

LLM (ENVIRONMENTAL LAW AND NATURAL RESOURCES)

**AN EVALUATION OF THE ZAMBIAN REGULATORY FRAMEWORK
GOVERNING WATER POLLUTION CAUSED BY COPPER MINING**

**Submitted to the Faculty of Law, University of Nairobi, in partial fulfillment of
the requirements of the Master of Laws (LLM) degree in Environment and
Natural Resources**

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DECLARATION

I, PATRICIA SIKAZWE KASAPATU, hereby declare that this dissertation is my original work, and other works cited or used are clearly acknowledged. This work has never been submitted to any University, College or other institution of learning for any academic or other award.

Signed

Date

This Dissertation has been submitted for examination with my approval as University Supervisor.

Signed

Professor Albert Mumma

University of Nairobi

Date.....

DEDICATION

To my husband Ronald, and my amazing daughters, Katayi and Kalusambu, for always being there no matter what.

ACKNOWLEDGMENT

God's unprecedented favour has assisted me in successfully completing this programme. I extend my sincere gratitude to my husband Ronnie who has always ensured that I finish what I start and to our girls, Katayi and Kalusambu for never failing to keep me motivated. While this study was undertaken under the supervision of Professor Albert Mumma, it would be remiss of me not to mention David Kapindula, the Principal Inspector at Zambia Environment Management Agency, Chibesa Chibeskunda, the Legal Manager at Zambia Environment Management Agency, and Gertrude Ngenda, the Senior Project Officer, UNEP, Nairobi. To you I say thank you for the invaluable insight into this subject and for the constant supply of reading material.

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LIST OF ABBREVIATIONS

AJP	Access to Justice Programme
CSO	Civil Society Organisation
CSR	Corporate Social Responsibility
DPSP	Directive Principles of State Policy
EEB	European Environmental Bureau
EC	Economic Commission
ECZ	Environmental Council of Zambia
EI	Economic Instrument
EIA	Environmental Impact Assessment
EMA	Environmental Management Act
EPP	Environmental Public Participation
EPPCA	Environmental Protection and Pollution Control Act
EPA	Environmental Protection Agency
ESD	Ecologically Sustainable Development
HRC	Human Rights Commission
IMF	International Monetary Fund
KCM	Konkola Copper Mines
MBI	Market Based Instrument
MAMDA	Mines and Minerals Development Act
MEWD	Ministry of Mines, Energy and Water Development
MLNREP	Ministry of Land, Natural Resources and Environmental Protection
MMSD	Mining Minerals and Sustainable Development
NGO	Non- Governmental Organisation
OECD	Organisation for Economic Cooperation and Development
PP	Pollution Prevention
PPP	Polluter Pays Principle
UNCED	United Nations Conference on Environment and Development
UNECE	United Nations Economic Commission for Europe

UNDESA	United Nations Department of Economic and Social Affairs
UNEGMO	United Nations Environmental Guidelines for Mining Operations
UNEP	United Nations Environmental Programme
ZEMA	Zambia Environmental Management Agency
ZCCM	Zambia Consolidated Copper Mines
WRMA	Water Resources Management Act

ABSTRACT

The main focus of this paper is to evaluate the Zambian regulatory framework governing water pollution caused by copper mining. This evaluation is based on the legal and institutional framework in Zambia. The paper concentrates largely on interrogating the extent to which the principles of public participation and access to environmental information, access to justice, and the use of Economic Instruments (EI) or Market Based Instruments (MBIs) have been incorporated in the Zambian laws on environmental management and conservation and ultimately in water pollution control.

The question investigated by this paper is whether the legal and institutional framework does in fact address or mitigate water pollution arising from mining, in particular, copper mining, keeping in mind the role that copper plays in Zambia' economy and the unusual characteristic of water as a natural resource.

There is no doubt that the copper mining industry in Zambia poses a difficult paradox. On the one hand it is the backbone of the economy while on the other it is one of the largest contributors to water pollution. The situation is further complicated by the fact that there is no way mining can be undertaken without polluting waste being produced. This being the case it is imperative that the Zambian Government find both an economical and environmental balance, which balance will take into consideration intergenerational and intra-generational equity.

To this effect, this paper suggests that this balance can be achieved by ensuring that there are not only adequate but effective laws enacted by the government of Zambia to address this situation.

The main Findings of this paper are:-

- Whilst Zambia does have robust and forward looking environmental legislation in place, it is imperative that this is reflected in its constitution. The Constitutional protection of environmental rights can be a powerful and potentially transformative step towards that elusive goal of ecological sustainability;
- Market Based Instruments (MBIs) and environmental regulation could be used side by side, with the benefits of both being made available to a country. Moreover, whereas regulation offers no incentive for firms to reduce pollution below the ambient standard, MBIs like eco-taxes provide a constant incentive for polluters to reduce pollution further in order to reduce their tax bill; and
- An aspect of capacity, enforcement and compliance of pollution control legislation is the role of effective and adequate public participation of various stakeholders found in communities affected by mining activities. However, when it comes to access to environmental justice, there has been little or no interest in public interest litigation. There has been only been one reported case undertaken involving water pollution.

Based on these findings, among others, this paper has concluded that in order to show the importance of environmental issues, the right to a clean and safe environment should be enshrined in the Constitution of Zambia. The Zambian' regulatory framework is indeed robust but that there is also an urgent need to involve all stakeholders in ensuring that water pollution is checked. The regulatory framework can be complemented or supplemented with market based instruments, corporate social responsibility guidelines and an emphasis on incentives for pollution prevention as opposed to punishment, penalties and licenses to pollute.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This research seeks to establish the adequacy and efficacy of the legal and institutional framework on water pollution caused by copper mining activities in Zambia. It interrogates the legal provisions and their suitability and effectiveness, as well as the functions assigned to various relevant institutions – offices, agencies and authorities – created under the various legislations and the capacity of these institutions to carry out their mandate. In doing this, the research will largely restrict itself to the concepts of public participation, access to information access to justice, , and the use of Market Based Instruments (MBIs) or Economic Instruments (EIs) These principles, as will be demonstrated, are some of the most important principles in environmental management and conservation.

The extent and effectiveness of their recognition and use in any jurisdiction has a direct bearing on the efficacy of the jurisdiction's legal and institutional framework on environmental management and conservation generally and pollution control particularly.

Copper mining is the most important economic activity in Zambia in terms of foreign exchange earnings. The Zambian economy depends largely upon this economic activity. However, pollution caused by the copper mining industry poses a great threat to the environment, including, specifically, water.

1.1 Background to Study

This paper ultimately seeks to show that the legal and institutional framework in Zambia on the control of water pollution caused by copper mining is inadequate and ineffective in dealing with water pollution arising from copper mining. The paper will proceed to, make various recommendations on how to remedy or improve the situation.

Copper mining has been the mainstay of Zambia's economy since the first commercial copper mine was opened in 1928.¹ At its peak in the late 1960s and early 1970s, copper mining accounted for more than 80 percent of Zambia's foreign exchange earnings, over 50 percent of government revenue and at least 20 percent of total formal sector employment in the country.² However, the collapse of the price of copper on the world markets and the inability of the then state owned company Zambia Consolidated Copper Mine (ZCCM) to further invest in the mining company, subsequently saw a reduction of revenues from the metal and saw the Zambian Government rethink its position with regard to its role in the mining industry.

By 1994, Zambia had sunk from a middle income country to being the 25th poorest country in the world.³ The Zambian government was ultimately forced to privatize the mines in the late 1990s and early 2000s.⁴ There was a desperate need for foreign direct investment and this resulted in the enactment of the Mines and Minerals Act of 1995 which set out very generous fiscal incentives to attract new investors in the mining sector..⁵

¹ The first commercial copper mine in the country, Roan Antelope Mine, was opened in Luanshya in today's Copper belt Province. See: Dymond, A. (2007), *Undermining Development? Copper Mining in Zambia*, at 3; Lungu, J. (2008) 'Copper Mining Agreements in Zambia: Renegotiation or Law Reform?' *Review of African Political Economy* (2008) 35 at 404; Simutanyi, N. (2008) 'Copper Mining in Zambia, the Developmental Legacy of Privatization', *Institute for Security Studies Paper* (2008) 1 at 165; and Lungu, J. (2009) 'The Politics of Reforming Zambia's Mining Tax Regime', *Southern Africa Resource Watch Issue* (2009) 6 at 8.

² Simutanyi (*ibid*). See also Lungu (*ibid*) (2008). Even now, copper is still Zambia's main export product as well as the country's main foreign exchange earner. Meanwhile, Zambia is presently Africa's largest producer of copper

³ Lungu (2008) (*supra* note 1) at 405

⁴ Lungu (2008) (*supra* note 1) at 405 to 409; Lungu (2009) (*supra* note 1) at 16 to 17; and Simutanyi (*supra* note 1) at 3.

⁵ Colin Noy Boocock (2002), *Environmental Impacts of Foreign Direct Investment in the Mining Sector in Sub-Saharan Africa*, Paper presented at the OECD Global Forum On International Investment Conference on Foreign Direct Investment and the Environment Lessons to be Learned from the Mining Sector, 7 - 8 February 2002, OECD Headquarters, 2 rue André Pascal, 75775 CEDEX 16, Paris, France.

With demand from nations such as China, there was an unprecedented increase in copper prices on the world metal market, with copper prices rising from an average of United States Dollars 1,714 per tonne between 2001 to an average of United States Dollars 9,580 a tonne in 2010.⁶

1.2. Problem Statement

The copper mining industry in Zambia poses a difficult paradox. On the one hand it is the backbone of the economy while on the other it is one of the largest contributors to water pollution. The situation is further complicated by the fact that there is no way mining can be undertaken without polluting waste being produced.

While mining and the generation and disposal of mineral waste are known to pose many environmental, socio-economic and governance challenges, a number of specific issues with respect to the management of mineral waste prompted and guided this research.

Significant volumes of mineral waste are generated every year from the mining sector. Mineral residue stockpiles pose significant environmental and human health impacts if not managed properly over time. Methods for successful rehabilitation of mineral residue stockpiles are being explored to ensure environmentally sound mine closure. Conflicting policy and legislation exists with respect to mineral waste - a lack of clarity and definition exists with respect to mining waste, mineral waste and residue stockpile.

One of the foremost problems with Zambia's privatization of the mines was the absence of constraints on the companies to encourage them to adopt a long term perspective with regard to the environment and to strike a balance between mere profit making and their duty and obligation to ensure that the environment and the people in it are not compromised. This

⁶ World Market Overview - International Business Times- Global Markets (February 22nd 2011) (accessed on 23rd February, 2011); See also Lungu (2008) (*supra* note 1) at 409.

balance, unfortunately, is still to be achieved and this is evident by the numerous water pollution ‘accidents’ that have largely been perpetuated by mining companies within the last decade or so.

Zambia, despite enjoying massive investment in the mining industry, chiefly from foreign investors in the form of multi-national companies, has been unable to address the increased levels of pollution, in particular water pollution. The Government evidently faces the challenge of enacting or reforming laws that will adequately address this phenomenon. This position was re-enforced by the Zambian Minister of Tourism and Environment who, whilst addressing, the media in Zambia admitted that the Environmental Protection and Pollution Act (EPPCA) was not sufficient to address water pollution and needed to be reviewed to ensure that the law was stiffened to deter offenders. The Minister further stated that the Zambian Government was aware not just of the inadequacies but the ineffectiveness of the law and was in the process of revising the law with the introduction of more punitive measures.⁷

All this against a background that in November 2010, a Zambian court had fined the largest copper mining company - Konkola Copper Mines (KCM) - a sum of US Dollars 4,449 after the company had pleaded guilty to four counts of polluting the environment by discharging pregnant liquor solution, a poisonous and toxic matter, into the Kafue River⁸ which is a source of water for more than fifty thousand (50,000) residents in the Copper belt Province of Zambia. This is but one of the reported incidences. Responding to concerns on why KCM was fined the paltry sum of Four Thousand Four Hundred and Forty Nine United States

⁷ Sinkamba, K. (2011), filed on Friday 4th February 2011, Steel Guru Correspondent, Zambia. Available at http://www.steelguru.com/metals_news/Zambia_unhappy_with_the_increased_levels_of_pollution/189398.html (accessed on 22nd June 2011)

⁸A report of the incident is available at: <http://www.epcengineer.com/news/post/1906/zambia-court-fines-konkola-copper-mines-4449-for-river-pollution> (accessed on 22nd June 2012)

Dollars (\$4,449) for polluting the Kafue River, Environmental Council of Zambia Director Paul Banda said the penalties imposed on KCM were the existing maximum under the law and further that the courts and regulators cannot impose stiffer penalties on perpetrators of pollution than what is provided for in the law.⁹

The most recent pollution incidence involving KCM¹⁰ has given me the impetus to critically look at the laws and institutions mandated to protect Zambia's water resources from pollution, and the citizens from its consequences. It is my contention that while there is no need for other actors in the regulation of the environment and water pollution per se; the best solution to unscrupulous company behavior is for a government of a country, where such an activity is taking place, to have adequate and effective domestic legislation and regulation to stop it.

The other reason for conducting such a study is that water has an unusual characteristic as a natural resource. It is a scarce public resource that is dynamic and is linked to many other features of development. It is essential to life and human existence and is central to agriculture, food production, to industry, economic, household, recreational and environmental activities. It is therefore of utmost importance for the sustainability of a community that water resources are managed well.

The European Environmental Bureau (EEB) report quotes certain expert assessments by the Environmental Protection Agency in 1987 concluding that:

...problems related to mining waste may be rated as second only to global warming and stratospheric ozone depletion in terms of ecological risk. The release to the environment of mining waste can result

⁹See the 21st January, 2011 article *KCM's K22m Fine for Pollution Lawful*,. Available at http://www.postzambia.com/post-read_article.php?articleId=17483 (accessed on 14th March 2012)

¹⁰ See BBC's 3rd January 2008 news item 'Zambia in Water Pollution Scare'. Available at <http://news.bbc.co.uk/2/hi/africa/7170295.stm>. (accessed on 23rd July 2012)

in profound, generally irreversible destruction of ecosystems. In many cases the polluted sites may never be fully restored, for pollution is so persistent that there is no available remedy.¹¹

The mining industry has in recent years turned its attention to the environmental impacts of its activities, and in particular is addressing the issue through the Global Mining Initiative and the Mining, Minerals and Sustainable Development Project (MMSD) which is addressing the issue of the contribution of the mining sector to sustainable development. In 1998 the industry started the Industrial Network for Acid Prevention as part of its contribution to dealing with the legacy of abandoned mines.¹²

However, there are still many reports of water pollution emanating from these mines yet there are laws in place to control water pollution. The problem, therefore, must be in the efficacy of these laws and institutions to rein in errant companies.

Against this backdrop, this study will look at some of the issues plaguing the management of water pollution resulting from copper mining in Zambia.

A paramount issue that must be addressed is the issue of pollution prevention. Pollution prevention (P2) is the reduction or elimination of wastes and pollutants at their sources.¹³ For all the pollution that is avoided in the first place, there is that much less pollution to manage, dispose of, or clean up. P2 can encompass activities such as implementing better housekeeping practices to minimize leaks and fugitive releases from manufacturing processes, reducing the generation of wastes or contaminants at the source, and thereby

¹¹ European Environmental Bureau (EEB) (2000), *The Environmental Performance of the Mining Industry and the Action Necessary to Strengthen European Legislation in the Wake of the Tisza-Danube Pollution*, EEB Document no 2000/016 at 32.

¹² *Supra* note 5, at 7.

¹³ Phipps, E. (1995), *Pollution Prevention, Concepts and Principles*, National Pollution Prevention Center for Higher Education, University of Michigan, Dana Building, 430 East University, Ann Arbor MI 48109-1115, at 2.

reducing releases to the environment that could pose hazards to the environment and public health.

Pollution prevention is related to the Precautionary Principle, as expressed in the UNEP Governing Council recommendation¹⁴ urging countries to adopt:

...alternative Clean Production methods including raw material selection, product substitution, and clean production technologies and processes as a means of implementing a precautionary principle in order to promote production systems which minimize or eliminate the generation of hazardous wastes.

The EC Treaty, for instance, stipulates in Article 130R (2) that Community policy on the environment is to be based on the principle that preventive action should be taken. The preference for pollution prevention or clean production methods over other types of environmental protection approaches is also stated in a number of international environmental treaties, including the 1982 UN Convention on the Law of the Sea and the 1989 Basel Convention which itself is based on a waste minimisation approach.¹⁵ Although the Basel Convention deals primarily with the trans-boundary movement of hazardous wastes prior to disposal or recycling, its provisions also require Parties to reduce the generation of hazardous wastes to a minimum. Another example is the 1991 Bamako Convention on hazardous wastes¹⁶ which requires that:

Each Party shall strive to adopt and implement the preventive, precautionary approach to pollution problems which entails, inter alia, preventing the release into the environment of substances which may

¹⁴ United Nations Environment Programme (1990), Governing Council Decision, UNEP GC/SS.II/4B, August 1990.

¹⁵ U.N. Convention on the Law of the Sea (1982), UN Document A/CONF.62/122; Basel Convention on the Control of Trans-Boundary Movements of Hazardous Wastes and their Disposal (1989); Paris Convention for the Prevention of Marine Pollution from Land-Based Sources (1974), 13 I.L.M. 352; Barcelona Convention for the Protection of the Mediterranean Sea Against Pollution (1976), 15 I.L.M. 290; UN Economic Commission for Europe, Convention on Protection and Use of Trans-boundary Watercourses and International Lakes (1992).

¹⁶ Bamako Convention on the Ban of Import into Africa and the Control of Trans-Boundary Movement of Hazardous Wastes within Africa (1991), 30 I.L.M. 775.

cause harm to humans or the environment without waiting for scientific proof regarding such harm. The Parties shall co-operate with each other in taking the appropriate measures to implement the precautionary principle to pollution prevention through application of Clean Production methods, rather than the pursuit of a permissible emissions approach based on assimilative capacity assumptions.

Faced with the limitations inherent in such pollution management strategies as containment and remediation, many sectors of government and industry are shifting toward a more preventive, proactive approach. This emerging approach, referred to as pollution prevention, offers a promising means for protecting the environment and achieving more efficient use of resources.

It is an indisputable fact that in modern environmental discourse, the promotion of environmental protection and sustainable development is fundamentally enhanced through the adoption of strategies and practices that secure a citizen's rights to access information, public participation and justice.¹⁷

A key approach in addressing any form of pollution and indeed in the management and conservation of the environment is in the articulation of environmental rights, which articulation can be achieved by applying the traditional human rights approach, namely giving the individuals access to information on environmental issues, and hence evoking the right to participation in decision making. The access to justice approach may be relevant in fostering environmental protection, particularly with regard to access to information and safeguards against abuse of power.

Another pertinent aspect of capacity, enforcement and compliance that most pollution control legislation tends to overlook or gloss over particularly in developing countries, is that of the

¹⁷ UNDP (2000); United Nation Development Report, UNDP, New York.

role of effective and adequate public participation of various stakeholders found in communities affected by mining activities.

It is also important to point out that MBIs or EIs, combined with information and education, can be an appropriate environmental management approach for mining, where there is a mix of small (entrepreneurial) operators using simple pollution controls and large corporations using state-of-the-art technologies. In the case of Zambia this approach would be extremely effective in addressing water pollution because most of the mining companies operating in Zambia are multi-nationals who are conversant with the benefits of the use of EIs.

EIs operate by realigning rights and responsibilities of firms, groups or individuals so that they have both the incentive and the power to act in a more environmentally responsible manner. EIs drive up the price of environmentally damaging inputs, as well as increase the returns to more sustainable approaches. When implemented carefully, EIs tend to reduce the societal cost to achieve any given level of environmental quality and the cost of pollution is shifted more effectively back onto polluters than with Command and Control strategies.

1.3 Objectives

1.3.1 Overall Objective

The objective of the study is to use the international environmental principles of public participation and access to information; access to justice and EIs/MBIs as measures to pinpoint the weaknesses in the environmental protection legislation and institutions existing in Zambia with a view to recommending how the legal and institutional framework can be strengthened in order to address the issue of water pollution caused by copper mining activities. In addressing the stated objective, the study will attempt to further interrogate the available laws, institutions, regulations and government policies in order to ascertain their

inadequacy or ineffectiveness and proceed to recommend possible reform proposals that would include issues of corporate responsibility on the part of copper mine owners.

1.3.2 Specific Objectives

The specific objectives are:

- i. To study the legal regime for the protection of water resources against pollution from the mining industry.
- ii. To interrogate the extent of public participation in environmental matters and public access to environmental information in Zambia.
- iii. To ascertain the extent of access to justice in environmental matters in Zambia.
- iv. To establish the extent, if at all, of the use of EIs or MBIs of water pollution control in Zambia and their possibility of success.
- v. To identify the weaknesses and challenges in the legal and institutional framework for control of water pollution in Zambia.
- vi. To highlight international benchmarks and guidelines on various principles relevant for pollution control.
- vii. To recommend ways in which the legal and institutional regime can be strengthened to minimize significantly the incidences of water pollution from the copper industry.

1.4 Research questions

In order to meet the objectives specified above, this study will attempt to answer the following questions:

1. What is the impact of copper mining on Zambia's water resources?
2. What is the regulatory framework for the protection of water pollution occasioned by copper mining in Zambia?
3. What are the international benchmarks and guidelines on control of pollution?

4. Measured against the recognized international environmental principles of public participation and access to information, access to justice and the use of EIs, to what extent do Zambian laws address water pollution caused by copper mining ?
5. What standards can be adopted to address the issue of water pollution caused by copper mining?

1.5 Hypothesis

My study will proceed on the premise that the Zambian laws are not efficient and sufficient at addressing the issue of water pollution caused by copper mining and that there is a need to either strengthen or reform the laws to effectively address the concern. In evaluating the inadequacy and inefficiency of the Zambian laws, this paper will look at three key principles and components of environmental law. These being Public Participation and Access to Information; Access to Environmental Justice and MBIs/EIs.

1.6 Justification

Many laws exist to protect our water resources from mining pollution but research into the effectiveness of these laws is rare. The complexity of the environment and the laws themselves makes evaluating the effectiveness of an environmental legal system a herculean, multi-disciplinary task requiring the integration of environmental science and law.

An evaluation of the effectiveness of a water pollution control legal system is a significant research question for five main reasons. First, the importance of properly protecting water resources for the survival and quality of life of humans and life on earth makes the effectiveness of environmental legal systems a vital issue. Second, the effectiveness of environmental legal systems is important for social and economic reasons because they are often an arena for intense political and social conflict, and a significant constraint on business activity. Third, the effectiveness of an environmental legal system is difficult to evaluate

because of the maze of legal and scientific complexity (including large gaps in information and scientific uncertainty). Fourth, evaluation of the effectiveness of an environmental legal system is relatively rarely attempted. A fifth reason for the significance of this topic is that evaluating the effectiveness of the whole, or selected parts of, environmental legislation is an integral component of wider government policy cycles and planning processes. In this context, a “policy” is a position taken and communicated by government that recognises a problem and states in general what will be done about it.¹⁸

With particular reference to Zambia, the importance of this study is really threefold. It firstly creates an opportunity for the Government of the Republic of Zambia to re-look at the subsisting laws and policies governing water pollution from copper mining. Copper mining is here to stay and its contribution to the economic growth of the country is undeniable but this too means that the effects of copper mining on the nation’s water resources, the citizens and the aquatic life in the Kafue river have to be protected and the only way to ensure this protection is by enacting legislation that will address the stated concerns.

Secondly, the study may act as a catalyst that may spur mining companies into action, by inviting them to take up their ‘corporate responsibilities’ in light of the prevailing circumstances. Measures used to avoid accidental or negligent water pollution acts may be put in place.

Lastly it is hoped that this study will ultimately benefit both the aquatic life and the citizens affected by water pollution bearing in mind that some of them use the Kafue River as a source of their income through fishing.

¹⁸ Dovers, S. (2005), *Environment and Sustainability Policy: Creation, Implementation, Evaluation.*, The Federation Press, Sydney, 2005, at 12.

It is also hoped that this study will fill the gap in academic literature available on the subject. A simple check through library catalogues and online resources reveals that not much has been written about the weaknesses in the legal framework for protection of water resources from pollution caused by mining in Zambia.

1.7 Theoretical framework

The underlying theories, assumptions and beliefs upon which this paper is built need to be examined to decide whether there is a solid basis to them and to expose any bias or pre-conceptions that may mistakenly skew the results of the research. Without a clear conceptual and analytical framework this task is practically impossible and the communication of any results of such research for policy improvement is severely hampered.

Managing water pollution evidently requires well-designed public policies or coordination among stakeholders.¹⁹ Some of these policies are discussed here below.

