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THE RELEVANCE AND IMPACT OF ETHICAL CONSCIOUSNESS ON ENVIRONMENTAL MANAGEMENT IN ZAMBIA: A PHILOSOPHICAL CRITIQUE.

BY

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A Dissertation Submitted to the School of Humanities and Social Sciences in Candidacy for the Degree of Master of Arts in Philosophy & Applied Ethics



Lusaka, Zambia April, 2004

DECLARATION

I, JOHN MWESHI, do hereby declare that this dissertation represents my own work and that it has not previously been submitted for a degree at this or another university.

Signature Williams.

Date 10 | 0 2 | 0 5

APPROVAL

This dissertation of JOHN MWESHI is approved as fulfilling the requirements for the award of the Masters of Arts Degree in Philosophy & Applied Ethics by the University of Zambia.

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ABSTRACT

This dissertation is informed by the need for adequate ethical consciousness in view of the perceived need for public responsibility, cooperation and participation in ensuring sound environmental management. Thus, to investigate and to critique the extent to which an adequate range of ethical principles has been incorporated in Zambia's attempts to address environmental issues was the overall aim of this study. The investigation was primarily focused on the role of government policy, the education system and the mass media in promoting responsible environmental management and practices by heightening environmental ethical consciousness.

The data was gathered mostly from secondary sources such as government policy documents and other relevant publications. Backup information was, however, gathered through focus group discussions and conversational interviews with key informants. A number of issues were raised to suit each key informant's area of specialization while at the same time remaining flexible enough to allow the participants to introduce other issues they deemed relevant to the discussion.

The findings confirmed the preponderance of economic utilitarianism with regard to environmental issues. This was revealed through the prevalent preoccupation with economic benefits that can be derived from natural resources at the expense of other ethically relevant environmental values.

Adequate ethical principles were found to be generally lacking in terms of government policy instruments, the formal education system and the mass media as

the principle channels for raising social consciousness about environmental issues. Consequently, by focusing upon the relevance of a wide range of environmental ethical perspectives, this dissertation demonstrates that the almost exclusive focus on the instrumental value of natural resources is not sufficient to ensure responsible environmental management.

Accordingly, this study recommends that there is need to expand environmental ethical horizons in order to widen public and individual environmental concerns by integrating and articulating relevant environmental values and ethical obligations. This approach has a significant bearing in terms of adjusting government priorities and programmes, both in terms of its interaction with local communities and with the private sector. While the question of government leadership has been highlighted as a crucial factor, this does not suggest that leaders are the major problem since the character of leaders is a reflection of the characteristics of the wider society from which the leaders have emerged. Thus, the need to sensitize the public is critically important. The relevant institutions such as the Environmental Council of Zambia, the education system and the mass media play a key role in this process.

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TO SOPHIA

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LIST OF ABBREVIATIONS

CBNRM: Community Based Natural Resources Management

ECZ: Environmental Council of Zambia
EIA: Environmental Impact Assessment

EPPCA: Environmental Protection and Pollution Control Act

ESP: Environmental Support Programme GMOs: Genetically Modified Organisms

IUCN: International Union for Conservation of Nature and

Natural Resources

LMOs Living Modified Organisms

MENR: Ministry of Environment and Natural Resources

NCS: National Conservation Strategy
NEAP: National Environmental Action Plan

SADC: Southern African Development Community

SIA: Social Impact Assessment SOE: State of Environment

UNEP: United Nations Environmental Programme
WSSD: World Summit on Sustainable Development

WWF: World Wildlife Fund

CHAPTER ONE

GENERAL INTRODUCTION

Global environmental awareness has thrived on significant concerns and understanding of the negative impacts of some human activities on the environment. The need to reverse these trends has in principle attracted widespread agreement. But consensus on modalities has in some cases not been easy, while in others it has only been achieved with a limited amount of success. In this scenario, there has been significant realisation that no nation is self-sufficient. Hence the need for nations and regions of the world to establish firm alliances that would secure cooperation in order to avert global environmental problems.

Global environmental awareness should also bring to the fore realization and understanding that we share a common cause in view of the fact that we share one planet and common human attributes. Hence the challenges arising from the interplay between our activities and the character of the planet we inhabit have a bearing on all humanity. Thus, we have a responsibility for the well-being of the planet in view of our ability to respond to nature's feedback to our activities, particularly where such activities have had some negative effects. Admittedly, immediate environmental concerns have been basically about human welfare. Much emphasis has been put on developmental needs that the environment offers and how such opportunities tend to diminish or are threatened by environmental degradation.

Efforts to understand the nature of this planet earth and its natural systems continue to indicate that its systems can be manipulated but to a limited extent beyond which undesirable effects tend to occur. It is clearly evident that natural systems do not have unlimited or infinite capacities to serve our insatiable appetites and adventures. Failure to appreciate these limitations, and our preoccupation with benefits at the expense of harm, has led to a situation where most human activities have crossed over from use to abuse and from intervention to interference.

Human interaction with the environment in any particular area involves certain cultural elements that tend to portray a particular worldview. How we use the earth's resources and the processes we invoke in acquiring them is largely influenced by the prevailing worldview. According to Tyler (1992), "your decisions and actions are built around your worldview (how you think the world works and what you think your role in the world should be)". Tyler also notes that "worldviews are based on the cultures in which people are raised and educated" and that, "regardless of what you say you believe, how you act in the world reveals your true beliefs." By the nature of this interaction, people tend to have certain attitudes and values, which in turn determine their approach to environmental issues and the sort of commitments they are willing to accept.

Zambia, like any other Third World country in Africa, is still at a stage where the western and the indigenous worldviews have not yet attained harmony if getting the best of both worlds is what is at stake. Unlike in some countries and regions where there was some kind of religious resistance to western intrusion, in Zambia the western worldview appears to have gained an upper hand. In this scenario, the education system and the mass media still pose significant challenges and opportunities.

1.1 Definition of Terms

It is important to be clear from the outset about how the concepts being used in the title of this study are understood, i.e., the relevance and impact of ethical consciousness on environmental management in Zambia. Going by the simple dictionary definition, ethics is the "moral philosophy and systematic study of the nature of value concepts such as good, bad, right or wrong, and of the general principles which justify us to apply them to any human activity" (cf.Ulrich and Sarasin, 1995: 137). Environmental ethics thus applies this dimension to human activity in relation to the environment. In this context "moral standards can be characterised as dealing with matters of serious consequences for human, animal and environmental well-being and as expressing some impartial ideal of equity and justice" (ibid.: 90).

While recognizing the vital leadership role government plays or should play, it is also imperative to acknowledge the fact that every resource user is in a sense involved in some form and at some level of environmental management. Hence environmental management has formal and informal aspects, starting from government and its agencies up to the actions of communities, households and

individuals respectively. At best, government by way of policy and other relevant legislation can only provide the overall framework and guidelines that determine the general patterns of how resources may be utilized. The involvement of the people and other primary resource user entities is inevitable by virtue of their existence. Issues of basic and legal rights in terms of access to resources also reinforce this involvement. For government, this is a happy arrangement as it provides entry points for the enforcement of certain policy provisions without which it would be impossible for government alone to manage the vast environment in its territory.

Environmental management at any level can be defined in general terms as involving safeguards and looking after environmental resources for a purpose and in order to ensure certain envisioned and desired outcomes. While it involves use and conservation of natural resources, in some cases it requires that some areas be preserved altogether. At the formal level, the process is more technical both in terms of approach, concepts, and the instruments employed. At the ordinary level, the process is characterized mostly by relatively permanent practices, which in turn simply means almost routine but purposive activity and interaction with the various elements of the environment.

In the context of environmental ethics, ethical consciousness refers to the social acceptance of approaches to the natural environment that are based on values and moral principles that in turn translate into certain responsibilities and commitments

to protect and care for the environment. When this situation is attained, then the term 'resource husbandry' can be used to refer to the manner in which people are managing their resources, that is, "where the users, without external regulations, show great concern for maintaining the resource in spite of other short-term economic opportunities" (cf. Walters, 1986: 15). Relevance is used to refer to how ethical perceptions influence human attitudes and conduct towards the environment as a means of increasing social and individual responsibility. Impact refers to the actual contribution that basic morality brings about if it is adequately cultivated and tapped with respect to attempts to achieve sound environmental management in both public and private spheres.

It is common and perhaps useful to consider the term **environment** as meaning the totality of everything around us or, ultimately, nature. Nature, however, can be interpreted in two senses. In a narrow sense, it excludes humans, their artifacts and anything that is a product of their intervention. It is this kind of understanding of nature that is primarily at issue with regards to human's moral relationship to nature. But the broader sense includes even human beings. Indeed, and according to Passmore (1974: 5), "it is other people, their actions, their customs, their beliefs [that] are the most important ingredient in our environment." It is also people's actions on the natural environment that have raised serious environmental concerns and moral questions. What this means, therefore, is that addressing the human-environment relationship requires an understanding of both the natural environment and humanity as a unique entity in this grand scheme of things.

In terms of physical features, **Zambia's** environment covers a total land area of 752,612 km². In terms of land use, out of the total land area of 752,612 km, 25% is used for agriculture while urban development takes up only 2%. Wildlife and forest development take 30% and 9%, respectively, with the remaining part going to unspecified areas and arable land, 12% and 22%, respectively (cf. Environmental Council of Zambia 2001: 2).

1.2 Background Issues

The evaluation of Zambia's environmental situation, policies, and practices is critical in the sense that it is at national and local levels that concrete action takes place, while the international arena provides the platform for the endorsement of landmark agreements that are regionally and globally relevant. Thus, developments in the international arena have significantly influenced Zambia's official approach to environmental issues.

At national level, government policy measures have been based largely on two major documents referred to as the National Conservation Strategy (NCS) of 1985 and the National Environmental Action Plan (NEAP) of 1994. The NCS was a national follow up to the World Conservation Strategy (WCS) of 1980 prepared by the International Union for Conservation of Nature and Natural Resources (IUCN) in response to escalating global environmental problems and growing population pressures on natural resources.

In order to update the NCS and to keep abreast with other subsequent international obligations, particularly the Rio agreements on sustainable development, and as envisioned in Agenda 21, the National Environmental Action Plan (NEAP) was developed and adopted in 1994. Technically, Zambia does not have a national environmental policy since documents such as the NEAP were devised and adopted at Ministry level. However, there is a draft policy that is being worked on albeit in the face of doubts as to whether it would really bring any major changes in the way government operates. The two documents alluded to above, and other relevant pieces of legislation and legal instruments such as the Environmental Protection and Pollution Control Act (EPPCA) of 1990, have formed the basis for national environmental regulation in Zambia thus far.

Ideally the purpose of environmental policy generally is to lay down the basic principles for environmental programmes and to act as a framework within which environmental action can be undertaken. It is also the nature of policy to indicate current priorities thereby having a bearing on future legislation, commitment and action. The fundamental challenge for any environmental policy is the same, namely, to allow basic human needs to be met without the destruction of the environment. Ultimately, this implies that activities are conducted within nature's systems and capacity. To balance between these two seemingly polar but mutual demands, sustainable livelihoods especially for the majority poor should be a clear priority because induced and unmitigated poverty is proving to be environmentally unsustainable as opposed to 'natural' poverty which simply entails primitive

simplicity. Much of the induced or 'artificial' poverty has been blamed on current developmental paths with skewed emphasis on economic activity that has tended to exclude the underprivileged.

It is very unhelpful to deal with environmental problems without a broader perspective that also addresses the factors underlying poverty and inequalities. In the same vein, it is unacceptable to dangle the needs of the poor in order to take measures that in the end simply go to benefit the rich.

The quest for more and more technological interventions is also at the moment elusive for most Third World countries, and for Zambia in particular, as some of the technologies that are still being imported have been found to be environmentally inefficient and perhaps disastrous. While some of these technologies are well managed in developed countries, they have proved to be unmanageable in developing countries, while some useful technologies are inaccessible altogether due to the differences in socio-economic conditions.

There are, however, particular risks with the quest for more and more technological intervention in the event that it amounts to interference with regards to particular local ecological systems. As some studies and informed intellectual opinions have indicated, and according to some basic principles of ecology and ecosystems, the more we transform the natural environment, the simpler it

becomes; and the simpler it becomes, the higher and greater is the risk and magnitude of an ecological breakdown.

The concept of sustainable development has been widely accepted to the extent that it is now almost a catch phrase for every environmental policy or concept. However, attempts to promote or adhere to the notion of sustainable development have glossed over some things very essential to the concept as contained in its fundamental principles. Hence, we read: "The principles of living sustainably depend on accepting a duty to seek harmony with other people and with the environment. We must all accept to share the resources with each other and care for the earth. This can be realized through adopting lifestyles and developmental paths that respect and work within nature's limits" (cf. World Wildlife Fund, 1999: 49).

Specifically, attempts to adhere to the notion of sustainable development are lacking in terms of adequate moral input in view of the belief that the concept of sustainable development is founded on respect and care for both people and the environment. While environmental quality is objectively essential to development, development is a human driven process in which self-determination plays a pivotal role. In this regard, government has an inescapable role in enabling its citizens to lead meaningful lives in which people's aspirations are fulfilled in order to live responsible lives. It is essential that people have confidence in public leaders and institutions pertaining to their expectations and aspirations. As appropriately noted

by Christian (1994: 566), "When hope is taken away from a people, moral degeneration quickly follows."

1.3 Statement of the Problem

At issue in this dissertation is the dominance of economic motives in our approach to environmental management. This is a form of utilitarianism and it can be referred to specifically as economic utilitarianism in the sense that economic considerations are the dominant force. In this approach, environmental degradation is a source of concern primarily because it threatens economic development. Conservation, then, is also based wholly on economic motives and incentives which, according to this approach, are in fact seen as a panacea to environmental problems. In view of the fact that economic activity, globally and locally, is not yet in harmony with ideal environmental well-being, there still remains a paradox, since the very value system and implements promoted in this approach have tended to aggravate environmental problems rather than solve them.

