of the United Nations conventions dealing with disaster management have been signed by most sovereign states signifying the need for international standards for adequate disaster management planning and response. The international instruments also provide an international framework for co-ordination of disaster management activities, plans and programs amongst member states.

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<sup>8</sup>Disaster Management Policy. Office of the Vice President. August 2005, 1

In Zambia, the overall mandate to coordinate disaster management activities lies with the Disaster Management and Mitigation Unit which lies within the Office of the Vice President. Before the promulgation of the Disaster Management Act there was no legal or institutional framework tasked to specifically deal with disaster management, that is, there was no legal or institutional framework to coordinate disaster management programmes and activities as this involved ad-hoc mechanisms which lacked efficiency in dealing with disasters in the country. The absence of a coordinated effort amongst key players culminated in problems such as, lack of coordination amongst key players in the management of disasters, lack of a legal framework to give legal authority to the operations of the disaster management system. Arising from these problems, the Disaster Management Act was passed on the 13<sup>th</sup> April 2010 to establish and provide for the maintenance and operation of a system for the anticipation, preparedness, prevention, coordination, mitigation and management of disaster situations and the organization of relief and recovery from disasters<sup>9</sup>.

The Act also provides for disaster management structures at national, provincial and district level and also provides the legal framework for disaster management in Zambia. The Act provides for the creation and establishment of the Disaster Management and Mitigation Unit whose primary responsibility is to implement all disaster management programmes and activities in the country.

## **1.2 STATEMENT OF PROBLEM**

In today's fast changing global environment, the detrimental consequences of disasters on society, economy, natural environment and even politics, cannot be overemphasized. More so in

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<sup>9</sup>Disaster Management Polic. Office of the Vice President. August 2005, 4

developing countries, the impact of disasters inevitably goes beyond their immediate devastation as the continuing toll on human lives, properties and resources exacerbate poverty and sets back economic development.

Global disaster statistics for 1996-2000 revealed considerable economic costs estimated at US\$ 235 billion and 425,000 lives lost. Disasters caused by natural hazards alone affected an average of 211 million people per year in the past decade<sup>10</sup>.

The United Nations, national governments, non-governmental organizations (NGOs), academic research institutions have made significant strides in promoting and establishing programmes and strategies for disaster management, that is, through awareness campaigns, risk assessments, training programmes and research<sup>11</sup>.

Notwithstanding the above, many countries and local communities, especially in Southern Africa are becoming increasingly vulnerable to disasters as technological, environmental, political and economic change combine to increase disaster risk.

Zambia too has not been immune from the threats and occurrence of disasters as it also faces the challenge of having to cope with natural disasters whose severity and frequency has increased. For example, in the year 2009, Zambia was struck by flooding which resulted in the deaths of at least 131 people and displaced over a 100,000 people. The floods affected 3 provinces of Zambia which were Western, North-western and Southern provinces damaging buildings and

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<sup>10</sup> Dewald Van Niekerk, *A comprehensive Framework for Multi-sphere Disaster Risk Reduction in South Africa* (Pretoria: North West University, 2005), 1

<sup>11</sup> United Nations Inter-Agency Secretariat of the International Strategy for Disaster Reduction (UNISDR) 2003.

infrastructure. The damage to infrastructure alone totalled more than \$5 million and the floods affected 20,000 households and destroyed 5,000 homes in Southern province alone<sup>12</sup>.

In addition to having floods, Zambia has also experienced periods of droughts since the attainment of independence. The periods include 1965-1966, 1972-1974, 1981-1984, 1991-1992 and 2004-2005. The causes of droughts are numerous and vary among seasons and years. The resultant effects include loss of life, disruption of lifestyle, psychological and sociological effects<sup>13</sup>.

In order to deal with disasters, the government of Zambia would appoint ad hoc bodies to deal with the disasters as they occurred. However this was not efficient and therefore the Disaster Management Act no 13 of 2010 was promulgated to provide for the maintenance and operation of a system of anticipation, preparedness, prevention, coordination, mitigation and management of disaster situations and the organization of relief and recovery from disasters, in addition to coordinating disaster management activities across the country<sup>14</sup>. This study seeks therefore to critically analyse the effectiveness of the Act in terms of its adequacy in dealing with and preparing for disasters.

### **1.3 SIGNIFICANCE OF THE STUDY**

The significance of this study hinges on the fact that after analyzing the ad hoc system that was in place before the promulgation of the Disaster Management Act and that of the legal and

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<sup>12</sup> United Nations , *Integrated Regional Information Network*, available at <http://www.irinnews.org/Report.aspx?ReportId=83623>. accessed on the 27 February 2010

<sup>13</sup> United Nations, *Environment and Poverty Times*, available at <http://www.ipccreports/sres/regional/index.php?idp=20> accessed on the 3<sup>rd</sup> March 2012

<sup>14</sup>Preamble of the Disaster Management Act no13 of 2010

institutional framework that has been put in place, it helps provide a guideline as to whether the legal and institutional framework in place is better than the ad hoc system. It will help policy makers to make informed decisions and plans relating to the function and operation of the legal and institutional framework that has been covered in the introduction. The study will help in further highlighting what the country can do to mitigate the effects of disasters when they occur. The study will also provide new information to authorities as to the amendments that need to be made to improve on the current Act. Finally the study will add to the body of knowledge on disaster management in Zambia.

#### **1.4 JUSTIFICATION**

Many countries including Zambia are not immune from disasters and this situation has been exacerbated by climate change. Zambia faces the challenge of dealing with annual floods and increasing levels of deforestation. It has also experienced periods of drought. In order to deal with the aforesaid disasters, the country has had ad hoc bodies deal with the disasters as they have occurred. However, this has changed due to the promulgation of the Disaster Management Act which provides for the maintenance and operation of a system of anticipation, preparedness, prevention, coordination, mitigation and management of disaster situations and the organization of relief and recovery from disasters<sup>15</sup>. The Act further provides for an institutional framework which will coordinate disaster management activities in the country. Therefore it is necessary to analyse whether the legal and institutional framework in place is adequate to deal with disasters in the country. Since the Disaster Management Act is a new piece of legislation, it is necessary and expedient for an analysis to be made as to whether the Act is indeed achieving the purpose it was intended for. This is because if the framework is not adequate to deal with disasters, then the

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<sup>15</sup>Preamble of the Disaster Management Act no13 of 2010

effect is that lives, infrastructure and property will be lost. This also has the effect of retarding Zambia's economic growth.

### **1.5 OBJECTIVES OF THE STUDY**

- i) Assess the Disaster Management Act and state whether it provides for Zambia to be able to adequately deal with disasters, paying attention to areas of disaster preparedness, risk reduction and post disaster reconstruction and recovery.
- ii) To highlight the institutions' structures, functions, mandate and establish how these operate and whether these have had an impact on the mitigation of disasters.
- iii) To suggest possible amendments that can be made to the Disaster Management Act.

### **1.6 RESEARCH QUESTIONS**

1. What is disaster management and what is its significance to a country like Zambia?
2. What are the main types of disasters which Zambia faces?
3. Is the Disaster Management Act sufficient to adequately deal with any disaster in the event that it does occur?
4. Does the Act provide for significant risk reduction and post disaster reconstruction and recovery?
5. How do disasters affect development?