1.7.1 The Polluter Pays Principle (PPP)

One commentator on environmental regulation has opined that whether by reason of an unprecedented orchestrated global movement or by some random collision of independently occurring incidents, the law of environmental protection has emerged as a sophisticated and developed machine pushing hard against the conflagration of pollutive processes that science has created.²⁰ He goes on to state that no principle of environmental law has caused such profound disagreement, often between cohesive cohorts on opposing sides of the boundary

¹⁹ Ostrom, E. (1990), *Governing the Commons*, Cambridge University Press, Cambridge.

²⁰ Ian Mann, *A Comparative Study Of The Polluter Pays Principle And Its International Normative Effect On Pollutive Processes*. Available at http://www.consulegis.com/fileadmin/downloads/thomas_marx_08/Ian_Mann_paper.pdf. (accessed on 4th May 2012)

between rich and poor, as the polluter pays principle.²¹ Environmental law concerns itself largely with the prevention, mitigation or correction of harm.

There is a recognition too that there are private benefit costs as well as social benefit costs that arise out of the use of a natural resource, whose use ultimately changes the face of the environment. In a case where social costs exceed private costs and private benefits exceed social benefits then a government must intervene to ensure that social welfare takes precedence. Some firms are driven by self-interest, Alexander Pigou, a leading neo-classical economist believed that *laissez faire* was justified where private and social interest coincided. Where they diverged, however, government intervention was required. Pigou was concerned with poverty and inequality, he had put forward an influential view that to keep the economy efficient, businesses should be forced, by taxation, regulation or the operation of the tort system to ‘internalise’ the costs they impose on other activities (‘externalities’).²² Pigou further argued that the pollution an industry creates, is the cost of that industry, and for that cost to be paid for by other people be it by taxes paid so that the government can clean up polluted water, is to create a subsidy for that industry. Therefore, for the market to return to being true and fair, these externalities – the other actors are affected by the activities of the industry and additional costs imposed on them - should be internalized. The industry should have to pay the equivalent of the costs the activities have imposed on other actors. Closely linked to this argument is the polluter pays principle. This principle in the domestic sense asserts that whoever causes pollution must be responsible for the harmful consequences of their pollution.

²¹ *Ibid.*

²² Pigou, A.C. (1920), *The Economics of Welfare*, 4th ed., Macmillan, London.

From water management to air pollution, managing environmental problems evidently requires well-designed public policies or coordination among stakeholders.²³

The evolution of the PPP can be traced to 1960 when the founding member governments of the Organisation for Economic Cooperation and Development (OECD), called for the promotion of sustainable economic growth among its member nations. The economic objective has evolved significantly over the years since 1960 when the idea was conceived. OECD having observed that the economic growth in the industrialised economies from natural resource was necessary for a sustainable development that required functioning rules on ecological protection adopted the “Polluter Pays Principle” (PPP) as a background economic principle for environmental policy in 1972. The OECD Guiding Principles thus defines the PPP as an instrument for ‘... allocating costs of pollution prevention and control measures’. The definition entails that the polluter should bear the cost of carrying out measures decided by public authorities to ensure that the environment is in an acceptable state and that the cost of those measures should be reflected in the cost of goods and services which cause pollution in production and or in consumption.²⁴

The purpose of the policy was to internalise the economic cost of pollution control, cleanup and protection measures and to ensure that government did not distort international trade and investment by subsidizing those environmental costs.²⁵ The rationale is that when a charge is levied, it induces polluters to treat their effluents as long as the treatments costs remain lower than the amount of the charge they would otherwise be compelled to pay in the absence of pollution abatement.²⁶

²³ Ostrom, E. (1990), *Governing the Commons*, Cambridge University Press, Cambridge.

²⁴ OECD (1972), Recommendation of the Council on Guiding Principles Concerning International Economic Aspects of Environmental Policies, Document No. C (72)128.

²⁵ Birnie, P. and Boyle, A. (2002), *International Law and the Environment*, 2nd ed., Oxford University Press.

²⁶ Goldemberg, J. (1996), *Energy, Environment and Development*, Earth Scan Publication Limited, at 125.

In 1992, the Rio Declaration also included the PPP by stating that “National authorities should endeavour to promote the internalisation of environmental costs and the use of EIs, taking into account the approach that the polluter should, in principle, bear the cost of pollution with due regard to public interest and without distorting international trade and investment.”²⁷

In 2001, the OECD Joint Working Party on Agriculture and Environment stated that the polluter should be held responsible for environmental damage caused and should bear the expenses of carrying out pollution prevention measures or paying for damaging the state of the environment.²⁸

The PPP have evolved in several ways since the early 1970s. At the outset, the PPP was mainly related to paying for the cost of pollution abatement, in line with legal requirements. The meaning was subsequently extended so that polluters could be made liable for the cost of administrative measures taken by authorities in response to pollution. It then evolved to cover any activity that contributed to deterioration of the environment, rather than being strictly limited to polluting activities. The evolution of the PPP reflects the changing goals of environmental policy in the industrialised economies in the 1970s and 1980s.²⁹

As presently understood, the ‘polluter pays principle’ states that whoever is responsible for damage to the environment should bear the costs associated with it.³⁰ The polluter pays principle has also been defined as “the principle according to which the polluter should bear

²⁷ The Rio Declaration, Principle 16.

²⁸ OECD (1989), Recommendation of the Council Concerning the Application of the Polluter-Pays Principle to Accidental Pollution.

²⁹ Turner, R.K., *Environmental Policy: An Economic Approach to The Polluter Pays Principle*, CSERGE Working Paper PA 92-04 presented to the Economics Association One World Annual Conference, April 1992.

³⁰ UNEP, *Taking Action*, Chapter 2, at 3. Available at www.rona.unep.org.action.02.htm (accessed on 3rd November 2011)

the cost of measures to reduce pollution according to the extent of either the damage done to society or the exceeding of an acceptable level (standard) of pollution”.³¹

The main characteristics of the PPP, is that pollution can be assessed based on some evidence of the physical effect of waste on the environment and a human reaction to that physical effect. There must be a loss of welfare due to the imposition of an external cost arising from the pollution. The characteristics of the PPP are therefore in the definition of the principle itself. The first is that there must be a polluter, secondly, there must be an identifiable pollution and thirdly, there must be a damage that must be compensated. Fourthly, it should be achieved by the imposition of charges and taxes and lastly, it should not be subsidized.³²

Although the principle’s precise legal definition, for the purposes of practical application, remains elusive, the core of the principle derives from the fundamental proposition that it is the parties who generate pollution, not others, nor indeed the government, who should bear the cost of abatement. Strictly speaking, it requires that any agent (firm or consumer) compensates all agents who suffer from his pollution emissions for the damage he causes, for according to Plato, "If anyone intentionally spoils the water of another ... let him not only pay damages, but purify the stream or cistern which contains the water..."³³

In order to satisfy the polluter-pays principle, the entity that pollutes should compensate those who suffer from this pollution for the damages it causes. If a victim is not fully compensated then he or she pays part of the cost of someone else's pollution. Hence, strictly speaking, the

³¹ United Nations (1997), Glossary of Environment Statistics, Studies and Methods, Series F, No. 67, New York.

³² Okenabirhie, T.O., *Polluter Pays Principle in the Nigeria Oil and Gas Industry: Rhetoric or Reality?* (Available at www.dundee.ac.uk/cepmlp/gateway/files.php?file=cepmlp_car13_26_427878273.pdf)

³³ The Dialogues of Plato: The Laws, vol. 4, book 8, section 485(e), translated by Jowett B, Oxford: Clarendon Press (4th ed.), 1953.

PPP imposes not only that polluters pay for the damage caused to society, but also that victims are fully compensated for those damages.³⁴

However, although the principle enjoins States and regulatory institutions to take account of the principle in the development of environmental law and policy, they are not bound by international law to make the polluter pay. Article 16 of the Rio Declaration which provides that National Authority should 'endeavour to promote' connotes that the PPP is neither absolute nor obligatory because it lacks the normative character of a rule of law. As a result, there is no general pattern of state practice and the implementation of the principle has been left to national rather than international action.

Whereas the principle has been modified and adapted into national legislation in various jurisdictions, including Zambia, whether it has been properly implemented is a different issue and one which in the context of Zambia will be interrogated and discussed in detail later on in this work.

1.7.2 Economic Instruments/Market Based Instruments³⁵

These instruments aim to prevent market failure by applying the polluter pays principle (PPP).³⁶ The PPP holds that the price of a good or service should fully reflect the total cost of production, including the use of public goods such as air, water or land for discharge by internalising external cost.³⁷ The main types of MBI are eco-taxes, tradable permits and refundable deposit.

³⁴ Ambecy, S & Ehlersz, L, *Regulation via the Polluter-Pays Principle*. Available at http://www.isid.ac.in/~pu/seminar/18_03_2011_Paper.pdf. (accessed on 3rd June 2012)

³⁵ Stavins, R.N., 2000. *Experience with Market-Based Environmental Policy Instruments. Resources for the Future Discussion Paper 00-09*. Resources for the future, Washington D.C.

³⁶ United Nations Environmental Programme *Taking Action*, Chapter 2, p. 3.

³⁷ See Duncan Austin, *Economic Instruments for Pollution Control and Prevention — A Brief Overview*, World Resources Institute, September 1999. And David Pearce & R. Kerry Turner, "Packaging Waste and the Polluter Pays Principle: A Taxation Solution," *Journal of Environmental Management and Planning*, Vol. 35, No. 1, 1992.

Eco-taxes are levied on pollution or on the goods whose production generates pollution.³⁸ Eco-taxes are more efficient than regulation because the same pollution abatement should be achieved for a lower overall cost to industry. Moreover, whereas regulation offers no incentive for firms to reduce pollution below the ambient standard, eco-taxes provide a constant incentive for polluters to reduce pollution further in order to reduce their tax bill.³⁹

Whereas an eco-tax is a price-based mechanism, a tradable permit is a rights-based mechanism that combines regulation and a financial incentive. The government sanctions a market in the permits, which gives firms an incentive to reduce pollution and sell any surplus permits for a profit.

One problem with the MBIs versus regulation debate is that it often involves a highly stylized and sharply distinguished comparison of perfect ‘laboratory’ MBI with flawed real – life regulations⁴⁰ In practice, MBIs encounter implementation difficulties that are either ignored or glossed over in these debates. Although the OECD and the EU have strongly recommended wider use of MBIs, there has still been only limited movement towards green tax reform and tradable permits are notable mainly by their absence.⁴¹

Each method of enforcing environmental laws is evaluated based on the criteria of efficacy, workability, substantive fairness, and procedural fairness.⁴²

³⁸ See Timothy O’Riordan (ed.), *Eco taxation*, Earth scan, London, 1997.

³⁹ Dick Nichols: *Can Green Taxes Save the Environment?* in *Environment, Capitalism and Socialism*. Available at <http://www.dsp.org.au/site/?q=node/85> (accessed 15th September 2011)

⁴⁰ Stuart Whitten and Mike Young (2011), *Market-Based Tools for Environmental Management: Where do they fit and where to next?* Available at http://www.ecosystemsproject.org/html/publications/docs/MBIs_conclusion.pdf (accessed 10th September 2011)

⁴¹ *Ibid.*

⁴² Gelpe, M.R. 1998, "The Goals of Environmental Enforcement and the Range of Enforcement Methods in Israel and in the United States", Faculty Scholarship Paper 174. Available at <http://open.wmitchell.edu/facsch/174> (accessed 10th September 2011)

"*Efficacy*" refers to how successful a particular enforcement action is in reaching its goal. For example, one goal of enforcement is to deter future violations by third parties. Enforcement by some means, such as a criminal fine, is efficacious if it actually deters others from violating the law.⁴³

1.7.3 The Environmental Principle of Public Participation

Although the meaning of public participation is difficult to articulate, it has been defined as "purposeful activities in which citizens take part in relation to government." It has also been described as being comprised of four elements: the purposes for which the participation is undertaken, the type of action that is undertaken, the individuals who are involved in the action, and the governmental entities that are targeted. More generally, it has been pointed out that public participation is an approach or philosophy that supplements the political process and that is manifested in various ways.⁴⁴

Public participation in decision making is a core issue of good environmental governance. Participation rights and representation, as well as accountability and transparency are among seven key elements of environmental governance. The rights of access to information and public participation in decision-making in environmental matters are among the three pillars of the United Nations Economic Commission for Europe (UNECE 1998), Aarhus Convention, Public Participation at different levels raises accountability and reliability of decisions, lessens risks of possible conflicts and inconsistencies and facilitates implementation.

Public participation in decision making is an essential part of the environmental impact assessment (EIA) process, which has become a widely applicable tool for environmental

⁴³ *Ibid.*

⁴⁴ Kweit G.M. and Kweit, R .W. (1981), Implementing Citizen Participation in a Bureaucratic Society: A Contingency Approach 31; Langton, S. (1978) What is Citizen Participation? in Citizen Participation in America 13.

decision making in the world since the 1970s ensuring consideration of environmental concerns within the planning. Different countries practice different levels of public involvement. While more advanced democracies have used this tool for a significant period of time some of the emerging democracies have introduced EIA systems just recently.

Environmental Public Participation (EPP) has been a topic of increasing interest among scholars for decades. Some early writings were atheoretical, prompting the criticism that EPP was a practice in search of a theory. Norman Wengert⁴⁵ explored the politics of natural resources and environmental policy formation and administration, with emphases citizen participation in administrative processes. Wengert argued that although the participation phenomenon may be worldwide, its meaning, role, function, and importance vary from culture to culture and political system to political system. It also seemed evident that the drive or reasons for seeking more participation varied, depending on the perspectives from which the subject was approached, the institutional, political, economic context, and the personal interests and points of view of those opposing as well as of those supporting participation. Similarly, the phrases "public participation" and "citizen involvement" had many meanings and connotations, depending on the situation to which applied and the ideology, motivations, and practical orientations of the users.⁴⁶ He emphasised, against this back ground, that there was an urgent need for a theory of EPP which could be related both to normative and empirical conceptions.

Since at least the 1970s, however, researchers have been working to develop theories of EPP. One of these researchers, Thomas Webler recognized that a vital issue facing the citizens and governments of modern democracies is the direct participation of the public in the solution of environmental problems. Governments are increasingly experimenting with approaches that

⁴⁵ Wengert, N 1976 *Citizen Participation: Practice In Search*

⁴⁶ Ibid at page 25

give citizens a greater say in the environmental debate. A novel approach to the problem is taken by viewing public participation as an act of communication. Jürgen Habermas⁴⁷ provided the theoretical foundation for this research. Drawing on Jürgen Habermas' Critical Theory of Communication, a normative framework is developed around the central area of citizen participation and competence in knowledge verification. This is a milestone on the road of citizen participation and applied critical theory.

Habermas emphasized the quality of deliberation as a key to successful decision making and has influenced ideas about how to evaluate the participation process. The Conflict resolution theory offers additional lenses through which to understand the dynamics of EPP and to arrive at useful prescriptions for practice. The Conflict resolution field rests on the premise that conflict is inevitable and that it can be a positive force in human interactions.⁴⁸ Conflict Resolution theory has influenced critical assumption in the current participation practice such as that most conflicts originate in competing interests and that the ways in which individual organisations pursue their differences can affect conflict dynamics.

There are other related lines of research that have had significant influence on how public participation practices are embraced. These include research on bargaining and negotiation and from the game theory, on ways that human beings create meaning and misunderstandings in conflict and conflict handling processes, on issues of procedural justice and dimensions of satisfaction and on the effects of interventions by third parties.

These sources of experience and insight combined with judgment of experts or panels of experts have provided a basis for public participation in environmental decision making.

⁴⁷ Webler T 1995 *Fairness and Competence in Citizen Participation: Evaluating Models for Environmental Discourse*

⁴⁸ Deutsch, M. 1973. *Conflicts: Productive and destructive*. In *Conflict resolution through communication*, edited by F. E. Jandt. New York: Harper & Row.

1.7.4 The Precautionary Principle

Given the limitations of science to address emerging environmental problems, there is a significant need for the development of new public policy approaches to anticipate and prevent harm to human health and the environment. The question of what society should do in the face of uncertainty regarding cause and effect relationships is necessarily a question of public policy, not science.

Several policy analysts confronted with this problem have proposed a concept called the "precautionary principle" or the "precautionary approach".⁴⁹ The precautionary principle in the context of environmental protection is essentially about the management of scientific risk. It is a fundamental component of the concept of ecologically sustainable development (ESD)⁵⁰ and has been defined in Principle 15 of the Rio Declaration (1992):

Where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

Although the term "measures" is not entirely clear it has generally been accepted to include actions by regulators such as the use of statutory powers to refuse environmental approvals to proposed developments or activities.⁵¹

⁴⁹ Cameron, J. and Abouchar, J., 1991, *The Precautionary Principle: A Fundamental Principle of Law and Policy for the Protection of The Global Environment*, Boston College International and Comparative Law Review 14: 1-27; Dethlefsen, V. *et al.*, 1993 *The Precautionary Principle: Towards Anticipatory Environmental Management*, in Jackson, T., (ed.), *Clean Production Strategies*, New York: Lewis Publishers.

⁵⁰ ESD is the environmental component of sustainable development. It is a dynamic concept that aims to ensure the exploitation of environmental resources in a manner that meets human needs while ensuring the sustainability of natural systems and the environment, so that the human needs can be met not only in the present but also in future.

⁵⁰ Cameron, J. and Abouchar, J., 1991, *The Precautionary Principle: A Fundamental Principle of Law and Policy for the Protection of The Global Environment* (*supra*)

⁵¹ Cameron, J. and Abouchar, J., 1991, *The Precautionary Principle: A Fundamental Principle of Law and Policy for the Protection of the Global Environment* (*supra*)

At the center of the precautionary principle is the concept of taking anticipatory action in the absence of complete proof of harm, particularly when there is scientific uncertainty about causal links. The precautionary principle states that decision-makers should act in advance of scientific certainty to prevent harm to humans and the environment.⁵² It addresses many of the limitations of current decision-making methods, such as the limitations of science. Precautionary approaches are goal oriented, lending themselves to technology innovation, pollution prevention, and facility planning.

The precautionary approach evolved as a response to the environmental and human health impacts caused by the rapid industrial growth following World War II and the weaknesses of early pollution control legislation. It is relatively new to environmental decision-making, having emerged during the early 1970s in West Germany - "vorsorgeprinzip" in.⁵³ At the core of early conceptions of this principle was the belief that society should seek to avoid environmental damage by careful forward planning, blocking the flow of potentially harmful activities.⁵⁴ The vorsorgeprinzip developed into a fundamental principle of German environmental law and has been invoked to justify the implementation of vigorous policies to tackle acid rain, global warming and North Sea pollution.

The precautionary principle has since flourished in international statements of policy; conventions dealing with high-stakes, low scientific certainty environmental concerns; and national strategies for sustainable development. It has gained international acceptance as a guiding principle for environmental decision-making.

⁵² O'Riordan, T. and A. Jordan., 1995, *The Precautionary Principle in Contemporary Environmental Politics*, *Environmental Values* 4:191-212.

⁵³ Von Moltke, K., . 1980, *The Vororgeprinzip in West German Environmental Policy*, in Royal Commission on Environmental Pollution, *Twelfth Report: Best Practical Environmental Option*, Cmnd 310 London: HMSO.

⁵⁴ *Supra* note 48

The precautionary principle was first introduced in 1984 at the First International Conference on Protection of the North Sea. Following this conference, the principle was integrated into numerous international conventions and agreements including the Maastricht Treaty, the Barcelona Convention, and the Global Climate Change Convention. It has been implicitly incorporated into several environmental laws in the U.S., such as the Pollution Prevention Act of 1990. The U.S.-Canadian International Joint Commission has called for a phase-out of persistent organic chemicals in the Great Lakes ecosystem based on weight-of evidence criteria. The criteria state that action should be taken to prevent environmental damage when evidence from several studies taken together indicates actual or potential environmental harm.

While the precautionary principle is growing in acceptance, it lacks a specific, widely recognized definition. With few exceptions, the principle remains only a concept provides few guidelines for policy makers, and fails to constitute a rigorous analytical framework.

Lack of a generally accepted formulation and criteria to guide its implementation has limited the wide-spread use of the precautionary principle in environmental decision-making and in some instances has led to heated debate and controversy. As such, there is a clear need to establish an institutional framework for the precautionary approach. This framework would need to introduce a common definition for the precautionary principle as well as establish a set of criteria for precautionary decision-making.

1.8 Research design, methodology and methods

While the term, “research”, is sometimes confined to the natural sciences and laboratory studies, here it is used to mean a careful and systematic process of inquiry to find answers to

problems of interest. To do “research” is to investigate a problem systematically, carefully and thoroughly.⁵⁵

The research design may be defined as the plan for getting from the research question to the conclusion.⁵⁶ Robson suggests that the research design has five components.⁵⁷ The first component is the purpose of the research: what is it trying to achieve? The second component is the theory that will guide or inform the research: what conceptual framework links the phenomena being studied and allows the findings to be understood? The third component is the research question(s): what question or questions is the research geared to providing answers to in the time and resources available? The fourth component is the methods: what specific techniques (for example, case studies) will be used to collect data to answer the research question; how will that data be analysed; how will that data be shown to be trustworthy? The fifth component is sampling strategy: where, when and how will the data be located?

The principal purpose of the research undertaken in this paper is to identify the effectiveness of environmental legislation in Zambia and, ultimately, to improve the system.

The primary research question asked in this paper is how can Zambia’s environmental legal system be improved to reduce incidences of pollution from the copper mining industry? Within this research question, the hypothesis tested is that the Zambian laws are not efficacious enough to address the issue of pollution caused by copper mining and that there may be a need to strengthen or reform the laws.

⁵⁵ Tan W., 2004, *Practical Research Methods*, 2nd ed., Prentice Hall, Singapore, at 3.

⁵⁶ Robson C. , 2002, *Real World Research: A Resource for Social Scientists and Practitioner – Researchers*, 2nd ed, Blackwell Publishers, Oxford.

⁵⁷ *Ibid.*

The methods used to collect data to answer the research questions are a literature review, a literature survey and case studies. This study will be a desk based research and it will largely depend on library literature. It will seek to assess Primary and Secondary sources of information on the topic and will also rely widely on internet sources.

Primary sources will include, a) The Constitution of the Republic Zambia; b) The Environmental Protection and Pollution Act of 1990, Chapter 204; c) the Environmental Management Act No. 12 of 2011; d) Zambian Mines and Minerals Development Act, 2008; e) the Mines and Minerals Development Act, 1995; f) The Water Act of 2011; and g) Environmental International Law Agreements.

Secondary resources will possibly include: a) relevant journal articles; b) study reports on mining and water pollution; c) papers written by academics and researchers on issues pertaining to this study; and d) any daily newspapers, discussions, speeches containing issues relevant to this study.

The approach will be to contextualize, assess and analyse the information with the intention of ascertaining how far the Zambian laws go in addressing the water pollution impact of copper mining.

1.9 Literature review

The results of the literature review conducted for this paper are presented throughout the paper by citation of relevant work in appropriate places. While recognising that there is a rich tapestry of academic and professional writing relevant to evaluating the effectiveness of environmental legal systems, it is significant in the context of this paper to note that most published legal writing describes, explains or interprets the law and its administration but does not evaluate its effectiveness. This is the case for most articles, books and government reports on the law. Attempting to evaluate the effectiveness of laws and legal systems is

relatively rare in the legal profession and government because this is not what concerns most lawyers and government officers. Judges, lawyers and others working within an environmental legal system generally interpret and apply the law but do not evaluate it. Judges and members of parliament also create and amend the law. These different approaches reflect the different purposes of the writers and roles of the participants in the legal system: describing; explaining; interpreting; applying; evaluating; creating; and amending.

(i) Carolyn Abbot, Enforcing Pollution Control Regulation, Strengthening Sanctions and Improving Deterrence.⁵⁸

Carolyn Abbot focuses on the challenges of enforcing pollution control regulation rather than on its necessity or desirability. Pollution control regulation in this context refers to regulation that limits the discharge of environmental pollutants into the air, water, and/or land.

The author employs an economic model based on Gary Becker's "Deterrence Model" to examine the enforcement issue. The underlying assumption of the "Deterrence Model" states humans act in rational and utility maximizing ways. Abbot expands on Becker's model to examine the cost-effectiveness of different sanctions and penalties in promoting compliance with pollution control regulation. More specifically, Abbot compares the effectiveness of different enforcement mechanisms, such as apprehension and conviction or severity of sanction, in eliciting desirable behavior in the regulatory realm. She proceeds to examine pollution control enforcement strategies and sanctions in Australia, Canada, and England and Wales to analyze the application of cost-effective enforcement. The application of this model provides important observations about enforcing pollution control regulation.

⁵⁸ Abbot, C. ,2009, *Enforcing Pollution Control Regulation: Strengthening Sanctions and Improving Deterrence*, Hart Publishing, 16C, Worcester Place, Oxford.