Economic utilitarianism has been promoted under the pretext that economic development will result in increased general welfare for the people or the nation at large. This approach seems to serve the general utilitarian theory in terms of human welfare and development. However, the consequent use of environmental resources in a manner that has tended to benefit a minority for the most part at the expense of the poor majority is evidence enough for the contrary. This has led to a significant realization that economic growth does not necessarily entail overall human

development. Consequently, it is important to distinguish between economic and human development. While these dimensions are both necessary for any meaningful development, it is not always true that any one of them will necessarily lead to the other.

The problem is that economic utilitarianism has been advanced and adhered to at the expense of more significant input from other relevant ethical perspectives. In the absence of this counter-balancing effect from the other approaches, the utilitarian approach has serious limitations and ramifications as the dominant approach to environmental management. Leopold (1949: 207-209) rightly noted that such a conservation philosophy is inadequate because it defines no right or wrong, or the basis upon which it does so is inadequate; it assigns no obligation, calls for no sacrifice and consequently implies no change in the current philosophy of values. There is also over-reliance on quantitative economic measures of likely social and economic benefits to human welfare that hardly translates into anything for the ordinary person, and neither is the costing adequate to take into account much of the resulting environmental degradation. This approach is either inherently blind or helpless to solve the social problems endemic to the current situation in the contemporary world.

1.4 Significance of the Study

In addressing the question of the relevance and impact of ethical consciousness with respect to management of the environment, this study is informed by the urgent need for public responsibility and participation in environmental issues. Of course, given the vast nature of the environment, there are certain limitations on any national government to effectively 'police' it. Hence the need to encourage citizens to be responsible custodians of the natural resources.

Moral concerns and the voluntary activity they generate have a special normative position, particularly because of their non-formal institutional method of regulating conduct, and thus they are effective even beyond the range of established environmental laws. Pichler and Gasparaikova (1999: 76) made this point as follows: "The acceptance and observance of moral norms [in contrast to formal laws] is not able to be enforced ... by state power. However, the problem of order is not solved only by government power, but is linked to the citizens willingness to participate voluntarily". Effective compliance presupposes basic morality. Hence, it is essential that adequate incentives be in place to cultivate and facilitate basic human morality as a foundation for regulatory institutions and measures. The complementary aspect of this sort of approach to issues is therefore likely to make formal regulation easier and much more efficient. In this case, emphasis on public awareness with regard to environmental issues will do well to dwell more on this moral dimension.

In addition, the moral dimension is not only concerned with contracting parties in any environmental action but it goes beyond mere compliance with environmental regulations. It extends its concern to all those who are potentially affected and, in turn, these people become deserving participants. This stems from the demands of environmental justice and the right of every citizen not to be harmed.

The objective of this study, therefore, is to focus on the need for a more explicit and a more adequate emphasis on environmental ethical principles in policy documents, education and media coverage on environmental issues. The underlying assumption involved is that people have a desire to act morally even if they sometimes define their conditions in ways that preclude moral action. The focus on ethical consciousness, therefore, involves an appreciation of this important human dimension as a significant motivating factor and facilitator of cooperative action.

1.5 Methodology

The environment is a subject of inter-disciplinary inquiry drawing necessary input from the natural and social sciences. While such data and knowledge are vital, in addition to analysing the basic assumptions, concepts and theories involved, a philosophical critique examines the values that particular methodologies and approaches espouse. Thus, the approach and discussion of issues in this study has been carried out with a view to offering a philosophical critique of the general approach to environmental issues in Zambia with a special emphasis on the ethical domain. Apart from some back up interviews that were conducted with relevant key

informants on the Zambian situation, this study was largely dependent on secondary sources of data for information both in the global and the Zambian context.

1.6 Limitations

The limitations of this study have arisen mainly from issues of methodology as alluded to above. Consequently, this study is not comprehensive in the sense that it does not attempt to offer a detailed analysis of every aspect of our environmental problems in Zambia. It has acknowledged the main areas of environmental concern as outlined in the National Environmental Action Plan (NEAP) of 1994 and the detailed analysis of the same that followed in the State of Environment in Zambia 2000. While such data and statistics from these and other relevant documents has been very helpful, only brief reference has been made to some of these issues in some sections of the discussion. In addition, other limitations in this study are partly due to drawing heavily on secondary sources, some of whose contents may be outdated or may have been overtaken by events. Hence, what is presented here should be better understood mainly as a reflection on some general and overall trends in the manner in which Zambia has responded to environmental issues as opposed to presenting factual information that would reveal or represent the current situation. However, most of the problems cited here are real problems that cannot disappear until something serious is done to address the issues they raise.

CHAPTER TWO

THEORETICAL FRAMEWORK

2.1 Environmental Ethical Theories

Natural systems are ethically relevant as our understanding of these processes provides the background against which acceptable and unacceptable human activities can be determined. As we come more and more to accept the fact that we exist among other species that also depend on the earth's resources and systems, it has to be asserted that ecology remains no longer a scientific discipline only but is also ethically relevant. That is why we need an ethic that is informed by a theory about the nature and processes of the natural world. In the same way, science has to be guided by an ethic and a theory about human nature. The understanding is that mere knowledge on its own is quite unlikely to curb the manipulative tendencies of humans. Thus, there is still need to ensure that such knowledge about the world takes place within an ethically appropriate framework of established structures and institutions necessary for ensuring appropriate value systems, habits, and the regulation of human interaction with the environment. It is, therefore, important that an adequate range of ethical perspectives relating to the natural environment informs the conception of such institutions and structures.

Each of the theories to be employed in this study moves in on a more or less specific issue. The overall theoretical framework will consequently include the

following: a consideration of utilitarianism, value theory, deep ecology, 'Gaia hypothesis', the land ethic, natural law theory, rights theory, social ecology, ecofeminism, communitarianism, virtue ethics, the concept of stewardship, and finally deontology. All of these, however, are in one way or another related to the central issue of justice in the relationship of human beings to the natural environment.

2.1.1 Utilitarianism

In its classical form, and as expounded by Jeremy Bentham and John Stuart Mill, utilitarianism identified well-being with happiness, and happiness with pleasure and the absence of pain (cf. Benson, 2000: 38). This is what is referred to as hedonistic utilitarianism as it focuses on pleasure and pain. There is also what is referred to as preference utilitarianism which counts preference satisfaction as the good to be maximized.

However, the general principle behind utilitarianism is utility satisfaction, i.e. maximizing the balance of good over evil with the best overall long-term consequences for the majority, or for everyone in terms of general welfare. Environmental concerns in this case have focused almost exclusively on human welfare and, in principle, in the conviction that harm to human beings currently living and to future generations should be avoided. It is also in principle extended to other sentient animals on the hedonic basis that they are capable of experiencing pain or pleasure.

The utilitarian framework, and the cost-benefit analysis approach it has inspired, have been the most dominant in the conventional approach to environmental issues. The cost-benefit analysis method attempts to determine the best decision by putting the costs and benefits of each alternative in monetary terms so that all alternative proposals can be compared mathematically (cf. Wenz, 2001: 292). In other words, this approach places great emphasis on the instrumental value of the measures and action to be taken. Utilitarianism also allows discrimination or inequities if it is believed that such inequities are a result of trade-offs intended to promote the common good or general welfare. It is, however, doubtful if this strategy always results in increased general welfare for everybody (cf. Low, 1999: 81).

2.1.2 Value Theory

The value theory is important in understanding the nature of value itself, as well as in evaluating approaches to the natural environment. According to Angeles (1981: 310), "value is the quality of a thing which makes it desirable, desired, or an object of interest." Consequently, anything that has value is good or is 'a good'. Thus, according to Frankena (1973: 81), saying that something is good means that we are commending it, with the implication that we are doing so on the basis of certain facts about it. However, and as Rolston (1988) noted, things never have value generically but rather have specific kinds of value, and hence the relevance of the distinction between three different kinds of value: instrumental, inherent and

intrinsic. Any approach or ethical theory will by design or by default tend to give greater, if not exclusive, emphasis to one or the other.

Instrumental value refers to the use value of something. In other words, instrumental value is about how useful the natural environment and its elements are, for instance, in terms of habitat and food for living things and in particular for human beings. Inherent value, on the other hand, involves a two-way process. It is about what sort of experiences the interplay between the characteristics of something and the appreciative capacity of the subject tends to bring about. Consequently, appreciation of the object that has afforded the subject such an experience requires that the object be not destroyed if such an experience is to be enjoyed again.

Intrinsic value is sometimes used interchangeably with inherent value although there is an important distinction between them that needs to be recognised. Intrinsic value refers to the objective properties and characteristics of something. It is a kind of self-sufficient value that makes the bearer valuable in its own right and for being what it is. Hence, the natural environment has intrinsic value independently of its use to human beings. Consequently, an almost exclusive focus on the instrumental value that we impute to the natural environment, or to some of its elements, is not always ethically acceptable. In fact, it is not sufficient to adequately account for our ethical obligations towards the natural environment.

2.1.3 Deep Ecology

Arne Naess (1973), as cited in Palmer (1997: 40), observed that environmental concerns that were primarily concerned about human welfare constituted what he referred to as "shallow" ecology. "Deep ecology", on the other hand, raises fundamental concerns and questions about how human beings have tended to relate to the natural environment in that scenario. Deep ecology, therefore, refutes the tendency by people to regard themselves as separate from or above nature. Of major concern is the fact that this perception has led to attitudes and values that have undermined the true appreciation of the real value of nature and our dependencies on it through our intricate relationships to its various systems and elements. These tendencies have in some ways undermined efforts to address environmental problems. As a result, deep ecology places much emphasis on the intrinsic value of the natural environment as well as on the intricate relationships and interdependencies between its various elements. Thus, its holistic approach is surpassed only by the Gaia hypothesis of James Lovelock which portrays the whole planet as an 'organism' capable of regulating itself.

2.1.4 The 'Gaia Hypothesis'

For the Gaia hypothesis, the whole earth is a community that in fact is both creative and energetic. As Palmer (1997: 70) notes, Lovelock asserts that "all constituents of the earth, including non-living elements, oceans, atmosphere and rocks are part of the self-regulating system that keeps the earth inhabitable for life." Consequently, the whole planet is where the real value rests since all living beings

and species depend on the natural environment it provides. Above all, it is intrinsically valuable in the sense that it exists independently of human beings and is capable of regulating itself. The Gaia hypothesis offers an attempt to arrive at an intuitive grasp of the whole earth as a system that particular human perspectives have tended to fragment. It also enhances our understanding and appreciation of global concerns about environmental matters.

2.1.5 Leopold's Land Ethic

On the basis of evident dependencies and inter-relationships of the various natural elements, especially in a particular area or region, this approach advocates for a holistic approach in environmental matters. It suggests that instead of just looking at how human activity affects individual elements, more emphasis should be on how they affect the whole. In Leopold's understanding, the entire land (region) should be seen as a 'biotic community'. Leopold's land ethic takes a regional perspective, hence his famous dictum that "a thing is right when it tends to preserve the stability, integrity, and beauty of the biotic community. It is wrong when it tends otherwise" (Leopold, 1949: 224). Many, indeed, have tended to see this as a definition of environmental ethics.

2.1.6 Social Ecology

Murray Bookchin (1970), as cited in Palmer (1997: 36), observed that the source of environmental problems lies in how society is organized and, specifically, in how human beings relate to one another where such relationships are characterised by dominance and oppression. Social ecology attributes environmental degradation significantly to exploitative relationships both among humans (between rich and poor) and between humans and the natural environment. Social ecology therefore calls for the reshaping of social institutions and relationships in a manner that would ensure harmony and equity in society if there is to be harmony between society and the natural environment. Social harmony in this regard is seen as necessary to the existence of harmony between humans and the natural environment. Hence, one perspective within social ecology suggests that there is need first of all to tackle social inequalities before any attempts are made to address environmental problems, whereas another perspective suggests that both issues can and should be tackled simultaneously.

2.1.7 Ecofeminism

In somewhat parallel fashion to social ecology, ecofeminism attempts to draw attention to the plight of women by linking it to that of the natural environment, and thereby arguing that these are twin oppressions. They are both significant indications of the oppressive and exploitative tendencies on the part of the male folk, particularly in patriarchal societies. Similar to the two approaches that are identified in social ecology, one perspective in ecofeminism would insist that an

adequate solution to environmental problems is conditional upon the empowerment and emancipation of women, while the alternative is that these issues must be addressed simultaneously. The point to be taken from this latter perspective is that the exploitation of women and environmental despoliation are issues of equal and related concern.

2.1.8 Communitarianism

The need for cooperative effort and action has been very much emphasized in issues of environmental awareness. It is also acknowledged that, on the basis of established relationships, communities are much more highly motivated and better placed to implement the action needed to take care of their local environments and resources. In this regard, commitment to community life is a significant requirement as community participation is very fundamental as a result of the recognition and appreciation of the fact that meaningful lives for individuals is only possible in communities. Hence this approach thrives on the acknowledged value of community. According to Edmond Burke as cited by Shlomo and Auner (1992: 2), "community should be seen as a partnership not only between the living but between those who are living, those who are dead, and those who are to be born". It is also in this setup that significant moral obligations have arisen and continue to expand as nations come to be increasingly conceived as belonging to one global community.

2.1.9 Virtue Ethics

Generally, a virtue is an admirable quality of character that facilitates good conduct and responsible behavior. In particular, it is a moral habit that develops after repetition of the same form of behavior and usually as a result of some form of instructive teaching or guidance. This approach focuses on the need to promote good moral habits and ultimately behaviour that would enhance good environmental practices and management. It therefore recognizes the significant role that good moral character plays in human conduct and behaviour and the fact that environmental management and practices finally boil down to issues of behaviour patterns and conduct. It is also crucial in the obvious sense that the responsibility for the environment, and ultimately for the planet, rests with human beings who need to recognize the imperative to keep their destructive activities in check.