## **1.7 METHODOLOGY**

*The research for this paper has been for the most part qualitative and consists of data collected from secondary sources in the form of books, dissertations, journal articles as well as data from reports. Internet data has also be referred to in particular for its value in being updated with current affairs.*

## **1.8 OUTLINE OF CHAPTERS**

### **1.8.1 CHAPTER ONE: INTRODUCTION**

Chapter one has focused on what disaster management is, giving an explanation of the types and classifications of disasters. It has also given the major disasters that Zambia deals with giving the effects of these disasters. It has also included the statement of problem, rationale and justification, objectives, research questions and methodology of study.

### **1.8.2 CHAPTER TWO**

The second chapter has focused on the Disaster Management Act of 2010 analyzing the salient provisions of the Act and determining whether or not the Act is adequate to deal with disasters in Zambia in relation to disaster preparedness, risk reduction and post disaster recovery and reconstruction.

### **1.8.3 CHAPTER THREE**

In the third chapter the paper has focused on three common disasters that Zambia has and continues to deal with stating the cause, consequences and highlighting the institutional framework in place to deal with these disasters.

#### **1.8.4 CHAPTER FOUR**

In this chapter a conclusion has be given and recommendations based on the findings of the paper will be made.

#### **1.9 CONCLUSION**

The paper has defined what a disaster is, giving the various types and classifications of disasters. The paper has also highlighted the effects of disasters giving a highlight of disasters that Zambia continuously faces. The paper has also given a statement of the problem, justification and methodology of study. The second chapter will therefore focus on the salient provisions of the Disaster Management Act stating whether the Act provides for adequate disaster management in the country.

## **CHAPTER TWO**

### **2.0 INTRODUCTION**

The first chapter outlined what a disaster is giving the types and classification of disasters. The second chapter focuses on the Disaster Management Act of 2010. The chapter begins by giving a background of the history of Disaster Management in Zambia from the period of independence up until the promulgation of the Disaster Management Act No 13 of 2010. The chapter also explains the legal and institutional framework that existed before the promulgation of the Act and how it operated. The paper then makes an analysis of the Act to determine whether the new institutional and legal framework is adequate to deal with disasters.

### **2.1 BACKGROUND TO DISASTER MANAGEMENT IN ZAMBIA**

At the time of attainment of independence in 1964 Zambia had no particular institution dealing with disaster management in the country. However at the end of the first republic the Contingency Planning Unit was established in 1966 and was charged with the responsibility of co-ordination of response to emergencies. The Contingency Planning Unit was located in the office of the then prime minister; the unit continued in existence throughout the first and second republic and was eventually phased out in 1992<sup>16</sup>.

Following the major drought of 1991/92 that affected most of the Southern African region and the major relief operation that followed, four key Ministries, these being the Ministry of Health, Agriculture, Energy and Community Development formed an ad-hoc committee which was responsible for managing different aspects of response to drought. Management committees were co-chaired by Ministries of Agriculture and Health. Despite attempts at co-ordination, the

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<sup>16</sup>Disaster Management Policy. Office of the Vice President. August 2005, 2

ministries tended to operate in theory on their own elements or respond in isolation. This led to unnecessary overlaps, wastage of resources and bureaucratic delays<sup>17</sup>.

In the absence of formal relief framework, new structures were set up by government to manage logistics of bulk imports and relief programmes which by passed existing government channels. These structures were created at national, district and village levels and became known as the Programme to Prevent Malnutrition (PPM) to which the Programme Against Malnutrition (PAM) provided secretariat and technical backstopping services<sup>18</sup>.

As a result of the fragmented disaster framework that existed, it became necessary to create a permanent body within the government establishment to initiate, facilitate the implementation and coordination of disaster management policies and programmes. Therefore the mandate for overall disaster management was vested in the Office of the Vice President. Consequently, and in line with the public service reform programme, government created the Disaster Management and Mitigation Unit within the Office of the Vice President in 1994<sup>19</sup>.

However despite the creation of the Disaster Management Unit, there were various weaknesses in the operations of the unit, in that there was a lack of a Disaster Management policy which resulted in an ad-hoc management of crisis situations, lack of reliable information about hazards, risks, vulnerabilities and resources, lack of coordination which hence posed a substantial risk of costly duplication of efforts among key players. There was also the problem of vulnerability to subjective political influence which threatened the credibility of programs and sometimes complicated the implementation of programmes. Most importantly was the lack of a legal

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<sup>17</sup>Disaster Management Policy.Office of the Vice President.August 2005, 3

<sup>18</sup>Disaster Management Policy.Office of the Vice President.August 2005, 3

<sup>19</sup>Disaster Management Policy.Office of the Vice President.August 2005, 3

framework that would give legal authority to the operations of the Disaster Management system<sup>20</sup>.

In order to deal with these weaknesses, the Disaster Management Act of 2010 was promulgated to deal with Disaster Management in Zambia. The Act plays a key role in Disaster Management as it provides the legal framework for Disaster Management. The Act provides for the establishment of the Disaster Management and Mitigation Unit which is responsible for central planning, coordinating and the implementation of disaster management programmes and activities in the country. The Act also provides for the establishment of the National Disaster Management Technical Committee, it also provides for the creation of Provincial Disaster *Management Committees and the District and Satellite Management Committees*. In this regard the Act also plays a key role as it creates the institutions that coordinate, plan and implement Disaster Management activities prescribing their powers and functions. The institutions created by the Act are important in that it would be impossible to implement and coordinate disaster management activities across the country without the existence of these institutions. In addition the Act provides for the legal basis for the existence of the institutions charged with disaster management in the country.

### **3.0 SALIENT PROVISIONS OF THE DISASTER MANAGEMENT ACT 2010**

The overall responsibility for national disaster management is the Disaster Management and Mitigation Unit (DMMU) which is situated in the office of the Vice President and is charged with the responsibility of the implementation of disaster management activities and programmes. The DMMU is required to exercise its responsibilities through the National Disaster

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<sup>20</sup>Disaster Management Policy. Office of the Vice President. August 2005, 3

Management Committee, Disaster Management Technical Committee and appropriate broad based committees at provincial, district and satellite levels. The DMMU is created under section 4 of the Act and is mandated under the Act that is, section 5 (1) (2) of the Act to be the secretariat of the entire national disaster management structure and is required to implement all disaster management programmes and activities in the country.

At national level, there are two institutions that have been created to coordinate disaster management plans, programmes and activities. The first is the National Disaster Management Council which is established under section 8 of the Act. The council is chaired by the Vice-President and comprises ministers of all ministries in government. The functions of the council are to:

- (a) Formulate and update national disaster policy;
- (b) Direct line ministries to take up their responsibility during disaster and non disaster periods
- (c) Mobilize resources for disaster management.
- (d) Approve disaster management plans and guidelines
- (e) Recommend to the president the declaration of a national disaster.<sup>21</sup>

The second institution created at national level to deal with disasters is the National Disaster Management Technical Committee (NDMTC) which is established under section 10 of the Act. Under this body, the national co-ordinator is the chairperson. The NDMTC consists of permanent secretaries of all ministries. The function of the technical committee is to:

- (a) Recommend policy and program direction to the council.

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<sup>21</sup>Disaster Management Act no 13 of 2010 section 9

- (b) Co ordinate the implementation of the decisions of the council, using sectoral skills and resources of line ministries
- (c) Supervise disaster management activities in Zambia and in particular, coordinate the disaster management content of development and reconstruction programmes.
- (d) Supervise the work of the unit in the monitoring and review of disaster management plans and
- (e) Control the disbursement of funds<sup>22</sup>

The National Disaster Technical Committee works in tandem with various sub committees. The sub-committees include the following, the finance and tender sub-committee, health and nutrition sub-committee, infrastructure, relief and logistics sub-committee, agriculture and environment sub-committee, security sub-committee, training and public education sub-committee and the early warning sub-committee.