The book further illustrates how an economic analysis, such as the expanded deterrence model, can provide valuable insights about pollution control regulation. First, it provides a comparison of the effectiveness of different enforcement mechanisms in encouraging compliant behavior. Second, it reveals important insights about the best ways to go about enforcing pollution control regulation. Third, it provides a wonderful comparative analysis of pollution control regulation in Canada, Australia, and England and Wales, where environmental concerns are near the top of the political agendas of these states. Finally, Abbot's expanded deterrence model is a valuable analytical tool. It provides a methodologically rigorous way to evaluate cost-effectiveness enforcement.

(ii) L. Norrgren, U. Pettersson, S. Örn and P.-A. Bergqvist, Environmental Monitoring of the Kafue River, Located in the Copperbelt, Zambia⁵⁹

This study points out the fact that Zambia is a country with an extensive mining industry with the majority of mines located in the Copperbelt province. Through this region of the country, the Kafue River drains and receives effluent water from mining activities as well as from other industrial point sources. In addition, production of agricultural products and pest control requires use of different pesticides in the area. Information on industrial and agricultural pollution has not been clearly identified in Zambia, and little attention has been paid to pollution control and possible impact of metals, pesticides, and other persistent compounds in the environment. The objective of this study was to introduce and to evaluate a few methodologies based on in situ bioassays for environmental assessment to promote sustainable and environmentally sound water resource management of the Kafue River. The results show that caged threespot tilapia exposed downstream of industrial points sources

⁵⁹Environmental Monitoring of the Kafue River, located in the Copperbelt, Zambia, Department of Pathology, Faculty of Veterinary Medicine, Swedish University of Agricultural Sciences, 750 07 Uppsala, Sweden. Available at <http://www.ncbi.nlm.nih.gov/pubmed/10667931>. (accessed on 5th May 2012)

rapidly bio accumulate several trace elements, i.e., Cd, Co, Cu, Cr, Ni. These elements also occurred in much higher concentrations in water samples downstream of the industrial area compared with a locality upstream. Furthermore, the use of a semipermeable membrane device (SPMD) for passive absorption of lipophilic pollutants in the water showed relatively high concentration of several pesticides, i.e., DDT with major metabolites, PCB, and dieldrin. The present study shows that only 2 weeks of in situ studies in waters contaminated by pollutants affects in situ exposed fish and that the correlation between water and tissue concentrations was relatively good. Both trace elements and persistent organic pollutants occurred in such high concentrations that they must be considered from Eco toxicological aspects and may affect aquatic animal health.

(iii) Bertha Z Osei-Hwedie, Environmental Protection and Economic Development in Zambia⁶⁰

The author of this paper reports that the 1980s saw a revitalised global realisation of the crucial interrelationship between environmental protection and sustainable development. Such global awareness helped some African governments to take action towards the control of environmental degradation. It is acknowledged that Africa faces two types of crises: the crisis of development and the crisis of environment. The two crises mutually cause and reinforce each other. However, in spite of the need for environmental protection, African governments are unable to commit adequate financial and human resources to control damage to the environment. The economic crisis in Africa, 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. This is the situation Zambia is faced with. He concludes that despite the government's efforts

⁶⁰ Journal of Social Development in Africa (1996), 11.2.57-72.

to control environmental degradation through enactment of a comprehensive environmental law and structures for that purpose, financial constraints and low priority accorded to this area in the face of an economic crisis makes it difficult to realise the goal of environmental protection.

(iv) Ndulo, Muna, Mining Legislation and Mineral Development in Zambia⁶¹

This article examines Zambia's mining laws by focusing on the requirements for obtaining the right to conduct mining operations in Zambia. It provides a general background of the mineral industry as it has evolved throughout the history of Zambia. It also discusses the sources of law relating to mineral rights, i.e. English common law and Zambian legislation and describes Zambia's approach to mining rights. It further describes the requirements for various types of mining licences, the nature of a mining interest and the obligations of a mining right holder. Finally, the article concludes that, on the whole, the Mines and Mineral Acts of 1976 successfully promotes the increased discovery and development of minerals in Zambia and thereby maximizes economic benefit from Zambia's mineral resources.

This article is limited in its scope of coverage, given that it only deals with the licensing of miners without covering the environmental legislation on mining activities. Even then, the article was done way back on 1986 and some of the laws covered have since been repealed. My research will highlight the current legislation on mining as well as the legal framework for environmental protection which is missing from this article.

⁶¹ Ndulo, M. ,1986, *Mining Legislation and Mineral Development in Zambia*, Cornell Law Faculty Publications, Paper 67. Available at <http://scholarship.law.cornell.edu/facpub/67> (accessed 24th September 2011)

(v) **Rohit Negi, The Micro politics of Mining and Development in Zambia: Insights from the Northwestern Province**⁶²

This article analyzes the political forms that took shape during the copper mining boom, bringing into view the new entanglements of capital, labor, civil society, and the state. It draws on ethnographic work in the Solwezi District of Zambia's North Western Province, where the opening of two large mines since 2004 placed it on the map of copper extraction. The article argues that the interlinked processes of structural adjustment and the privatization of mining in the 1990s significantly weakened the country's historically strong labor unions. Though still important as political actors within the workplace, the unions representing mineworkers are less salient in the arena of the broader civil society. Instead, loose networks of assorted groups have coalesced around the issue of capital's developmental impacts, namely the mechanism of Corporate Social Responsibility, making this a pivotal site of the emergent politics of mining. These and other more 'formal' political contestations forced the state to revisit the neoliberal mining framework that was negotiated with and tilted in favor of capital, only, however, to be confronted with a changed landscape of possibilities as the world economy nosedived in 2008.

However, this article is only interested in the politics of copper mining in Zambia and mentions nothing about the environmental impact of the industry. My paper will cover this gap by investigating the environmental consequences of copper mining as well as the legislation put in place to minimize the environmental impact.

⁶²Negi, R. , 2011, *The Micro politics of Mining and Development in Zambia: Insights from the Northwestern Province*, African Studies Quarterly, 12 (2). Center for African Studies, University of Florida.

(vi) Bonnie Campbell, Regulating Mining in Africa: For whose benefit? Discussion Paper 26.⁶³

This is a study into the development of mining legislation in Africa. The book briefly summarises the process of liberalisation of the African mining sector in the 1980s from a developmental perspective. It also examines the creation of a new regulatory framework in the 1990s for mining in Africa. It also has a series of case studies illustrate how this process has given rise to specific mining codes and environmental regulations in different African countries. The countries studied are Ghana, Guinea, Mali, Madagascar and Tanzania. The paper does not include Zambia as a case study and this present research will look at the mining industry in Zambia and its regulation.

(vii) Ericka Phipps, Pollution Prevention Concepts and Principles⁶⁴

This document introduces the concepts and principles of pollution prevention (P2) and gives a brief overview of P2 activities of government, industry, and the general public.

The report recognizes that States are well-positioned to further the goals of P2 due to their direct interactions with the regulated community. In addition, states are responsible not only for their own environmental regulations but many of the federal programs as well. Some states fund P2 activities with revenues from “polluter-pay” fees based on facilities’ emissions.

It gives a practical example of how more state environmental agencies are developing P2 programs. Some offer grants and incentive programs to encourage P2 activities; many offer education and outreach and provide technical assistance to help the regulated community comply with environmental laws through preventive means. Often the education and

⁶³ Bonnie Campbell (ed.), *Regulating Mining in Africa: For whose benefit?* Nordic Africa Institute Discussion Paper.

⁶⁴ Phipps, E., *Pollution Prevention, Concepts and Principles*, National Pollution Prevention Center for Higher Education, University of Michigan Dana Building, 430 East University, Ann Arbor MI 48109-1115. Available at <http://www.umich.edu/~nppepub/resources/GENp2.pdf> (accessed on 5th May 2012)

technical assistance functions are offered through a local university, or are at least housed separately from the regulatory functions, so that industry is not inhibited from seeking assistance. Or, the regulatory agencies themselves offer the services, often incorporating P2 into the planning and permitting processes. Some state environmental agencies are integrating their air, water, and waste divisions. Multimedia inspections and permitting processes make it harder for polluters to just shift wastes from one medium to another; the attention of both industry and the regulators focuses on P2 opportunities instead.

(viii) Christopher Mupimpila and Nicolien van der Grijp, Copper from Zambia⁶⁵

The purpose of this report is to present the findings of a case study of copper on the trade impacts on developing countries of changing production and consumption patterns in developed countries. The report first deals with world production and consumption of copper before turning on to the political economy of copper mining, with the central focus on Zambia. It then focuses on the environmental impacts of copper mining, and the influences to improve the environmental performance of mining companies.

The one weakness of this paper is that it does not cover the legal framework for the protection of the environment against pollution caused by the mining industry.

⁶⁵ Mupimpila, C and van der Grijp, N., *Copper from Zambia*, Paper prepared for the United Nations Environmental Programme.

(ix) Ashton, P.J., D. Love, H. Mahachi, P.H.G.M. Dirks, An Overview of the Impact of Mining and Mineral Processing Operations on Water Resources and Water Quality in the Zambezi, Limpopo and Olifants Catchments in Southern Africa.⁶⁶

This report provides an overview of the impacts that mining and mineral processing activities have had, or are likely to have, on the water resources (in particular, water quality aspects) of the Zambezi, Limpopo and Olifants river basins. More importantly, however, the paper also discusses legislative requirements for the control and management of impacts attributable to mining operations in southern Africa.

It is reported that most countries still have several old and new sets of interlocking legislation that exert control over mining and related activities and their impacts on the environment. Many of these acts are now in the process of revision to reflect more clearly the principles embodied in their respective constitutions and the tenets of international treaties designed to minimize environmental degradation. Inevitably, the changes in existing legislative frameworks in each country are complicated by the fact that some pieces of legislation can be interpreted in ways which appear to conflict with the terms and conditions set out in other legislation. Similarly, there are situations where legislative requirements in neighbouring countries differ from each other, thereby complicating the process of managing impacts on shared resources (e.g. shared river basins).

This is a thorough report on the environmental impact of mining, but it is limited in the sense that it attempts to cover an entire region and therefore there is little focus on Zambia. It also discusses water pollution only whereas my research will cover water pollution in addition to other forms of pollution such as air and soil degradation.

⁶⁶ Ashton, P.J., D. Love, H. Mahachi, P.H.G.M. Dirks ., 2001, *An Overview of the Impact of Mining and Mineral Processing Operations on Water Resources and Water Quality in the Zambezi, Limpopo and Olifants Catchments in Southern Africa*, Contract Report to the Mining, Minerals and Sustainable Development (SOUTHERN AFRICA) Project, by CSIR Environmentek, Pretoria, South Africa and Geology Department, University of Zimbabwe, Harare, Zimbabwe.

(x) **Priscilla Kaela Kangwa, An Assessment of the Economic, Social and Environmental Impacts of the Mining Industry - A Case Study of Copper Mining in Zambia**⁶⁷

This study assesses the impacts of copper mining in Zambia. The assessment was carried out through the use of a case study methodology which employed interviews and documents as instruments for data collection. It establishes that copper mining in Zambia has been a major contributor to the country's foreign exchange earnings however; the revenues from copper mining are externalized and consequently make very minimal contribution to the local economy and people. It further establishes that though copper production has been on an increase and seen increased inflows in DFI, environmental management has not received the same attention and this has negatively impacted on the environment and the livelihood of the people of the Copperbelt Province. In addition to this, the social impacts on the local people arising from copper mining were examined and it was found that the mining industry has negatively impacted on the social support systems of the local people and that productive land which could ideally be used for other developmental projects has been allocated for copper mining. The study therefore, recommends reinforcement of institutional capabilities and competencies for proficient long-lasting planning for sustainable development.

This study comes close to the subject of my paper, but it can be differentiated by the approach adopted by the author. The author adopted a political economy perspective to her research which differs significantly from the perspective my study will take. The paper also fails to discuss the legal framework for environmental protection against pollution from the mining industry which will be covered by my paper.

⁶⁷ Unpublished thesis for MSc, Environmental Studies and Sustainability, Lund University, Sweden

(xi) McGrath, Christopher James, How to evaluate the effectiveness of an environmental legal system.⁶⁸

The principal research question addressed in this paper is how the effectiveness of an environmental legal system can best be evaluated. The author argues that a legal system is effective if it is achieving or likely to achieve its objectives and for an environmental legal system this means achieving sustainable development. It is a rather technical paper but the tools described will be used in measuring the effectiveness of Zambia's laws in addressing pollution concerns from the mining industry.⁶⁹

(xii) Michael Faure, Morag Goodwin & Franziska Weber, Bucking the Kuznets Curve: Designing Effective Environmental Regulation in Developing Countries⁷⁰

This Article suggests that in addressing problems of environmental degradation in developing countries, policymakers and scholars have neglected the important question of regulatory design. While a country's long-term improvement in environmental conditions almost certainly depends on improving its economic position, in the short to medium term, the quality and type of environmental regulation can play a significant role in determining regulatory effectiveness. Much of the research into the failures of environmental regulation has focused on implementation and enforcement problems, but the authors argue that one of the primary reasons for such regulatory failure is that policy makers have not paid enough attention to designing regulation appropriate to the legal, economic, political, and social situations in which they must function.

⁶⁸ McGrath, C.J.,2007, *How to Evaluate the Effectiveness of an Environmental Legal System*, PhD thesis, Queensland University of Technology.

⁶⁹ Four groups of methods for evaluating the effectiveness of an environmental legal system are discussed in this paper: State of the Environment ("SoE") reporting using the pressure-state-response ("PSR") method; variations on the PSR method for SoE reporting; best practice; and other methods.

⁷⁰ Michael Faure, Morag Goodwin & Franziska Weber, *Bucking the Kuznets Curve: Designing Effective Environmental Regulation in Developing Countries*, *Virginia Journal of International Law* Volume 51 — Issue 1 — Page 95

After providing background on the historical approach to environmental regulation in developing countries and offering their thoughts on why such efforts have not succeeded, the authors consider what lessons can be drawn from the fields of law and economics and law and development in attempting to formulate a new, more particularized approach.

This paper makes a good reading on regulatory design. The starting point is necessarily the particular environmental issues within a given country, and the legal, cultural, and institutional context. The adopted approach will differ depending on all of these factors. As is now widely recognized in the fields of law and development, there can be no “one size fits all” approach. Instead, by weighing the relative capacities of relevant institutions and the various levels of governance, in conjunction with an internal determination of the problem to address, it is possible to take a pragmatic approach that is far more likely to achieve success in the short term. While such an approach will not eliminate enforcement problems, they will be minimized to the maximum extent possible by designing regulation and a decision-making process that takes into account specific locations of capture and weak capacity, and by making the most of the existing infrastructure.

Although this paper is not focused on Zambia, the suggestions made therein will be adopted in suggesting the best design for Zambia’s environmental laws.

(xiii) United Nations Environmental Guidelines for Mining Operations⁷¹

These guidelines are premised on the acknowledgment of the fact that mining can be a potential source of wealth in developing countries, a point emphasised in the 1990s by the adoption of new, or modified mining policies and legislation in more than 75 countries world-wide. These changes have, for the most part, been undertaken to promote foreign investment

⁷¹ Compiled by UNEP and UNDESA

and the creation of a stable fiscal and regulatory climate attractive to the international mining community.

The guidelines also appreciate that in addition to generating wealth, mining can be a major source of degradation to the physical and social environment unless it is properly managed. These guidelines are designed to assist regulators, particularly in developing countries, to encourage sustainable mining while at the same time protecting the environment.

These Environmental Guidelines for Mining Operations address regulatory frameworks; EIAs; environmental management systems and programmes; environmental monitoring programmes; environmental auditing; and enforcement, as applied to all aspects of mining operation, but in particular exploration; mine operation; mine site rehabilitation; and small scale mining.

(xiv) Environment Australia – Overview of Best Practices Environment Management in Mining⁷²

These guidelines begin by accepting that today's modern society places ever-increasing demands upon the supply of raw materials necessary in the provision of infrastructure, services and goods for national development. A large proportion of these raw materials are obtained by mining. As low-cost ore deposits are not evenly distributed around the world because of geological differences, and as efficient, large-volume transport facilities are now available to every country, mining has become a truly global activity. Ore mined in one country may be exported to another for refining, and exported to a third country for fabrication into the final product which may then be sent for sale to consumers in yet more countries.

⁷² This booklet is part of a series of booklets on Best Practice Environmental Management in Mining devised by the Australian Government to help improve the level of understanding of how these concepts can be applied to the mining industry, and to provide practical advice on management and operational methods to reduce the level of environmental harm from mining to acceptable levels.

As the scale of mining activity has increased, as well as the infrastructure to support it, so has the level of impact upon the environment. The 1950s and 1960s were a turning point for attitudes into the impacts that industry in general and mining in particular were having on the environment. Part of the reason for this change in attitude was the obvious damage being caused to the environment from mining activities such as direct discharge of tailings into rivers, periodic flooding and escape of acid mine water, collapse of tailings and waste rock piles, and contamination of soils and the food chain from heavy metals and other compounds. Such impacts from mining in the early to mid-20th century are evident around the world.

Mining practice has evolved to reflect these concerns and regulatory requirements, and some operators have introduced management policies and practices and have adopted technologies that allow mining to occur with minimum environmental harm.

Best practice can simply be explained as "the best way of doing things". Best practice environmental management in mining demands a continuing, integrated process through all phases of a resource project from the initial exploration to construction, operation and closure. For it to be successful it requires careful planning and commitment from all levels and groups within a mining company. It is based on a comprehensive and integrated approach to recognising, and avoiding or minimising, environmental impacts. In order to be fully effective, this approach must be based on a sound set of generic and mining specific principles – ecologically sustainable development, intra and inter-generational equity, accountability and compliance with international human rights and environmental standards and principles, the precautionary principle, well informed and trained staff, effective communication and openness, flexibility and continual improvement.

(xv) Water and Mining

The paper gives an account of the negative impacts of mining particularly in Canada and begins by emphasizing that water is essential to our planet and that a pre-requisite to sustainable development must be to ensure uncontaminated streams, rivers, lakes and oceans.

The article attempts to find solutions to water pollution caused by mining and identifies some of these solutions as changes in laws, technologies, attitude and enforceable standards and acknowledges that without enforceable standards there is decreased corporate accountability, and increased ecological liability. The article further stresses the importance of an effective regulatory base, as voluntary measures have not, and will not deliver reliable, consistent safeguards and environmental performance improvements. History has shown that, especially with mining, clean up is always more expensive than prevention, hence there is an urgent need to ensure the best pollution prevention strategies are employed in cases where the risks can be managed. There is also need to recognize that in some places mining should not be allowed to proceed because the identified risks to other resources, such as water, are too great.⁷³

(xvi) Zambian Legislation

This paper will also look at the Laws of Zambia relating to this study which include the Constitution of Zambia Act, Chapter 1 of the Laws of Zambia, the Environmental Management Act No. 12 of 2011, the Mines and Minerals Act 2008, and the Water Resources and Management Act No 21 of 2011.

⁷³Safe Drinking Water Foundation, “Mining and Water”. Available at www.safewater.org/PDFS/.../Mining+and+Water+Pollution.pdf (accessed 17th July 2012)

1.10 Assumptions

The Zambian government is in the process of revising the current Environmental Protection and Pollution Act (EPPCA) of 1990, with a view to enhancing the legal framework. The major departure is that this Environmental Management Bill will shift towards addressing the inadequacies of environmental management. The Bill has since passed the first reading in Parliament.⁷⁴ The assumption is that at the time of undertaking this study the new Act will have been enacted and therefore this study will be able to assess its adequacy in light of this research.

1.11 Limitations

This study's main focus will be on the enacted Zambian legislation. There is an indication that by the conclusion of this study, other legislation that might ultimately affect or have an impact on the conclusions and recommendations of this study might be enacted. This particular piece or pieces of legislation may not be included in this study.

Another significant limitation is that the study is currently being conducted in Kenya, which means the researcher will not have an opportunity, due to limited time and funding, to travel to the ground and conduct interviews with industry players and those affected by pollution. Data will mostly be secondary, collected through online research and from published books and journals.

1.12 Conclusion

Having set out the background upon which this research was conceived, and justified the need for this research in this chapter, the stage is now set to proceed with the research and record the findings. The next chapters are ideally geared towards establishing the correctness of the research hypothesis, meeting the objectives of the study and answering the key research questions as set out in this chapter.

⁷⁴ Government to Revise Pollution Act-Environment Minister-Reported by Zanis, (December 17th 2010), Available at www.statehouse.gov.zm/.../2302-government-to-revise-pollution-act-environment-minister (accessed on 17th July 2012)

CHAPTER TWO

PUBLIC PARTICIPATION AND ACCESS TO INFORMATION IN ENVIRONMENTAL REGULATION

2.0 Introduction

Having indicated in the previous chapter that this research seeks to interrogate the adequacy and effectiveness of the legal and institutional framework on control of water pollution caused by copper mining in Zambia, while focusing mainly on the concepts of public participation and access to information; access to justice, and the use of EIs/MBIs; this chapter discusses two of these areas of focus – public participation and access to information – which are necessarily related and intertwined.

This chapter seeks to outline the necessity of public participation in environmental matters and access to environmental information. It will outline the guidelines for development of national legislation on public participation and access to information on environmental matters, and interrogate whether Zambia has developed such legislation. The chapter will further seek to establish as far as is ascertainable the actual extent of the Zambian public's participation in environmental matters and their access to information on environmental matters. Finally, the chapter will highlight examples of jurisdictions where public participation in environmental matters and access to environmental information has contributed to environmental management and conservation.

The ultimate objective of this chapter is to establish the role of effective public participation and access to information as measures that can be employed effectively and adequately in addressing the problem of water pollution from copper mining in Zambia. In doing so, the paper will also establish and ascertain the place of these key tools in international environmental law and how they have been used as measures to address environmental challenges in other jurisdictions.

2.1 The concepts of public participation and access to information

2.1.1 Public participation

Public participation can be understood as a political and management tool of practice or as a right which seeks and facilitates the involvement of those potentially affected by or interested in a decision in the decision-making process. The principle incorporates the concepts or practice of stakeholder engagement and popular participation.

The principle of public participation holds that those who are affected or potentially affected by a decision have a right to be involved in the decision making process and implies that the public's contribution will influence the decision.⁷⁵ It seeks out and facilitates the involvement of those potentially affected or interested in a decision, and promotes sustainable decisions by recognizing and communicating the needs and interests of all participants, including decision makers.⁷⁶

Public participation may be regarded as a tool of empowerment and as a vital part of democratic and progressive governance.⁷⁷ To highlight the importance of public participation generally, the role of this important concept in economic and human development was enshrined in the 1990 African Charter for Popular Participation in Development and Transformation.⁷⁸

In the present context, public participation therefore entails the involvement of the members of the public in decision making on environmental matters. With growing complexities of environmental issues, public participation has come to the fore in academic analysis concerning the contemporary debates about environmental governance. There have emerged

⁷⁵ International Association for Public Participation (IAP2), *Core Values for the Practice of Public Participation*. Available at www.iap2.org/displaycommon.cfm?an=4 (accessed on 22nd November, 2012)

⁷⁶ *Ibid*

⁷⁷ The Co-Intelligence Institute, *Principles of Public Participation*. Available at www.co-intelligence.org/CIPol_publicparticipation.html (accessed on 22nd November, 2012)

⁷⁸ The Charter was adopted in February 1990 at the International conference on Popular Participation in the Recovery and Development Process in Africa, Arusha, Tanzania.

a number of arguments in favour of a more participatory approach, which stress that public participation is a crucial element in environmental governance that contributes to better decision making. It is recognized that environmental problems cannot be solved by government alone.⁷⁹

Participation in environmental decision making effectively links the public to environmental governance. By involving the public, who are at the root of both causes of and solutions to environmental problems, in environmental discussions, transparency and accountability are more likely to be achieved, thus securing the democratic legitimacy of decision making that good environmental governance depends on.⁸⁰

However, public participation does not entail involvement of the members of the public only at the decision making stage, but also at the implementation stage. This paper, at least, adopts that wider understanding of public participation. Involvement of the public, as far as is practicable, in the implementation of environmental legislation and environmental management and conservation programmes is an effective way of ensuring compliance and achieving pollution control.

Arguably, a strong public participation in environmental governance could increase the commitment among stakeholders, which strengthens the compliance and enforcement of environmental laws. In addition, it is arguable that public participation in environmental decision-making is a procedural right that can be seen as part of the fundamental right to environmental protection.⁸¹ From this perspective, environmental governance is expected to

⁷⁹ Pring, G. and Noe, S.Y. ,2002 *The Emerging international law of Public Participation Affecting global Mining, Energy, and Resource Development* in Zillman, D.M., Lucas, A. and Pring, G. (eds) *Human Rights in natural resource Development: Public Participation in the sustainable Development of Mining and Energy Resources*, Oxford university Press, Oxford, at page 76.