2.1.10 Stewardship

Informed by various perspectives to the extent that the earth is not just for us to use for our own benefit, but to be looked after, this concept asserts that people should accept the responsibility to take care of the environment. In religious terms, this responsibility is owed to the Creator to whom the world belongs. In secular terms, human beings owe it to the future and to future generation in particular to care for the earth, as natural resources are indispensable to the sustenance of life on this planet.

Admitting that we do not unconditionally own parts of the planet in any absolute sense, but only hold them in trust, should naturally lead to an ethic of environmental concern and care for the natural environment (cf. Connelly and Smith, 1999: 11). Thus, as much as we have the right to satisfy our basic needs, we are at the same time responsible for the survival and well-being of the natural environment as well as for future generations.

2.1.11 Natural Law Theory

Natural law theory is one of the oldest approaches to ethics. It was partially informed by the order and regularity of events in the natural world. Attempts to understand events in the natural world culminated into some kind of understanding that the natural world operates according to 'laws' of nature. From the human point of view, it meant that many such events are 'teleological' or goal-directed.

Natural law theory is also based on the belief that there is order and purpose in the human world. Central to this approach is the distinction between conventional law and natural law. As opposed to conventional law, natural law is derived from the natural order of the world and from the in-built tendencies of the human world (cf. Miller, 1987: 490). In relation to moral issues, this is taken to imply that human beings have the potential to discern how to live properly in harmony with others and the natural world by abiding by the rational and moral principles discoverable by reason. In the same vein, natural justice and basic rights are believed to derive from the nature of human beings (cf. Lomasky, 1987: 104).

Issues of justice arise in environmental issues with regards to questions about access to resources. Furthermore, the distribution of benefits and burdens has been the most dominant theme in environmental justice with regard to environmental degradation. Justice is also expected to take into account the issue of future generations. In view of the widely accepted obligation not to deprive others or to cause harm, environmental justice is essentially linked to rights and duties. It emphasises that the duty not to cause harm should not be restricted to human beings but should be extended to animals and to the natural environment. As Principle 1 of the *Rio Declaration* states, "human beings are entitled to a healthy and productive life in harmony with nature" (cf. Attfield, 1999: 155). Consequently, the right to satisfy our needs is closely tied to a duty not to harm the natural environment.

2.1.12 Rights Theory

Rights are widely understood as claims or entitlements which individuals have against each other, or against the state, or other relevant institutions. Rights can be mainly of two different kinds: basic (moral) rights and legal rights. According to Lomasky (1987: 104), legal rights depend on the nature of existing legal provisions and therefore are highly specific in terms of what privileges they entail, and what penalties will face the violators. This contrasts sharply with the open-ended nature of basic rights where such rights have not been provided for or codified in some legal statutes. As Attfield (1999: 80) noted, "human beings have moral standing, and are bearers of autonomy and other intrinsically valuable activities; indeed, for

any defensible ethic, they are holders of moral rights". Although moral rights in this sense cannot be extended to the non-human world, legal protection of animals, forests and some parts of the natural environment appear to grant them a legal right.

However, the recognition that we have to co-exist with these elements is what is crucial. It is also important to appreciate that these elements have their own intrinsic value especially by virtue of their in-built tendencies to flourish on their own and to replenish their own kind. In this context, there can be talk about "moral considerability" or a "good-of-its-own". Thus, a "biotic right" to exist, to flourish and to remain where they are against undue interference can be conceded when all other and competing issues have been taken into account.

According to Audi (1995: 213), "a duty is what a person is obliged or required to do". Furthermore, Audi points out that a duty can either be positive or negative. A positive duty is where one is required to do something, while a negative duty is where one is required to refrain from doing something. Incidentally, most of the duties that human beings have toward the natural environment are negative. In other words, we have a duty not to harm other living things and not to destroy the environment.

2.1.13 Deontology

Drawn from traditional human ethics, the deontological approach contends that such a duty or obligation to look after the natural environment should (on the Kantian basis) be accepted by all rational beings irrespective of the benefits that may be conceived or are likely to arise therefrom. For instance, following this approach, we could say that conservation or preservation of the natural environment is the right thing to do as a matter of principle irrespective of what we stand to gain for ourselves by doing so.

The 'categorical imperative' of Kant that human beings should never be treated solely as a means to an end but always at the same time as ends in themselves might also be extended to the non-human world in view of judging its intrinsic value. An extreme statement of this is that "the value we attach to ecological phenomena is of the same kind as the value that we attach to human beings, and the problem of explaining its nature is no greater in the one case than in the other" (cf. Coker and Richards, 1992: 17). This view is plausible as long as it does not plunge us into absolute egalitarianism with no standard for addressing the relative importance and needs of humans as opposed to other elements of the natural environment. It is questionable, however, whether we can speak of the same kind of value with reference to human beings and the non-human world.

2.2 Literature Review

To start with, given that no extensive studies or papers have been done in the Zambian context in the field of environmental ethics, it is imperative at this stage to just review the development of thought, principles and fundamentals in the area of environmental ethical theory. As Wenz (2001) noted in a preface to his book *Environmental Ethics Today*, many views are introduced in this discourse and most of them endorsed if they have merit. While individual perspectives may be limited, they do highlight helpful dimensions of different aspects of the natural environment and human involvement. The danger, however, is in applying them too broadly in cases where they are not sufficient to account for all the aspects involved. Hence, in view of the multiplicity of issues inherent in environmental matters and concerns, satisfactory handling of these matters would be better served by discerning a suitable combination of perspectives. In other words, building a cumulative case with collaborating views and evidence that would give an informed and fairly balanced account is preferable.

It has to be pointed out here that our obligation to the natural environment is not an extension of traditional ethics *per se*. This has been challenged on the basis of certain criteria such as mutually reciprocal obligations pertaining to rights and duties, and appeals to 'sentience' (i.e. the capacity to feel pain) that could not be extended to all elements that we are actually concerned about in environmental issues. Hence, the bold premise to be made in this regard is simply that, beyond the animal kingdom, the recognition of value is the basis for human obligations.

According to Lonergan (1970: 601), "...it is in rational, moral self-consciousness that the good as value comes to light, for the value is the good as the possible object of all rational choice." However, as Bilimoria observed, "perhaps the overly cognitive emphasis betrayed in the concept of self-rational consciousness overlooks the connotative, affective and subjective dispositions of human beings" (cf. Oruka 1994: 341). The observation being made here is that we normally tend to feel deeply about things that, depending on our attachments, are valuable to us. One of the things we value in this way is the conservation or preservation of certain elements and areas of the natural environment. It is because of the element of choice that we may appear to be selective about what we acknowledge to be valuable.

One challenge within environmental ethical theory is where to locate such values, a job that is done unreflectively in ordinary life. It is important that the relevant facts are available and well understood. In the realm of environmental questions, ecology is one of the discipline that attempts to provide such pertinent facts. According to Rolston (1988: 197):

What humans [should] value in nature is an ecology, a pregnant earth, a projective and pro-life system in which (considering biology alone, not culture) individuals can prosper but are also sacrificed indifferently to their pains and pleasures. ... From the perspective of individuals there is violence,

struggle, death, but from a systems perspective, there is also harmony, interdependence, and ever-continuing life.

One major insight gained from Rolston (1988: 192) is that value is generated in a system. John Clark also acknowledges that, "systemic value is the productive process; its products are intrinsic values woven into instrumental relationships" (in Zimmerman, 1993: 348).

This, however, does not mean to say that individuals do not have any value. As Rolston himself pointed out, individual organisms are valuable as spontaneous natural systems. Individuals are intrinsically valuable in this sense. Given that they are environmentally situated is reason enough to acknowledge their biotic 'right' that would warrant the use of the term 'interference' when they are tampered with, or hindered in some way, or destroyed. Such eventualities may sometimes be inevitable or necessary but, with regards to human activities, there are instances when we can safely say that it was unnecessary or unacceptable.

It is correct to assert, as Elliot (1995) suggested, that it is not necessarily the object that is worthy of respect; rather, the point is that the value that the object manifests must be respected. However, and by implication, this gives objects some sort of immunity since value is mostly adequately respected by not interfering or abusing the objects that exemplify it.

Species cannot be accorded the same kind of consideration as that given to an individual organism. However, the value of a species is quite significant in its own right as it transcends particular individuals. In this regard, the destruction of individuals becomes an issue of special concern whenever it threatens the continued existence of a particular species. It should be noted, however, that the value of a species is attached to the ecosystem in which it has an ecological role to play.

As human beings, we have certain basic obligations and responsibilities for the environments we live in. As Clark rightly pointed out, "humanity's role in nature results from its inextricable interrelationship to the biospheric whole, and from its character as the most richly developed realm of being to emerge thus far in the earth's evolutionary self-organization" (cf. Zimmerman, 1993: 348). Consequently, environmental ethical consciousness is the ultimate result of accepting the responsibilities implied by our being and is, as Clark puts it, "nature rendered self-conscious" (ibid.: 348).

As opposed to the basic criteria invoked in traditional inter-human morality where the 'subject' takes the centre stage, in environmental ethics, as Rolston (1988: 106) expresses it, "we defend an objective morality, one with a focus on objective life. Environmental ethics is not only an affair of psychology but of biology."

Bioregionalism is a form of communitarian perspective that suggests that people can be motivated and empowered to take care of the conservation needs within their local environments far more easily than trying to pursue such matters on the global scale. It is also in this perspective that the relevance of good cultural values for environmental management comes to light. In his article, 'The Cultural Approach to Conservation Biology', Norton (in Benson, 2000: 150), puts this point clearly as follows:

Cultural attitudes determine the values we express and pursue. If we develop a healthy attitude toward nature and experiences of nature, we will act to save wild species and eco-systems. [In fact]...all cultures relate to nature and derive symbols from the unique communities of wildlife that grace their countryside. Further, if we believe in evolutionary theory, all cultures [as natural law theory emphasizes] have evolved in the context of natural systems and can learn their place in the natural world by paying attention to their natural heritage.

Ethically, the focus on 'bioregionalism' is also an attempt to avoid environmental injustices that may arise from the effects of global capitalism on environmental resources and human habitats. It carries with it an imperative for the local people to take care of their own particular environments. As Northcott (1996: 300) rightly notes, "bioregionalism involves a new relationship between the factors of production and local conditions of the environment and of human welfare so that feedback from the degradation of either occurs quickly and locally."

According to Seshamani (2002: 14), "by ignoring customary laws that acted as controls in the exploitation of natural resources [and by imposing alien laws], colonial intervention alienated communities from their resource base and has fostered practices that are deleterious to the environment." In addition, he has also acknowledged that alienating communities from direct ownership and management of resources, and ignoring indigenous knowledge systems in the wake of modern knowledge, has had some serious repercussions on environmental management. Furthermore, the relationship between Government natural resource managers and the local communities was constrained by conflicting expectations, suspicion, and consequently confrontation.

The involvement of local communities in the management of natural resources is essential to their conservation. Initiatives such as Community Based Natural Resources Management (CBNRM) are crucial for strategic and responsible partnerships between local communities and government. For instance, many commentators have highly commended this kind of arrangement in the Lupande Game Management Area in the Lwangwa Valley involving government agencies and the Kunda people. Hence, we read:

It has been remarkable how well communities have responded to the trust placed in them. Most projects are well under way, and are certainly being implemented faster than before. Communities and committees meet regularly to report progress. Financial management is improving. Poaching is reduced because people see a tangible value in wildlife for the first time.

(http://www.africa-insites.com/zambia/travel/lird.htm 2001)

The concept of CBNRM has now been extended to other sectors such as forestry. However, sensitization and real empowerment of local communities is crucial to the long-term success of such undertakings. However, as a first step, it has played a significant role by refuting the impression that natural resource management is the role of Government alone. In addition, such a move has to be commended in the sense that it has the potential to challenge local communities to be more organised and to accept responsibility willingly.

In the State of Environment in Zambia 2000 Report, it was recommended that "to ensure the national policy and subsequent strategies are effective, the policy must be formulated on the basis of a clear understanding of the inter-relations between ecological, economic and socio-cultural aspects of the environment" (ECZ, 2001: 146). As Binns (1997) noted, the relationship between people and the environment in the context of poverty is quite pertinent as most of the poor people depend on agriculture or live and work in close contact with the environment in order to earn a living. Consequently, food security is an essential part of any sustainable natural resource management efforts.

Chidumayo (2002: 33) has also acknowledged the link between social problems and environmental degradation by stating that "poverty can contribute to environmental degradation while the latter can perpetuate poverty. Hence, poverty reduction can be viewed as a strategy for sustainable environmental management." Unfortunately, as Chidumayo further notes, in spite of the various policy measures and legal instruments that Zambia has instituted, not much has been achieved in practice to reduce impoverishment of the people and the environment. Furthermore, he has acknowledged that the conditions for sustainable development are to a large extent lacking in Zambia as the majority of the people, in view of the poverty situation, are unable to meet their needs and are lacking the freedom to fulfill their potential. While poverty stricken people can sometimes act in ways that would appear, and are in some cases morally unacceptable, what they may need is not necessarily moral improvement but social reorganization of institutions that command resources and opportunities in a manner that would alleviate poverty and restore people's dignity.

Their predominance in the informal sector, especially in petty trading and street vending, and their higher levels of employment as unpaid family workers or underpaid farm workers all together contribute to their vulnerability to poverty (Seshamani, 2002). The empowerment of women in terms of participation in decision-making can help in conserving resources as well as in harnessing the indigenous knowledge that women have acquired. It has been constantly observed

that women are more knowledgeable than men where knowledge of indigenous wild species of various plants is concerned.

With specific reference to the Zambian situation, there is an indication that some ethical issues have been raised. However, these have not been raised or explained on the basis of elaborate ethical perspectives. Consequently, there is a general weakness in terms of satisfactory criteria for identifying the problems. In turn, there may be lack of adequate guidance in terms of the overall direction of solutions to problems. For example, although the question of poverty in relation to environmental management and environmental degradation has been raised, the issue of how the poor are being treated by the politico-economic system and by the rich - as observed by social ecology in the context of environmental issues - has been overlooked. The plight of women has also been discussed in most cases merely as gender imbalance as opposed to injustice.