It can be ascertained from the aforementioned provisions that at national level, there are two institutions that have been established under the Act to coordinate disaster management. This means that the overall responsibility of disaster management at national level lies within these two institutions. It can be seen that the NDMC comprises of ministers of various government portfolios' who are in charge of government policy while the NDMTC consists of permanent secretaries whose responsibility is to implement government policy on disaster management. These two institutions therefore coordinate with each other at national level to deal with disasters.

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<sup>22</sup>Disaster Management Act no 13 of 2010 section 11

In order to co ordinate disaster management activities at provincial level, the Act provides for the creation of Provincial Disaster Management Committees which is a sub-committee of the Provincial Development Co ordination Committee. It is created under section 16 of the Act. Under this committee, the provincial permanent secretary is the chairperson and it consists of representatives of government departments. The functions of the Provincial Committee include:

- (a) participate in risk analysis and vulnerability assessment
- (b) monitor the implementation of district disaster management plans
- (c) Monitor the preparation and implementation of disaster management plans and evaluate their impact.
- (d) Act as a channel for information between central government and the districts.
- (e) Perform emergency operations for the province in times of disasters
- (f) Promote public awareness at provincial and district levels
- (g) Perform emergency operations for the province in time of disasters
- (h) Promote and implement disaster management training at provincial level and ensure that training programmes are carried out at district level
- (i) Mobilize provincial resources for prevention, mitigation, preparedness, response and rehabilitation activities for purposes of the trust fund
- (j) Prepare and consolidate provincial disaster management plans in line with national development plans; and
- (k) Act as a clearing house for information relating to early warning<sup>23</sup>.

It follows from the aforementioned provisions that the Act provides for the creation of Provincial Disaster Management Committees who coordinate and implement disaster management plans

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<sup>23</sup>Disaster Management Act no 13 of 2010 section 18

and programmes at provincial level. This means that even at provincial level there are institutions mandated to deal with disasters. In addition the provincial committees work in tandem with the institutions created at national level to effectively deal with disasters.

At district level the Act provides in section 21 for the establishment of Disaster Management Committee which is a sub-committee of the District Development Coordinating Committee. The District Disaster Management co-ordinator is the chairperson and it comprises of all members of parliament in a district. The functions of the district committees are provided for in section 22 of the Act. It provides that the district committee shall:

- (a) Prepare and update district multi-sectoral disaster preparedness, prevention and mitigation plans for slow and rapid response.
- (b) Act as a clearing house for information related to early warning;
- (c) Co-ordinate district disaster management activities;
- (d) Assist district offices in dealing with disaster management;
- (e) Review and update district disaster plans during times of non emergency;
- (f) Participate in risk analysis and vulnerability assessment;
- (g) Implement public information and public awareness programs in the districts; and
- (h) Review and update district disaster plans during times of non emergency.<sup>24</sup>

At village level the Act provides for the creation of satellite Disaster Management Committees which consists of a representative of a traditional authority and local persons in the community. This is provided for under section 26 of the Act. The functions of the Satellite Committees are to;

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<sup>24</sup>Disaster Management Act no 13 of 2010 section 22

- (a) Identify vulnerable households and individuals
- (b) Sensitize the local community on the effects of disasters and appropriate responses.
- (c) Act as a clearing house for information related to early warning.
- (d) Participate in risk analysis and vulnerability assessments
- (e) Oversee disaster preparedness, disaster relief and post disaster recovery activities of individuals and households in the village or township under its jurisdiction
- (f) Act as a primary responding and mitigation agent within the existing resilience capacity of the community<sup>25</sup>.

It follows from the aforementioned provisions that the Act creates institutions at district and village level. This means that each institution is responsible for the implementation and carrying out of disaster management activities, that is, at district and village level. It can be seen that both the district and village level institutions work in tandem with the provincial committees who in turn report to the national institutions. The effect is that there is coordination in terms of carrying out and implementing disaster management activities. In addition the Act prescribes the powers and functions of each institution to ensure that there is no duplication of efforts and to endow these institutions with authority to take action before, during and after a disaster occurs.

#### **4.0 THE INSTITUTIONAL FRAMEWORK UNDER THE ACT**

It follows that when the current institutional framework is contrasted with the ad hoc system that was in place, it can be seen that under the ad hoc system there was no co ordination of efforts among institutions dealing with disaster management as there was no institution mandated to deal specifically with disaster situations. In addition there was lack of reliable information about

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<sup>25</sup>Disaster Management Act no 13 of 2010 section 27

risks, vulnerabilities and hazards. Furthermore, due to political influence the ability to deal with disasters was subject to political manipulation which interfered with the ability of key players to be able to adequately deal with disasters. This had the effect of disturbing the implementation of disaster programs<sup>26</sup>.

However with the promulgation of the Act, there is now an organized and effective system in place to deal with disasters. The Act creates institutions at national, provincial and district levels thereby creating a disaster management structure through which disasters can be adequately dealt with. In addition, each structure has its own functions and powers which are prescribed under the Act preventing the duplication of efforts in terms of the mandate of each institution created under the Act. Furthermore the Disaster Management and Mitigation Unit co-ordinates the activities of all the institutions under the Act and provides for the coordination, monitoring, planning and implementation of all disaster management programmes in the country. It can therefore be concluded that the current institutional framework under the Act is better than the ad hoc system as it provides a systematic manner in which disaster should be dealt with in the country.

## **5.0 DISASTER MANAGEMENT**

Disaster management is the organization and management of resources and responsibilities for dealing with all aspects of emergencies, in particular, preparedness, response and rehabilitation. Emergency management involves plans, structures and arrangements established to engage the normal endeavours of government, voluntary and private agencies in a comprehensive and

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<sup>26</sup>Disaster Management Policy. Office of the Vice President. August 2005, 3

coordinated way to respond to the whole spectrum of emergency needs. This is what is known as disaster management<sup>27</sup>.

Disaster management in the Zambian context is defined by the Disaster Management Act as:

a continuous and integrated multi-sectoral, multi-disciplinary process of planning and implementation of measures aimed at:

- (a) Preventing or reducing the risk of disasters;
- (b) Mitigating the severity or consequences of disasters;
- (c) Emergency preparedness
- (d) A rapid and effective response to disasters; and
- (e) Post disaster recovery and rehabilitation

The Zambian definition of disaster management places emphasis on a multi sectoral and multi-disciplinary approach. This means that disaster management is not seen as the responsibility of one implementing agency which in Zambia seems to be the Disaster Management and Mitigation Unit. This is contrasted with the situation at the international arena that is, under the international strategy for disaster reduction of 1999 (ISDR) where disaster management is seen as the responsibility of one implementing agency.

## **6.0 DISASTER MANAGEMENT CYCLE**

In order for the Disaster Management Act to be efficacious, the Disaster Management cycle must be followed. There are three key stages of activities that have to be undertaken in disaster management. The first stage is the pre-disaster stage. These will include those taken to reduce

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<sup>27</sup>Dewald Van Niekerk, *A comprehensive Framework for Multi-sphere Disaster Risk Reduction in South Africa* (Pretoria: North West University, 2005), 11

human and property losses caused by a potential hazard. An example would be carrying out awareness campaigns, strengthening the existing weak structures, preparation of the disaster management plans at household and community level. Such risk reduction measures taken under this stage are termed as mitigation and preparedness activities<sup>28</sup>.