⁸⁰ Bulkeley, H. and Mol, A.P.J. 2003, *Participation and Environmental Governance: Consensus, Ambivalence and Debate*, *Environmental values* 12(2), at pages 143 to 154.

⁸¹ Du Plessis, A. 2008, 'Public Participation, Good Environmental Governance and Fulfillment of Environmental rights', *Potchefstroom Electronic Law Journal*, 11(2), at pages 170 to 201.

operate within a framework coinciding with the constitutional principle of fairness, inclusive of equality, which inevitably requires the fulfillment of environmental rights and ultimately calls for the engagement of the public.⁸² Further, in the context of considerable scientific uncertainties surrounding environmental issues, public participation helps to counter such uncertainties and bridges the gap between scientifically defined environmental problems and experiences and values of stakeholders.⁸³ Through joint efforts of the government and experts in collaboration with the public, better governance is expected to be achieved by making the most appropriate decision possible.

2.1.2 Access to information

Access to information refers to the ability and opportunity to obtain knowledge of, in the present context, environmental information. Access to environmental information is vital as it not only enables public participation in environmental decision-making but also enables the public to participate in environmental management and conservation by taking precautionary measures for pollution control. Without access to environmental information, the public cannot effectively participate in environmental management and conservation and in environmental decision making and policy development, yet the importance of the public's contribution in these regards cannot be gainsaid.

It is vital that the government and various institutions involved in the management and conservation of the environment ensure that there is easy, sufficient and widespread public access to environmental information, especially those held by or within the exclusive knowledge of government or the institutions.

⁸² Ibid

⁸³ Fischer, F. 2000, *Citizens, Experts and the Environment*, Durham NC: Duke University Press, at page 222.

Greater detail will emerge in further discussions in this chapter. Where appropriate, however, access to information and public participation will be discussed together as they are concepts that support and facilitate each other.

2.2 Rationale for public participation and access to information in environmental law and environmental matters

The growth of “public participation” law and practice is one of the most significant occurrences in mining and natural resources development in the late 20th century. And this phenomenon - variously called “public participation,” “citizen involvement,” “stakeholder engagement,” “indigenous peoples’ rights,” “local community concerns,” “NGO intervention” and “Aarhus rights” - is predicted to become even more central to the successful, sustainable development of minerals and other resources in the 21st century.

A “public participation explosion” has been occurring since the 1960s, and few sectors will be more impacted by this than the mining and resources development industries. New international and national laws and practices are injecting this human dimension into resources planning, financing, licensing, operating, and closure on a global scale.⁸⁴

In 1972, the United Nations Conference on the Human Environment (UNCHE) made a direct link between the environment and the right to life. Two decades later, in 1992, the Rio Declaration acknowledged the right to a healthy and productive life in harmony with nature and the right of access to environmental information and of public participation in environmental decision making.

In dealing with environmental problems, "participation" has emerged as a central theme. There has, for some time, been a growing recognition in international environmental law and

⁸⁴ Pring, G. (2001) , *The Law of Public Participation in Mining and Resources Development*, International Institute for Environment and Development.

various jurisdictions that environmental protection depends on more effective participation of multiple stakeholders. Over the last decade, there has been a succession of studies pointing to the conclusion that current environmental practices, entrenched institutional arrangements and attitudes, and poorly adapted laws are major constraints on participatory approaches.⁸⁵

With specific reference to the Zambian legislative framework, Zambian legislation falls short in comparison to those in most developed countries and acts as a constraint on participation because of its command and control approach, in which most decisions are made by the state and the principal role of law is to ensure compliance and penalise non-compliance with those decisions. There have been attempts, however, to incorporate the principle of public participation in Zambian environmental legislation as discussed in detail in part 2.4 of this chapter.

2.3 International conventions and other legal instruments and guidelines on public participation and access to information

2.3.1 Rio Declaration on Environment and Development

The 1992 Rio Declaration on Environment and Development defines the rights of the people to be involved in the development of their economies, and the responsibilities of human beings to safeguard the common environment. The declaration builds upon the basic ideas concerning the attitudes of individuals and nations towards the environment and development, first identified at the UNCHE, 1972.

The Rio Declaration states that long term economic progress is only ensured if it is linked with the protection of the environment. If this is to be achieved, then nations must establish a new global partnership involving governments, their people and the key sectors of society.

⁸⁵ *Ibid*

The right to public participation in environmental decision making and natural resources management is one of the 27 principles endorsed by the nations of the world and is embodied in the provisions of Principle 10 of the Rio Declaration. It provides that:

Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.

Principle 10 of the Rio Declaration recognizes the importance of involving the public in environmental decision making processes and recognizes the right of access to environmental information and particularly such information held by public authorities. It then places an obligation upon States to facilitate and encourage public awareness and participation by making environmental information widely available. Finally, it stresses the need for the provision of effective access to judicial and administrative proceedings including redress and remedy. This is an important provision as the public cannot enforce its rights without proper access to judicial and administrative processes where redress can be sought.

The aspects of public participation and access to environmental information provided for by Principle 10 of the Rio Declaration are important aspects that ought to be implemented and effectively addressed in every jurisdiction.

The Rio Declaration emphasizes the important role of states in facilitating public participation by taking care of adequate and effective access to information. . This can be achieved by making information readily and widely available as well as through public

awareness and education. Public participation should involve the participation of all concerned citizens and not just part of society. The Rio Declaration recognizes this by providing for the participation of various groups within society, including often marginalized but equally affected members of society such as women and the youth.

Principle 20 deals with women's participation, Principle 21 deals with youth participation, Principle 22 promotes the participation of “indigenous people, their communities and other local communities” and Principle 23 calls for the protection of “the environment and natural resources of people under oppression”.

By including all these different groups, the Rio Declaration sets the stage for a common vision on public participation in which everyone is allowed to participate. Public participation is viewed as an essential tool in addressing environmental challenges in that it is a condition for responsive, transparent and accountable governments. It is also a condition for the active engagement of equally responsive, transparent and accountable Civil Society organizations, including industrial concerns, trade unions, and Non-Governmental Organizations (NGOs). Public participation in the context of the protection of the environment and particularly water pollution requires effective protection of the human rights to hold and express opinions and to seek, receive and impart ideas. It also requires a right of access to appropriate, comprehensible and timely information held by governments and industrial concerns on economic and social policies regarding the sustainable use of natural resources and the protection of the environment, without imposing undue financial burdens upon the applicants and with adequate protection of privacy and business confidentiality.

The empowerment of people in the context of environment protection also requires access to effective judicial and administrative proceedings. It would be meaningless to guarantee environmental rights without guaranteeing a corresponding right of access to judicial and

administrative proceedings where these rights can be enforced and their violation or infringement remedied.

In many jurisdiction, public participation rights are granted through EIA procedures with broad public participation or in various sectoral laws adapted to the special circumstances of each sector. Consultation with, and dissemination of information to the public are important objectives of EIAs with public access to information and access to remedial procedures.

2.3.2 The Aarhus Convention

A major recent development in the field of public participation in environmental issues in the European Union is the Aarhus Convention or the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters.

Whereas it is a UNECE Convention which does not apply to Zambia, an African nation, there are important lessons that can be drawn from it and applied in the context of Zambia, hence its inclusion here. The significance of the Convention in terms of putting into context and elaborating Principle 10 of the Rio Declaration is immense.

Kofi A. Annan, then Secretary-General of the United Nations said in reaction to the Aarhus Convention:

Although regional in scope, the significance of the Aarhus Convention is global. It is by far the most impressive elaboration of principle 10 of the Rio Declaration, which stresses the need for citizen's participation in environmental issues and for access to information on the environment held by public authorities. As such it is the most ambitious venture in the area of environmental democracy so far undertaken under the auspices of the United Nations.⁸⁶

⁸⁶ Pickaver, A and Kreiken, W., 2007, *Public Participation Legislation* Available at

The Convention is based on the premise that greater public awareness of and involvement in environmental matters will improve environmental protection. It is designed to help protect the right of every person of present and future generations to live in an environment adequate to his or her health and well-being. The idea of the Aarhus Convention is that greater public awareness and public participation in environmental matters will help to ensure the successful application of environmental law.

This is an environmental treaty that turns the 1992 Rio Declaration's vague commitments to the principles of access into specific legal obligations. Since its negotiation in 1998 as a regional agreement among the countries of the United Nations Economic Commission to Europe (UNECE), 24 nations in Europe and Central Asia have become Parties to the treaty, and 40 have signed it. It entered into force in October 2001, and is now open to signature by all nations of the world.

The Convention covers three fields or 'pillars', which address the relationship between the public and public authorities in environmental matters. It firstly provides for the public to have access to environmental information. It requires Parties to ensure that public authorities make environmental information available on request to members of the public (subject to certain exemptions) and sets out basic obligations to actively collect and disseminate such information. Secondly, it provides for public participation in the preparation of plans, policies and programmes, in addition to decisions on certain specific activities relating to the environment. Thirdly, where an interested person believes their rights under the first two pillars have been infringed, or wishes to challenge acts or omissions by private persons or public authorities which may contravene national environmental law, it provides for that person to have access, within certain parameters, to expeditious review procedures before a

http://www.coastalwiki.org/coastalwiki/Public_participation_legislation (cessed on 23rd November 2012)

court of law or other independent body. This falls partly within the ambit of access to justice which will be discussed in detail in the next chapter.

The Convention not only recognizes the basic right of every person of present and future generations to a healthy environment but also specifies how the authorities at all levels will provide fair and transparent decision-making processes, access to information, and access to redress. For example, the Convention requires broad access to information about the state of air and atmosphere, water, land, and biological diversity; information about influences on the environment such as energy, noise, development plans, and policies; and information about how these influences affect human health and safety.⁸⁷

For most signatory countries, meeting the standards of the treaty will require authorities to change how they disseminate environmental information to the public, to create new systems of environmental reporting by businesses and government, to improve the practice of public notification and comment, and to change judicial processes.

Adopting and implementing the Aarhus Convention's principles beyond its European base could provide a straightforward route to better access at a global level. But while there is growing interest in endorsing the Aarhus principles in Latin America, southern Africa, and the Asia-Pacific region, many countries perceive the treaty's concepts of democratic decision-making about the environment as too liberal or threatening to commercial confidentiality. Some countries are also reluctant to adopt a treaty that they did not have a chance to shape initially. Nonetheless, the Aarhus Convention stands as an example of real progress toward a global understanding of what access is and how it can be manifested in national laws and practices.⁸⁸

⁸⁷ *Ibid*

⁸⁸ *Ibid*

2.3.3 The United Nations Environmental Guidelines for Mining Operations (UNEGMO).⁸⁹

The United Nations Conference on Environment and Development (UNCED), held in Rio de Janeiro in June 1992, adopted Agenda 21 as the programme for environmental management for the 21st century. Agenda 21 emphasised the need for environmental guidelines for natural resources development. Five years on, at the special session of the UN General Assembly to review and appraise the implementation of Agenda 21 held in New York,⁹⁰ Member States reaffirmed their belief that the implementation of Agenda 21 in a comprehensive manner remains important.

Towards the end of the 20th Century, both the Natural Resources and Environment Management Branch and the United Nations Environment Programme (UNEP) were constantly requested by a number of countries to provide environmental guidance for the mineral sector. The first edition of the UNEGMO was published in 1994, and served as a useful sequel to the 1991 Mining and Environment “Berlin Guidelines”, an outcome of the Round Table Conference organized by the United Nations and the German Foundation for International Development.⁹¹

The current version of the UNEGMO was published in 1998 in light of continuing changes that had occurred within the mining sector since 1994 when the first edition was published, particularly in the evolution of legal, fiscal and regulatory policies.

The UN Environmental Guidelines for Mining Operations address, inter alia, regulatory frameworks; EIAs; environmental management systems and programmes; environmental monitoring programmes; environmental auditing; and enforcement as applied to all aspects of

⁸⁹ The United Nations Environmental Guidelines for Mining Operations

⁹⁰ The UN Earth Summit +5

⁹¹ The International Round-Table on Mining and the Environment was held in Berlin, Germany, in June 1991. The guidelines for mining and the environment were drafted there. They contain a set of recommended actions by the various stakeholders in mining and the environment. The first edition of the UNEGMO was produced as a result of the Round-Table.

mining operation, but in particular exploration; mine operation; mine site rehabilitation; and small scale mining. The regulations are not a prescriptive manual, but should rather be amended and improved according to the specific needs of each country.

The UNEGMO outlines various fundamental principles for the mining sector. These principles below are taken from the Berlin Guidelines, and state, inter alia, what governments, mining companies and the minerals industries should as a minimum adopt.

- i. Recognize environmental management as a high priority, notably during the licensing process and through the development and implementation of environmental management systems. These should include early and comprehensive EIAs, pollution control and other preventative and mitigative measures, monitoring and auditing activities, and emergency response procedures.
- ii. Establish environmental accountability in industry and government at the highest management and policy-making levels.
- iii. Encourage the employed, at all levels, to recognise their responsibility for environmental management and ensure that adequate resources, staff, and requisite training is available to implement environmental plans.
- iv. *Ensure the participation and dialogue with the affected community and other directly interested parties on the environmental aspects of all phases of mining activities.*
- v. Adopt best practices to minimise environmental degradation, notably in the absence of specific environmental regulations.
- vi. Adopt environmentally sound technologies in all phases of mining activities and increase the emphasis on the transfer of appropriate technologies which mitigate environmental impacts including those from small-scale mining operations.

However, notably, and key to the present discourse, these principles recognize the need for public participation in environmental matters.⁹² As will be evident, the principle of public participation has been observed in various jurisdictions to great effect and immense success.

The participation of the affected communities in the decision-making process is an essential precondition for a responsible environmental policy and for avoiding subsequent conflicts. Notwithstanding the possibility of granting more extensive rights, participation is primarily ensured by giving affected communities access to relevant information at all stages of mining activities.

The access to information should be realised in two steps: the mining operator's duty to disclose certain information to the competent authorities and the citizen's right to obtain environmental information in turn from the authorities, including information disclosed by the mining operators. However, companies are also beginning to provide environmental information directly to the public, for example through corporate environmental reports.⁹³

2.3.4 United Nations Environmental Programme (UNEP) Guidelines for the Development of National Legislation on Access to Information, Public Participation and Access to Justice.

In order to catalyze and to accelerate action in terms of implementing Principle 10 of the Rio Declaration, 1992, governments adopted the Guidelines for the Development of National Legislation on Access to Information, Public Participation and Access to Justice in Environmental Matters at the 11th Special Session of UNEP Governing Council/Global Ministerial Environmental Forum in Bali, Indonesia on 26th February, 2010.

⁹² Principle VII

⁹³ Environmental Key Performance Indicators, Reporting Guidelines for U.K. Business Available <http://archive.defra.gov.uk/environment/business/reporting/pdf/envkpi-guidelines.pdf> (accessed on 14th May 2013)

These Guidelines, though voluntary, demonstrate a willingness by Governments to more thoroughly engage the public at all levels to protect and manage the environment and related resources. The purpose of the guidelines is to provide general guidance, if so requested, to States, primarily developing countries, on promoting the effective implementation of their commitments to Principle 10 of the 1992 Rio Declaration on Environment and Development within the framework of their national legislation and processes. In doing so, the guidelines seek to assist such countries in filling possible gaps in their respective legal norms and regulations as relevant and appropriate to facilitate broad access to information, public participation and access to justice in environmental matters. The guidelines should not be perceived as recommendations to amend national legislation or practice in cases where existing legislation or practice already provides for broader access to information, more extensive public participation or wider access to justice in environmental matters.

The first seven guidelines⁹⁴ deal with access to information, and are as follows:

- i. Any natural or legal person should have affordable, effective and timely access to environmental information held by public authorities upon request (subject to guideline iii), without having to prove a legal or other interest.
- ii. Environmental information in the public domain should include, among other things, information about environmental quality, environmental impacts on health and factors that influence them, in addition to information about legislation and policy, and advice about how to obtain information.
- iii. States should clearly define in their law the specific grounds on which a request for environmental information can be refused. The grounds for refusal are to be interpreted narrowly, taking into account the public interest served by disclosure.

⁹⁴ Part I: Guideline 1 to Guideline 7.

- iv. States should ensure that their competent public authorities regularly collect and update relevant environmental information, including information on environmental performance and compliance by operators of activities potentially affecting the environment. To that end, States should establish relevant systems to ensure an adequate flow of information about proposed and existing activities that may significantly affect the environment.
- v. States should periodically prepare and disseminate at reasonable intervals up-to-date information on the state of the environment, including information on its quality and on pressures on the environment.
- vi. In the event of an imminent threat of harm to human health or the environment, States should ensure that all information that would enable the public to take measures to prevent such harm is disseminated immediately.
- vii. States should provide means for and encourage effective capacity-building, both among public authorities and the public, to facilitate effective access to environmental information.

The next seven Guidelines⁹⁵ then deal with public participation, and provide that:

- i. States should ensure opportunities for early and effective public participation in decision-making related to the environment. To that end, members of the public concerned should be informed of their opportunities to participate at an early stage in the decision-making process.
- ii. States should, as far as possible, make efforts to seek proactively public participation in a transparent and consultative manner, including efforts to ensure that members of the public concerned are given an adequate opportunity to express their views.

⁹⁵ Part II: Guideline 8 to Guideline 14.

- iii. States should ensure that all information relevant for decision-making related to the environment is made available, in an objective, understandable, timely and effective manner, to the members of the public concerned.
- iv. States should ensure that due account is taken of the comments of the public in the decision-making process and that the decisions are made public.
- v. States should ensure that when a review process is carried out where previously unconsidered environmentally significant issues or circumstances have arisen, the public should be able to participate in any such review process to the extent that circumstances permit.
- vi. States should consider appropriate ways of ensuring, at an appropriate stage, public input into the preparation of legally binding rules that might have a significant effect on the environment and into the preparation of policies, plans and programmes relating to the environment.
- vii. States should provide means for capacity-building, including environmental education and awareness-raising, to promote public participation in decision making related to the environment.

2.4 The extent to which Zambian law on environmental management and conservation embraces the principles of public participation and access to environmental information.

In light of this background, this section of the work interrogates whether, and to what extent, the Zambian legal and institutional framework on environmental management and conservation generally, and control of water pollution caused by copper mining specifically, has embraced the principles of public participation and access to environmental information.

2.4.1 The Constitution of Zambia, 1991

A constitution is a set of rules that defines a nation and its government. It grants authority to the government and sets out how it will operate. Zambia, like most other nations, has a written constitution. The present Constitution of Zambia was adopted on 24th August, 1991. It is the schedule to the Constitution of Zambia Act, 1991⁹⁶ which is ‘an Act to provide for a new Constitution of the Republic of Zambia and to repeal the Constitution of Zambia Act, 1973, and the Constitution scheduled thereto, and to provide for matters connected with or incidental to the foregoing.’⁹⁷ The Act repealed the Constitution of Zambia Act, 1973, and the Constitution in the schedule thereto.⁹⁸

The preamble to the Constitution mentions several rights that the people of Zambia recognize and aspire to guarantee and protect by the means of the Constitution.⁹⁹ However, the right to public participation is not mentioned in the Preamble to the Constitution. This omission of the right to public participation is repeated in the Bill of Rights.¹⁰⁰ Zambia’s Constitution provides no explicit participatory rights, so participation opportunities in Zambia come from legislation, agency rules, and other authorities. The upshot of this is that the supreme law of Zambia¹⁰¹ does not recognize the right of public participation.

More specifically, the Constitution does not address itself at all or adequately to the issues of sustainable utilisation of natural resources, environmental management and conservation, and

⁹⁶ As amended by act No. 1 of 1996.

⁹⁷ Constitution of Zambia Act, 1991, Long title.

⁹⁸ *Ibid*, section 3.

⁹⁹ These include ‘the rights of all men to participate fully and without hindrance in the affairs of their own government and in shaping the destiny of their own mother land’, ‘the rights and duties of all men in the protection of life, liberty and property, freedom of conscience, expression and association’, ‘the right to work, to free choice of employment, to just and favourable conditions of work and to protection against unemployment’, ‘the right to equal access to social, economic and cultural services and facilities provided by the State or by public authorities’ and ‘the right to education’.

¹⁰⁰ See Part III (Articles 11 to 33) of the Constitution

¹⁰¹ See Article 1(3) of the Constitution of Zambia, 1991.

pollution. It leaves it entirely to Acts of Parliament to make provisions with regard to these important issues.

Constitutional environmental provisions have substantially increased the public's role in environmental governance. The right to a healthy environment has been interpreted consistently as including procedural environmental rights—access to information, participation in decision making, and access to justice. Citizens, in ever-increasing numbers, are using these rights. Other major factors contributing to the growing public role in environmental governance include the enhanced importance of civil society, advances in communications technology (particularly the Internet), and in many nations the transition from closed, authoritarian types of government to open, participatory democracy. In many nations recognizing the right to a healthy environment, administrative processes and courthouse doors are now open to citizens who lack a traditional economic or personal interest but seek to protect society's collective interest in a healthy environment.

2.4.2 The Draft Constitution of Zambia, 2012

The people of Zambia are currently going through a constitutional moment. The country initiated a review of its Constitution in 2011 with the appointment in November of that year of a Technical Committee on the Drafting of the Constitution. The 16-member Committee began its sittings in December 2011 and came up with the draft of the Constitution in April 2012. The process has now entered a series of District-level consultations to enrich the draft with the wishes and aspirations of the people.

It is imperative to note from the very outset that the Draft Constitution of Zambia, 2012 (the Draft) is merely a draft that will certainly undergo some changes before a final draft is finally presented for possible adoption. Nonetheless, there are a lot of lessons to be learnt from this draft, particularly considering the huge emphasis it lays on addressing issues concerning the

environmental and natural resources. The Draft is definitely an environmental pointer in that the people of Zambia, or, at least, the drafters, have recognised the deficiencies of the current Constitution of the country in addressing environmental matters and have made a deliberate step towards ensuring that in future these matters are part of the issues addressed by the supreme law of the land.

The Draft identifies the responsibilities of a citizen as, *inter alia*, to protect and conserve the environment and utilise natural resources in a sustainable manner¹⁰² and to maintain a clean and healthy environment.¹⁰³ This illustrates and emphasizes the importance the Draft seeks to lay on environmental conservation and sustainable utilization of natural resources. It is the first of many instances of the recognition of environmental issues in the Draft. It is also an important acknowledgement of the role citizens can play in environmental management and conservation, and a direct reference to public participation in environmental matters.

It further seeks to establish a devolved system of government comprising of the national and local levels of government, and the provincial administration.¹⁰⁴ Pursuant to Article 197(2)¹⁰⁵ of the Draft, the Schedule to the Draft provides that environmental management, nature conservation and pollution control are concurrent national and provincial functions. The Draft proceeds to provide that the devolved system of government shall be based on co-operative and integrated governance in a unitary and indivisible State where the provincial administration and local authority, *inter alia*, involves communities in decisions relating to the management and exploitation of natural resources in their areas and promotion of a safe and healthy living environment.¹⁰⁶ This recognition of the need for public participation in decision making with regard to environmental matters and issues of exploitation of natural

¹⁰² First Draft Constitution of Zambia, 2012, Article 22(c).

¹⁰³ Ibid, Article 22(d).

¹⁰⁴ See Article 197(1) and (2) of the Draft.

¹⁰⁵ The concurrent and exclusive functions of the national and local levels of government, and those of the provincial administration, shall be as specified by an Act of Parliament and as listed in the Schedule.

¹⁰⁶ See Article 197(4) (b)(ii) of the Draft.

resources is a welcome move. Indeed, it is the communities that are directly affected by the processes and the aftermath of the exploitation of natural resources such as copper, in the present context. It is only fair, therefore, that they actively participate in the decision making process with regard to these issues.

The aforementioned provisions of the Draft are an attempt at ensuring sustainable environmental management and conservation, and other related goals. They are a vast improvement on the present constitutional position on environmental matters. Perhaps most importantly, however, is the fact that Part XIX¹⁰⁷ of the Draft is reserved for provisions on Land, Property, Environment and Natural resources. Of the articles in this Chapter of the Draft, Articles 302 to 305 make provisions relating to the environment and natural resources.

Article 302 provides for the principles of environmental and natural resources management and development. These principles are, *inter alia*, that:

- (i) if an action or a policy is likely to cause harm to the public or to the environment, in the absence of scientific consensus that the action or policy is harmful, the burden of proof that it is not harmful shall fall on the person taking the action;¹⁰⁸
- (ii) the party responsible for polluting or degrading the environment is responsible for paying for the damage done to the environment;¹⁰⁹
- (iii) the origin, quality, methods of production, harvesting and processing of natural resources shall be regulated;¹¹⁰
- (iv) equitable access to environmental resources shall be promoted and the functional integrity of ecosystems shall be taken into account to ensure the sustainability of the ecosystems and to prevent adverse effects;¹¹¹

¹⁰⁷ Articles 293 to 305.