Above all, the main danger is posed by the tendency in most of the solutions that have been put forward to reinforce the utilitarian framework in the economic sense. Consequently, it is implied that when the poor or women are empowered, they will also exploit others and the natural environment for their own private gain. In other words, if their individual problems are solved, they will also operate within the same current political and socio-economic paradigm which is the major problem in the first place.

CHAPTER THREE

GLOBAL ENVIRONMENTAL AWARENESS

The challenges that have been brought about by the cumulative effects of human activities, especially on the global scale, needed well-equipped, informed and highly articulate minds to awaken the global community. Environmental awareness has continued to gain momentum from the time of pioneering works even though it is seriously lagging in many cases when it comes to initiating appropriate action. Early significant works on these issues include the following: Rachel Carson's *Silent Spring* (1962) which was basically an exposure of the dangers of indiscriminate use of pesticides as involving the destruction of wildlife thereby tampering with biodiversity and the progressive poisoning of human habitats (cf. Becker, 1997: 33). In addition, *The Population Bomb* (1968) by Paul Ehrlich, "marked the end of an era of almost total ecological naivete' in the modern Western world" (cf. Christian, 1994: 435).

The concern about resource depletion and its implications were significantly highlighted by the 1972 report of the Club of Rome, *The Limits of Growth*. The issue was put across in the context of economic growth, industrialisation, population growth, the deteriorating environment and the impeding collapse of ecological systems. It is still debatable as to whether such a danger has been averted or just postponed. For instance, whereas innovations in agriculture have helped to satisfy the demand for food in certain areas thereby evading some of the fears that

were raised, such innovations have also introduced new problems on a wider global scale.

In spite of such concerns being voiced, responses to environmental challenges have not been adequate, perhaps because we are trapped by established traditions, technologies and institutions and, as a result, environmental problems have continued to increase. The cumulative effects of these problems have led to global environmental challenges. One important realization that has emerged out of global environmental awareness is the understanding that environmental challenges cannot and should not be left to politicians and industrialists alone.

The disparities between the developed North and the developing South as reflected in the economic, social and political relationships between the two fronts has tended to entrench environmental problems. The South has acted as the supplier of raw materials (in most cases at the expense of the environment) to support industries in the North. In reverse, the North exports some of the finished products to the South. This trend is much more pronounced in industries such as agriculture and mining. For example, the encroachment on the rain forests in Brazil in order to satisfy the demand for soya beans and beef in the North has attracted widespread concern.

The rising costs of production and stringent environmental regulations have also seen some businesses relocating from some countries in the North to the South where some countries still lack clear and adequate enforcement of environmental regulations. The quest for foreign investment as a result of the perceived need for development has in some cases seriously undermined the capacity of national governments to set adequate environmental standards. Some of the issues institutions such as the World Trade Organization (WTO) are concerned about with regards to trade may also divert real attention from environmental concerns.

These trends in the global arena have also hindered swift administration of the requirements of some of the landmark agreements and treaties. For example, banned substances and environmentally objectionable technologies have continued to flow from the developed to developing countries. Consequently, the South acts as a dumpsite in addition to being the significant source of raw materials. Second hand technologies such as cars, heavy industrial equipment and computers which, in their countries of origin, have now become 'junk' because of the high rate of obsolescence, find their way to developing countries in the name of aid or trade. In the same way, harmful substances such as pesticides and other chemicals have continued to pile up in developing countries.

The relationship between the developed and developing countries has also in most cases contributed significantly to armed conflicts in Third World countries, and in Africa in particular. While actual combat has its own environmentally destructive aspects, the looting of natural resources that has characterised war situations is a major source of concern as the same resources are in fact used to buy

illegal arms that perpetuate and make these conflicts much more destructive. Consequently, the disruption and displacement of people has brought untold misery and suffering, and has posed significant environmental challenges to countries hosting these people as refugees going by the levels of environmental degradation that have been witnessed in most refuge camps and in the areas close by.

Overall, the North-South relationship has in most cases been a significant hindering factor in reaching consensus on some of the pressing global environmental challenges. This is partly because environmental problems in the two zones arise from different factors such as industrial affluence in the North and economic reforms, developmental projects and rising populations in the South.

The global character of air, water, winds, international trade, and the cumulative effects of what is happening everywhere have generated regional and global environmental challenges. Global warming and climate change, ozone layer depletion, resource sustainability and pollution are some of these challenges that have been too visible to go unnoticed.

Global warming is one major source of concern with regard to global weather systems, climate change and terrestrial implications such as the melting of polar ice and rising sea levels. The large-scale consumption of fossil fuel in industrialised countries is largely responsible for this. International efforts to curb carbon emissions culminated in the Kyoto agreement in Japan in December 1997 which

allotted emission quotas to various industrialised countries based on their 1990 emission levels. There was also provision for trade of quotas between countries. A general concern about this arrangement, however, is that treating historical emissions as the basis of quotas may only reward the bigger polluters. Although this may have proved to be the only basis for agreement, it is important to appreciate that the problem is not only the possibility of an increase in carbon emissions but that these historical levels themselves are unsustainable. Hence, reducing carbon emissions is still a challenge that nations need to face up to. It is however, unfortunate that big polluters such as Russia have not ratified this protocol while the United States has been reluctant to reduce its consumption of fossil fuels. In fact, the Bush administration has pulled out of the Kyoto agreement.

Another issue on the global agenda is stratospheric ozone layer depletion. Because of its protective function against harmful radiation (i.e. ultraviolet rays), a hole in the ozone layer or its thinning means that a lot more people are exposed to the risk of skin-cancer and other related ailments. Animals and other living organisms are also significantly under threat. The effects of chlorofluorocarbons (CFCs) on the stratospheric ozone and the consequences for human and other species came to light in the 1980s. As a result of agreements brought about by the Montreal Protocol in 1987 in Canada, and later reinforced in London in 1990, an international treaty ensued aimed at phasing out the use, trading and consequently the manufacturing of these substances. These measures have shown significant

results, though adequate monitoring may be difficult. It is expected that, with no more interference, the stratospheric ozone can replenish itself.

On the ground, the problem of waste is a continuous one particularly in areas that do not have adequate facilities and the institutional capacity to manage the problem. Nearly all human activity and enterprise produces some kind of waste. Solid waste, especially that which is not biodegradable and where, apparently, recycling has not helped very much has reached unmanageable proportions in most developing nations, particularly in poor suburbs.

Hazardous or toxic waste is much more problematic and is noticeably produced mostly by industrial and nuclear processes. It is noted that nuclear waste is much more problematic as it can remain highly dangerous for many thousands of years. Worse still, there are no methods for neutralizing if at the moment and hence there are no safe ways of disposing of it. Therefore, the disposal of such waste anywhere in the environment still poses grave danger.

Another issue of major concern is the rate at which resources are being depleted. In many parts of the Third World, there is pressure on land partly due to rising populations and, in some cases, due to poor land distribution. These are some of the issues that have prompted the international community, governments and civil society to initiate certain responses in an attempt to help in resolving the problems.

The earliest significant landmark step was the Stockholm Conference in 1972 where the relationship between development and environment was stressed to the point that you cannot have development at the expense of the environment. In 1987, the Brundtland report attracted a lot of attention under the title *Our Common Future*. It is this work that significantly refined and popularized the notion of sustainable development. The subsequent Rio Conference (Earth Summit) in 1992 set forth an ambitious programme of action called 'Agenda 21' as a blueprint for implementing sustainable development.

The definition of sustainable development in the Brundtland report as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" was rather anthropocentric, i.e. human centred. However, there are some interpretative difficulties with this definition, particularly with regard to its key term, "needs". We can safely infer that the term was used to refer to basic human needs. Nonetheless, human desires and appetites have continued to vary with levels of economic prosperity and as induced by technological innovations and the corporate business culture. In other words, the distinction between "needs" and "wants", i.e. things that people can do without, has been undermined. Whatever the case, the concept of sustainable development still demands that such a drift in terms of human needs should not be at the expense of the environment. If it happens otherwise, as the case is in practice, then it is imperative that we review our current and future human inclinations and demands.

Hence, it has been emphasized that sustainable development should be founded on respect and concern for both people and the environment. This therefore challenges the conception of sustainable development in purely economic terms.

On the same path as the previous Summits, the latest World Summit on Sustainable Development (WSSD) was held in 2002 in Johannesburg, South Africa. Unfortunately, for all its status and splendour, the Johannesburg Summit has in large part been another failure in the history of global Summits. The UN Secretary-General, Kofi Annan, is also reported to have admitted that the ten-day Conference had not achieved all that had been hoped for (*Sunday Times of Zambia*, September 30, 2002). The common observation is that the Summit was a failure because of the absence of targets for the implementation of protocols and commitments for the protection of the environment in the final plan of action. Some of the negatively affected areas include protocols on climate change, the promotion of renewable sources of energy, and poverty alleviation.

The Summit, however, endorsed a final plan of action aimed at tackling global problems such as HIV/AIDS, and biodiversity loss, particularly in terms of depleted global fish stocks. In the final analysis, though, environmental groups issued a statement that the action plan from the WSSD 2002 would generally serve to strengthen an international economic and financial system that is incompatible with the goals of sustainable development, and thus would fail to protect the earth and the interests of the poor.

The concept of sustainable development as well as the manner in which it has been promoted has not been without criticism. As a result, it has been the subject of much skepticism and attack. While it has become fashionable for every environmental idea and forum to employ the concept, there are doubts as to whether development can really be sustainable given the present global political and economic trends. As noted earlier, there are still deep tensions and exploitative tendencies in particular between the North and South. Cooperative effort in this regard will require the rich nations to come to the aid of poor or impoverished nations as was clearly recognised in 'Agenda 21.' Issues of debt burdens on the part of developing countries and the unfair trade imbalances between developed and developing countries need to be addressed if sustainable development is to be feasible in the global sense.

At the core of sustainable development is the concept of sustainability which, in fact, can be examined in its neutral sense. As an analytical concept and as a general policy goal, it has been found much more convenient and useful than any other concept on environmental issues. As Pricern (1998: 395-411) notes, the analytical strength of the concept of sustainability in environmental issues is as a result of its two distinguishing features. Firstly, "the sustainability approach is systems oriented. A systems perspective compels the analyst and resource user to pay attention to both the biophysical and social systems and, in particular, to the intersection of the two systems." Secondly, the implication of the sustainability approach is that "all environmental problems are in some sense both local and

global. When everything is connected and the planet is finite, seemingly local activities cannot depend on an infinite supply of 'other places' or on an 'away' approach to throw wastes" (ibid.: 395).

The solace that some people have found in the two concepts of 'sustainable use' and 'substitution of resources' should be taken with some concern. The concept of sustainable use usually brings with it the distinction between renewable and non-renewable resources. The danger is to think that renewable resources cannot be depleted on the false assumption that they are being replenished as some are being used up. But with the inaccuracies involved in collecting data, it is difficult to calculate a reliable rate of consumption that can be really relied upon as 'sustainable'. In fact, if resources continue dwindling, or if the demand for the same increases, then that same rate cannot be said to be fixed. Hence, the recognition that even some renewable resources can be depleted is very fundamental. In view of the current environmental problems therefore, we should be wary of the distinction between renewable and non-renewable resources even though the distinction is valid.

The concept of substitution also raises some serious issues when it is held that, if a resource is depleted but a substitute is found or can be found, then there is no problem. Implicit in this way of thinking is the common assumption that resources are there to provide benefits to human beings and, as long as a substitute can be found for a depleted resource, then there is no loss. The problem with human-

induced depletion of any resource is that it is radical. Usually, it is not in tune with nature's systems and capacity to restore or introduce a new species in place of the one that has been depleted as the case may be with natural extinction. The notion of substitution will then also confront the fact that there are natural resources for which there are no substitutes at the moment, and perhaps there never will be. Besides, even knowing the constituent elements of some of these natural resources has not helped human efforts in finding replacements.

Selective attention may also blind people to the fact that not all natural resources are similarly substitutable. For instance, it is common to think that plantations may succeed in substituting for old-growth forests in terms of logging. Such an approach ignores the fact that the ecology and ecosystems that have been destroyed cannot be re-created. This practice has led to the reduction and loss of most indigenous tree species as more and more exotic ones are planted and replanted presenting a significant loss of value in the world at large and in the local communities in particular. Thus, 'man-made' plantations are unlikely to provide the same natural values and amenities, aesthetic pleasures or medicinal plants even to human beings, while acknowledging that other species and organisms also need the natural resources found in natural forests. What should be clear is that natural resources may normally perform several functions with a stream of benefits, some ecological and aesthetic, and others economic. In this regard, therefore, there are environmental needs to be considered just as much as there can be economic developmental needs.

Developments in biotechnology have contributed significantly in raising the biodiversity issue on the global agenda. The Convention on Biological Diversity that was launched in 1993 is still a source of issues that have culminated in "intense lobbying and negotiations aimed at securing international agreement on access to, and use of genetic resources for food and agriculture" (in PELUM, 2000: 28).

In the developing world, and for poor communities in particular, the conservation of biodiversity is a dire need. Of much more concern, however, is the fact that for many African communities, issues relating to biodiversity are not about commercial innovations; they are rather primarily about survival. As one farmer, Peter Kahito from Kenya, reportedly said: "[Although] we may not be able to explain with mere words about the importance of preserving our many plants, our very existence hinges on it. We must maintain our plants for our existence and the survival of future generations" (ibid.: 31). As a result, these people need all the protection and safeguards necessary to arrest the threats to biodiversity upon which their livelihood depends.

Generally, there is no shortage of evidence to back up concerns that exotic, alien species and genetically modified organisms tend to disturb ecosystems radically if allowed or introduced into the environment.