The second phase is during a disaster (disaster occurrence). These include initiatives taken to ensure that the needs and provisions of victims are met and suffering is minimized. Activities taken under this stage are called emergency response activities<sup>29</sup>.

The third and final phase is the post disaster phase. After a disaster strikes, the initiatives taken in response to a disaster with a purpose to achieve early recovery and rehabilitation of affected communities, immediately after a disaster strikes. These are called response and recovery initiatives. Therefore in order to analyze whether the Disaster Management Act is adequate to deal with disasters, particular attention has to be paid to measures taken before, during and after a disaster<sup>30</sup>. The measures include disaster risk reduction, mitigation, preparedness and post disaster construction and recovery.

## **8.0 PRE-DISASTER PHASE**

### **8.1 RISK REDUCTION**

According to the Disaster Management Act, Risk reduction refers to the probability of harmful consequences or expected losses (deaths, injuries, property, livelihoods, economic activity

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<sup>28</sup>Robert Singh,*Disaster Management* (New Delhi: Rawat Publications, 2006), 7

<sup>29</sup>Robert Singh,*Disaster Management*, 7

<sup>30</sup>Robert Singh,*Disaster Management*, 7

disrupted or environment damaged) resulting from interaction between natural or human induced hazards which create vulnerable conditions.<sup>31</sup>

A risk has also been described by Singh<sup>32</sup> as a “measure of the expected losses due to a hazard occurring in a given area over a specific time period. Risk is a function of the probability of particular hazardous event and the losses each would cause.”

The level of risk depends upon:

- (a) Nature of the hazard.
- (b) Vulnerability of the elements which are affected.
- (c) Economic value of those elements.

A community/locality is said to be at ‘risk’ when it is exposed to hazards and is likely to be adversely affected by its impact. Whenever we discuss ‘disaster management’ it is basically ‘disaster risk management’. Disaster risk management includes all measures which reduce disaster related losses of life, property or assets by either reducing the hazard or vulnerability of the elements at risk<sup>33</sup>.

It therefore means that in order to alleviate the effects of a disaster, the Act must provide for adequate risk reduction measures. This is adequately dealt with in section 7 of the Disaster Management Act which states that the unit shall give guidance to government ministries and departments, the private sector, non-governmental organizations, communities and individuals to assess and prevent or reduce the risk of disasters including:

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<sup>31</sup>Disaster Management Act no 13 of 2010

<sup>32</sup>Robert Singh, *Disaster Management*, 6

<sup>33</sup>Robert Singh, *Disaster Management*, 6

- (a) Ways and means of
  - (i) Determining levels of risks
  - (ii) Assessing the vulnerability of communities, households, environment and economic assets to disasters;
  - (iii) Increasing the capacities of communities and households to minimize the risk of impact of disasters and;
  - (iv) Monitoring the likelihood of, and the state of alertness to, disasters.

(2) The unit shall promote formal and informal initiatives that encourage risk-avoidance behaviour by government ministries and departments, the private sector, non-governmental organizations, communities and individuals.

## 8.2 DISASTER MITIGATION

Disaster Mitigation refers to all actions taken before a disaster to reduce its impacts including preparedness and long term risk reduction measures. Mitigation activities fall into two categories:

- 1) Structural mitigation- this involves construction of projects which reduce economic and social impacts.
- 2) Non-structural activities- these are policies and practices which raise awareness of hazards or encourage developments to reduce the impact of disasters<sup>34</sup>.

Mitigation includes reviewing building codes, vulnerability analysis updates; zoning and land use management and planning; reviewing of building use regulations and safety codes and

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<sup>34</sup>Paul West and Keith Thomas et al, *Introduction to Disaster Management* (Boston: Earth Works Press, 2010), 23

implementing preventive health measures. Mitigation can also involve educating businesses and the public on simple measures they can take to reduce loss or injury. Ideally, these preventive measures and public education programmes will occur before a disaster. From time to time some mitigation requirements may be outside the scope of the disaster manager; however, this does not lessen the role to be played by mitigation. On the contrary, it is the responsibility of the emergency manager to avail him or herself with the requisite information to engage community involvement. The primary focus of disaster management is to prevent disasters wherever possible or to mitigate those which are inevitable. The four sets of tools that could be used to prevent or mitigate disasters include<sup>35</sup>:

- (a) Hazard management and vulnerability reduction
- (b) Economic diversification
- (c) Political intervention
- (d) Public awareness

Mitigation strategies and measures include adjusting normal development programmes to reduce losses. For instance, varieties of crops that are more wind, flood or drought resistant can often be introduced in areas prone to floods, drought and cyclones. Economic diversification is also another strategy. This involves areas where the principle or sole source of the income may be threatened, attempts should be made to diversify the economy and introduce the economic activities that are less vulnerable. Diversification is important where economies are dependent on a single cash crop. Developing disaster resistant economic activities which are relatively unaffected by disasters. For instance, situating warehouses in flood plains may be more appropriate than manufacturing plants in the same location. In

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<sup>35</sup> Paul West and Keith Thomas et al, *Introduction to Disaster Management*, 23

addition efforts should be made to identify and encourage the development of enterprise that is less vulnerable to hazards<sup>36</sup>.

The Disaster Management Act has defined mitigation as structural and non structural measures undertaken to limit the adverse impact of natural disasters, environmental degradation and technological hazards. Disaster mitigation has been covered in the Act under section 5 (2) which provides' that:

*The Disaster Management and Mitigation Unit is charged with the responsibility of central planning, coordinating and monitoring institution for prevention, mitigation, preparedness, response and post disaster recovery.*

Furthermore, Disaster Mitigation is also covered in section 7 (1) of the Act which provides that the unit shall give guidance to government ministries and departments, the private sector, non-governmental organizations, communities and individuals to assess and prevent or reduce the risk of disasters including:

- (b) The development and implementation of appropriate prevention and mitigation methodologies.
- (c) The integration of prevention and mitigation methodologies with development plans, programmes and initiatives.

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<sup>36</sup>Paul West and Keith Thomas et al, *Introduction to Disaster Management*, 25

## **9.0 DISASTER OCCURENCE**

### **9.1 DISASTER PREPAREDNESS AND RESPONSE**

According to the Disaster Management Act, disaster preparedness means activities and measures taken in advance to ensure effective response to the impact of a hazard, including the issuance of timely and effective early warnings and evacuation of people and economic assets from a threatened location.

According to Singh<sup>37</sup> disaster preparedness refers to a protective process which embraces measures which enable governments, communities and individuals to respond rapidly to disaster situations to cope with them effectively. Preparedness includes the formulation of viable emergency plans, the development of warning systems, the maintenance of inventories and the training of personnel.

It may also embrace search and rescue measures as well as evacuation plans for areas that may be at risk from a recurring disaster. Preparedness therefore encompasses those measures taken before a disaster event which are aimed at minimizing loss of life, disruption of critical services, and damage when the disaster occurs.

Disaster preparedness is important to every disaster management programme in that it helps in mitigating the effects of disasters. This is adequately dealt with under the Act. The Disaster Management and Mitigation Unit is charged with the preparation for disasters in section 5 (2) (a) of the Act.