¹⁰⁸ Article 302(1)(b)

¹⁰⁹ Article 302(1)(c)

¹¹⁰ Article 302(1)(l)

(v) the people shall be involved and participate in the development of relevant policies, plans and programmes;¹¹²

Of specific importance, is that public participation is further recognized and entrenched as a principle of environmental and natural resources management and development.

The Draft further provides that a person has a duty to co-operate with State organs and State institutions and other persons to ensure ecologically sustainable development and use of natural resources;¹¹³ respect, protect and safeguard the environment;¹¹⁴ prevent or discontinue an act which is harmful to the environment;¹¹⁵ and maintain a clean, safe and healthy living environment.¹¹⁶ These are in addition to the responsibilities of a citizen provided for in Article 22 (c) and (d) as already discussed earlier, and a further recognition of the importance of public participation in environmental matters.

Article 304 of the Draft provides that the State shall, in the utilisation of natural resources and management of the environment, *inter alia*, implement mechanisms that minimize waste and encourage recycling;¹¹⁷ establish systems of EIA, environmental audit and environmental monitoring;¹¹⁸ encourage public participation;¹¹⁹ ensure that the environmental standards enforced in the Republic are of essential benefit to all citizens;¹²⁰ and apply international best practices.¹²¹

Generally, the Draft makes progressive provisions with regard to environmental management and conservation as a whole, and the sustainable utilisation of natural resources. Particularly,

¹¹¹ Article 302(1)(m)

¹¹² Article 302(1)(n)

¹¹³ Article 303(a)

¹¹⁴ Article 303(b)

¹¹⁵ Article 303(c)

¹¹⁶ Article 303(d)

¹¹⁷ Article 304(b)

¹¹⁸ Article 304(c)

¹¹⁹ Article 304(d)

¹²⁰ Article 304(f)

¹²¹ Article 304(g)

in the present context, the Draft underscores the need for public participation in environmental matters and the importance of access to environmental information.

2.4.3 The Environmental Management Act No. 12 Of 2011

Before the enactment of the Environmental Protection and Pollution Control Act, 1990 (EPPCA), Zambia had no integrated body of national environmental law. Instead, there were scores of desperate statutes each one concerned with one aspect or another of the environment, such as agriculture, antiquities and monuments, livestock, river basins, particular crops, fish, forests, lands, pests. Such sectoral legislation largely remains in place, however, save that the Environmental Management Act (EMA) now provides institutional mechanisms of co-ordination, as well as the broad principles to guide the conduct of environmental management in the country at large.

The EMA is an Act to continue the existence of the Environmental Council and re-name it as the Zambia Environmental Management Agency; provide for integrated environmental management and the protection and conservation of the environment and the sustainable management and use of natural resources; provide for the preparation of the State of the Environment Report, environmental management strategies and other plans for environmental management and sustainable development; provide for the conduct of strategic environmental assessments of proposed policies, plans and programmes likely to have an impact on environmental management; provide for the prevention and control of pollution and environmental degradation; provide for public participation in environmental decision-making and access to environmental information; establish the Environment Fund; provide for environmental audit and monitoring; facilitate the implementation of international

environmental agreements and conventions to which Zambia is a party; repeal and replace the EPPCA; and provide for matters connected with, or incidental to, the foregoing.¹²²

This Act was enacted in early 2011 and assented to on 12th April, 2011. It repealed and replaced the EPPCA. It does not deal specifically with water pollution but is concerned generally with environmental management and conservation. In the process of tackling this general subject, it makes provisions that are particularly relevant to the current study.

The EMA defines the environment as the natural or man-made surroundings at any place, comprising air, *water*, land, natural resources, animals, buildings and other constructions; and pollution as the presence in the environment of one or more contaminants or pollutants in such quantities and under such conditions as may cause discomfort to, or endanger, the health, safety and welfare of human beings, or which may cause injury or damage to plant or animal life or property, or which may interfere unreasonably with the normal enjoyment of life, the use of property or conduct of business.¹²³

The EMA recognizes and guarantees the right of every person living in Zambia to a clean, safe and healthy environment, subject to the Constitution.¹²⁴ The Act proceeds to provide that the right to a clean, safe and healthy environment shall include the right of access to the various elements of the environment for recreational, education, health, spiritual, cultural and economic purposes.¹²⁵ To the extent, therefore, that pollution of water caused by copper mining makes the water unclean, unsafe and unhealthy or limits access to the water for recreational, educational, health and/or economic purposes, such pollution is a violation of the right to a clean, safe and healthy environment

¹²² See the Long title of the Act

¹²³ Section 2

¹²⁴ Section 4(1)

¹²⁵ Section 4(2)

Several principles to be applied in achieving the objectives of the Act are outlined.¹²⁶ These key principles include:

- i. The environment is the common heritage of present and future generations;
- ii. adverse effects shall be prevented and minimized through long-term integrated planning and the co-ordination, integration and co-operation of efforts, which consider the entire environment as a whole entity;
- iii. the precautionary principle;
- iv. the polluter pays principle;
- v. equitable access to environmental resources shall be promoted and the functional integrity of ecosystems shall be taken into account to ensure the sustainability of the ecosystems and to prevent adverse effects;
- vi. the people shall be involved in the development of policies, plans and programmes for environmental management;
- vii. the generation of waste should be minimised, wherever practicable, and waste should, in order of priority, be re-used, re-cycled, recovered and disposed of safely in a manner that avoids creating adverse effects;
- viii. non-renewable natural resources shall be used prudently, taking into account the needs for the present and future generations
- ix. renewable natural resources shall be used in a manner that is sustainable and does not prejudice their viability and integrity

¹²⁶ See Section 6 of the EMA

- x. community participation and involvement in natural resources management and the sharing of benefits arising from the use of the resources shall be promoted and facilitated.

It is quite evident that EMA does make provision for the involvement of citizenry in the management of natural resources. The Act also has provisions geared towards ensuring that the public is actively engaged in making policy decisions affecting their environment. For instance, the public has the right to be informed of the intention of public authorities to make decisions affecting the environment and of available opportunities to participate in such decisions. The public also has the right to participate in decisions concerning the formulation of environmental policies, strategies, plans and programmes and to participate in the preparation of laws and regulations relating to the environment.¹²⁷

EMA further provides under Section 94(1) that the Minister is expected to structure public participation regulations which will provide guidelines on rules, procedures and mechanisms on how public participation can ultimately be enhanced. These regulations are still to be put in place.

2.5 Public Participation in the EIA Process

An important tool of public participation is EIA laws/regulations. Pring and Noé¹²⁸ mention some of the first provisions on public participation such as the EIA laws, as a tool for public participation. These laws, that have their origin in the United States, are there to guarantee that the impact on the environment is clear before the decisions are made. In this way, the EIA laws combine development planning with environmental policy and also public participation. There is not a direct provision on public participation but because the impact on

¹²⁷ Section 91(2)

¹²⁸ Pring, G, Noe, Susan Y., 2002 *International law of public participation* in Zillman et al., Human Rights in natural resource development, (2002), Oxford University Press.

the environment needs to be known, consultation and access to information is obviously essential. Since such an interactive process is necessary to guarantee the success of EIA laws, public participation plays a role in almost all “EIA schemes” and that is why these EIA laws are worth mentioning. It was not until 1985, with the European Community (EC) Directive on EIA, that international law really started to require EIAs, since directives are a form of “hard” law.

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 of the project will have on the environment in its totality i.e. 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. This process is applied prior to major decisions and commitments being made to the project. Besides a broad definition of environment is adopted, whenever appropriate social, cultural and health effects are considered as an integral part of EIA process. Particular attention is given in EIA practice to preventing, mitigating and offsetting the significant adverse effects of proposed undertakings. EIA is probably the best known environmental mainstreaming tool and is often the only one backed by its own legislation and statutory institutions dedicated to coordinating application.

The EIA process is a vehicle that has been used to partially realize the rights to information and participation. The Zambian Constitution aims to create an environment where people should have the “...freedom to receive ideas and information without interference, freedom to impart and communicate ideas and information without interference,..”. Access to information and participation is covered under the National Environmental Action Plan of 1994 and the EIA Regulations (No 28 of 1997), which states in section III, No. 8 (2): “...the developer shall organize a public consultation process, involving Government agencies, local

authorities, nongovernmental and community based organizations and interested and affected parties...” Whereas this is just one aspect of public participation, it is an important step towards achieving the proper implementation of public participation as a principle. There is of course a need to employ other aspects of public participation in order to fully realize its benefits. The right to information and participation are both rights in themselves and also essential to the exercise of other rights, such as the right to life, the right to the highest attainable standard to health and the right to adequate food, among others. Lack of information denies people the opportunity to develop their potential to the fullest and realize the full range of their human rights.

The EIA process should consider the right to information and participation highly relevant in the context of the enjoyment of basic human rights. Public access to information when requested and the obligation of public authorities to disclose and inform, irrespective of requests, are imperative for the prevention of environmental human rights problems and the protection of the environment¹²⁹.

International human rights bodies have placed both human rights and the environment on the agenda but have not moved much further than affirming the inextricable relationship between human rights and the environment; and recognizing the need to identify new trends in international law relating to the human rights dimensions of environmental protection. The procedural rights aspects have been clarified through jurisprudence. The right of access to environmental information and public participation are often implemented as procedural rights. Some international, regional and national cases show that environmental rights are being litigated through the recognition of standing, access to information and due to process of law. Indeed injunction type has been used in quite a few countries and in some obligation

¹²⁹ United Nations, Human Rights Council ; promotion, protection of all human rights, civil, social, political

of public authorities has been extended even further to EIAs of potentially hazardous activities.

While progress has been made in increasing access to justice in environmental matters locally, there is still a lot that remains to be done. Article 19 of the United Nations Declaration of Human Rights stipulates that “everyone shall have the right to hold opinions without interference”. This means that everyone shall have the right to freedom which shall include freedom to seek, receive and impart information and ideas of all kinds, regardless of frontiers, either orally, in writing or in print, in the form of art, or through any other media of his choice. Access to information is alongside environmental rights. International human rights law is relatively underdeveloped in this area but regional developments, notably the 1990 EC Directive on the freedom of access to information¹³⁰, may foster international standard setting in this area.

The EMA makes mandatory provisions for EIAs before any project that may have an effect on the environment is undertaken.¹³¹ The EMA goes on to further provide that the Minister will provide regulations that will provide for the effective use of EIAs.¹³²

¹³⁰ Ksentini F. Z ., 1993 *Human Rights and the Environment*, Second progress report by special rapporteur, UN.doc

¹³¹ Section 29

¹³² (1) The Minister may, by statutory instrument, on the advice of the Agency, make regulations for the effective administration of strategic environmental assessments and environmental impact assessments.(2) Without limiting the generality of subsection (1), regulations made under that subsection may provide for—

- (a) the categories of projects that are considered to have an effect on the environment for the purposes of subsection(1) of section twenty-nine and are required to conduct environmental impact assessments;
- (b) the procedural requirements for public hearings, strategic environmental assessments, environmental impact assessments and comprehensive mitigation plans;
- (c) the information to be included in a strategic environmental assessment report, an environmental impact assessment and a comprehensive mitigation plan;
- (d) the fees for the cost of dealing with any application for the approval of projects;
- (e) the categories of facilities and activities in respect of which the Agency may require environmental audits to Regulations relating to environmental assessments be conducted and may require the submission of reports on the audits to the Agency;
- (f) the contents of an environmental audit report; and
- (g) the penalties for non-compliance with the regulations made under this section.

The purpose of EIA is to provide information for decision-making on the environmental consequences of proposed actions and promote environmentally sound and sustainable development through the identification of appropriate enhancement and mitigation measures.

In modern environmental discourse, the promotion of environmental protection and sustainable development is fundamentally enhanced through the adoption of strategies and practices that secure a citizen's rights to access information, public participation and justice. The importance of these rights has already been discussed at length, and will be highlighted further. However, in a survey carried out by the *Zambian Human Rights Commission (HRC)* in various mining communities, the local people, where consultations took place, were of the opinion that the EIA process is not inclusive of the lowest levels of the community- it uses formalized structures such as councils and chiefs. Further, the documents on EIA are not easily accessible and not easily understood by the locals since there are no translations; and there is inadequate political will which in turn negates potential gains.¹³³

Apart from the fact that the *Environmental Council of Zambia (now Zambia Environmental Management Agency)* has inadequate capacity for wider stakeholder consultation, monitoring and inspection of projects is rarely carried out. From the perspective of the *Civil Society Organisations (CSOs)*, they were concerned that key processes, such as the establishment of targets for universal access to information, reviews of the EIA response and the monitoring of progress in achieving universal access at country level, often still excluded meaningful participation by all key civil society actors, to the detriment of human rights principles of participation.¹³⁴

It is pertinent to mention that presently the EIA regulations existing are those that were subsisting under the repealed *EPPCA*. The Minister has not yet drawn up any new EIA

¹³³ Human Rights Commission 2010, Annual State of Human Rights Report at page 14

¹³⁴ Ibid at page 53

regulations to bring them in line with EMA. This clearly reflects the lack of importance afforded to the EIA process. Public participation in the EIA process has consequently not been effectively implemented. There is need for the development of proper regulations that are in line with the aspirations of the EMA which seeks to enhance public Participation in the EIA processes.

Both from a general public information and human rights perspective, such processes must include not only a few civil society actors selected by the authorities, but meaningful representation of positive networks including but not limited to women's groups, human rights organizations, legal support groups, children's groups, community groups, interested and affected parties as well as employers' and workers' groups. In this regard, sufficient support for meaningful participation of these groups in these processes should be an integral part of achieving universal access to information vital for informed decision making.¹³⁵

¹³⁵ Ibid at page 58

An Evaluation Of The Zambian EIA Process Using International Guiding Principles Of

EIA Good Practice¹³⁶

PRINCIPLES	ASSESSMENT OF EIAs IN ZAMBIA (COMMENTS)
Purposive: EIA should meet its aims of informing decision making and ensuring an appropriate level of environmental protection and human health	The EIA process in Zambia has met the target in that the information disseminated is intended for policy makers. The documents are circulated to relevant government institutions and through the Project Assessment Committee, consultation is addressed. However, local decision makers are not adequately covered in the local scenario. While the Environmental Impact Statements and Environmental Project Briefs (EIS/EPB) have very good proposals on mitigation measures, these are not strictly enforced and are often not achievable. Further, human health protection is not mainstreamed in the current process and therefore calls for the active follow up by the Ministry of Health.
Focused: EIA should concentrate on significant environmental effects, taking into account the issues that matter	This objective has been met as the developer is obligated to have a scoping meeting at which significant issues are agreed upon in consultation with relevant stakeholders. However, there is need for verification by the ECZ (now ZEMA) to ensure that those issues are indeed a true reflection of what the negative outcomes of the project would be.
Adaptive: EIA should be adjusted to the realities, issues and circumstances of the proposals under review	While it is widely understood that the Terms of Reference (ToRs) developed at the beginning of any EIA process are not cast in concrete and therefore can be amended, the procedure attached to this is often cumbersome and therefore negates this provision. However, the public can at any time raise concern and if the ECZ (now ZEMA) deems the issues to be significant, they can direct the developer to include these in their ToRs and this has both cost and time implications in terms of the issuing of a decision letter.
Participative: A should provide appropriate opportunities to inform and involve the interested and affected publics, and their inputs and concerns should be addressed explicitly	<p>The current EIA process has attempted to provide opportunities for informing the public such as the holding of Public Hearing Meetings in the locality in which the project will be implemented, the use of community radio stations and instructions to the developers to summarize the projects in as far as practicable the language commonly used in that locality.</p> <p>However, there is still room for improvement in the information flow particularly at local level. There is inadequate sensitization to the communities prior to the period of the public hearing meetings. EIS are often bulky and accessibility to them is very limited to the</p>

¹³⁶ Adapted from Sadler, 1996; International Association for Impact Assessment and Institute of Environmental Management and Assessment, 1999. See 2010 State of Human Rights Report in Zambia: Human Rights and the Environment page 56

	<p>common man.</p> <p>This calls for more involvement of other stakeholders at local level such as area councilors, Members of Parliament, government ministries, traditional leaders, Non Governmental Organisations, Governmental organisations to translate this information into easily understood language for the local populace. Often, the Chief is taken to represent all the subjects' views even when he didn't have meeting with his people in the chiefdom to consult them on the views of the projects. Therefore, there should be need to consult extensively the local people who are more affected on the ground if the EIA process is to be meaningful and ensure that the inputs and concerns of all IAPs are taken on board at the decision making stage.</p>
<p>Transparent: EIA should be a clear, easily understood and open process, with early notification procedure, access to documentation, and a public record of decisions taken and reasons for them.</p>	<p>The ECZ (now ZEMA) has attempted to promote public education in the EIA process to various sectors of society to ensure transparency. However, at the local level, the process is a preserve of the few privileged traditional leaders who may have attended the training workshops or read the brochures. When it comes to particular projects, the locals are often left out of the planning cycle and therefore their views may not be taken early on in the process before the ToRs are developed.</p> <p>In terms of early notification, whilst the ECZ (now ZEMA) announces on public media both electronic and print of its intentions to hold public hearings, notification in the affected area is usually done a few days before the actual meeting. This reduces the time the public would have taken to consult internally and organize themselves to properly articulate their interests and concerns.</p> <p>Lastly, with regards to access to documentation and public records of decisions and reasons for taking them, this is perhaps the weakest area in the current EIA process in Zambia. There is hardly access to the documents before the information posted on the internet or press statements are released. This begs an answer to the question of, how many Zambians have access to the internet or can afford a copy of the daily newspapers? Even though the EIS' are placed at the ECZ offices and local authorities, again, how many local people would have the time to sit and go through these often very bulky and technical reports to ensure their understanding and therefore ensure that participation is meaningful?</p>
<p>Rigorous: EIA should apply the "best practicable" methodologies to address the impacts and issues being investigated</p>	<p>To the contrary, the methodology used is not best practice of the impact because these investors are motivated by the profits generated from the project. They do not care to use the best practice since some of the project owners, when they look at the cost of handling the impacts of the project seems to be more expensive than paying a fine for breaching the rules and regulations. They prefer paying a penalty than improving the methodology.</p>

Practical: EIA should identify measures for impact mitigation that work and can be implemented	Some of the impact mitigation measures are not sustainable like the use of water to lessen the effects of pollution of dust in the mine.
Efficiency	There is no efficiency in our projects because mining companies are still using old techniques of doing business which is not efficient. Zambia is still very behind in terms of technology advancement as such we cannot talk about efficiency if we are still struggling to improve our technology or unable to ensure and enforce the use of clean technology by mining companies.
Credible : EIA should be carried out with professionalism, rigor, fairness, objectivity, impartiality and balance.	The ECZ (now ZEMA) must be commended for the high professionalism demonstrated in their conduct of the EIAs in Zambia. It also clear that there have been attempts to also conduct them with rigor, fairness, objectivity, impartiality and balance. It is on record that some projects with very deleterious effects on the environment have been rejected by the Council though in some cases, these decisions were overruled by the presiding Ministers of Environment.

2.6 Lessons from South Africa and Fiji on public participation and access to environmental information.

The South African legal framework also serves to show what an important role public participation legally is required to play as a result of a Bill of Rights that, inter alia, provides for an enforceable substantive environmental right.

Article 24 of the Constitution contains the environmental right of South Africa's citizens and states that: Everyone has the right to an environment that is not harmful to their health or well-being; and to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that prevent pollution and ecological degradation; promote conservation; and secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

Article 24(b) requires positive action on the part of government by means of reasonable legislative and other measures, which arguably implies a need for public participation in

environmental decision-making at all levels. Other constitutional rights that support the latter idea include the right to access to information (Article 32) and the right to just administrative action (Article 33). The Constitution furthermore provides in Article 152(1)(e) that one of the objectives of local government is to encourage the involvement of communities and community organisations in the matters of local government. Articles 195(e) and (g) state that as one of the basic values and principles governing public administration the public must be encouraged to participate in policy-making and that transparency must be fostered by providing the public with timely, accessible and accurate information.

The constitutional framework is further supported by, inter alia, the White Paper on Integrated Pollution and Waste Management of South Africa of 2000 (White Paper on IPWM), the Draft National Policy Framework for Public Participation of 2005 (Draft National Policy Framework), the National Environmental Management Act 107 of 1998 (the NEMA), the National Environmental Management: Waste Management Bill of 2007 as well as the Promotion of Administrative Justice Act 3 of 2000 (PAJA) and the Promotion of Access to Information Act 2 of 2000 (PAIA).

In South Africa, particular emphasis is placed on the role of local authorities or municipalities in facilitating public participation in decision-making generally. As a result, the Local Government: Municipal Systems Act 32 of 2000 (the Systems Act) and the Local Government: Municipal Structures Act 117 of 1998 (the Structures Act) also serve to strengthen the constitutional framework.

The White Paper on Integrated Pollution and Waste Management for South Africa: A Policy on Pollution Prevention, Waste Minimisation, Impact Management and Remediation, 2000 provides that public participation will be expanded using consensus-based approaches and

negotiated rule-making.¹³⁷ Responding to public needs and encouraging public participation in environmental governance by providing mutual exchange of views and concerns between government and people are listed in the White Paper as key components of good governance and as a distinctive part of the obligation of government to effect the Article 24 environmental right in the Constitution.

In the Draft National Policy Framework, the South African government attempted to avoid mere establishment of a vague and generally applicable legal call for public participation. The Draft National Policy Framework outlines a number of public participation principles with accompanying examples of instruments and methods intended for implementation by local government, as tabulated below:

¹³⁷ Du Plessis, A. (2008) *Public participation, Good Environmental Governance and fulfilment of Environmental right* ' PER 12

Principles	Proposed Examples of Instruments and methods
Inclusivity	Identification and recognition of existing social networks, structures, organisations, social clubs and institutions and employment of these as vehicles for communication.
Diversity	Ensure that different interest groups including women, the disabled and youth groups are part of governance structures.
Building Community Capacity	Solicit funding from external sources to train ward committees on their role in development. Embarking on consumer education on all aspects of local governance including the functions and responsibilities of municipality and municipal structures.
Accountability	Ensuring report-backs to community forums or ward committees at least on a quarterly basis.
Accessibility	Conducting public meetings in local language.
Intergration	Integrating ward planning with the IDP process. Including user committees in mainstream services such as school governing bodies.
Trust, Commitment and Respect	Ensuring that the purpose of the process is explained adequately as well as how it will develop.

The NEMA is South Africa's principal environmental management framework law that, inter alia, contains a number of environmental principles. Section 2(4)(f) provides that the participation of all interested and affected parties in environmental governance must be promoted and that all people must have the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation and that participation by vulnerable and disadvantaged persons must be ensured. Section 2(4) (g) supports the latter provision by stating that decisions must take into account the interests, needs and values of all interested and affected parties, and this includes recognising all forms of knowledge, including traditional and ordinary knowledge.

As evidenced in the above, the South African Constitution¹³⁸ does provide the policy basis and guidance for public participation programmes. The duty to facilitate public involvement has been described as being central to their constitutional democracy and further that, in South Africa active and on-going public involvement is a requirement of constitutional government in a legal sense, thus, where the legislature makes a decision, and such decision does not correctly reflect what was deduced during the public participation process, the legitimacy of legislation which flows from such a decision will be tainted.¹³⁹

Positively viewed, the South African law framework serves to show how an environmental right and the implied right of all to participate in environmental decision-making may be strengthened by subsequent legal developments. In South Africa, particular emphasis is placed on the role of local government in furthering public participation.

¹³⁸ The Constitution of the Republic of South Africa, Act 108, 1996

¹³⁹Nyati, L ' Public Participation: What has the Constitutional Court given the public?' University of the Western Cape. <http://www.ajol.info/index.php/1dd/article/viewFile/52896/41497> (accessed on 22nd November 2012)

In addition to the fact that the notion of public participation or stakeholder engagement is firmly entrenched in South Africa's laws, starting with the country's Constitution, along with their international counterparts, South African mining houses are actively participating in international efforts aimed at sustainable development, and are subscribing to the guidelines and principles that flow from these processes. Many of these guidelines and principles deal with the role of public participation, stakeholder engagement and partnerships with stakeholders in achieving sustainable development. The recommendations of the Mining, Minerals and Sustainable Development (MMSD) Southern Africa process place particular emphasis on the important role of stakeholders.

In order to make a practicality of public participation, South Africa recognized that there was a need for established practical guidelines and procedures to guide these efforts. It developed public participation guidelines through a consultative process, in which representatives of the mining industry, Community-based Organisations, Non-Governmental Organisations and Labour organisations participated.