In May 2000, Kenya became the first country to sign the Cartegena Protocol on Biodiversity. "The protocol requires that countries exporting Living Modified Organisms (LMOs) provide detailed information to the importing country in advance. This is aimed at checking the threats posed by LMOs and is a major step toward protecting the world's biodiversity" (ibid.: 30). In addition, "the protocol further urges parties to ensure that risk assessments involving LMOs and GMOs are made in terms of the potential impact not only on health and environment, but also on the agricultural economies of the communities" (ibid.: 29).

The commercialization of biodiversity resources does not at the moment show any significant returns for Africa in general in terms of benefits to local communities, while industries in the developed countries have gained substantial economic advantage through 'bio-piracy', i.e., the use of genetic resources and species from Africa. There are also significant concerns that globalization and the so-called 'free trade' in agriculture and bio-resources pose serious threats and are of no benefit to the majority of Third World farmers as opposed to their counterparts in developed countries. This is so because of inequalities in terms of capital, technological resources, unfair trade imbalances and access to markets.

In view of the above, concerns about the application and accessibility of biotechnology, and their implications for local ecosystems and agricultural economies, are well founded. There are even wider concerns that the biotechnology industry is prone to seek a monopoly for commercial purposes, thereby significantly undermining the value of natural varieties that are readily accessible as these are seen to be in competition. Given such a trend, it is not hard to believe the

observation that the United States' opposition to the biodiversity treaty was on grounds that it amounted to a significant threat to its own global prominence in biotechnology (cf. Northcott, 1996: 311). Such dispositions do not pay much attention to safeguarding the culture and livelihoods of local people in the tropical areas. What is likely to continue, however, is the exploitation of indigenous knowledge and biodiversity through 'bio-piracy', and the imposition of significant restrictions through patenting.

3.1 Conclusion

Global environmental concerns seem significant, but the political disagreements among the major key players, i.e. industrialized nations, and the undermining of developing and poor countries have hindered the much needed progress in terms of addressing the issues in a fair and transparent manner. As Northcott noted:

Perhaps the greatest danger of international environmentalism is not so much the mirage of environmental control it sets before those who have economic and political power, but the illusion such meetings as the Rio Summit create that something is being done, that ordinary people and local communities have no need to worry, that transnational agri-business, ecocrats or the United Nations have already got the problem at hand" (ibid.: 311).

The euphoria that such events create has a tendency to mislead some national governments to look up to such frameworks as the most significant source of solutions to environmental problems at the expense of fully engaging the ordinary

people and local communities. This is made worse when some governments in the developing world tend to look at solutions to environmental problems solely in terms of aid and funding that is anticipated following the accepting or signing of such international agreements. While this may be partly justified, nevertheless, since such funding comes with its own perspectives on solutions, there is the danger of imposing alien solutions on local problems and on local communities that may not only be ineffective but detrimental as well.

However, and as the UNEP director, Dr. Toepfer, acknowledged, "the advantage of multilateral environmental agreements is that they enable us to think globally while empowering people to act locally" (PELUM, 2000). Not long ago, for example the Zambian Government with significant backing from civil society, rejected genetically modified maize that was offered by the United States on grounds consonant with the provisions of the biosafety protocol, and more specifically by adhering to the precautionary principle. This is the safest thing to do when the long-run consequences of the events that we are supposed to set in motion are not clearly known, and where such events are likely to be irreversible.

CHAPTER FOUR

HISTORICAL BACKGROUND ISSUES

The reason why there is so much concern about the natural world is that we depend on it and the environment it provides for our existence. We are obviously interested in and concerned about our continued existence as humanity. In this sense, concern about environmental degradation is not simply that we are concerned about the fact that we are destroying the environment but rather that, by degrading the environment, we are putting our own lives and our future in particular in jeopardy (Black, 1970: 141). What is at stake is enlightened self-interest on the part of humanity as a species. However, this is not sufficient to activate our ethical obligation to care for the natural world even though significant ethical obligations to our fellow human beings are feasible within this framework.

First of all, we need a deeper understanding of our relationship to the natural world that would be sufficient to ground our obligations. It is often said that the world does not belong to us but that we belong to the world. In the same vein, all the natural resources belong to the world and not to us. Alternatively, the natural world nurtures our existence and, therefore, it would appear that the most appropriate attitude toward 'mother earth' should be one of humility and appreciation.

relation to human beings. For purposes of comparative analysis, it is now necessary to discuss differences in two worldviews, namely, western and indigenous worldviews.

4.1 Western and Indigenous Worldviews Contrasted

At the core of the western worldview is the belief that, as human beings, we are separate from nature. There is also a certain strong conviction about our abilities to manipulate nature so as to make progress and make life much easier. As a result, the natural world has become something that is there to be exploited. Indeed, "for a westerner, land is basically an economic commodity, not a possession of his ancestors" (Gyeke, 1987: 166). From this point of view, one must exploit nature to the best of one's ability.

The western worldview has thrived on scientific and technological developments. However, the manner in which scientific and technological tools have been applied in some cases has not gone unquestioned or unchallenged. By evaluation and analysis, an understanding has emerged that science by itself, and depending on how it is applied, may be legitimate. However, as Nasr has pointed out, science and its application in particular have become illegitimate in most cases and even dangerous because of lack of an appropriate and higher form of knowledge into which science can be integrated (cf. Black, 1970: 20). This higher form of knowledge cannot itself be a product of science as it has to provide an ultimate evaluative framework. As it is, science does not provide any ultimate

answers, and neither is it meant to. This higher form of knowledge or evaluative framework is at best a product of human rationality which involves an interplay of reason and values which, in turn, translates into meaning derived from either understanding or purpose.

The denial of the relevance and role of values in science is at best just a denial of responsibility. But science does not have to operate like that. "[If scientists can be] aware that science cannot be neutral, and that facilities available to researchers reflect economic and political objectives, scientists will readily accept a share of the responsibility for their work" (Reid, 1995: 159). On the other hand, the attempt to insulate people from the effects of their technologies is also naïve, for technology, according to Barbour (1993: 3), is merely "the application of organized knowledge to practical tasks by ordered systems of people and machines." The involvement of people in these processes should necessarily include moral obligations and responsibilities. Technology cannot be separated from people and neither can it function without being applied. Recognition of this situation should further enhance the acceptance of responsibility for both the design and the application of technological inventions.

Central to the indigenous worldview as distinct from the western worldview is the perception of nature as purposive, alive and conscious, and as a natural home for the 'living-dead' or ancestral spirits. The natural world is traditionally perceived as a unifying factor between the past, the present and future generations. Such a view is, of course, held together by 'myth' and therefore should be valued not in terms of validity but as serving a significant social function.

Ntuli cites an example from his native area *Mpumalanga* in South Africa where a tree was planted where one's umbilical cord had been buried. He explains that "these two acts – the planting of an umbilical cord and a tree – symbolize both the earth feeding us and our duty to replenish the earth with our umbilical cords." He further notes that "to plant the tree is to create a link between one's ethnic group and the plant world, so that one is linked to nature" (cf. Gyeke, 1987: 167).

The weakness of indigenous worldviews, as generally observed, has been to take much of what the environment offers for granted, and to see it as an infinite source over which human interference has very little impact or influence. Hence, as one scholar summed it up, "environmental equilibrium to most of them has been, and will always be maintained by natural forces or without intervention by them" (in Boafor, 1993: 11).

In the global arena, the western worldview is the most dominant not only because of historical reasons, but also because the West has significantly utilized its dominance economically and politically to set the global agenda. Globalization and reforms that Third World countries were coerced to adopt have also aggravated the negative effects of capitalism. In the words of Engel and Subb (1990: 171), "a money economy has not only altered social relationships among people, but it has

also affected people's attitudes towards nature and natural resources." The challenge at national level is how to harmonize the western worldview with the indigenous ones in order to ensure that an adequate perspective on environmental problems and solutions is attained. This is one area in which the colonial governments and their capitalism failed to balance the issues properly.

One significant factor is the recognition that we are essentially part and parcel of the ecological communities and the natural environment is not there for us to exploit. It is unfortunate that some scientific and technological views have tended to either deliberately overlook or ignore the moral role and place of human beings in the scheme of things. This is in sharp contrast to indigenous setups where moral rules and norms played an integral role in almost every aspect of people's lives. The fundamental issue in environmental ethics stems from the fact that we should have the humility to live by certain naturally determined limits and socially determined rules. Hence it is a matter of concern when some of our activities lead to undesirable consequences on ecological systems and cultural perceptions of the natural world and our place in it.

There is an inherent danger when people relate to the natural environment primarily through science, technology and in terms of economics. When people fail to relate directly to the natural environment, they are not likely to appreciate their own individual relationship with it. Neither are they likely to appreciate the relationship between society and the natural environment. The more immediate

relationship is that identified with the economy, technology, and science and how these elements relate to the environment. The unfortunate thing is that the centre of value also shifts from the natural environment to these intermediary factors. On the other hand, responsibility is also surrendered to these factors which are expected to provide solutions to all problems. The human being is no longer in the saddle but is subsumed by the very forces that he or she has contributed to.

The argument to be made from the foregoing discussion is that to blame science, technology or economics for the environmental crisis is to fail to accept fully our responsibilities in the scheme of things, as well as in the shaping of these institutions. In the same vein, to emphasize economics, technology and science as our masters rather than our instruments in solving problems is also to miss some of the fundamentals of the problems. The restoration of harmony between nature and society that earlier human societies had maintained requires the re-cultivation of appropriate relationships within society, and between society and the natural environment. This may require radical social transformation (in terms of awareness and empowerment) and it goes to emphasize the need for more social input especially through active participation of local communities in decision-making in all issues that affect their environment and their habitats.

4.2 Historical Trends

"In the colonial days, because of its superior production techniques, capitalism was favoured as environmentally more efficient while the

indigenous peasant production, culture and way of life were dismissed accordingly as inefficient, poor and environmentally disastrous" (Molutsi, 1986: 40).

It is not hard to infer what efficiency in capitalistic terms would mean. It meant that the new techniques from the west were superior in terms of resource extraction, but not that they accomplished this process with less environmental damage than the indigenous ones. Environmental constraints in this context were in fact what were construed as environmental disasters and not environmental degradation *per se*. It must be admitted that most indigenous techniques were severely constrained by environmental conditions. Capitalism, on the other hand, came equipped with technologies superior to peasant techniques that were able to override most of the environmental constraints faced by the indigenous techniques in terms of resource extraction and general living conditions. Hence, colonial governments made it a point to transform indigenous systems, particularly those elements that hindered, or were not seen to be supportive of their economic goals.

The post independence period did not see much change except for the increasing role of the state in the management of resources supposedly for the people. The increasing role of the state in industrial development and reorganization arose from the perceived need to provide development to as many people as possible. In particular, the underlying assumption was that resources and the industrial

enterprises were too valuable to the economy to be allowed to go unsupervised or to remain in the hands of transnational corporations.

One major weakness in this regard was that the State did not step in primarily as a guardian of natural resources and against over-exploitation in particular. Rather, a developmental path on the lines of capitalism was pursued under the guise of nationalism. The challenge in terms of environmental management was that the State was, at the same time, the culprit and the regulator. Side stepping of informed opinion was very common in the pursuit of whatever was assumed to be in the interest of the nation. In short, wise natural resource utilization was threatened as state officials controlled both economic and political power.

At the onset of Zambia's Third Republic in 1991, reforms that could not take root in the Second Republic were urgently embarked upon as they were seen to be participatory and consistent with the new market economy. Apparently, privatization of resources, property rights reform, and the market mechanisms were seen as the real solution to environmental problems as well. According to the National Environmental Action Plan (1994), by privatizing ownership, the government intended to make incentives to resource users more closely tied to returns from the resource, and it was hoped that this would ensure greater efficiency in a well functioning market.

Consequently, instruments that were expected to bring about efficient utilization of resources - in the hope of creating more wealth in view of the perceived need to develop - basically characterized the approach to perceived solutions to environmental problems. This is deducible from the items listed under the requirements for sustainable development in the National Environmental Action Plan's framework, namely, economic liberalization, property rights reform and privatization. Furthermore, it was pointed out that "in the move to a market economy, government will have to rely on sound economic and legal instruments to achieve sustainable development and environmental management" (Ministry of Environment and Natural Resources, 1994: 16).

4.3 Bearing on Land Issues

The issue of land is very fundamental in environmental matters, particularly because "the non-human world primarily enters human calculations about resource use and distribution as land" (Northcott, 1996: 265). But as Northcott further noted, "so fundamental to modern culture and economic relations is the concept of absolute ownership that modernity tend to construct common land as inherently problematic" (ibid.: 191). This way of looking at land runs through current government bureaucratic and 'expert' economic thinking on land issues, particularly by putting blame on traditional common land as being primarily responsible for environmental degradation.

But the emphasis on private entitlements to land has to do with the perceived incentives and guarantees that are seen to facilitate economic transactions and investment. For instance, it is argued that security of tenure would encourage investments. However, security of tenure is not entirely lacking under traditional land tenure systems except that even when land is entrusted to the individual, it still belongs to the community. The only difference is that while there is legal security under the leasehold system, administrative practices are rigid and prohibitive with regard to rates or rentals where a tenant and landlord are involved. When all these constraints are considered, it is doubtful if change of the land tenure system by transferring customary land to the State will emerge as an incentive for sound environmental management or the plight of the poor.

Under the leasehold system administered by the State, the so-called investor is usually given priority in sharp contrast to the principle operating under traditional systems where, while rights would automatically follow visible investments on land, there was also an element of giving priority to the most needy (Chiselebwe, 1976).

The current levels and nature of environmental problems in Zambia cannot be attributed to communal land tenure systems in large measure or, indeed, to the farming practices and activities of indigenous people. On the contrary, it is rather the treatment of land as an asset for economic purposes, and the loss of communal

control over certain resources to industry that have contributed significantly to the current environmental crisis.