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<sup>37</sup>Robert Singh, *Disaster Management*, 7

Disaster preparedness is also covered by section 14 of the Act which provides for the keeping of directories of all government heads of departments, locations of all schools and learning institutions in the country, the location of all health facilities in the country , the location of all fire fighting stations and units in the country, names and addresses of all non-governmental organizations, all United Nations agencies and the records or registers showing the location and size of buildings which could be used as emergency shelters or health facilities in the event of a disaster.

In addition section 15 of the Act provides for the creation of an electronic data base which shall contain all information relating to disasters in Zambia. This helps in disaster preparedness in that it assists the unit to prepare adequately as all information on disasters in the country is available which means that the unit can adequately prepare in advance for any disasters.

Furthermore section 15 (2) (k) also provides for disaster preparedness in the different institutions of government.

## **10.0 POST DISASTER PHASE**

### **10.1 POST DISASTER RECONSTRUCTION AND RECOVERY**

Under the Disaster Management Act<sup>38</sup> post disaster reconstruction and recovery refers to measures to help restore livelihoods, assets and production levels of emergency affected communities, to re-build essential infrastructure, productive capacities, institutions and services destroyed or rendered non-operational by a disaster and help bring sustainable development by

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<sup>38</sup> Disaster Management Act no 13 of 2010

facilitating the necessary adjustments to the changes caused by the disaster and improving on the status quo, where possible.

This has been dealt with in section 39 of the aforesaid Act which states that during a disaster, the national co-coordinator shall prepare a post disaster, reconstruction, rehabilitation and recovery plan and after its approval by the council shall implement and maintain that plan at national, provincial and district level.

It therefore follows that the Act makes provision for all activities that need to be carried out in order to deal with disasters. That is, activities which include the pre-disaster, during and post disaster phase. It must also be mentioned that in the event that any of the activities are not covered in line with the disaster management cycle, the effects of the disaster would be catastrophic on the country. Therefore it is important that the phases in the disaster management cycle are followed.

## **11.0 CONCLUSION**

In conclusion, the chapter has made a comprehensive review of the legislative and institutional framework dealing with disaster management in Zambia. The chapter has outlined the salient provisions in the Act that provide for measures aimed at disaster risk reduction, mitigation, preparedness and post disaster reconstruction and recovery. The paper has also outlined the institutional framework that has been put in place to coordinate disaster management in the country. It can be concluded that in contrast to the ad hoc system that was in place, the current institutional and legislative framework in place has created an adequate framework for dealing with disaster in particular the ability to coordinate, plan and monitor disaster management activities. In addition the paper has also outlined the steps involved in disaster management cycle

which is the foundation upon which all disaster management activities should be based. The third chapter therefore focuses on the disasters that Zambia is imminently faced with giving their causes and effects. The paper also highlights the institutional framework in existence to deal with the disasters.

## **CHAPTER 3**

### **3.0 INTRODUCTION**

The second chapter focused on highlighting the salient provisions of the Disaster Management Act of 2010. The third chapter focuses on the various disasters that Zambia has been affected by, these being droughts, floods and deforestation. The chapter explains the causes, types and consequence that each of the aforementioned disasters has had on Zambia. The chapter in highlighting the aforementioned disasters explains the institutional framework that has been in existence to deal with these disasters.

### **3.1 MAJOR HAZARDS THAT HAVE AFFECTED ZAMBIA**

#### **3.2.1 FLOODS**

A flood is a state of high water level along a river channel or on the coast that leads to inundation of land, which is not usually submerged. Floods may happen gradually and also may take hours or even happen suddenly without any warning due to breach in the embankment, spill over, heavy rains. There are different types of floods namely: flash flood, urban flood, riverine flood, estuarine and coastal floods.<sup>39</sup>

In Zambia, there are two types of floods that commonly occur. The first and most frequent type of flood is the seasonal flood or riverine flood. A riverine flood is caused by runoff water following sustained rainfall. The second type of flood that frequently affects Zambia is the flash flood. These can be defined as floods which occur within six hours of beginning heavy rainfall and are usually associated with cloud bursts.

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<sup>39</sup>Robert Singh, *Disaster Management* (New Delhi: Rawat Publications, 2006), 30

### 3.3.2 CAUSES

There are several causes of floods and they differ from region to region. The causes may vary from a rural area to an urban area. Some of the major causes are heavy rainfall, heavy siltation of the river bed which reduces the water carrying capacity of the river or stream, blockage in the drains leads to flooding of the area as well as construction of dams and reservoirs.<sup>40</sup>

In Zambia, one of the major causes of flooding is the release of water from dams. This is through the spilling of water from both the Kariba and Itezhi- tezhi dams. Most releases are done in December and February. The water is spilled when the dam reaches a water limit to which if the water level goes beyond then dam failure would result. It is as a result of the releasing of huge volumes of water from the aforementioned dams that lead to the flooding of surrounding areas.

Another cause of flooding in Zambia is that of lack of drainages. Drains are essential in directing the flow of water. The absence of this basic infrastructural service has caused considerable distortion in the flow of water in various cities and townships within the country. For instance, many new settlements in Lusaka particularly the unplanned ones lack drainage systems thereby making them susceptible to flooding. Most of these allocations took place at the periphery of existing unplanned settlements without any corresponding service provision and without regard to the physical nature of land, that is, whether it was prone to floods due to its configuration. The resultant development from such allocation is spontaneous, irregular, uncontrolled or indeed what others would call haphazard. The developments further leave no

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Robert Singh, *Disaster Management*, 31

room for drainage systems and roads as such developments do not enjoy planning permission.<sup>41</sup> It is as a result of lack of this basic infrastructure that flooding occurs in many cities and townships across the country.

Another cause of flooding is building of residential areas on land that is not suitable for building houses and other types of infrastructure. For instance in Lusaka, it has been established that some areas become flooded because of the presence of impervious rocks that do not allow water to pass through. Most of such areas are not meant for human habitation because of the presence of rocks. Any settlement developed in such land is susceptible to flooding. This is the case in Kanyama Township.<sup>42</sup>

In addition, some places are equally located in a trough like terrain which makes it susceptible to flooding. Some places have been quarried creating deep depressions which fill up during the rainy season. Such common areas include Kabwata Site and Services, Kamwala, Kanyama and Misisi compounds<sup>43</sup>.

### 3.2.3 EFFECTS

Typical effects of floods are the loss of life and property. Structures like houses, bridges and roads get damaged by the gushing water. In addition boats and fishing nets also get damaged. Other effects are loss of livestock caused by drowning, lack of proper drinking facilities, contamination of water (well, groundwater, piped water supply) which leads to outbreak of epidemics, diarrhoea, viral infection, malaria and many other infectious diseases. Flooding also

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<sup>41</sup> Lusaka City Council, *Major causes of floods in Lusaka*, available at [www.lcc.zm/causes of floods](http://www.lcc.zm/causes_of_floods). accessed on the 28<sup>th</sup> march 2012

<sup>42</sup> Lusaka City Council, *Major causes of floods in Lusaka*, available at [www.lcc.zm/causes of floods](http://www.lcc.zm/causes_of_floods). accessed on the 28<sup>th</sup> march 2012

<sup>43</sup> Lusaka City Council, *Major causes of floods in Lusaka*, available at [www.lcc.zm/causes of floods](http://www.lcc.zm/causes_of_floods). accessed on the 28<sup>th</sup> march 2012

leads to a large area of agricultural land getting inundated and results in shortage of food, and animal fodder. Floods may also affect the soil characteristics. The land may also be rendered infertile due to erosion of top layer soil.<sup>44</sup>