These Guidelines aim to provide clarity and guidance on how to achieve the results and benefits of public participation. The public participation principles and processes outlined here are equally applicable to the different phases of exploration, environmental assessments for proposed new mining ventures, expansions during operation, and closure. Equally, the principles and processes could apply beyond environmental assessments to any decision-making process that will affect economic growth, social equity and ecological integrity during a mining company's normal operations provide guidance to stakeholders in the mining industry on how to extract the greatest benefit from public participation. In particular, the document provides guidance on the scale and extent of public participation for different types of project, from short-duration, inexpensive processes to long, complex and costly processes.

Another leaf that Zambia could pick from South Africa is the importance it has placed on public participation in the EIA process. South Africa has taken the EIA process to another level by providing guidelines on how the process is to be effected. It is important to note that these Guidelines were developed in a consultative process in which representatives of the mining industry, Community-based Organisations, NGOs and Labour organisations participated. The Guidelines were enriched by the views of the people who participated. These detailed guidelines were drawn up by stakeholders in the mining community. This in itself speaks volumes for the embracing of ‘public participation’ in environmental issues.

The South African guidelines are an example of what can be referred to as best practice when it comes to the EIA process. The guidelines provide a detailed account of how an EIA should be conducted in order to enhance public participation and elicit public interest in the whole process. Emphasis is placed on the need to make available information in a language that can be understood by the stakeholder. This includes the fact that information must be easily accessible. It should be presented in a language and style that stakeholders can understand, with simple explanations of complex concepts; presented both in writing (letters, information sheets, discussion documents, newsletters, poster displays) and verbally (during meetings, workshops or small-group discussions), since some stakeholders are better at hearing than at reading, and vice versa; presented visually to those stakeholders who require capacity-building (e.g. simple line drawings, photographs or other graphics); easily obtainable; discussion documents should be mailed or e-mailed to individuals and available at stakeholders’ representative organisations, on the web and in public places such as libraries or community centres.¹⁴⁰

¹⁴⁰ Chamber of Mines of South, 2002 *Public Participation Guidelines for Stakeholders in the Mining Industry*. Coordinated by the Consultative Forum on Mining and the Environment. South Africa, Marshalltown. Available at www.bullion.org.za (accessed on 21st November 2012).

In Fiji, public participation in decision making regarding mining activities is encouraged and enforced by the government. From early in the exploration phase the project sponsor and Government, through the Ministry of Fijian Affairs, collaborate on a public information and education program about the anticipated nature and impact of the project. There is a recognition in Fiji that a regular information flow needs to be established fairly early in the project cycle to avoid misconceptions and unwarranted rumours about potential mine development. Once the project has come into operation, mine management is urged to consider establishing resident liaison committees to facilitate information exchange and to provide residents with a forum for airing their views.

The rights of landowners and immediate stakeholders as part of the greater public are enshrined in Fiji's Mining Act and Regulations. The Housing, Social & Regional Impacts Policies further clarifies the importance of landowners/public consultation and participation in decision-making related to mining projects.

Government's main aim for the mineral sector should be to ensure that developments proceed in a sustainable manner. Sustainable mineral sector projects are those that effectively incorporate community participation during the corporate decision-making process, that ensure an equitable distribution of the benefits arising from mine developments, and that, having carefully assessed the socio-environmental impacts, minimise these impacts. Fiji has been successful in this regard through sustained and continuous public participation in decision making regarding mining affairs.

In addition to the fact that environmental management requires an EIA and monitoring of all phases of mining operations; exploration, project development, mine operation and mine closure, developers are also required to post a refundable bankers guarantee, as surety for best practice. The amount is determined according to the element of risk associated with the

project. The full bond or partial amount may be used to remedy unacceptable environmental impacts of the mining project, or may be used as a penalty for a late or non-remediation of remediable impacts identified during the EIA process.¹⁴¹

2.7 Conclusion

This chapter has interrogated the extent to which the principles of public participation in environmental matters and public access to environmental information have been recognized and implemented in Zambia. In the process, some best practices have been highlighted, particularly South Africa and Fiji.

Whereas Zambia has endeavoured to recognize these principles, particularly the principle of public participation, at least in legislation, a lot still needs to be done to actually and practically realize the benefits of these important principles on the ground.

Perhaps, the point to begin from is for the Minister in charge of environmental matters to develop the regulations on public participation as envisaged by the EMA. In doing this, the Minister should ensure that the very process of developing the regulations is consultative enough and brings on board all stakeholders, and particularly the local communities affected by mining activities and pollution arising therefrom. Guidelines therefore, become extremely essential in mapping a process for regulations. The process of developing these guidelines and ultimately regulations must in itself be a process that incorporates the principle of public participation and access to information.

The next chapter interrogates whether and to what extent Zambia has recognized and implemented another important principle in environmental matters: the principle of access to justice.

¹⁴¹ The Environment Management Act , 2005

CHAPTER THREE

ACCESS TO JUSTICE FOR THOSE AFFECTED BY MINING ACTIVITIES IN ZAMBIA

3.0 Introduction

As a follow up to the discussion in the previous chapter of the principles of public participation and access to information in the context of Zambia's law and practice on environmental matters, this chapter discusses the extent, if at all, to which yet another important principle in environmental matters has been recognized and implemented in Zambia. This is the principle of access to justice.

This chapter will expound on the concept of access to justice and identify the international law and Guidelines on access to justice in environmental matters. The chapter will then interrogate the extent to which Zambian law and practice on environmental matters has embraced the principles and complied with international law and Guidelines, while also discussing some best practices that Zambia can learn from.

3.1 The concept of access to justice

Access to justice means access to a fair, respectful and efficient legal process, either through judicial, administrative or other public processes, resulting in a just and adequate outcome.¹⁴²

The Van Vollenhoven Institute uses a broad definition of access to justice, which takes the perspective of the justice seeker as its point of departure and looks at the process this justice seeker has to go through to achieve appropriate redress. The various elements in the definition leave room to see access to justice as a process and not merely as a situation or a goal. Access to justice exists if people, notably the poor and vulnerable, suffering from injustices have the ability to make their grievances be listened to and to obtain proper treatment of their grievances by state or non-state institutions leading to redress of those

¹⁴² The Global Alliance Against Traffic in Women (GAATW), *Access to Justice* Available at www.gaatw.org/index.php?option=com_content&view=article&id=446:access-to-justice&catid=157:what-we-do&Itemid=12 (accessed on 22nd November, 2012).

injustices on the basis of rules or principles of state law, religious law or customary law in accordance with the rule of law.¹⁴³

In the present context, access to justice should be understood as both the opportunity and the ability to have environmental concerns, issues, grievances, disputes and complaints addressed through fair, respectful and efficient legal processes which result in just and adequate outcomes. Mere opportunity to institute proceedings in some judicial body as a result of some legislative statement granting that right is not sufficient access to justice if it does not, for instance, come together with the ability to institute such proceedings or a guarantee that the dispute will be heard and decided expeditiously and fairly.

An issue of concern with regard to access to justice in environmental matters has in several jurisdictions been the issue of *locus standi* in environmental matters. In several jurisdictions, the law for a long time provided that only the government through the Attorney General had jurisdiction to take up public interest litigation on environmental matters and that members of the public could only institute relevant legal proceedings if they could show that they had personally suffered harm or injury as a result of the matter complained of. The result was that public interest litigation on environmental matters was extremely limited and several issues of environmental concern remained unaddressed. Of course, where the act or issue complained about was a government act or project, it was unimaginable that the Attorney General would sue the government!

In Kenya, for instance, the 1989 case of *Maathai v Kenya Times Media Trust Ltd*¹⁴⁴ illustrates how the issue of *locus standi* in environmental matters was used to deny or limit access to justice in environmental matters. In this specific case, the plaintiff had moved to

¹⁴³ University of Leiden, Van Vollenhoven Institute, *Access to Justice: The Concept*, Available at www.law.leiden.edu/organisation/metajuridica/wi/research/access-to-justice/access-to-justice/the-concept.html (accessed on 22nd November, 2012)

¹⁴⁴ **1 KLR (E&L) 164**

court in an attempt to stop the construction of a 64-storey building by the defendant on part of Nairobi's nature park, Uhuru Park. It was the plaintiff's contention that the building should not take place due to the adverse effects it would have on the environment. The defendant raised a preliminary objection that the plaintiff did not have *locus standi* to institute the suit. Dugdale, J (as he then was) held, *inter alia*, that:

- (i) The plaintiff disclosed no cause of action against the defendant.
- (ii) Only the Attorney General could sue on behalf of the public.
- (iii) The plaintiff's strong views that it would have been preferable if the building never took place in the interest of many people who had not been directly consulted were personal and immaterial.
- (iv) The plaintiff had no right of action against the defendant and therefore she had no *locus standi*.

Progress has since been made in various jurisdictions, with the adoption, domestication and implementation of various international law instruments and Guidelines on environmental matters. Further, various jurisdictions have undergone this change as a result of constant lobbying, agitation and activism by environmental stakeholders for greater access to justice.

3.2 International legal instruments and Guidelines on access to justice

3.2.1 Rio Declaration on Environment and Development

The 1992 Rio Declaration on Environment and Development builds upon the basic ideas concerning the attitudes of individuals and nations towards the environment and development, first identified at the United Nations Conference on the Human Environment, 1972 by defining the rights of the people to be involved in the development of their

economies, and the responsibilities of human beings to safeguard the common environment, 1972.

The Rio Declaration has been discussed in greater detail in the previous chapter. Of importance here is to highlight that the right of access to justice in environmental matters is one of the 27 principles endorsed by the nations of the world and is embodied, alongside the principles of access to information and public participation, in the provisions of Principle 10 of the Rio Declaration which provides that:

Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. *Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.*

The access to justice pillar of Principle 10 of the Rio Declaration is arguably one of the most difficult areas in which to see improvement. However, increasingly, countries have created or enhanced environmental courts and tribunals with specialized functions.¹⁴⁵ The belief that these institutions enhance access to justice and provide more effective means of resolving

¹⁴⁵ Pring, G. and Pring, C., *Greening Justice: Creating and Improving Environmental Courts and Tribunals, The Access Initiative*, 2010. Available at http://www.accessinitiative.org/sites/default/files/Greening%20Justice%20Final_31399_WRL.pdf (accessed on 20th November 2012)

¹⁴⁵ The Access Initiative (TAI), 'Moving From Principles to Rights: Rio 2012 and Access to Information, Public Participation, and Access to Justice for Everyone'

¹⁴⁵ See the Preamble to the Environment and Land Court Act No. 19 of 2011.

¹⁴⁵ Bakshi, Pradeep, Yadav, and Madhur, *New Judicial Roles and Green Courts in India, in Ninth International Conference on Environmental Compliance and Enforcement* 641, available at http://inece.org/conference/9/proceedings/66_BakshiYadav. (accessed on 15th May 2013)

environmental disputes has been a primary reason for these interventions. In 2010, there were over 300 environmental courts and tribunals in 41 countries.¹⁴⁶ Recently, Kenya established an Environmental and Land Court by enacting the Environment and Land Court Act which is an Act of Parliament to give effect to Article 162(2)(b) of the Constitution; with the overall objective of establishing a superior court to hear and determine disputes relating to the environment.¹⁴⁷ The judges of these courts are, as a pre-requisite qualification, expected to have knowledge and experience of matters related to land. India established a Green Tribunal and Malawi created an Environmental Tribunal.

In India, the National Green Tribunal Act of 2010 authorized the development of institutional capacity for domestic environmental governance, including the implementation of a national green tribunal that is staffed by judicial and expert members for issuing rulings on environmental controversies. The Tribunal, which became operational in summer of 2011, is expected to play a dominant role in leading the development of environmental compliance and enforcement mechanisms, but is likely to require significant capacity enhancements before it can make inroads in improving compliance with India's environmental laws¹⁴⁸

The Land and Environment Court in the state of New South Wales, Australia, is a standalone court that is part of the judicial branch of government. It has comprehensive authority to address issues that integrate environmental and land-planning concerns and is empowered to issue civil, administrative, and criminal rulings.¹⁴⁹ The court makes extensive use of internally selected independent experts who have scientific or technical credentials.¹⁵⁰

¹⁴⁸ Bakshi, Pradeep, Yadav, and Madhur, *New Judicial Roles and Green Courts in India*, in *Ninth International Conference on Environmental Compliance and Enforcement* 641, available at http://inece.org/conference/9/proceedings/66_BakshiYadav. (accessed on 15th May 2013)

¹⁴⁹ Land and Environment Court, *About Us* available at http://www.lawlink.nsw.gov.au/lawlink/lec/II_lec.nsf/pages/LEC_about us (accessed on 15th May 2013)

¹⁵⁰ Pring, G and Pring, C., 2009, *Greening Justice: Creating and Improving Environmental Courts and Tribunals*

In contrast, Brazil's state and federal environmental courts do not have authority to integrate land use planning issues into their decisions on criminal cases (although they have civil and administrative jurisdiction). However, Brazilian judges have significant leeway to fashion creative remedies in environmental cases and are recognized for being relatively insulated from political pressures. A unique fixture in environmental cases in Brazil is the office of public environmental prosecutors (Ministério Público), which is largely independent of the three branches of government and has substantial powers to autonomously and aggressively pursue environmental actions, work closely with NGOs, or respond to a claim filed by the public.

However, the world over, there remains a general concern with regard to many gaps in the road to improving access to justice. Issues of timeliness of redress (time taken to obtain a remedy), intimidation and costs (litigation, loser pays the winner's costs court fees and costs to hire advocates) should be highlighted.

This is coupled with the fact that, despite the advantages that environmental courts and tribunals offer over non-specialised civil and criminal courts, their availability only represents a first step towards preventing and providing effective redress for environmental harms. The means enforcement must be available in order to give effect to the decision of an environmental court or tribunal. This may prove difficult in practice where there is insufficient capacity on the part of the government agencies, in terms of training, experience, level of staffing, or political will to implement the actions necessary to accomplish this. In many countries, judges and prosecutors will require additional training and resources in order to consistently fashion decisions that can be enforced..¹⁵¹

v, 4 available at http://www.accessinitiative.org/sites/default/files/Greening%20Justice%20Final_31399_WRI.pdf
¹⁵¹ Markowitz, K and Gerardu, J.J.A., 2012, *The Importance of the Judiciary in Environmental Compliance and Enforcement*, 29 Pace Environmental Law Review 538

The engagement of senior judges, prosecutors, and attorney generals in international networks has proven to be one highly effective tool for enhancing their abilities to shape the ultimate outcome in environmental disputes.¹⁵²

3.2.2 United Nations Environmental Programme (UNEP) Guidelines for the Development of National Legislation on Access to Information, Public Participation and Access to Justice.

Sufficient background information with regard to the development and scope of application of these guidelines has been given in the previous chapter. Of importance at this stage is to highlight the various Guidelines that are relevant to the question of access to justice. There are 12 relevant Guidelines in this regard, which are contained in Part III of the Guidelines,¹⁵³ as follows:

- i. States should ensure that any natural or legal person who considers that his or her request for environmental information has been unreasonably refused, in part or in full, inadequately answered or ignored, or in any other way not handled in accordance with applicable law, has access to a review procedure before a court of law or other independent and impartial body to challenge such a decision, act or omission by the public authority in question.
- ii. States should ensure that the members of the public concerned have access to a court of law or other independent and impartial body to challenge the substantive and procedural legality of any decision, act or omission relating to public participation in decision-making in environmental matters.
- iii. States should ensure that the members of the public concerned have access to a court of law or other independent and impartial body or administrative procedures to

¹⁵¹ *Ibid.*

¹⁵³ Guideline 15 to guideline 25

challenge any decision, act or omission by public authorities or private actors that affects the environment or allegedly violates the substantive or procedural legal norms of the State related to the environment.

- iv. States should provide broad interpretation of standing in proceedings concerned with environmental matters with a view to achieving effective access to justice.
- v. States should provide effective procedures for timely review by courts of law or other independent and impartial bodies, or administrative procedures, of issues relating to the implementation and enforcement of laws and decisions pertaining to the environment. States should ensure that proceedings are fair, open, transparent and equitable.
- vi. States should ensure that the access of members of the public concerned to review procedures relating to the environment is not prohibitively expensive and should consider the establishment of appropriate assistance mechanisms to remove or reduce financial and other barriers to access to justice.
- vii. States should provide a framework for prompt, adequate and effective remedies in cases relating to the environment, such as interim and final injunctive relief. States should also consider the use of compensation and restitution and other appropriate measures.
- viii. States should ensure the timely and effective enforcement of decisions in environmental matters taken by courts of law, and by administrative and other relevant bodies.
- ix. States should provide adequate information to the public about the procedures operated by courts of law and other relevant bodies in relation to environmental issues.

- x. States should ensure that decisions relating to the environment taken by a court of law, or other independent and impartial or administrative body, are publicly available, as appropriate and in accordance with national law.
- xi. States should, on a regular basis, promote appropriate capacity-building programmes in environmental law for judicial officers, other legal professionals and other relevant stakeholders.
- xii. States should encourage the development and use of alternative dispute resolution mechanisms where these are appropriate.
- xiii. These Guidelines highlight the important considerations that ought to be taken in developing national legislation to ensure access to justice in environmental matters. The guidelines particularly stress the need for avenues for redress of environmental violations. Guideline iv is particularly relevant to the extent that it requires states to provide a broad interpretation of standing in proceedings concerned with environmental matters with a view to achieving effective access to justice. Principle vi is also significant as it addresses the costs of seeking redress in environmental matters and imposes an obligation on States to ensure that access of members of the public concerned to review procedures relating to the environment is not prohibitively expensive. It also addresses the need for the establishment of assistance mechanisms to remove or reduce financial and other barriers to access to justice.
- xiv. The Guidelines also recognize the importance of public information on environmental decisions, with Guideline x providing that States should ensure that judicial and administrative decisions relating to the environment are publicly available. This can be achieved through law reporting, for instance.

- xv. These Guidelines offer important tips on the considerations that ought to be made in developing national legislation on access to justice in environmental matters and should be implemented by any State that is serious about ensuring access to justice in environmental matters.

3.3 Zambian law and practice vis-à-vis access to justice.

Having highlighted some of the Guidelines for the development of national legislation on access to justice, this part of the work seeks to establish whether Zambia has developed legislation that sufficiently guarantees access to justice in environmental matters, and whether the practice in Zambia is such as to ensure that justice is done.

3.3.1 Governance Secretariat and the Access to Justice Programme

The Government of Zambia as part of its efforts to entrench good governance set up a Secretariat at Ministry of Justice on governance. The implementation of the governance chapter within the Fifth National Development Plan saw the birth of the Access to Justice Programme (AJP) whose main thrust is access to justice in the criminal arena and targets women and other vulnerable sectors of society.

The programme works closely with four identified institutions which are: The Zambia Police, Directorate of Public Prosecutions, Legal Aid and Zambia Prison Service. The programme seeks to increase communication, cooperation and coordination with the view of reducing and/or avoiding gaps in the implementation of the criminal justice system.

An analysis of the programme report ¹⁵⁴ shows that justice in environmental issues does not fall within the ambit of the programme. Whilst violations of the environmental laws in Zambia are criminalized, the current criminal justice system does not have a clear platform

¹⁵⁴ Ministry of Justice, Access to Justice Programme Annual Report, 2008

on which to embrace the principles of securing a future in which environmental justice is a reality.

3.3.2 The Constitution of Zambia and Environmental Justice

It is safe to mention that unlike in other constitutions such as the ones for Uganda and South Africa, the Zambian constitution does not guarantee the right to a clean environment. The Ugandan Constitution for example provides at Article 39 that “every Ugandan has the right to a clean and healthy environment”. In order to secure this kind of right the Ugandan Constitution further provides for the right to access to information in the following terms, “every citizen has a right of access to information in the possession of the State or any other organ or agency of the State except where the release of the information is likely to prejudice the security or sovereignty of the State or interfere with the right to the privacy of any other person”.

This right of access to information is vital for the enjoyment of access to environmental justice. The Zambian constitution on the other hand provides for the Directive Principles of State Policy (DPSP). The application of DPSP is contained in Article 110 (1) which provides thus:

The Directive Principles of State Policy set out in this Part shall guide the Executive, the Legislature and the Judiciary, as the case may be, in the-

- (a) development of national policies;
- (b) implementation of national policies;
- (c) making and enactment of laws; and
- (d) application of the Constitution and any other law.

The application of the DPSP may, however,, be observed only in so far as government resources are able to sustain their application or if the general welfare of the public so unavoidably demands, as may be determined by Cabinet [Article 110 (2)].

The DPSP are presented at Article 112. The principles that relate to environment are found in paragraphs;-

- (i) the State shall strive to provide a clean and healthy environment for all; and
- (ii) the State shall promote sustenance, development and public awareness of the need to manage the land, air and water resources in a balanced and suitable manner for the present and future generation.

It can be deduced from the language of paragraphs (h) and (i) that government would not be bound if there was a failure on its part to fulfill these “rights”. In fact, Article 111 provides that the DPSP are not justiciable. If the said right is only perceived as a directive principle that is not justiciable and shall not thereby, by themselves, despite being referred to as rights in certain instances, be legally enforceable in any court, tribunal or administrative institution or entity. It follows therefore that access to environmental justice may not be easily attained. What is also clear from the analysis of the current constitution is the absence therein of the other procedural rights important for access to environmental justice.

These are the right to access to information held by public bodies and the right of the public to participate in environmental decision making. It is important to underscore here that the current constitution of Zambia is in the process of being amended or replaced.

3.4 The Environmental Management Act (EMA)

Until the enactment of EMA, the EPPCA as stated earlier, was the principal law on environment in the country. The Act established the Environmental Council of Zambia (ECZ)

(Section 3), and prescribed the functions (section 6) and further prescribed functions for each thematic area (sections 23 36, 49, 58, 67, 72 and 76). With regard to access to environmental justice and the attendant rights of access to information and participation in decision making, the principal Act did not clearly present this area. The subsidiary legislation on EIA (SI No 28 of 1997) does to some extent provide for the right to access to information.¹⁵⁵ This Article provides that every person has a duty to cooperate with the state organs and State Institutions and other persons- (a) to ensure ecologically sustainable development and use of natural resources; (b) to respect. Protect and safeguard the environment; (c) to prevent or discontinue an act which is harmful to the environment; (d) to direct the appropriate authority to take measures to prevent or discontinue an act or omission which is harmful to the environment and; to maintain a clean, safe and healthy environment.

When it comes to appeal procedure, the Act seemed to suggest that appeals against decisions of the Council as opposed to decisions of the Inspectorate lie to the courts. Section 95 provided:

- (1) A person aggrieved with any decision or ruling made by an Inspectorate under this Act, may appeal to the Council within forty-five days after the date of receipt of the ruling or decision.
- (2) The Council within thirty days after the receiving an appeal, shall make and convey its decision to the appellant.

It would appear that the intention of the legislature, at the time was that where one was not happy with the decision of the Council that aggrieved person would appeal to the courts.

¹⁵⁵ This Article provides that every person has a duty to cooperate with the state organs and State Institutions and other persons- (a) to ensure ecologically sustainable development and use of natural resources; (b) to respect. Protect and safeguard the environment; (c) to prevent or discontinue an act which is harmful to the environment; (d) to direct the appropriate authority to take measures to prevent or discontinue an act or omission which is harmful to the environment and; to maintain a clean, safe and healthy environment.

The EMA on the other hand has come in with some innovations which are clearly absent from the EPPCA. The preamble or long title makes specific mention of access to information and participation of the public in decision making. Under section 3, the EMA is supreme on environmental matters but only subject to the constitution. Section 4(1) of EMA provides for a right to a clean and healthy environment. The right is enshrined subject to the constitution. Sub-section (3) of section 4 provides that a person may where the right in sub-section (1) is threatened or is likely to be threatened as a result of an act or omission of any person bring an action against the person whose act or omission is likely to cause harm to human health or the environment. The action by the affected person may seek to stop or discontinue the act or omission; it may also compel a public officer to take certain steps to prevent the contravention [(sub-section (4)]. Section 6 presents yet another innovation. This section introduces principles to govern environmental management in Zambia. The functions of the Agency as presented at section 9 are in similar pattern as the ones under the EPPCA. The Act at section 20 empowers the Minister to publish the State of the Environment. Section 91 of the EMA, also provides for the right to access to information and public participation. Section 91 (1) and (2) creates the right of the public to be informed and the right to participate in decisions that affect the environment.

The Agency is required to establish and maintain an Environmental Information Registry where different pieces of information will be deposited (section 90). Under section 108, the public may initiate the issuance of an order by the Director General. Prosecutions may also be initiated by the public (section 109). Where the Director General decides not to commence prosecution proceedings, the member of the public may proceed to do so (subsection 4 of section 109). In a case where a matter is brought to court by a member of the public, the court is prohibited from awarding costs (sub-section 6 of section 109). A civil matter for damages may be brought by any person where there is an act or omission in contravention of the Act

and that the person need not be the one directly affected [Section 110 (1)]. This brings to the fore the concept of standing. In this scenario locus is more liberal and not restricted. This concept is referred to as action popularis which means action to obtain a remedy by a person or a group in the name of the general public, without the necessity of representation authorization from the victims of the harm. Some states recognize this notion as an exception to standing limits.