This is a challenge for the local people who cannot cope with the rate and manner in which new land reforms are being introduced. As a result, they have tended to oppose such measures. For instance, as the Minister of Lands acknowledged, traditional leaders have outrightly rejected the new draft land policy without even bothering to suggest any changes to the document. The controversy over this issue was significantly highlighted later on when delegates to the so-called national *indaba* that was held in October 2003 in Lusaka failed to agree as to whether more traditional land should be brought under the jurisdiction of the State. It is reasonable to suppose that increasing population pressure and demand for private ownership of resources can only intensify the need to safeguard systems that allow the custodian role of communities to secure public interests from private demands. In the Zambian context, on the contrary, this situation was interpreted as leading to more political pressure to privatize resources. Nevertheless, it has been acknowledged that government needs to enhance and develop its regulatory capacity in order to safeguard the environment and public resources.

The State is not merely an apparatus for legitimizing and reproducing market forces. On the contrary, it has to be an institution which adequately reflects the short and long-term interest of the main sectors of the population. Therefore, the State and the planning authorities have fundamental and decisive responsibilities in

these matters. However, in view of so many concerns about government's capacity to play its regulatory role, this is still a source of concern. Otherwise, ignoring this by pushing more and more on the economic (free market) framework is rather self-defeating in terms of environmental management with regards to environmental integrity and welfare. Northcott (1996: 309) highlights the fact that "governments with a stronger sense of the need for social control of market forces have made much further advances in environmental reform". In this respect, Germany and Sweden are cited as good examples.

In principle and legally, all natural resources are vested in the State. Hence, people should come to accept the position of the State as the ultimate authority to which individuals owe a duty for the management and care of the natural resources entrusted to them (cf. Black, 1970: 75). This view also amounts to some form of a secularized version of the concept of stewardship. This notion, however, has been seriously compromised, particularly with regard to natural resources under private 'ownership'. Nevertheless, legislation and regulation have in some instances been used to ensure that the role of the State and public interest are not undermined. For instance, the Countryside Acts in British legislation stipulates as follows:

Access to the country is not to be restricted by private ownership. Land has a social value that can take precedence over the economic purpose for which it is primarily being used. Land is the heritage of the people and considerations of private enjoyment, no matter how long standing, are not to be allowed to stand in the way (ibid.: 84).

In an African traditional context, land belongs to the community for the benefit of the community as a whole and as individuals. It is recognized that the welfare of the community is as essential as the rights of individuals to improve their well-being. This is a central focus of communitarianism. Thus, the rights of any individual should not limit the land rights of the community or of other individuals superficially or unnecessarily such as may occur in the case of some absent landlords (cf. Chiselebwe, 1976: 57). The possession of huge tracts of land by some commercial farmers and private ranchers which are left to lie idle at the expense of landless people is therefore a source of concern.

One of the oldest concerns about property rights in relation to land in particular was raised by the French Philosopher Jean-Jacques Rousseau in his expose of the origins of inequality. According to Rousseau, the institution of private property and how it was established was a significant source of major inequalities between people. As Rousseau rightly observed, there is no real justification for any excessive possession of huge tracts of land that go beyond one's needs to the extent that some of it is left to lie idle. In this scenario, might (financially or politically) is right. However, it does not guarantee adequate security to one's possessions. Hence, seeking ways and means of protecting what the rich owned saw the extension of property law to common land. According to Rousseau, these developments "irretrievably destroyed natural liberty, eternally fixed the law of property and inequality, and converted clever usurpation into unalterable right" (cf. LaFollette, 1997: 107).

Even when property rights have become more legitimized in terms of land reforms and issues, they are far from being equitable and still favour the rich. This could be because such reforms are still emerging within a law or legal framework that is normally conceived by those who have interests to protect. It appears, therefore, that property rights in relation to land is a bourgeois concept that makes sense only to those who either have legal title or have the means to acquire it.

The philosopher John Locke attempted to give a philosophical account (justification) of how property rights to land can be justified by showing how individuals could gain this entitlement to what was previously held in common.

One fundamental element in this account, as Locke himself insisted, is the labour that one has put in. It is reasonable to agree that people are entitled to what they have laboured for. However, we have to be clear about what it is that one has laboured for. For instance, if one cultivates a piece of land, the fruits of his or her labour will be the produce, be it potatoes or grain, and not the piece of land itself. In other words, one has laboured *on* land and not *for* land. Hence, if labour has to be an issue, there has to be something that one has put on a piece of land that will reflect the value of his or her labour as distinct, even though not separate from the piece of land it stands upon. That is why government has no qualms when it comes to the repossessing of undeveloped land. On the other hand, the value of labour cannot suffice if a property was built, for instance, on a piece of land that one is not

legally or customarily entitled to. In short, one's labour is not a sufficient condition for anyone to claim property entitlement to land. Hence, what can be deduced from Locke's account is that necessity would warrant the appropriation of land that was previously held in common, only on the basis of need and not greed.

The appropriation of land to leasehold is rather a matter of convenience. Therefore, there can be no absolute justification for absolute ownership of land. The immunity that the so-called owners enjoy is not a right derived from ownership or possession but from the voluntary sanction of society (Black, 1970: 85). It is therefore part of the established moral rules within society to respect people's efforts in terms of investment. Thus it is unacceptable for anyone to trespass or make use of someone's field of maize or house yard as though it was an open countryside without due cause or without consent from the owner.

4.4 Conclusion

In terms of attitudes to the natural environment that may arise from the two worldviews, the western front has not faired favourably in terms of nurturing a relationship between society and the natural world that would ensure harmony and less manipulative tendencies. In this regard, it has been strongly suggested that there is need to search for other alternatives on which to base the future development of resources that is compatible with cultural traditions, while at the same time serving developmental needs as well. The skewed emphasis that elevates private property rights over responsibilities will not help very much in solving

environmental problems. What we have to challenge, therefore, and as the concept of stewardship demands, is the extravagant notion of ownership in which several parts of the natural world are held as property to be used almost in whatever manner the so-called property owner deems necessary.

Central to any meaningful improvement in land use, and according to the central focus of social ecological theory, is the reshaping of social institutions in an appropriate participatory way. Major shifts in economic and social systems, due to such measures as the Structural Adjustment Programmes, have had some serious ramifications. The increasing poverty and the widening gap between the rich and the poor is one of the consequences at issue.

Attempts to further reform the land policy will, of course, be riddled with attempts to harmonize local community and private sector participation in natural resource management. So far, the community has continued to lose control and ownership of land and resources to businesses and individuals. The quest for private ownership of resources has promoted, and will continue to promote the exploitation of the environment for private gain. This encourages a kind of thinking that assumes that value can only be attached to private resources. We need a rational basis for our environmental concerns. In turn, this has to be informed by the relevant values in order to appropriately tune our attitudes toward the natural environment. Consequently, our current paradigm requires serious adjustment if not a total paradigm shift altogether. It is clear that undermining indigenous systems

has to some extent aggravated environmental degradation. On the other hand, opposing or renouncing all developmental or technological initiatives is not the solution either.

But we have to be cautious about the optimism that has been placed in science and technology upon understanding that these are merely instruments at our disposal. Hence, those that are directly involved in their design or application need to accept responsibility for their effects on society and the natural environment.

Above all, there is need to have the long-term well-being of the planet as the first priority. This will be easier if people come to appreciate, as many environmental ethical perspectives have emphasized, that the earth or parts of it do not belong to human beings in any absolute sense, but rather that human beings belong to the earth. There is need to constantly remind people that acquiring exclusive resource use rights does not confer upon them the 'right' to destroy. Rights, as it were, are intertwined with responsibilities given that natural resources have a communal ownership element about them and herein lies the fundamental basis for natural justice. Hence, equitable access to resources as well as fair and responsible distribution of benefits and burdens is very essential. After all, the earth is finite. A lot needs to be done in order to rid people of the view that there is always more in terms of natural resources, and that whatever is in their custody is theirs for their own private gain only.

CHAPTER FIVE

ENVIRONMENTAL ISSUES IN ZAMBIA

In the case of Zambia, as indeed may be the case for any other Third World country, it is important to acknowledge the unique differences between the environmental problems in rural as distinct from urban areas.

The rural setting is an environment where traditional cultures and modern western influence coexist, but it is an environment which is largely underdeveloped. The interplay between these factors affects how people relate to one another and to outsiders.

In the rural setting, the major source of pollution is wood fuel and other sources of energy used mainly for cooking. Pressure on land, charcoal production and indiscriminate bush burning have also contributed to deforestation. Soil erosion in cattle grazing areas, such as in some areas of Southern province, is also a source of concern given that these areas are in fact prone to droughts. Other problems include depletion of wildlife and lack of access to clean and safe drinking water in some areas.

In urban areas where there is a fair concentration of industrial activity (e.g., mining and manufacturing), the typical problems encountered are air and water pollution, material and toxic waste as well as land degradation. Inadequate

sanitation, especially for the urban poor in unplanned and densely populated settlements, is another issue of concern (cf. ECZ, 2001: 77).

The environmental problems that Zambia is facing today have resulted from a combination of factors, although the political leadership has been more vocal on lack of financial resources. The main argument is that the economy has not been able to grow for some time now in order to generate resources needed for development as well as to meet environmental challenges and improve environmental quality. This has been blamed on trends in the international arena coupled, of course, with inefficiencies in the performance of some national policies, particularly investment decisions that led to a declining economy in the 1980s. As noted in the National Environmental Action (NEAP) of 1994, "Government efforts to redress this decline in the economy and environment started in 1989 through the economic structural adjustment programme" (MENR, 1994: 14).

But the Poverty Reduction Strategy Paper (PRSP) of June 2001 for Zambia has acknowledged that "recent macro economic policies and industrial reforms, although well intended, have created huge demands on natural resources and the environment amidst extreme poverty and social maladjustment." One way in which these reforms have aggravated the problem is by increasing instead of reducing poverty levels. The PRSP proceeded to cite population pressure, poverty, resource depletion, and the external debt burden as some of the challenges resulting from the manner in which the central players have managed the affairs of the nation.

5.1 Practical Challenges

Environmental concerns in Zambia received a significant boost in the Third Republic as there was a perceived need for government to regulate corporate and public activities that have significant impacts on the environment. The ECZ (2001: 141) acknowledged that "although formal public involvement in environmental management is new in Zambia, the country has had a long history of natural resources conservation." The Environmental Protection and Pollution Control Act of 1990 and the subsequent establishment of the ECZ are seen as a significant milestone for environmental regulations. Moreover, these developments took place at a time when the nation was still facing a difficult period of transition politically, socially and economically.

The Director of Public Health for Ndola City Council, Mr. Joseph Katoti, acknowledged that population pressure in urban areas has led to the springing up of unplanned settlements where the problems of waste, water supply and sanitation have significantly reduced the quality of human life in these areas. Some planned settlements have not been spared, as facilities have not expanded to cater for the increasing population. As a result, the systems that were put in place have been seriously constrained to the point of collapse. The capacity of local governments to effectively deliver essential services has also been seriously constrained by lack of resources.

The commercialization of services and the involvement of the private sector have not been very successful in some cases. This is so not only because people were used to services that were subsidized to the point where they appeared to be free, but also because they have been hit hard by the economic situation. Hence, people may appear to be unwilling when in fact they are just unable to afford what is requested from them.

The high cost of living in urban areas is another significant challenge. As a result, it is common at household level for people not to pay for services such as garbage collection even at fees as little as twenty-nine thousand Zambian kwacha per month. Such a service has to compete with other essential services such as water and energy. The final decision in line with 'rational choice' theory will depend on the availability of alternatives. In the same vein, most households in urban areas cook with charcoal as even those that are connected to electricity use charcoal as a way of reducing on electricity bills. In most cases, electricity and major electrical appliances are simply beyond the reach of most households. The importance of forest resources for human welfare and survival is, of course, not restricted to rural areas but extends to urban areas as well (cf. Chidumayo, 2002: 34). As ECZ (2001: 128) noted, "in Lusaka, for example, charcoal is being transported from distances of over 200 km."

The displacement of people from urban areas either because of retirement or retrenchments has led to a situation where people have resorted to settling themselves in peri-urban areas where they have easy access to protected areas even when they have not settled right in those areas. In a focus group discussion

conducted with some members of a non-governmental organization called "Citizens for Better Environment" (CBE) which is based in Kitwe, it was observed that these people seem to have no alternative means of livelihood. It was further noted that Government does not have the capacity to assist them.

However, there are some areas where a lot of sensitization backed with efficient enforcement is still needed in order to change the thinking of people. One such area is the practice of littering which every social group in Zambia has exhibited. This is not something unique to street vendors even though their role in the matter is too significant to go unnoticed. Apparently, this habit can be traced back to the Second Republic when people believed that they could throw litter anywhere they wished as the local councils had people and facilities to clean up after them. Consequently, they have been reluctant to change even in the face of revelations that most local councils no longer have that capacity.

5.2 The Issue of Poverty

Poverty is a term that features prominently in any discussion of the problems facing developing countries. There is some level of consensus of late as to what poverty is, even though most discussions tend to elude any attempt to highlight the causes. A lot more attention has been devoted to the effects of poverty on such issues as population growth, environmental degradation and, ultimately, sustainable development. In all these issues, poverty is featured as a cancer in society that has to be exterminated. The language employed currently is 'poverty reduction' which is a recognition that poverty at the moment is too enormous to be eradicated

completely. Therefore, it is something that has to be managed as some developed countries have attempted to do through their extensive social welfare systems.

The consensus around the notion of poverty has strongly indicated that it is a state of deprivation of basic human needs. The PRSP for Zambia quotes the Central Statistics Office (CSO, 1993) where poverty is defined as "a level of living when individuals and households are not able to meet their food and basic needs, such as shelter, energy, sanitation, and water supply." However, poverty still remains a relative concept since what would count as basic needs continues to vary with levels of prosperity. Hence, it is not just a matter of having some source of water supply, some form of energy source, or some sanitary provisions. There are also issues relating to "quality" in terms of hygienic requirements, for instance, as well as in terms of adequacy, availability and efficiency. Shelter is much more problematic, perhaps because it provides the arena where, in fact, these other sorts of questions arise.