### **3.2.4 INSTITUTIONAL FRAMEWORK DEALING WITH FLOODS**

Zambia was affected by flooding in the period between March and April 2010. The worst hit province was Lusaka. The people in the worst affected areas had to be moved to the independence stadium. There were well over 900 families residing in tents and their children had to be integrated into schools near the stadium. Other towns affected included Kabwe where over 55 families were accommodated at the Rotary Hall because either their houses were flooded or had collapsed due to heavy rains. According to Council for Churches in Zambia (CCZ) General Secretary Reverend Suzanne Matale's observation, "the worst is yet to come if the issue of floods is not tackled once and for all. We need as a country, to prevent such disasters as opposed to planning for such disasters."<sup>45</sup>

In order to deal with this disaster, the Disaster Management and Mitigation Unit (DMMU) in conjunction with NGO's such as Red Cross and Rotary Club were the key institutions involved in the relocation of people affected by the flooding as well as to providing food and other supplies of relief to the people affected. The DMMU also worked with key ministries such as Health, Agriculture and Home Affairs in order to assist the people affected by floods.

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<sup>44</sup>Robert Singh, *Disaster Management*, 33

<sup>45</sup> Post news paper 5<sup>th</sup> April 2010

### 3.3 DROUGHTS

A drought is either absence or deficiency of rainfall from its normal pattern in a region for an extended period of time leading to general suffering in the society. It is the interplay between the demand that people place on the natural supply of water and the natural event that provides the water in a given geographical region. The more the imbalance in the supply of water, the worse the drought becomes.<sup>46</sup>

Although droughts are basically caused by deficit in rainfall which is a meteorological phenomenon, they manifest into different spheres because of various vulnerability factors associated with them. Some of these factors are human induced. Even though droughts are natural disasters, their effects are made worse in developing countries by overpopulation, over grazing, deforestation, soil erosion, excessive use of ground and surface water for growing crops.<sup>47</sup>

#### 3.3.1 TYPES

There are four types of droughts. These are meteorological, hydrological, agricultural and socio-economic droughts. A meteorological drought is simply the absence or deficit of rainfall from the normal patterns. It is the least severe form of drought and is often identified by sunny days and hot weather. The second type of drought is the hydrological drought which often leads to reduction of natural stream flows or ground water levels, plus stored water supplies. The main impact is on water resource systems. The third type of drought is the agricultural drought which occurs when moisture levels in the soil is insufficient to maintain average crop yields. Initial consequences are the reduced seasonal output of crops and other related products. An extreme

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<sup>46</sup>Robert Singh, *Disaster Management*, 34

<sup>47</sup>Robert Singh, *Disaster Management*, 35

agriculture drought can lead to famine, which is the prolonged shortage of food in a restricted region causing widespread disease and death from starvation. The fourth type of drought is the Socio-economic drought which correlates the supply and demand of goods and services with the three above mentioned types of drought. When the supply of some goods or services such as water and electricity are weather dependent then the drought may cause shortages in the supply of these economic goods<sup>48</sup>. Zambia experiences most of these forms of droughts with the most prominent being the agricultural drought.

### 3.3.2 EFFECTS

In general all elements that are dependent on water are most affected. It affects the rainfed crops and then slowly creeps into the irrigated crops. People who are dependent on agriculture and areas where the other livelihood opportunities are least developed are greatly affected. The herdsman, landless labourer, subsistence farmers, women, children and farm animals are the most vulnerable groups<sup>49</sup>.

Droughts are different from other natural disasters because they do not cause any structural damage. As the meteorological drought turns into hydrological drought, the impacts start appearing first in agriculture which is most dependent on soil moisture. Irrigated areas are affected much later than the rain fed areas. However regions surrounding perennial rivers tend to continue normal life even when drought conditions are prevailing around. The impacts slowly spread into social fabrics as the availability of drinking water diminishes, reduction in energy

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<sup>48</sup>Robert Singh, *Disaster Management*, 36

<sup>49</sup>Robert Singh, *Disaster Management*, 36

production, ground water depletion, food shortage, health reduction and loss of life, increased poverty, reduced quality of life and social unrest leading to migration<sup>50</sup>.

Zambia has experienced periods of drought in many instances; these include the periods of 1965-1966, 1972-1974, 1981-1984, 1991-1992 and 2004-2005. The most prolonged and widespread period of droughts occurred in 1973 and 1984, when most African countries were affected and in 1992 when all southern African countries experienced extreme food shortages<sup>51</sup>. In 1973 alone, the drought killed over 100,000 people within southern Africa. It was also during this period that Zambia recorded a decline in agricultural growth and output.<sup>52</sup>

### **3.2.3 INSTITUTIONAL FRAMEWORK DEALING WITH DROUGHTS IN ZAMBIA**

It must be stated that during the periods that Zambia has faced droughts, that is, before 1992, droughts were handled by the Contingency Planning Unit (CPU) which was situated in the office of the Prime Minister. The CPU worked with key Ministries such as the Ministry of Agriculture and Energy in order to deal with disasters as they occurred. The CPU would also work in conjunction with International non-governmental organizations (NGO's) such as Red Cross and Rotary Club in order to assist with the helping of people caught in the droughts. During the droughts of 1991-1992, four key Ministries, these being the Ministry of Health, Agriculture, Energy and Water Development and Community Development formed an ad-hoc committee which was responsible for managing different aspects of response to this drought. Management committees were co-chaired by Ministries of Agriculture and Health. Despite attempts at co-ordination, the ministries tended to operate in theory on their own elements or respond in

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<sup>50</sup>Robert Singh, *Disaster Management*, 39

<sup>51</sup>Deepa Narayan and Robert Chambers, *Crying out for Change, Voices of the Poor series, The World Bank* (New York: Oxford University Press, 2000), 12

<sup>52</sup>World Development Report 2000/2001. The World Bank, Washington DC.

isolation.<sup>53</sup> This was the framework that existed to deal with disasters until 1992. Since the creation of the Disaster Management and Mitigation Unit in 1994 in the office of the vice president, it has been the main body dealing with droughts working in cooperation with Ministries of Health and Agriculture to deal with droughts throughout the country.

### **3.4 DEFORESTATION**

Deforestation is the removal of a forest or stand of trees where after the land is converted to non-land use. An example of deforestation is the conversion of forest land to an urban area. The term deforestation is often misused to describe any activity where all trees in an area are removed. However the removal of all trees in an area is correctly described as regeneration harvest<sup>54</sup>.

#### **3.4.1 CAUSES**

Forests are cut down for many reasons, but most of them are related to money or to people's need to provide for their families. The biggest driver of deforestation is agriculture. Farmers cut forests to provide more room for planting crops or grazing livestock. Often many small farmers will each clear a few acres to feed their families by cutting down trees and burning them in a process known as "slash and burn" agriculture. Logging operations, which provide the world's wood and paper products, also cut countless trees each year. Loggers, some of them acting illegally, also build roads to access more and more remote forests which lead to further deforestation. Forests are also cut as a result of growing urban sprawl<sup>55</sup>.