EMA introduces a procedure that makes appeals against the Board of the Agency to lie to the Minister without a procedure of how the minister would determine the appeal (sections 115 and 116). It has a similar approach when it comes to appeals against the Agency or Secretariat. Under the EMA the appeals against the Secretariat would lie to the Board (sections 112-114).

Section 4(3) of the EMA makes provisions with regard to *locus standi* in environmental actions. The *locus standi* provided for is universal in the sense that any person can bring such actions, whether or not they are directly affected. The subsection provides that:

[any] person may, where the right [to a clean, safe and healthy environment] is threatened or is likely to be threatened as a result of an act or omission of any other person, bring an action against the person whose act or omission is likely to cause harm to human health or the environment.

This is a break from past practice in many jurisdictions such as Zambia itself and Kenya where the right to bring actions was based on actual harm or injury being occasioned to the person bringing the action. The new position is recognition that environmental matters are matters of general public interest and that therefore the general public should have a right to seek redress for environmental law violations.

An action brought under section 4(3) of the EMA may seek, inter alia, to:¹⁵⁶

- (i) prevent, stop or discontinue any activity or omission, which threatens, or is likely to cause harm to, human health or the environment;
- (ii) compel any public officer to take measures to prevent or discontinue any act or omission, which threatens, or is likely to cause harm to, human health or the environment;
- (iii) require that any on-going activity or omission be subjected to an environmental audit or monitoring;
- (iv) require the person whose activity or omission threatens, or is likely to cause harm to, human health or the environment, to take measures to protect human life or the environment;
- (v) compel the person responsible for any environmental degradation to restore the degraded environment, as far as practicable, to its condition immediately prior to the damage; and
- (vi) provide compensation to any victim for the harm or omission and the cost of beneficial uses lost as a result of an activity that caused harm to human health or the environment.

The nature and scope of the remedies that can be sought are alive to both the general harmful effects of pollution as well as the possible harm caused to individual victims.

In addition to the foregoing provisions, Part IX of the Act makes provisions regarding enforcement of the Act. The enforcement mechanisms provided for include environmental audits,¹⁵⁷ environmental monitoring,¹⁵⁸ prevention orders,¹⁵⁹

¹⁵⁶ See section 4(4) of the EMA

¹⁵⁷ Section 101.

protection orders,¹⁶⁰ environmental restoration orders,¹⁶¹ compliance orders,¹⁶² and cost orders.¹⁶³ In addition to the above orders being initiated by ZEMA, a member of the public may make a written request to the Director-General of ZEMA to issue the aforementioned orders.¹⁶⁴

A person may also sue for damages in respect of an act or omission that constitutes a contravention of this Act or that is likely to have an adverse effect, whether or not that person or any other person has suffered, or is likely to suffer, any loss or harm from the act or omission.¹⁶⁵ Further, a court that convicts a person of an offence under the EMA may, in addition to any other penalty imposed order the person to take and pay for measures to avoid, remedy or mitigate any adverse effects arising from, or likely to arise from, the offence. If the person fails to comply with such an order, the court may issue an order allowing the Director-General to take those measures, and requiring the person to pay the Director-General's costs of so doing.¹⁶⁶

Where a case is brought against a corporate or unincorporated body of persons, every director or manager of the body corporate or unincorporated body shall be liable, upon conviction, as

¹⁵⁸ Section 102.

¹⁵⁹ Section 103.

¹⁶⁰ Section 104. The protection order is an order served by Director-General - where he considers that it is necessary to conserve, protect and enhance the environment and natural resources in an area – on the owner, manager or person in control of the premises, vehicle, vessel, aircraft or equipment where the activity is occurring or will occur; or any person who caused or permitted the activity. A protection order may require the person on whom it is served to, inter alia, take any measures to avoid, remedy or mitigate any adverse effects and to stop the activity that is resulting or is likely to result in, an adverse effect; control the activity; assess the actual or anticipated extent of the adverse effect; remedy any adverse effects caused by the activity; or prevent a recurrence of the activity.

¹⁶³ Section 107.

¹⁶⁴ Section 108.

¹⁶⁵ Section 110(1).

¹⁶⁶ Section 111.

if the director or manager had personally committed the offence, unless the director or manager proves to the satisfaction of the court that the act constituting the offence was done without the knowledge, consent or connivance of the director or manager or that the director or manager took reasonable steps to prevent the commission of the offence.¹⁶⁷

The Act makes room for applications for review or appeal of decisions taken by the ZEMA to the ZEMA Board or the Minister responsible for environmental matters.¹⁶⁸

All these provisions are relevant with regard to the general issue of access to justice. There is a deliberate attempt to widen the scope of access to justice on environmental matters.

3.4.1 The Mines and Minerals Development Act (MAMDA)

The MAMDA is an act of Parliament to revise the law relating to the prospecting for, mining and processing of minerals; to repeal and replace the Mines and Minerals Act, 1995; and to provide for matters connected with or incidental to the foregoing. The Act was assented to on 27th March, 2008 and came into force on 1st April, 2008.

Of particular relevance to the present study is to establish the extent to which the MAMDA provides for and encourages access to justice.

With regard to *locus standi* to bring a claim and seek redress in respect of the breach or threatened breach of any provision relating to damage to the environment, biological diversity, human and animal health or to socio-economic conditions, the MAMDA provides that any person, group of persons or any private or state organization may bring such claims in any of the following instances:¹⁶⁹

¹⁶⁷ Section 126.

¹⁶⁸ Sections 112 to 116.

¹⁶⁹ Section 123(7)

- (i) in that person's or group of persons' interest;
- (ii) in the interest of or on behalf of a person who is, for practical reasons, unable to institute such proceedings;
- (iii) in the interest of, or on behalf of, a group or class of persons whose interests are affected;
- (iv) in the public interest; and
- (v) in the interest of protecting the environment or biological diversity.

The fact that public interest and the interest of protecting the environment or biological diversity are recognized as some of the grounds upon which claims may be brought implies universal *locus standi* on environmental matters and is a huge step towards achieving access to justice.

3.4.2 Factors affecting access to Justice in Zambia

As explained earlier, that the concept of justice under this study was incorporating the aspects of access to information and public participation, it is imperative to now consider what factors are present in a legal system such as Zambia's that would impede access to justice. According to the Access to Justice Programme Specialist,¹⁷⁰ the following factors have an impeding effect on access to justice.

- (i) Distance to the service providers: Many vulnerable members of the public reside in remote places which are far away from the service provision centers. Further, the presence of ZEMA is only in four places being Lusaka, Ndola, Livingstone and

¹⁷⁰ Chikalanga, D in Human Rights Commission 2010 State of Human Rights Report in Zambia: *Human Rights & the Environment*. Available at http://www.hrc.org.zm/media/state_of_human_rights_report_2010.pdf (accessed on 27th November 2012)

Chirundu. The individual will not make it in time and sometimes will not make it at all. The distribution of the service provision centers continues to be a big challenge. For people to access justice they certainly need information as well as participation in the process of making decisions.

- (ii) Competence: This refers to competence on the part of the officers at service provision centers. Many a time the officers at the service provision centers are not trained and as such are not competent to handle certain issues. For example police officers who have no idea what pollution is and how to go about investigating the same will in most cases fail to bring about justice.
- (iii) Logistics: This relates mainly, in the case of service provision centres, to issues of transport and equipment. If for instance, there is a pollution incident, there is obviously need for transport to get to the site as well as equipment to help determine the levels of pollution and to also determine whether the pollution is one for which prosecution can attach. Additionally, the service centres also require equipment for data generation and storage. If there are no computers, it will be difficult for the service provision centre to provide information, if what the member of the public requires is information. It was found that many of the service provision centres as assessed by the Access to Justice Programme were found to be lacking in the area of logistics. Many police stations do not have adequate transport to attend to complaints. In some centres, there are completely no computers and consequently data management becomes a serious challenge.
- (iv) Lack of confidence in the justice system: this refers to a situation where the public loses trust and confidence in the justice system. Where the public thinks it is not

possible to get justice from the courts or available administrative systems, then it becomes difficult for one to even approach the service provision centres.

- (v) Corruption: Where corruption exists, justice cannot be found. Other factors that can impede access to justice are the issues of costs and locus standi.¹⁷¹

3.4.3 Standing in Environmental issues

The concept has developed over a very long time with the justice system. *Locus standi* is defined basically as the right one has to bring an action before a court of competent jurisdiction. To do so a person generally must be affected by the matter and there must be a case or controversy that can be resolved by legal action. Environmental cases can push the bounds of standing rules because people often do not hold individual, immediate or exclusive interests in the thing harmed. Environmental concerns often have a collective or shared nature¹⁷².

It is important to note that the EMA has recognized this position. Section 109 of the EMA empowers a member of the public to request in writing the Director General to investigate an alleged contravention of the Act. Where the Director General decides not to investigate the said matter, the person who made the request may lay a charge and prosecute the matter and may seek assistance from any person in so doing [Subsection (4) of section 109]. This shows that members of the public have locus before the courts. In fact EMA in section 110 (1) provides as follows:

“A person may sue for damages in respect of an act or omission that constitutes a contravention of the Act or that is likely to have an adverse effect whether or not that

¹⁷¹ Ibid

¹⁷² Bulska R, 2010 ., *Principle 10 of the Rio Declaration,* Paper presented at the UNEP and University of Joensuu Training in International Environmental Law and Diplomacy.

person or any other person has suffered or likely to suffer any loss or harm from the act or omission”.

It will be further noted that EMA makes it clear that whether or not the person is affected or likely to be affected as a result of the action or omission that person will have standing and can bring action before court. This position is a significant departure from the traditional position on standing.

3.4.4 Costs as a Barrier to access to Environmental Justice

In the Zambian context, even the cost of instituting a suit in the sense of court fees can discourage members of the public or given communities from environmental litigation. In a case by the community of Kafue contending against the decision of the Minister of Environment on the Kafue Iron and Steel Plant, the litigants had to abandon the cause due to the requirement for a deposit. Generally, it is accepted that for one to come before court there are certain requirements to be met. Firstly, the commencement especially in civil matters requires that one pays some money to the Judiciary for the summons. The cost of the summons may, in many cases, not be managed by the communities. The costs of hiring lawyers and expert witnesses where they are required is also quite prohibitive.

3.5 The right of access to justice vis-à-vis public awareness and involvement.

It is one thing to legislate rights, entitlements and duties and completely another for the public to take them up and seek to enforce or perform them, as the case may be.

Whereas Zambia has to a large extent legislated the rights and duties of citizens in environmental matters with the overall aim of ensuring environmental management and conservation and specifically, pollution control, if the public awareness of these is low, the mere existence of law does not achieve much.

Despite the recognition of the right to a clean, safe and healthy environment in the EMA and the creation of various offences in the statutes governing environmental management and conservation, water management and mining and mineral processing activities, there is a shortage of judicial decisions on these matters for the reason that the public has not been active in instituting actions and seeking remedies for the violation of their rights to a clean and healthy environment. This is in spite of the continued violation of these rights particularly by holders of mining rights and mineral processing licences. This is, further, in spite of the right of access to justice that is recognized and entrenched in various pieces of legislation, with universal *locus standi* to commence environment actions.

Indeed, as a testament to the fact that the Zambian public is largely uninterested in or lacks motivation to litigate environmental rights issues, there has so far been one explicit case on the issue of water pollution caused by mining, being that of *James Nyasulu & 2000 Others v Konkola Copper Mines (KCM) Plc, Environmental Council of Zambia and Chingola Municipal Council*.¹⁷³ In this case, instituted in 2007 and decided in 2011, the High court ordered KCM to pay a total of ten billion Kwacha (K10 billion) as general and punitive damages to 2,000 Chingola residents who suffered consequences of the company's action of discharging effluent from its mining operations into River Kafue, the source of their water.

In as much as this case could be referred to as a triumph for environmental rights, judicial activism fell short. Despite the court establishing that the actions of the first defendant caused harm to 'fish, frogs, crocodiles, hippos, aquatic plants and... harm people who use the water for drinking purposes', the defendant was not punished for the other harm caused to the environment except the harm caused to the Plaintiffs. One would have expected the court to

¹⁷³ [2011] ZMHC 86; 2007/HP/1286

take this opportunity to address the wider environmental harm caused by pollution instead of focusing solely on the harm suffered by the plaintiffs.

It is also disheartening that ZEMA (then still the Environmental Council of Zambia) which was the second defendant in the case was exempted from liability by the Court on the grounds, *inter alia*, that the Agency operated under difficult circumstances since it is a Government Agency not insulated from political control. Whereas this may be true, it is hardly an excuse for the Agency to fail to discharge its statutory responsibilities and fail to be liable for such failure. If anything, the court ought to have used this opportunity to set the record straight and penalize the Agency for its failure at discharging its statutory duties, if only to deter or reduce the negative political influence and control in the agency's performance of its duties. Indeed, the Plaintiffs' counsel's arguments that the second defendant (the Environmental Council of Zambia) neglected its duty by failing to prosecute the first defendant, to enforce the conditions of the licence and to protect the community made a lot of sense and should have been considered by the court in reaching its decision.

It is imperative that the government of Zambia and the various agencies, authorities and offices created under the various legislations do more to educate the public on their environmental rights and their duties as citizens pertaining to environmental management and conservation.

It is also important that the members of the public be actively involved in asserting their rights and seeking to enforce them by bringing similar actions which will, in the long run, have a deterrent effect on holders of mining and mineral processing licences in so far as their environmentally-unfriendly practices are concerned.

This lack of participation by members of the Zambian public in environmental litigation further highlights the need of ensuring that the provision for access to justice is accompanied

by improved public awareness which necessitates greater access to environmental information. There is also greater need for public participation. EMA makes a provision for the establishment of an environment registry that would go a long way in assisting the members of the public in accessing information and ultimately aid in proving their case before they go before a court of law.

3.6 Conclusion

Whilst great strides have been made towards widening the scope of access to justice in Zambia, a lot still remains to be done. Mere legal pronouncements without deliberate efforts to enhance their implementation in the practical can have only very little effect. However, the progress that has been made must be appreciated.

Access to environmental justice is a pertinent aspect of the protection of the human rights of individuals or groups particularly the vulnerable in society from the results of unsustainable environmental management or the negative social, cultural and health impacts of economic development. Environment and development should always be viewed as two sides of the same coin and this therefore implies that one cannot have one without the other.

As has been highlighted in this chapter, access to justice requires a robust system that provides a platform for members of the public to access environmental information as well as a platform that provides a niche for participation in the decision making process. These two aspects are important for access to justice since it is not possible to attain one without the other.

The conclusion therefore is that Zambia has achieved some progress with regard to ensuring access to justice in environmental matters. However, more measures need to be employed to ensure that the public are aware of their rights and that there is enough environmental information available to the masses. Further, measures such as establishment of special

Courts or tribunals to deal with environmental actions as well as measures aimed at lowering the costs of instituting and undertaking environmental litigation need to be implemented to encourage public participation in environmental litigation and ensure true access to justice.

There are a number of concrete ways in which the judiciary can participate in realizing a sustainable future, such as: balancing environmental and developmental considerations in judicial decision-making; providing an impetus to the incorporation of contemporary developments in the field of environmental law for promoting sustainable development, including access to justice, right to information and public participation; promoting the implementation of global and regional environmental conventions; and strengthening the hand of the executive in enforcing environmental regulations, in the face of often outside and improper influences that could stifle executive action. The judiciary can, and must, play a leading role in promoting compliance and enforcement of environmental regulations.

A judiciary well informed of the rapidly expanding boundaries of environmental law and law in the field of sustainable development, and sensitive to their role and responsibilities in promoting the rule of law in regard to environmentally friendly development, would play a critical role in the vindication of the public interest in a healthy and secure environment through the interpretation, enhancement and enforcement of environmental law¹⁷⁴

¹⁷⁴ Global Judges Symposiums on Sustainable Development and the Role of Law, Aug. 18-20, 2002, UNEP Executive Director's Background Paper to the Global Judges Symposium (2002) Available at http://www.unep.org/law/Symposium/Pre_session.htm (accessed on 15th May 2013)

CHAPTER FOUR

THE USE OF ECONOMIC OR MARKET BASED INSTRUMENTS (EIs/MBIs)

4.0 Introduction

Having discussed the principles of public participation and access to information, and access to justice, in the two previous chapters, this Chapter looks at the use of MBIs (MBIs) in environmental management and conservation.

A relatively new concept, MBIs are yet to gain widespread use over the world. However, they have been used with a huge degree of success in some jurisdictions, particularly Australia, which is identified as a case study in the present Chapter.

Zambia has not employed any MBIs in its environmental management and conservation efforts. As such, there will be no discussion on the extent to which these instruments have been employed in Zambia. Rather, the purpose of this Chapter is to briefly introduce the concept of MBIs, describe how they have been used elsewhere and possibly recommend them for Zambia.

4.1. The Concept of Market Based Instruments/ Economic Instruments in International Environment Law

In the world today there is a global concern for resolving environmental and natural resource management problems through the integration of development efforts with sound environmental protection measures. This requires elaborate legal, institutional and policy measures that can harmonise the two sustainable development imperatives adequately. A number of policy instruments are used for meeting the development and environmental management concerns. There are basically two universally applied policy measures in environmental and natural resource management. These are MBIs/ EIs and Command and Control approaches. These are used in different combination to complement each other.

The use of MBIs or EIs to protect the environment has been under discussion for the past two decades, as the international community addresses the fact that many environmental regulations have not resulted in any environmentally cleaner behavior, technologies or products.

It is contended that current mechanisms have failed to provide adequate economic incentives to limit activities that are environmental damaging and have failed to achieve their environmental objectives. The use of MBIs is premised on the belief that the market can be used to provide incentives to guide human behavior.

Support for the use of MBIs or EIs is found in the Rio Declaration. Agenda 21 refers frequently to the need to develop EIs. Principle 16 of the Rio declaration, for instance, provides that national authorities should endeavor to promote the internalization of environmental costs and the use of economic instruments , taking into account the approach that the polluter should in principle bear the cost of pollution with due regard to the public interest and without distorting international trade and investment. Whereas this Principle principally deals with the polluter pays principle, it supports the use of EIs.

4.1.1 Regulation and enforcement instruments

The UNEGMO Guidelines recognise that the nature of the relationship between the regulator and the operator can vary significantly, from confrontational through to collaborative. Where a regulatory body exerts greater control, it also accepts a greater level of responsibility, reducing the accountability of the operator. This may inhibit continuous improvement on the part of the operator, thereby undermining one of the principles behind sustainable development. In order to provide greater flexibility, the concept of co-regulation by the industry and regulatory agencies together is desirable, and is increasingly being tried in various countries.

The Guidelines further observe that in the past, governments tended to use command-and-control systems that gave little choice to industry. However, as the UNEGMO concludes, command-and-control can be costly to implement, and more often than not, require an appropriately trained enforcement team, extensive and regular monitoring of operations, analytical and data evaluation support and an effective judicial system to administer fines. Government authorities are therefore currently actively using a variety of other regulatory approaches to overcome these limitations. However, none of these alternatives used alone is able to address all situations. In practice a mixture of regulatory instruments is now advocated - including some command-and-control - in order to provide the most suitable response to national needs.

Some of the regulatory instruments identified include:

4.1.1.1. Command-and-control systems

These systems are based on a general application of discharge standards and/or mandated technology designs, often irrespective of the industrial process being controlled. They are typically "media"-specific and were originally designed to reduce the discharge of specific pollutants to the atmosphere, land or water. Command-and-control can be highly successful in reducing pollution from certain industries. For instance, it can be the most cost-effective and efficient approach to regulating many manufacturing processes where local factors have little effect on the production process.

There are both pros and cons in the use of the command-and-control approach in the mining sector. Large mining operations lack the degree of standardization present in other sectors such as manufacturing. Therefore, the standardized requirements which are an integral part of command-and-control may exhibit reduced efficiency, resulting in under-protection at some sites and unnecessary over-protection at others. The use of fixed design standards under

command-and-control regulations also stifles innovation by promoting standardized technological solutions that do not necessarily deliver the optimum environmental or economic performance at a given site. It is also incorrect to assume that because a specific technology is in place, compliance will automatically follow. Human resource management, training and other factors will significantly affect whether or not the technology is correctly used. Finally, the use of design standards also does not promote a shift in corporate culture to "beyond compliance".

From an economic perspective, the disadvantage of this command-and-control approach is that it imposes details upon operators and threatens stringent administrative or criminal sanctions when standards are breached. But this does not necessarily guarantee that operators will also strive for an optimal reduction of emissions, which is why economists have increasingly pleaded for instruments that provide financial incentives to operators to reduce emissions to the greatest extent possible.

It is imperative to note that most of Zambia's regulatory system falls within this broader classification of command-and-control.

4.1.1.2. Rehabilitation bonds

Rehabilitation bonds are an important instrument in the mining sector. They are a type of commercial instruments. Due to the high cost of remedial action at many sites, governments often seek assurance that companies will be able to fully rehabilitate their properties at no expense to local, regional or central government. The setting of rehabilitation bonds serves the purpose of reducing the risk of failure of the lease holder to the government to meet management commitments. They are intended to ensure that a normal range of costs associated with reclamation and closure of mines will be paid for by the mine owner or operator, either directly or through some alternative mechanism which assures their financial

responsibility. These mechanisms are typically not intended to insure against catastrophic events. Financial assurance assumes that the costs of reclaiming and restoring mined land to subsequent uses, and protecting the public from safety threats such as open audits, shafts and subsidence, are ultimately the responsibility of the owner or operator of the mine.¹⁷⁵

These bonds may take various forms, including, in reducing order of 'hardness':¹⁷⁶

- i. Irrevocable Letter of Credit: an agreement between the company and the bank whereby the bank will provide cash funds to the authorities if the company defaults.
- ii. Performance Bond: a surety bond issued by an insurance company in which the insurer is responsible for all claims up to an agreed limit.
- iii. Trust Fund: a fund that operates in a similar fashion to a pension fund with regular contributions being invested by a fund manager.
- iv. Insurance Policy: a special form of performance bond.
- v. Parent-Company Guarantee: the parent company guarantees to indemnify the government in the event of a company default.

During the start-up of an operation, working capital may be limited, presenting problems in ensuring that "hard" security is available. A phased introduction of security may therefore be required, allowing the security to accrue during the mine's life. However, "soft" security should only be considered where the risk is low, for instance, where reclamation costs are

¹⁷⁵ UNDESA and UNEP, *United Nations Environmental guidelines for Mining Operations*. (Available at http://commdev.org/files/814_file_UNEP_UNDESA_EnvGuidelines.pdf)

¹⁷⁶ *Ibid*

low or the mine is profitable with good cash flow characteristics. Contributions to security funds, and the interest they earn, may be tax-free, as is the case in South Africa.¹⁷⁷

In setting the level of financial assurance, the permitting process plays an important role for various reasons. First, the permit can be used to identify the required standards for reclamation and environmental performance at the mine. Second, the mine plan is used as the basis for calculating the amount of financial assurance, taking into account such factors as the level of pollution prevention in place, planning for closure and design for reclamation. The third reason is that the permit is often the only way to successfully enforce the environmental performance and reclamation standards. The mine permit should clearly and explicitly define the terms for release of financial assurance; this protects the operator from the risk of constantly shifting reclamation requirements and the regulator from the risk of being unable to access the bond when required.¹⁷⁸

More proactive approaches are also possible. For example, the United States Environmental Protection Agency is moving towards more closely integrating the environmental costs of mineral processing technologies into its mine permitting process.

4.2 Market Based Instruments/ Economic Instruments generally

EIs are generally based on levying fees or taxes on certain operations or products that have high environmental impact. Usually, effluent and emission fees are set to encourage companies to reduce their environmental releases. Taxes, or tax relief, on certain processes such as emission control equipment or the use of recycled materials, respectively, may also be used.

¹⁷⁷ *Ibid.*

¹⁷⁸ *Ibid.*

The principal advantage of incorporating EIs, is to get the producers and consumer evaluate alternatives ways to achieve the environmental goals; cost effectiveness, personal preferences, cultural values, and access to this information technology can be settled in this evaluation. Due to its extreme cost, regulators cannot often access this information.¹⁷⁹

These instruments are increasingly being implemented in both developed and developing countries. A number of powerful international organizations promote smart regulatory instruments, such as environmental taxes and tradable emission rights. For example, the UNEP is a strong supporter of the use of EIs to realize environmental goals. Not only does Principle 16 of the Rio Declaration promote such instruments, but so too does the UNEP Guidelines on Compliance with and Enforcement of Multilateral Environmental Agreements. The World Bank and International Monetary Fund (IMF) have also frequently suggested the use of such EIs within developing governance structures, although certain voices within the World Bank are increasingly critical of EIs for developing countries. Yet while these international bodies and regimes such as the UNEP are not oblivious to the difficulties associated with selecting and implementing EIs in this fashion, they nonetheless continue to recommend EIs as the best means of achieving environmental objectives.