Hence it is noted that the relative nature of the concept of poverty invites a more social conception. This would emphasize, according to Hollis (1994: 215) that, "people 'are relatively deprived' if their resources do not let them meet the social demands of membership of their society..." The implication is that "when the rich become richer, the poor thereby become poorer" (ibid.: 215).

Attempts to remove this relativity by devising some threshold income (in American dollars) needed to meet the cost of acquiring basic food items that provide basic minimum calorie requirements for the individual or household, has not helped matters as much as some would want us to believe. However, in view of the predominance of quantitative economics, it is a measure that has come to be relied upon by governments and international organization. This has also either distorted or worsened poverty as almost anything that cannot be measured or priced in monetary terms is either problematic or of no value in this setup. On the other hand, as the PRSP also acknowledged, this underestimates the level of poverty because it excludes other basic needs.

What has to be appreciated is that poverty is a social phenomenon, and that an exclusive focus on either individuals or households will not give an adequate account of its causes. In most cases, and for Zambia in particular, poverty is at best an institutional issue both in terms of its roots and its perpetuation where the majority of the population are not able to gain access to important resources and services. Poverty as a social phenomenon is a condition resulting from the state and organization of resources, particularly in economic terms.

This state of affairs in the Zambian context is not good. Poverty is widespread, unemployment is growing, and there is gross inequality in incomes. The displacement of people from land as a result is also a common phenomenon. In this light, the tenets of social justice and promises of equitable access to resources still

remain empty notions in government policies and papers. The continued prevalence of market solutions to problems is rather blind to issues of distribution of benefits and costs.

In addition, lack of adequate political will to address these issues may be much more the reason for failure than the apparent lack of resources. In order to create a society and communities where a people's way of life reflects their true aspirations and values, political leadership is vital. People should be empowered to be able to achieve their set goals in order to have proper direction, meaning and purpose in their lives. What obtains on the ground in Zambia simply goes to indicate the lack of either political will or vision in terms of meeting the aspirations of the people. In order to reduce poverty, economic growth is vital, or so government has consistently argued. On the other hand, and as pointed out by ECZ (2001: 12), "previous economic reforms have not had much impact in breaking the poverty-environment chain but, instead, economic growth has brought about the risk of environmental damage by exerting unmitigated pressures on the environment".

5.3 Conclusion

Zambia's environmental problems have been presented in a fairly articulate manner in government policy documents such as the NEAP (1994). But the manner in which interventions have been assessed reveals some underlying belief that a healthy environment is only important because human welfare depends on satisfactory environmental conditions. Furthermore, the assessment of human

welfare at the national level has been largely identified with the assessment of the national economy. Consequently, the tendency is to highlight the contribution a particular sector makes to the national economy through the Gross Domestic Product (GDP) before attending to its harmful environmental effects. This was also the trend exhibited in the SOE in Zambia 2000 Report.

This approach lends itself more to the utilitarian inspired cost-benefit analysis as a way of adjudicating in environmental concerns. It also subscribes to the idea that economic growth can generate the resources needed to offset environmental problems. What has been ignored is the clearly evident fact that economic growth is taking place in ways that are hampering favourable social and environmental conditions. The SOE in Zambia 2000 Report also revealed a significant bias in favour of this approach. As an introductory note in chapter one, it was forcefully stated that poverty underlies all the relevant environmental problems in Zambia that were earlier highlighted in the NEAP of 1994 (ECZ, 2001: 11). However, in view of the detailed presentation that followed about the serious environmental impacts of industrial activities that have polluted the air, land and water resources, it is not clear as to how poverty can be said to underlie such issues as industrial pollution and waste. There is need to appreciate the fact that, in the case of industrial land degradation, pollution, and waste, the poor are the victims. Consequently, poverty is neither the underlying factor nor the direct cause of environmental degradation arising from industrial activities.

CHAPTER SIX

THE IMPORTANCE OF ETHICAL CONSCIOUNESS

The assertion that a healthy environment and development are mutually supportive is still tenable. But environmental degradation, the escalating levels of poverty, and the widening gap between rich and poor indicate that there is something wrong in the manner in which development is being pursued. The link between the environment and development has been frequently highlighted and is very much stressed in *Agenda 21*. It has been noted that most environmental problems in the world have their origin in the failures and inadequacies of the development process.

Much of what has been perceived in terms of developmental reforms and projects has caused tensions which have seriously affected indigenous livelihoods and systems, and has destabilized long established relationships among people, as well as between society and the natural environment (cf. Binns, 1997: 17). In addition, Binns points out the differential impacts of such developments on particular environmental and social situations where some benefit at the expense of those who suffer the most.

The conception of development in terms of economic growth, and consequently in quantitative statistical terms has been a source of concern. Even institutions such as the World Bank and the International Monitary Fund (IMF) have acknowledged

the inadequacies of this approach as a measure of development. However, this very approach still influences investment decisions as well as bilateral and multilateral agreements to a great extent.

Development is multidimensional, and it should not be mistaken for economic growth. It is absurd to claim development on the basis of economic growth that has only enriched a few people and thrown the majority into poverty. What is becoming increasingly notable also is that there is more to meaningful and sustained development than just economic growth. Real development must also ensure human development for all. In broad terms, human development can be defined as permitting people to lead longer, healthier and fuller lives, or more narrowly as reflected in the status of the people's levels of health and education (cf. Ranis and Stewart, 2001: 333). It has also been observed that improvements in human development are a significant contributor to economic growth, while economic growth provides the resources needed for sustained improvements in human development. Hence, justice is a fundamental issue as the manner in which the outcomes of economic growth are distributed will either enhance or seriously undermine human development efforts and environmental integrity.

6.1 The Relevance of Ethical Theories

Ethical issues arise in deciding how much of the natural resources should be used up in order to meet human demands and how much should be preserved or conserved. While human needs have to be met, it is also important to realize that

not only are natural resources valuable; in some cases, they are finite and irreplaceable. When they are gone, or if they are not properly managed, our human needs and problems will still be there but there will be no resources to starve them off (cf. Palmer, 1997: 64). What is at stake here is respect for both people and the environment. These two perspectives are, however, mutually reinforcing in the sense that genuine respect for all human beings tends to protect nature while respect for nature generally promotes human well-being in the long run (cf. Wenz, 2001: 169). Given this challenge, there is need to strike a wise balance in terms of competing values and uses as well as between different and competing user groups.

The evaluative character of ethical theories means that they tend to have some inescapable bearing in terms of what sort of decisions are appropriate. Hence, ethical theories go beyond mere explanation. Accordingly, they provide a standpoint from which things can be evaluated. Ultimately they inform and make firm one's position to the extent that some level of consistency can be afforded. Above all, awareness of these various ethical perspectives, if properly internalized, can play an important role in heightening environmental ethical consciousness. Although ethical commitments, in some cases, may not necessarily involve elaborate ethical theory in an explicit sense, this does not dispense with the need for what Attfield (1999: 27) refers to as some kind of ethics and ecology, a theory of right, duty, responsibility, and value theory. Without these, as Attfield himself rightly acknowledges, there is no guidance and direction for tackling problems and no satisfactory criteria for identifying them in the first place.

The loss of land, forests and indigenous woodlands, and in particular their replacement with exotic species, often undermines and threatens rural livelihoods in terms of food security and health needs as rural people depend mostly on the endowments of natural forests for food and medicine (cf. Chidumayo, 2002: 34). However, since traditional livelihood systems have been associated with underdevelopment, activities that seem to bring economic development are favoured when it comes to government's decisions about land use. As a result, local communities have been undermined by most of the private sector initiatives and undertakings that government has approved. Consequently, local people have tended to be suspicious and hostile in some cases to government measures and reforms.

In traditional African societies, issues pertaining to natural justice and morality usually played a significant role in the administration of natural resources. Indeed, as Chiselebwe (1976: 65) rightly noted, "economic considerations do not appear to have affected the administrative practices as an independent force, but were incorporated significantly in the broader moral principles." However, with the wholesale adoption of liberalization and privatization, economic considerations have become the dominant force both at government policy and project levels thereby reinforcing the utilitarian approach to environmental issues.

According to social ecological approaches, the exploitation of the poor in Zambia has contributed to environmental degradation, either as a result of

diminished responsibility on the part of the poor, or as a result of outright disregard for the interests of the poor by the privileged in society. The politicians and government have been made to believe that entrusting resources to the private sector will bring about the kind of economic activity and prosperity that will benefit all citizens in the long run. But persons and institutions that have been entrusted to command resources are using the opportunity to maximize returns for their own private gain at the expense of local communities and the poor in particular. In addition, they have also engaged the less privileged to help them attain their own goals under very exploitative economic conditions.

The exploitation of local communities in Zambia is evident in the tourism and timber industries. For the national government and the private sector, these areas are a source of revenue. Hence, licensing is not seen as a management tool but as a means to revenue. Consequently, over-licensing and wasting of resources is not something rare. Furthermore, while economic benefits have been evident in terms of gain by private individuals and at central government revenue level, they have not been made available to local communities in an equitable manner.

As a result of their predicament, some of the poor have involved themselves in some activities that are environmentally unsustainable in order to eke out a living. Encroachment into protected areas such as forests and wildlife conservation areas in terms of charcoal production, farming and settlements are consequently issues of great concern. In terms of encroachment into forests, some of the highly affected areas can be cited from the Copperbelt -- for example, along the Ndola-Mufurila

road and other surrounding areas. However, in terms of the effects of forest depletion on livelihoods, the case study by the Samfya District Strategic Planning Team (2000) as cited by Seshamani (2002: 15) was more revealing. It observed that in some instances, as is the case in the Luapula valley, forest reserves are encroached upon to meet people's demand for forest products resulting in biodiversity degradation. However, the depletion of forest resources in areas close to these communities has a serious bearing on their livelihoods. The same report explained that:

People, especially women, spend an average of four working days walking four hours [each day] in search of forest products and to areas where their *chitemene* fields are located. This has implications on the nutritional status of household family members in terms of the number of meals taken per day as well as increasing the labour burden on the women folk in the remote areas (ibid.: 15).

Furthermore, the emphasis on cash crops, as a male preoccupation, has tended to subordinate women's interests, and has increased their burden. Women now have to either grow or fetch a variety of crops needed to feed their families. In most traditional setups, this particular task is a woman's role. From the point of view of ecofeminism, it has been asserted that by subordinating women's roles, interests, knowledge and concerns to those of men, men have also become a serious threat to biodiversity in the process (Wenz, 2001: 189).

An article in the SADC Environmental Education Mail, August, (1999: 10) made the following significant observation concerning the situation of women, particularly in the traditional African context: "Historically, women take care of basic needs of society like food, fodder, fuel, shelter and nurturing." While this may sound impressive, such a position in fact reduces women's chances for more empowering and challenging opportunities. Women should be empowered to control resources and command opportunities in a manner that will make them become independent and self-reliant. While the same article states that "women need liberating education to give them voices about what should be done to combat socio-economic problems", there is need to combat environmental problems as well.

It is important to note that what is happening now has a bearing on the welfare of future generations. If the current situation is not addressed, any talk about intergenerational justice in Zambia will remain an empty notion. It would appear at the moment that this is not a major concern for the government. The preoccupations with resource use exclusive rights that has characterized our current legal, socioeconomic and political situation has a negative bearing on inter-generational justice and equity for posterity.

First of all, there are some difficulties with the emphasis on rights - as some philosophers have pointed out - in the sense that "it seems paradoxical to say that [future] people have rights when they do not yet exist" (cf. Wenz, 2001: 46). This observation is valid in exposing the fact that the emphasis on rights is not sufficient to ground our obligations to future generations. However, this position appears to

be based on an artificial assumption which seems to imply that generations are distinct and separate whereby one generation and its institutions has to disappear before the next one comes into existence.

In practical life, however, it is evident that generations are a continuum to the extent that some people have lived long enough to live through two or more generations. Hence, the sort of rights we are protecting or fighting for today will have a bearing on, if not actually determining, the sort of rights future generations will enjoy. The widely accepted desire to make our society or the world in general a better place implies an obligation not to serve our own interests at the expense of others. The understanding is that we ought not to harm others. This duty is not only owed to our contemporaries but to future generations as well. But with regard to future generations, as Wenz rightly noted, this duty cannot be based on the market economy and relationships being promoted today because we can have no such relationship with future generations (ibid: 46). As earlier noted, however, this does not excuse us from our duty not to harm future generations.

Hence, we should be mindful of the structures we institute and the sort of measures and activities we set in motion. By promoting structures and institutions that make some people rich and others poorer, we are also being unjust to some members of future generations. We are equally accountable for the sort of environmental activities we undertake or allow to be undertaken.

While the ECZ may be well informed that industrial effluent as discharged does not in most cases meet environmental standards, the use of fees as penalty is not sufficient to account for the environmental damage and harm being done to the people. Furthermore, this method has an in-built tendency to distort environmental evaluation. This is, in fact, the major weakness of the famous "polluter pays principle". As Connelly and Smith (1999: 147) rightly observed, "the move from a description of the environmental effects to a monetary valuation may alter the character of any decisions". Value theory is quite essential in addressing such distortions, and the concerned parties should make use of it when weighing the relevant issues.

One thing that is immediately clear is that the penalty fees that are charged do not reflect the destructive environmental effect of such activities; neither are they sufficient to repair the damage even if they were used for that purpose. Overall, this approach has led to a situation where quite a number of environmentally harmful industrial activities have been condoned, perhaps because at their individual level the impact appears to be insignificant.

The central question in the case of pollution is one of benefits against costs. Some of the activities that cause pollution are quite essential for our livelihoods as sources of energy, income (employment) and economic prosperity (cf. Palmer, 1997: 97). In some cases, benefits and burdens seem to be evenly distributed to the degree that whoever is affected has also benefited in one way or the other. The consumption of fossil fuels by our transport systems is a good example.