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<sup>53</sup> Disaster Management Policy. Office of the Vice President. August 2005, 3

<sup>54</sup> Andrew Grainger, *The Threatening Desert* (London: Earthscan Publications, 1990), 3

<sup>55</sup> National Geographic Society, *Modern day Plague*, available at [www.nationalgeographic.com/deforestation/facts](http://www.nationalgeographic.com/deforestation/facts). Accessed on the 28 march 2012

Not all deforestation is intentional. Some is caused by a combination of human and natural factors like wildfires and subsequent overgrazing, which may prevent the growth of young trees.<sup>56</sup>

In Zambia approximately 57% of its land area is forested, although there is no primary forest remaining. More than 40% of the country is within protected parks, although this does not prevent widespread poaching and deforestation from taking place. Since 1990, Zambia has lost over 13% of its forest cover and the deforestation rate is slowly rising. Zambia was one of the top 10 countries with the highest rates of deforestation between 2000 and 2006<sup>57</sup>. In Zambia, deforestation has been caused mainly by the use of the Chitemene system in which farmers use water logged trees, burned branches and use ash as a fertilizer for the soil. It is the use of this system that has led to the destruction of many forests around the country. Another major cause of deforestation is that of use of charcoal as an energy source. The introduction of charcoal as an urban cooking energy source has created an incentive among rural communities in central Zambia to clear woodlands to supply charcoal to the urban market<sup>58</sup>.

The seriousness of the situation was echoed by Climate Change communication officer Mathews Kalabo who said “Zambia suffers deforestation, which to some extent is caused by the production and consumption of charcoal. Every year, more than 250,000 hectares of the forest is disappearing,” “Government must stiffen its Forestry Policy, to ensure its implementation in working towards reducing the emissions of gases, as well as the discriminate depletion of trees and vegetation”.

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<sup>56</sup> National Geographic Society, *Modern day Plague*, available at [www.nationalgeographic.com/deforestation/facts](http://www.nationalgeographic.com/deforestation/facts), Accessed on the 28 march 2012

<sup>57</sup> The Food and Agriculture Organization of the United Nation's Global Forest Resources Assessment (2005 & 2010)

<sup>58</sup> *Underlying causes of deforestation*, available at <http://www.wrm.org.uy/deforestation/UNreport.html> Accessed on the 28 march 2012

### 3.4.2 EFFECTS

Deforestation on a human scale results in the decline of biodiversity and on a natural global scale is known to cause the extinction of many species. The removal or destruction of areas of forest cover has resulted in a degraded environment with reduced biodiversity. Forests support biodiversity, providing habitat for wildfires. Moreover, forests foster medicinal conservation. With forest biotopes being an irreplaceable source of new drugs, deforestation can destroy genetic variations (such as crop resistance) irretrievably<sup>59</sup>.

Deforestation also contributes to global warming and is often cited as the major cause of an enhanced greenhouse effect. The water cycle is also affected by deforestation. Trees extract groundwater through their roots and release it into the atmosphere. When part of a forest is removed, the trees are no longer in existence to evaporate away this water, resulting in a much drier climate. Deforestation reduces the content of water in the soil and groundwater as well as atmospheric moisture. The dry soil leads to lower water intake for the trees to extract. Deforestation also reduces soil cohesion, so that erosion and flooding ensue.<sup>60</sup>

Another effect of deforestation is that of soil degradation. This means water and wind can easily erode the valuable top soil of the earth. In addition poor agricultural practices exhaust the soil's

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<sup>59</sup>United Nations, *Underlying causes of deforestation*, available at <http://www.wrm.org.uy/deforestation/UNreport.html> Accessed on the 28 march 2012

<sup>60</sup>United Nations, *Underlying causes of deforestation*, available at <http://www.wrm.org.uy/deforestation/UNreport.html> Accessed on the 28 march 2012

nutrients and pollutants also make the soil acidic and toxic. The resultant effect is that of desertification of the earth which also contributes to flooding, droughts, famine and fires.<sup>61</sup>

### **3.4.3 INSTITUTIONAL FRAMEWORK DEALING WITH DEFORESTATION**

Currently in Zambia the institution dealing with deforestation is the Disaster Management and Mitigation Unit (DMMU). Before the creation of the DMMU there was no specific institution put in place to curb the rapid deforestation taking place in the country. After the creation of the DMMU in 1994, it recognized in its policy the importance of reducing the levels of deforestation but is yet to develop a concrete strategy to tackle the scourge. The forestry department in the Ministry of Tourism, Environment and Natural Resources has made attempts at addressing this scourge but the results of such attempts are yet to be seen in terms of reducing the rate of deforestation in the country. The leading pioneers in trying to reduce the levels of deforestation in the country are NGO's and United Nations agencies such as Food and Agriculture Organization.

### **CONCLUSION**

In conclusion, the Disaster Management Act has provided for the creation of the Disaster Management and Mitigation Unit prescribing its powers and functions. It is the DMMU which is the central planning, coordinating and monitoring institution for disaster management plans, activities and programmes across the country. The DMMU under the Act is also responsible for the implementation of the Disaster Management Act and the provisions contained therein. The DMMU therefore is the institution that now manages all disasters in Zambia including the three

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<sup>61</sup>United Nations, *Underlying causes of deforestation*, available at <http://www.wrm.org.uy/deforestation/UNreport.html> Accessed on the 28 march 2012

aforementioned disasters in Zambia. The DMMU is mandated under the Act to carry out activities for disaster prevention, mitigation, preparedness and post disaster recovery taking into account all potential disaster risks. The DMMU works with different institutions that have been created under the Act at different levels of the disaster management structure. That is, institutions created at national, provincial and district level. The DMMU therefore coordinates all bodies created under the Act within the framework of the disaster management structure. Having stated as above, the fourth chapter therefore gives a conclusion and recommendations.

## **CHAPTER FOUR**

### **4.1 INTRODUCTION**

The third chapter looked at the various hazards that Zambia is prone to, it also states what the causes and effects that result from the occurrence of such disasters are. It also explains the institutional framework that exists to deal with the said disasters and also gives the current framework for dealing with disasters as provided for under the Disaster Management Act. The fourth Chapter gives a conclusion and makes recommendations for the improvement of the Disaster Management Act no 13 of 2010 to reflect and adopt the current trends and best practices in disaster management.

### **4.2 GENERAL CONCLUSION**

The focus of this study was to highlight the salient features of the Disaster Management Act of 2010 and to ascertain the adequacy of the Act to provide for the effective coordination, planning and implementation of disaster management activities and programmes. The study also highlights the institutional framework that existed before the promulgation of the Act to ascertain whether it is better than the institutional framework created under the Act. Findings from the field have revealed that disasters have detrimental effects on a country's economy, society, and natural environment and therefore the management of disasters cannot be overemphasized. More so, in a developing country like Zambia, the impact of such disasters goes beyond its immediate devastation as to the continuing toll on human life, property and resources which exacerbates poverty and sets back economic development. It follows that disaster management should be prioritized if a nation like Zambia is to progress to prevent the retrogressive impact of disasters.

Firstly, the dissertation has highlighted whether the Act provides for adequate activities with regard to all phases of the disaster management. It has been realized from this study that the Act provides for all phases of disaster management which are the pre-disaster, during and post disaster phases. Each of the phases covers disaster preparedness, mitigation, risk reduction measures, post disaster reconstruction and recovery and these have been provided for under the Act. It must be stated that the disaster management cycle forms the basis of any disaster management programme if it is to be effective and efficient.