MBIs are broadly defined as instruments or regulations that encourage behaviour through market signals rather than through explicit directives.¹⁸⁰ Stavins¹⁸¹ further describes these instruments as harnessing market forces because of their potential to redefine the agenda of firms and individuals such that the improved environmental outcomes are in their own interest. The application of MBIs focuses on achieving outcomes through the self-interest of

¹⁷⁹ Anderson. K, 2000, *Using Financial Assurance to Manage the Environmental Risks of Mining Projects* in: Wahrurst. A / Noronha. L, *Environmental Policy in Mining*, Lewis Publishers p. 283-293, here 285, 286

¹⁸⁰ Stavins, R. N. 2000 'Experience With Market Based Environmental Policy Instruments', *Resources for the Future Discussion Paper 0009*, January 2000.

¹⁸¹ Ibid

the firms and individuals. Whereas the key interest in MBI application is achieving policy targets at reduced cost, other interests such as risk may also be targeted.¹⁸²

MBIs have two potential cost advantages over more traditional instruments. First, MBIs allow different firms to make different adjustments in response to their unique business structures and opportunities. Second, incentives to discover cheaper ways to achieve outcomes provide dynamic ways of reducing the future costs of achieving targets. Under a command and control instrument firms are required to achieve specified outcomes regardless of their individual cost structures. For example, two neighbouring firms producing similar amounts of pollution may face widely differing costs to reduce their pollution - due to processes employed, input mixes, type of goods produced or other reasons. A command and control instrument would lead to each reducing their pollution by an identical amount whereas an MBI with the same target would encourage differential reductions in pollution. That is, firms with high control costs undertake a smaller share of achieving environmental targets in a physical sense but a similar share in a monetary sense.

The main advantage of MBIs over traditional regulation mechanisms and thus the key reason for MBI adoption is their theoretical potential to deliver the same outcome as a command and control mechanism but generally at lower financial cost to industry and at lower overall net social cost. In achieving this, MBIs are able to employ three potential levers: price-based instruments, rights-based instruments and instruments designed to reduce market friction.¹⁸³

Price-based instruments alter the prices of goods and services to reflect their relative impact. They provide certainty to industry as to the compliance costs of achieving an outcome but the

¹⁸² Pannell, D. 2001, *Harry Potter and the Pendulums of Perpetual Motion: Economic Policy Instruments for Environmental Management*, *Connections - Farm Food and Resource Issues*, Summer.

¹⁸³ Whitten, S. et al, *An Overview of Market-Based Instruments and Environmental Policy*.

environmental outcome generated to the broader community is uncertain. Examples of price-based instruments include emission charges, user charges, product charges, performance bonds, non-compliance fees, subsidies (materials and financial), removal of perverse subsidies/taxes and deposit-refund systems. Rights-based instruments can be designed to control the quantity of the environmental good or service (or a suitable proxy) to the socially desired level. These instruments provide certainty as to the environmental outcome but not as to the cost to industry of achieving that outcome. Examples of these instruments include tradeable permits, rights or quotas and offset schemes. Instruments designed to reduce market friction are less common. They aim to stimulate a market to produce a desired environmental outcome through improving the workings of existing markets by reducing transaction costs or improving information flows. Responses to market friction tend to be less certain and longer term. Examples of these include reducing market barriers, extension / education programs, research programs designed to facilitate market exchanges, labeling and information disclosure.¹⁸⁴

4.3. The Australian experience with Market Based Instruments

Australia is one of the jurisdictions that have embraced the use of MBIs in pollution control with great success. The number of MBIs that have been implemented has been steadily increasing over recent years, and new Australian MBIs are now under development as part of the National Market-Based Instruments Pilot Program under the National Action Plan for Salinity and Water Quality. A list of the range of MBIs currently in operation in Australia is shown in the table below, with potentially many more operating at pilot or local scale that are not included in this list.

¹⁸⁴ Ibid

Table: Examples of Australian Market-Based Instruments¹⁸⁵

Lever	Instrument
Price-based	<ul style="list-style-type: none"> • Licence fee for use of marine waters • Aircraft noise levy (Sydney). • Ozone depletion fee. • Waste effluent charges (Load based licensing). • Mine site rehabilitation performance bond. • Greenhouse challenge subsidy. • South Australian beverage container deposit scheme. • Bushtender in Victoria.
Rights-based	<ul style="list-style-type: none"> • Hunter river salinity scheme • Tradable Renewable Energy Certificates (RECs) • Nutrient offset scheme in South Creek, Sydney • Carbon legislation. • Development offsets (local and state levels)
Market friction	<ul style="list-style-type: none"> • Banrock Station Wines environmental labelling • Revolving funds for nature conservation • Eco Certification Program (Tourism)

¹⁸⁵ See Organization for Economic Cooperation and Development (OECD) 1999, *Economic Instruments for Pollution Control and Natural Resources Management in GECDCountries: A Survey*, Paris, OECD; National Action Plan for Salinity and Water Quality (2002), *Investigating New approaches: A Review of Natural Resource Management Pilots and Programs in Australia that Use Market-Based Instruments*, NAPSWQ; and van Bueren, M. (2002) *Environmental Trading Programs and Markets: Implications for the Australian minerals and Energy Sector*, A report for the 2000 AMEEF Travelling Scholarship Award.

Price based mechanisms of various forms are employed in Australia. Particularly, many Australian state and local governments have imposed pollution, development and waste management fees. Further product taxes are imposed on lubricating oils and used tyres to pay for product recycling. Other common price-based mechanisms designed in part with an environmental outcome in mind include parking and toll charges as well as noise levies such as that imposed on landings at the Kingsford-Smith Airport in Sydney. Subsidies are also prevalent in Australia including those through tax concessions for Land-care management and numerous water and energy related programs.¹⁸⁶

Rights-based MBIs have been used extensively in Australia to manage resource over-allocation in fisheries and water. They have also been used to cap emissions contributing to environmental damage. Some examples include caps placed on salinity in the Murray-Darling Basin and in the Hunter River, and on nutrients from a group of wastewater treatment plants in the Hawkesbury-Nepean system. More recently rights-based MBIs have also been employed to promote the uptake of environmentally positive activities such as low greenhouse gas energy under the Tradable Renewable Energy Certificates (RECs) program.¹⁸⁷

The Hunter River Salinity Trading Scheme is probably the most outstanding example of an Australian rights-based instrument. The NSW Environmental Protection Agency (EPA) operates the Hunter River Salinity Trading Scheme. This cap-and-trade scheme regulates discharges of saline water from coalmines and power stations in the Hunter River catchment above Singleton. The program was introduced as a trial scheme in 1995 after extensive

¹⁸⁶ Whitten, S, *et al*, *An Overview of Market Based Instruments and Environmental policy in Australia*. (Available at http://www.ecosystemsproject.org/html/publications/docs/MBIs_overview.pdf)

¹⁸⁷ *Ibid*.

consultation with the NSW Department of Land and Water Conservation (DLWC),¹⁸⁸ the Coal Industry Association, the Hunter Catchment Management Trust and Pacific Power.

The objective of the scheme is to manage saline water discharges so as to minimise impacts on irrigation, other water users and on the aquatic ecosystem. The scheme manages salinity by restricting discharges to a share of that which can be safely diluted within a high flow event. The total salt that can be discharged during the high flow event is calculated according to the ambient salinity in the Hunter River and concentration targets at key points in the river (Denman and Singleton). A comprehensive system of real time monitoring is used to ensure that participants do not exceed their pollution entitlement. Monitoring is the responsibility of permit holder, with the EPA and DLWC conducting regular audits to verify the accuracy of the monitoring data. It is estimated that the scheme costs between \$150,000 and \$200,000 per annum to administer.¹⁸⁹ This cost is covered through a fee levied on participants based on credit holdings.

The scheme was introduced as a pilot scheme. The environmental targets were achieved during the pilot period despite a series of seasons with low flows that made it harder for participants to manage their discharges.¹⁹⁰ The evolution of the scheme shows how MBIs can evolve from traditional command and control regulation. Initially the scheme was managed through EPA licensing with credits allocated to coalmines and power stations in the region and including a reserve held by the EPA. More recently, the pilot has moved to a permanent footing under separate legislation. A number of innovations have accompanied introduction of the permanent scheme, including extending the life of credits to 10 years and allowing third party ownership. In order to maximise the potential benefits from trade and

¹⁸⁸ In 2003 DLWC was merged with Planning NSW to create The Department of Infrastructure, Planning and Natural Resources

¹⁸⁹ Australian Bureau of Agricultural and Resource Economics (ABARE) 2001, *Alternative Policy Approaches to Natural Resource Management*, February 2001, Canberra.

¹⁹⁰ Ibid

facilitate new entrants, twenty percent of credits expire every two-years and are reallocated via auction.

Finally, though relatively fewer MBIs have been developed that are specifically targeted towards reducing market friction, those that are properly developed have considerably contributed or have the potential to contribute to environmental management and conservation.

4.4. Use of Regulatory Instruments in Zambia

There are four types of instruments used for environmental management in Zambia since independence in 1964. These are regulatory, economic, anticipatory and consultative instruments. The most used of the four instruments are regulations enforced by legislation. These have since been strengthened through the EMA which also established the ZEMA.

Various regulatory instruments have since been enacted for pollution control and resource management for water, air, waste and noise pollution among other uses. A number of instruments are currently being used for both environmental management and conservation in Zambia. The use of regulatory instruments for pollution control in Zambia is based on EMA. Various regulatory instruments are used for water, air, waste and noise pollution among other uses. Specific instruments include:

- (i) licenses and permits to discharge effluent by use of Effluent Standards;
- (ii) licenses to emit air pollutants through use of Emission Standards;
- (iii) license to generate waste;
- (iii) license to operate a waste disposal plant or site;
- (iv) license to transport Hazardous waste;

Permits are used to control the emission of noise through noise emission standards.

Regulatory instruments are effective when properly enforced, but, even then, they do not solely achieve all the results that would be achieved if they were employed together with other mechanisms such as MBIs and EIs. The use of regulatory instruments in Zambia has achieved some measure of success in Zambia, but pollution still remains a major challenge in Zambia, proving on the one hand that regulatory instruments alone may not be very effective in pollution control and suggesting, on the other hand, the need to more effectively implement the regulatory instruments to achieve optimum results.

4.4.1 Use of Market Based Instruments in Zambia

Whilst EIs are preferable to predominantly command-and-control instruments in a liberalised economy because they integrate environmental and economic policy and are efficient in their use of scarce development and management resources, EIs in natural resource management in Zambia, are , still only being used in form of user charges for water, energy and other metered resources. The use of EIs in Zambia is not common. So far, no charges and taxes on water effluent, air emissions and/or waste production/disposal have been introduced in Zambia. Such charges and taxes could provide useful incentives for the mining sector to gradually shift towards more sustainable production practices. The EMA has so far not incorporated any EIs to contribute environmental management and conservation. As discussed earlier, MBIs inherently provide an incentive to a mining company to reduce emissions in exchange for tax reductions.

4.5 Conclusion

This chapter has identified that the use of MBIs has not been tried in Zambia as a means of pollution control. Using the example of Australia and having identified how MBIs have been successfully used in Australia to achieve pollution control, it necessarily follows that it will be recommended that MBIs, as far as they are practically applicable, be employed in Zambia

as part of the legal and regulatory measures to achieve pollution control. The efficacy of MBIs has been discussed in the context of Australia that has employed them with great success.

Care must be taken, however, to ensure that only desirable and practical MBIs are used, as each jurisdiction has its peculiar circumstances that must be taken into account in determining which MBIs to use.

CHAPTER FIVE

RECOMMENDATIONS AND CONCLUSION

5.0. Introduction

This ultimate chapter of this work sums up the findings of the study and makes recommendations on how Zambia can improve her legal and institutional framework on control of pollution caused by copper mining. This is in light of the finding in Chapter 2 to 4 that Zambia's legal and institutional framework does not adequately address the issue of water pollution caused by copper mining.

Whereas the three immediate previous chapters of this work has discussed some mechanisms that have been employed by various jurisdictions to achieve pollution control with considerable success, it is imperative to note that each jurisdiction has its peculiar circumstances that must be taken into account in coming up with laws and regulations. What works for one jurisdiction does not necessarily work for another, depending on the peculiar circumstances of each jurisdiction. That notwithstanding, there are a lot of lessons Zambia can learn from other jurisdiction especially with regard to mechanisms of regulation that Zambia herself has not tried to utilize or utilized effectively. These mechanisms that have been used elsewhere with considerable success can be adopted by Zambia and modified to suit her circumstances.

This research focused majorly on the areas of access to information and public participation, access to justice and the use of MBIs in pollution control. However, the recommendations are not restricted to these areas. Wider recommendations are made to generally deal with the entire scope of pollution control.

5.1. Recommendations

The following are general and specific recommendations on how Zambia can achieve greater pollution control, especially with regard to pollution caused by mining.

5.1.1. General recommendations

5.1.1.1. Adoption of Market Based Instruments for pollution control

MBIs - whether price-based, rights-based or aimed at reducing market friction – are a cheaper and more sustainable mechanism of achieving environmental management and conservation in general, and pollution control specifically. Apart from the cost advantages both to the mining companies and the regulatory authorities, MBIs have the potential to be more effective than traditional mechanisms such as command-and-control since they offer a direct incentive for the companies to reduce pollution, for instance, so as to incur less tax liabilities. They require less human and financial resources to enforce, and do not often lead to disputes between the regulator and the mining companies.

However, with all their advantages, MBIs may not address all the problems posed by mining and mineral processing in the context of pollution of water resources. It may, therefore, not be practical to substitute command-and-control mechanisms with them, entirely. Indeed, that is not the recommendation here as it would be undesirable. More appropriately, a proper balance should be found between MBIs and other regulatory mechanisms so that where MBIs can serve a purpose there need not be employed command-and-control or other traditional measures that may be more expensive to enforce.

The economic liberalisation and privatisation of formerly state run mining companies have not been accompanied by corresponding increases in the incorporation of EIs in environmental management and conservation. The use of predominantly Command and Control (CAC) Regulatory instruments was probably justified by the dual responsibility of

government as entrepreneur and environmental protection regulatory authority. Government could not incorporate EIs, which among other things impose full cost pricing and ensure equity in environmental protection responsibilities and costs. This was so because government would have been charging itself for pollutant emissions and effluents from state run mining companies.

With the increase in privately run mining companies, one would expect the use of EIs to be more desirable for government and sustainable development. Unfortunately the expected shift to increased use of EIs has not taken place yet. Nearly all the environmental related Acts enacted to repeal older ones and beyond have not full incorporated, if at all, EIs in environmental management and conservation.

Government should take advantage of the liberalised economy and privatisation by incorporating more EIs with other existing policy instruments (i.e. CAC approaches) in environmental and natural resources management policies. This will enable Zambia attain sustainable natural resource management and environmental protection by integrating development and environment efficiently, cost effectively while ensuring equity, full cost pricing of natural resources and above all generating revenues for better environmental and natural resources management.

No significant changes have taken place in Zambia's environmental policy instruments as far as the application of economic policy instruments for sustainable natural resource management is concerned. Further, the consequences of policy failure on sustainable development are still largely the same. This is largely because regulatory policy instruments remain dominant in environmental and natural resources policies.

5.1.1.2. Proper Corporate Social Responsibility (CSR) framework

Zambia lacks a proper CSR framework. This has led to a situation where CSR is voluntary as opposed to mandatory and CSR activities often times do not benefit the local communities that are most affected by mining activities. Mining companies would, for instance, sponsor sports events and/or teams as opposed to building dispensaries or schools for the benefit of local communities living around the mines.

A proper CSR framework that makes CSR compulsory by, for instance, providing that a certain percentage of mining corporations' profits must be used towards CSR and ensures that the CSR activities benefit the local communities that are most affected by the adverse effects of mining will be an important step.

Each mining corporation should be required to develop a CSR Plan that should be approved by the government in consultation with the public. If corporations are required to have proper CSR Plans, they will more likely come up with solid plans that will benefit the local communities. South Africa has achieved solid CSR activities from mining corporations by requiring them to come up with CSR Plans. Since the mining corporations know that everybody is looking to see what their plan is, they have developed very solid, innovative and genuine plans for development to meet the expectations of the public.

Zambia should come up with a proper CSR framework that, *inter alia*:

- i. Makes CSR compulsory and prescribes what portion of mining corporations' profits should be directed towards CSR activities;
 - ii. Requires all mining corporations to develop a CSR Plan to be approved by some relevant government authority (e.g. the Minister) and the affected local community;
- and

- iii. Identifies broad areas of interest to local communities within which proposed CSR activities must fall, for instance environmental clean ups, education, health, nutrition and sanitation.

5.1.1.3. Greater focus on pollution prevention than punishment and penalties for resolving water pollution

The Zambian legal framework on environmental management and conservation concentrates more on creating environmental offences and prescribing punishment for the same as opposed to prescribing mechanisms of pollution prevention. Even the mandate of the various institutions created under the laws is more towards supervising potentially pollutant activities, arresting offenders and punishing offenders than, for instance, sensitizing the public in general and mining corporations on the need for environmental management and conservation and pollution control. This ought to change.

The law should be geared more towards ensuring prevention of pollution than dealing with pollution after it has occurred. To this end, ZEMA and other institutions that are charged with overseeing environmental management and conservation ought to direct greater effort towards sensitizing the public on the importance of pollution prevention and ways of achieving this.

The punishment of offenders is, of course, an important part of the regulatory framework as it also, to an extent, achieves deterrence. However, it should not be the main focus of legislation and the various institutions. The primary objective should be environmental management and conservation, and prevention of pollution.

Pollution prevention through the application of Clean Production methods should be encouraged, rather than the pursuit of a permissible emissions approach based on assimilative capacity assumptions.

5.1.1.4. Increased access to justice

Access to environmental justice is a pertinent aspect of the protection of the human rights of individuals or groups particularly the vulnerable in society from the results of unsustainable environmental management or the negative social, cultural and health impacts of economic development. Environment and development should always be viewed as two sides of the same coin and this therefore implies that one cannot have one without the other.

As has been highlighted in this chapter, access to justice requires a robust system that provides a platform for members of the public to access environmental information as well as a platform that provides a niche for participation in the decision making process. These two aspects are important for access to justice since it is not possible to attain one without the other.¹⁹¹

Members of the public certainly need information for them to make informed decisions about their environment and how they can contribute to the overall development agenda. The idea is for the public to benefit from development as well as from the protection of the environment. Information is key even in the process of participation.

Whilst Zambia has been praised for making strides in the economic and social aspects of sustainable development, the environmental aspects still remain weak. It is worth recognizing that the government of Zambia has in the past five years been working on law reforms in the environmental sector. These reforms have certainly come with a lot of innovations which can be seen in the area of standing before courts and the costs associated with access to environmental justice as well as access to information and public participation.

It is vital that the government of Zambia implement measures geared at ensuring greater access to justice in environmental matters.

¹⁹¹ See Note 164 at page 21

Whereas the universal locus standi to commence actions on environmental matters as provided for by the EMA and MAMDA is a step in the right direction, it is not enough to have the right to commence judicial action. There is a need to ensure that the court process results in justice for those who seek redress. Justice must be understood in the sense not only of a fair determination but also of an expedient and affordable process.

There is an immediate need to set up special Courts or Tribunals to deal with environmental matters to not only ensure expeditious determination of matters but also ensure specialization by the judges hence a deeper understanding of environmental matters. Together with this, steps should be taken to ensure that litigation of environmental matters especially where it is in the public interest is affordable. The unaffordable cost of litigation is one of the factors that discourage potential litigants and thus hampers their access to justice.

5.1.1.5. Diversification of economic activities

Zambia's over-reliance on copper mining as an economic activity does not only lead to greater pollution due to a lot of mining work in the copper belt at any given time, but also leads to the government's reluctance to fully implement environmental laws and regulations geared towards pollution prevention and control for the fear of losing investors to other nations. Indeed, Zambia has, at times, had to make it very cheap to invest in copper mining so as to attract investors. At some point, the mining corporations were provided immunity from liability for the harm their activities caused to the environment all in an attempt to attract investment in this major sector of the country's economy.

There is a need for Zambia to explore alternative economic activities in order to reduce the reliance on copper mining. This will not only reduce the pressure on the environment generally and copper resources specifically, but will enable the government and other regulatory authorities to be stricter in the enforcement of laws regulating mining activities.

5.1.1.6. Increased human and financial resources investment in environmental management and conservation

One of the problems that face the implementation of the laws on environmental management and conservation in Zambia is the inadequacy of human and financial resources employed towards achieving this.

The major regulatory bodies such as ZEMA cannot adequately perform their functions due to a shortage of funds and specialized human resources to deal with specific issues.

It is important that more funds be granted to the regulatory bodies to enhance their capacity. There is also need to recruit more specialized staff for these bodies to ensure that there is no shortage of properly trained human resources. This could further be achieved by training present members of staff to acquire more specialized skills.

5.1.2. Specific recommendations

The more specific recommendations are as follows:

5.1.2.1. Recognition of the right to a clean, safe and healthy environment as a Constitutional right

As was discussed in chapter 3 of this work, Zambia currently does not recognize the right to a clean, safe and healthy environment as a constitutional right. Instead, the right is provided for in the recently enacted EMA. Whereas this was an important step, the benefits of having a right guaranteed by the Constitution as opposed to ordinary legislation are obvious, as have been identified earlier on in this work.

The First Draft constitution of Zambia, 2012 provides for the right to a clean and healthy environment. Hopefully, the Constitution making process will be expedited and the constitution that will finally be adopted will guarantee the right to a clean, safe and healthy environment.

5.1.2.2. Increased public participation and access to information

Public participation is a process leading to a joint effort by stakeholders and for this process to be effective, it is imperative that it is not only mentioned in the laws but that it forms part of the terms of reference in proposed mining activities. The EMA recognises this as a pertinent and key principle of environmental management but in practice not much consultation takes place. Public environmental awareness and participation in the regulatory enforcement mechanism is key to its satisfactory application and enforcement.

Pursuant to Section 94(1) of the EMA, the Minister may, by statutory instrument, make regulations to enhance the ability of the public to acquire environmental information, to participate in decision-making and to protect the environment. These regulations ought to give guidance on the rules, procedures and mechanisms for the enhanced provision of information to the public. Though public participation has been mentioned in EMA, it is not structured in regulations. Presently, there are no regulations subsisting to this effect.

The Minister is also expected under Article (20) of EMA to provide information on the environment of Zambia in a State of the Environment, as a means by which the public can appreciate the strides that are being made to address environmental degradation, whether the legal, enforcement and compliance measures are working and if not, how to improve on the situation and what mitigating factors can be employed. History has shown that these reports have never been published, if they exist at all. This could be a pertinent indicator in ensuring that the State does play its role in monitoring and evaluating the effectiveness of legal and institutional framework in environmental advocacy.

The principles of participation and inclusion entail that countries should deliberately encourage participation in all spheres of development, particularly if the development affects their right to a clean, safe and healthy environment.

The EIA process is dependent on public participation and access to information. The exclusion of the two may as well render the whole process ineffective. Hence it is imperative that the process, as provided for in the EMA, is carried out as set out in spite of the fact that access to information is not guaranteed by the current constitution.

5.2. Conclusion

This paper has established that the Zambian legal and institutional framework on water pollution caused by copper mining, whilst robust, does face some challenges in dealing with the various problems associated with the pollution. Significantly, the supreme law of the land does not embrace the principle of a right to a clean, safe and healthy environment and further, the subsisting laws and institutions have been unable to prevent pollution or to considerably reduce it. In the same vein, little seems to be done by regulatory authorities to administratively curb the problems or by the Courts to address the various problems.

In terms of effective pollution control, the alternative, might be in the case of Zambia, that a more balanced mix of regulatory, economic and consultative instruments be used in the environmental protection and natural resources management policy in the country if sustainable development is to be attained. Future environmental policy reforms should be inclined towards increased use of EIs in view of the economic liberalisation and privatisation policies of the government.

This research paper has identified the various shortcomings of the Zambian legal and institutional framework on water pollution caused by water mining, and the challenges faced thereby. Having also discussed various approaches by other jurisdictions in curbing the problem of pollution caused by mining, and the UNEGMO, this paper has made recommendations that the author believes, if fully implemented, will go a long way in

ensuring sustainability of copper mining in Zambia without unnecessary adverse effects on the environment generally and water resources particularly.

The purpose of this study is to focus on the strengths and weaknesses of Zambia's environmental law per se, by highlighting some international lessons and practices that might be useful to Zambia's as it considers what future steps to take in improving the legal framework for participation.

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