Furthermore, the research has revealed that due to the creation of an institutional framework, each institution in the disaster management structure has a specific role and responsibility in terms of risk reduction, mitigation, disaster preparedness and post disaster reconstruction and recovery. Therefore the Act provides for all essential activities that have to be carried out in order to have a comprehensive disaster management system.

Secondly this research has revealed that though the Disaster Management Act has provided for the creation of institutions to deal with disasters, most of these institutions have yet to be made fully operational. This is why many of the preventable disasters like floods are still occurring. For instance, places like Kanyama, Misisi, Kabwata site and service are still experiencing floods. Currently the offices that are fully operational are the Provincial Management Committees of all provinces which have the mandate of disaster management at provincial level. While in some places like Lusaka, the District Disaster Management Committee has been established however it is yet to become fully operational to enable it to carry out its mandate under the Act.

Therefore the entire disaster management structure for the country is still being established and once fully operational, there is to be expected a difference in operations. A clear and more

organized structure has been created prescribing the powers and functions of each organ in addition to clearly prescribing the roles and responsibilities of each institution. This means that there will be less duplication of efforts as each institution has defined roles and responsibilities. Further the system will enable the disaster management structures to carry out preventive measures as opposed to responding to disaster.

It follows therefore that until the full structure and system provided for under the Act is in place, it is submitted that the disaster management operations will be geared towards responding to disasters as most of the institutions under the Act are yet to be fully operational. However once all institutions are fully operational it means that each institution created at each level, that is at district, provincial and national levels will be able to carry out activities of disaster preparedness, mitigation, risk reduction measures which will have the effect of preventing disasters in the country.

### **4.3 RECOMMENDATIONS**

The paper having highlighted the salient features of the Act therefore makes recommendations that will enable the current Act to adopt and reflect the best international practices in terms of disaster management evolution and thought. Therefore the following is recommended:

#### **4.3.1 Need for promotion of adequate information at community level**

There is need for communities in affected areas to become more active in reducing their own risks to disasters. However pertinent information about disaster risk is not available to the people at grass root level and is only known by the technocrats at national and provincial level. There is therefore a need to provide information to people who are located in disaster prone areas to enable them to take preventive and other measures to mitigate the effects of the disaster. This can

be done by including in the Disaster Management Act of 2010 a provision which guarantees citizens a right to information about disaster risk. For instance, Algeria's law on the prevention of major risks in its disaster management framework of sustainable development guarantees its citizens a right to information about disaster risk reduction by including the following:

- (a) The risks and vulnerabilities of their places of residence and work
- (b) The measures put in place to prevent major risks in those places
- (c) The measures in place for managing disasters.

Likewise, El Salvador's 2005 Law on Civil protection, Prevention and Mitigation of Disasters provides that "all persons living in the country" have the right to "receive information on the imminent or eventual occurrence of a disaster" and that "the Directorate General, the commissions of the system and all public security authorities have the obligation to provide this information when it is in their knowledge.

Therefore the Zambian Disaster Management Act should also have such a provision to guarantee the citizens of Zambia the information about disaster risk reduction.

#### **4.3.2 Promoting the role of community based organizations**

Traditionally, Disaster Management laws have focused on defining the roles and responsibilities of various government departments particularly at national level. However, there is a trend towards increasing the mandate or role for community based organizations in decision making and coordination bodies. As evidenced from the Act, community based organizations such as Red Cross and Red Crescent Movement are not included in the coordination and decision making institutions of disaster management. The community based organizations are only recognized at district level where they are allowed to volunteer and participate in disaster

management at district level. However they are excluded at provincial and national level from participating in the decision making and coordination bodies. State parties to the Geneva Convention adopted a resolution “recognizing the importance of the independent and auxiliary role of National Societies with respect to the public authorities in providing humanitarian services in the field of disaster management. This means that they should negotiate clearly defined roles and responsibilities with their respective National Societies in risk reduction and disaster management activities. This may include National Society representation on relevant national policy and coordination bodies as collaborative partners with States.” Many states have taken up this invitation and included National Societies in coordinating bodies.

For example, the Dominican Republic’s 2002 Disaster Management Act requires that regional, provincial and municipal committees on disaster management all include a representative of the National Red Cross Society. Likewise, Djibouti’s 2006 Act on the Creation of an Institutional Framework for the Management of Risks and Disasters mandates that a representative of the National Red Crescent Society participate both on national and regional level. Therefore it would be prudent for the Zambian Disaster Management Act to have such a progressive provision to allow community based organizations to be part of the decision making process at both national and provincial level.

#### **4.3.3 Empowering individuals to insist on results**

It can be stated that there is no culture of disaster risk reduction among political leaders and the general public in Zambia even though it plays an important part in ensuring that people’s lives and property are not damaged. In addition to ensuring opportunities for information, education and participation, legislation can contribute to empowering individuals to insist on compliance

with government's stated goals and plans. It is therefore submitted that the Disaster Management Act should enshrine the right to protection from disasters. This has been done by countries such as Bolivia, Slovenia and Serbia. For instance Bolivia's law provides that "all persons who live on the national territory have the right to protection of their physical integrity, productive infrastructure, their goods and their environment with regard to possible disasters and emergencies." The legal remedy should be compensation for losses from disasters due to government's failure to undertake risk reduction measures where they could be clearly prevented. In addition the laws should provide for penal penalties where authorities fail to Act.

#### **4.3.4 Promoting community participation**

It can be noted that the communities are key stakeholders in disaster management and therefore community participation is an important aspect of disaster management. It is therefore submitted that community participation should be the guiding principle of Zambia's disaster management system. The Act should therefore enshrine the rights of the community in the Disaster Management Act, that is, community's rights and obligations at various levels of disaster management must be provided for under the Act. That is at District, Provincial and National levels. This is because the community is an important element in the process of disaster management because they are affected the most by such disasters. The Disaster Management Act however only provides for community participation at satellite level in the disaster management system. Therefore more community involvement and participation should be included in the Act.

#### **4.3.5 Use of Technology in disaster management**

Natural disasters and calamities pose serious challenges for national governments world over, this includes Zambia. Floods, droughts, deforestation, epidemics are of common occurrence in

the country and these disasters repeatedly take life and damage property. In such situations, the main challenge for disaster management authorities is the protection of life and property. A delay could worsen the distress of disaster victims. Therefore advanced disaster management technology could provide a critical support system for disaster management authorities. Rapid advancement of technology could be deployed in efficiently tackling the challenges which emerge from disasters such as waste collection and disposal of dead bodies. This will have the effect of minimizing the impact of disasters on the victims in addition to reducing the magnitude of deaths and casualties. Further specific technology solutions can be utilized in all phases of disaster management, namely, disaster preparedness, disaster reduction, mitigation and post disaster reconstruction and rehabilitation. This could be done by employing the use of modern information and communication systems, renewable energy, advanced medical diagnostics and robotic systems for relief and rescue operations. The use of advanced technology could go a long way in saving lives.

#### **4.3.6 The expansion of the role of women in disaster management**

In all cases of disaster management, women are affected differently from men. The vulnerability of women is greater because of the subordinate position of women in the family. Zambia is a patriarchal society and even traditionally women are seen to be subordinate to men. Most Zambian women are the backbone of the subsistence rural economy and therefore their skills and capacity must be mobilized to enhance efforts in the mitigation of disasters. This can be done by making provisions in the Disaster Management Act for a minimum number of women on all committees throughout the disaster management structure. This can be done by requiring that there must be 40 per cent women representation on all committees in the institutional framework in Zambia.

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