But there are other cases where it is clear that those that benefit most are not in fact the ones who bear the burdens. At a time when the mines in Zambia were run

by the State parastatal, Zambia Consolidated Copper Mines (ZCCM Ltd.) and when much of the revenue was ploughed back into national development, these questions were not as acute as they are now. As it is now in the post-privatization era, most people who live in the compounds on the Copperbelt are still affected by air pollution while those who take the profits are not affected in the same way.

Because of inadequate sanitation and water supply, the poor are vulnerable still further as they resort to polluted streams and dams. Thus, on account of the pollution of major rivers such as the Kafue and streams in urban centres, industrial effluents and sewage treatment are a major cause for concern. Because of this situation, the urban poor are the most vulnerable to health-threatening pollutants in water, as well as to waterborne and other environmental diseases (cf. Chidumayo, 2002: 40). We have run into a situation where the rich cause the pollution while the poor suffer, and the benefits that are expected to trickle down from the activities causing pollution are neither forthcoming nor tangible.

A combination of factors such as social habits as well as lack of institutional capacity to address the issues has compounded the problem of waste. While people's conduct in terms of littering cannot be excused, the corporate culture has also played a significant role in maintaining the problem of waste. For example, our mothers used to carry baskets whenever they went shopping, but as soon as the supermarkets started dishing out plastic carrier bags, the good habit of carrying baskets has since disappeared. Businesses have also continued to offload their goods packaged in plastics even when they have seen that the problem of waste has become unmanageable for most local councils and communities.

The moral maxim, 'to each according to need' has been replaced by 'to each according to political and financial ability' which has become the mode of allocating resources. This trend has to a great extent hindered community participation. Civil society groups have recognized this problem and have made it clear to government that private sector driven initiatives are not a solution to the problems of the poor. The principle laws, policies and institutions that regulate the use of natural resources need to take seriously into account the needs of the poor while at the same time safeguarding the well-being of the environment and strategies that promote alternative livelihoods.

The preponderance of economic and legal instruments in national environmental management and regulation in Zambia has created serious 'structural injustices'. These are injustices that arise from the nature and operations of social structures and systems as opposed to the direct intentions and actions of individuals. As Dorr (1991: 66) noted, these injustices are a characteristic feature of the current pattern and model of development that has been characterised by rapid social change and exploitative economic relationships globally and nationally.

At national level, such developments have, according to Dorr, "undermined the traditional subsistence economy and replaced it with an economic system designed to exploit the resources of the country in return for [immediate] pay-offs to a few in power" (ibid.:66). As Dorr further noted, the tendency by these so-called 'developmental' reforms has been to replace or undermine traditional structures. Consequently, such measures have rendered many of the traditional checks and

balances which ensured a modicum of social justice inoperative or ineffective (ibid.: 66).

In Zambia, economic reforms have just created new opportunities for the privileged people in society to take advantage of the poor. The resultant exploitation of the poor and their exclusion from gaining command of productive resources is evident enough for everybody to see. The issue of access and entitlement to land is one of the areas in Zambia where social injustice has been prevalent. Indigenous communities are losing customary land to politicians and businesses that have acquired legal title from the government.

6.2 Institutional Aspects

The WWF (1999: 50) has significantly noted that, "Zambia's environmental law has been in the form of sectoral enactments administered by different ministries and departments. Although these enactments are legally adequate they do not sufficiently provide for a coherent national conservation framework." In addition, it is further noted that the existing enactments merely prescribe sectoral activities deemed hazardous to the environment and do not provide for an all-embracing natural resource conservation philosophy and strategy which would encourage voluntary compliance and enhance public participation.

The NCS and the subsequent NEAP were government's first attempts to deal with the shortcomings alluded to above. However, any serious environmental

concerns that were raised in these two documents fall short of achieving their intended purpose for a number of reasons. The most significant include the following:

Firstly, such concerns were not a true reflection of the inner aspirations of the political leadership in government and, even after they were raised, they did not have any substantial effect on the political agenda. Consequently, the mindset and the national mood needed for desirable environmental action was still lacking essentially because the leadership had failed to perform its role, particularly in changing social consciousness. You can have relevant institutions and structures in place but, as long as leadership is missing and social behaviour remains the same, these institutions cannot perform adequately. "Change is not easy and it takes time" is the common excuse usually given. But as Christian (1994: 316) acknowledges, "When one tries to change institutions without having changed the nature of men, the unchanged nature [of people] will soon resurrect those [old] institutions". Hence, although some government ministries and agencies may have changed names a number of times in the hope of reform, the same problems have continued.

A second problem arises from the manner in which the issues were presented in the NCS and the NEAP documents. Where an issue was environmentally significant with regard to a variety of ethical perspectives on the environment, it was usually expressed in vague 'sweeping statements'. On the other hand, if the issue was concrete and specific it was discussed within the restricted ethical framework of economic utilitarianism.

It can be argued, of course, that some of the recommendations have not been implemented because of lack of resources. However, most of the environmentally significant observations stand merely for ideals which the policy makers should strive for, and these cannot be implemented without some interpretative difficulties. Such general statements do not help much in terms of monitoring and, in the absence of political will and leadership, they cannot translate into concrete implementation. Consequently, leadership on the part of government is very vital. It is unfortunate that government appears to be reactive rather than proactive and has tended to be inconsistent and lacking in committed interest.

Zambia's attempts to address environmental problems by way of enhancing sound and responsible environmental management would have been more successful if ethical awareness and relevant environmental values had been more clearly emphasized. Surely failure on the part of policy makers to articulate ethical obligations is primarily responsible in large part for environmental neglect.

Lack of adequate moral input is at least a significant part of the reason as to why Zambia has been reactive rather than proactive in terms of meeting environmental challenges. When government officials and officers react, there is little or no moral motivation. Hence, statements such as 'it is illegal to do this or that' and 'culprits must be brought to book' or 'government is loosing a lot of revenue through such and such practices' are some of the common statements you get.

The SOE in Zambia 2000 Report in fact acknowledged that environmental management practices have focused largely upon the after-the-effect repair of damage. It states: "Environmental policies directed at symptoms of harmful growth should only be additional to those that integrate production with resource conservation and enhancement, and those that provide a wider choice of adequate livelihoods and equitable access to resources by all" (ECZ, 2001: 12). This is what the SOE report recommends as a way of mitigating Zambia's reactive approach to environmental issues. Unfortunately, the Report does not indicate in concrete terms how government should go about implementing this recommendation and in what areas.

The prevailing culture in government and among the public in general in Zambia is not adequate to facilitate a satisfactory philosophy of conservation. Hence, most environmental concerns will continue to have no real practical impact unless further initiatives are taken. This concern was in fact earlier noted in the NCS (1985) where it was stressed that a conservation ethic "should" be promoted amongst all Zambian people and that people should be involved as far as possible in decision-making and action in the environment. While there is overwhelming acknowledgement that a lot needs to be done, what is needed, first of all, is a standpoint that will give the much-needed direction to whatever has to be done.

The challenge still remains one of meeting people's basic needs without at the same time depriving the natural environment of its integrity by destroying it.

Natural law theory draws attention to the importance of this mutual relationship if we are to strike the balance that we should be striving for. We need to respect and

heed the ethical principles that should govern our care of the natural world. In addition, we should strive to adhere to the precepts of natural justice, and to respect the basic rights of human beings realizing that these are not only morally sound but also environmentally desirable.

6.3 Conclusion

The lack of adequate ethical consciousness in Zambia with regard to environmental management has resulted from government relying too heavily on bureaucratic packages as a way of regulating environmental practices. This approach is devoid of adequate provision for local community and public participation in the formulation and implementation of policies for the management of the environment and of natural resources.

It has been difficult to engage communities and the public in a manner that motivates them to respect and care for the natural environment. The approach taken appears to assume that people are living independently of the natural resources that government wants to manage. This is one assumption that deep ecology and Leopold's land ethic have forcefully disputed. On the other hand, when communities are more fully involved in the process, there is a better chance to make them more aware of the interconnection of various elements in the natural environment as indigenous knowledge systems have demonstrated. They are thus more likely to appreciate the value of the natural environment and the effects of their actions. Hence the need for greater community awareness and participation in

decision-making concerning interference with the natural environment is crucial from the ethical perspective of environmental justice.

The top-down model of decision-making that has characterised government's bureaucratic approach has also significantly influenced the manner in which problems are conceived and how solutions are defined. One serious weakness of this approach has been to overlook priorities from the communities' point of view. Furthermore, the predominant conception of development in economic terms frequently glosses over very vital aspects of human development. Specific mention can be made of essential social services, structures and institutions that should facilitate human development as a crucial factor in ensuring responsible environmental behaviour.

However, given the magnitude of the problem with regard to the prevalence of environmentally undesirable socio-cultural habits, at the moment we cannot expect the situation to change overnight. But there is need for consistent and sustained efforts in order to address these problems in the long run. The relevance and impact of ethical consciousness in this crusade is founded on the understanding that, on the one hand, genuine respect for all human beings can assist in ensuring environmental protection. On the other hand, genuine respect for ecological integrity will definitely assist in ensuring human well-being in the long run. This recognition is in fact the basis for the concept of sustainable development which at the moment is the principal goal of every viable strategy and approach to environmental management. This understanding also forms the link between ethical

consciousness from the perspective of environmental justice and the implementation of viable concrete action.

As Chidumayo (2002: 32-33) noted, the Government of Zambia has accepted the concept of sustainable development as highlighted in the mission statement of the MENR (now the Ministry of Environment and Tourism). Chidumayo further notes that sustainable development is also the key policy objective in the forest and wildlife policies in the same Ministry (ibid.: 33).

Sustainable development is premised on the notion of sustainability which in turn rests on a number of mutually reinforcing principles, among which the following are the most relevant from the ethical perspective of environmental justice. One of these principles relates to the need for ecological integrity or the need to ensure that livelihood activities do not irreversibly degrade natural resources within a given ecosystem to a point where they are unable to regenerate. Any activity that tends to degrade the environment in this manner is thus environmentally unsustainable in the long run. In this case, there is need for government to provide or facilitate relief and incentives that will ensure, or bring about alternative livelihoods that are environmentally sustainable.

The principle of social and environmental justice (equity) entails that promoting access to resources and opportunities for some members of society should not constrain or eliminate opportunities for others, at present or for future generations. Hence, while private sector involvement in natural resources management has been seen as a way of enhancing economic development, it is also important to ensure

that communities are not undermined in any way. Community empowerment in terms of decision-making, participation in resource management, as well as access to benefits is therefore essential. Furthermore, there is need to safeguard the interests of the disadvantaged members of society, namely, the poor, as well as women and children.

In view of the foregoing, and as Seshamani (2002: 13) similarly noted, Zambia's success can be measured in terms of the extent to which it has been able to ensure ecological integrity, reduce poverty and to achieve human development. It is thus unfortunate to note that Zambia has not done well in these spheres.

CHAPTER SEVEN

ETHICAL EVALUATION OF KEY REGULATORY INSTRUMENTS

Value conflict between the ECZ and other Government agencies is inevitable perhaps because of the various competing demands and interests. This is also reflected in the fact that there is a difference, in terms of emphasis, between the overall objectives of the NEAP which is the major government policy document on environmental issues and the overall goal of the ECZ as expressed in its mission statement. According to the mission statement of the ECZ, its overall goal is stated as follows:

To regulate and coordinate environmental management, promote awareness, and ensure environmental protection through enforcement of regulations and the prevention and control of pollution in support of sustainable development – so as to provide for the health of persons, animals, plants and the environment of Zambia.

The mission statement of the ECZ appears, at face value, to give due attention to all the elements referred to, namely animals, plants and the environment. The NEAP appears to suggest that all these other elements are ultimately intended to serve human welfare since it appears to suggest that environmental management is intended primarily to foster economic development. These two perspectives are not entirely incompatible but their respective orientations are likely to lead to different practical implications and attitudes. Unfortunately, the influence of the market

economy on the overall objectives of the NEAP is the most dominant orientation in practice, a situation that has reinforced the utilitarian approach to environmental management in Zambia. As acknowledged in the NEAP itself, "the market economy, therefore, offers new opportunities and challenges for economic development and environmental management" (MENR, 1994; viii).

Such an approach is a clear indication of western influence. As pointed out earlier, the attitude that prevailed in traditional African setups was one of co-existence. In fact, there was no room for any 'theoretical' controversies as to whether or not animals or plants have 'rights' as alluded to earlier in the brief discussion of 'rights theory'. In the words of Engel and Subb (1990: 167), "attitudes to land and natural resources differ considerably between traditional African and other societies ... this difference is rooted in cultural and socio-economic relationships". The significance and place of other elements in the natural environment was clearly acknowledged. It was also appreciated that the welfare of the people was intimately linked to the well-being of plants, animals and other elements of the natural environment.

7.1 Environmental Assessment

The overall objective of the NEAP to integrate environmental concerns into the social and economic development planning process is quite commendable and points to the need for what has been referred to as Strategic Environmental Assessment (SEA). Wood and Dejebour (1992: 3) make the point in this way:

"Alternative approaches, cumulative impacts and synergistic impacts (which may be cross-sectoral in nature), ancillary impacts, regional or global impacts and non-project impacts may be better assessed initially at the policy, plan or programme level, rather than at the project level."

As a firm background, this approach would make the project based Environmental Impact Assessment (EIA) far more feasible and effective. The EIA process is, in fact, relatively recent in Zambia, introduced by statutory regulation no. 28 of 1997. Wathern (1988: 6), has described EIAs as follows:

A process for identifying the likely consequences for the biogeophysical environment and for man's health and welfare of implementing particular activities, and for conveying this information at a stage when it can materially affect their decision to those responsible for sanctioning the proposals.

Further, in order to provide a comprehensive perspective for environmental assessments, the emphasis on the biophysical aspects of development was expanded to include socio-economic aspects as well, hence the incorporation of Social Impact Assessments (SIAs) in EIAs (cf. Becker, 1997: 35). Social impact was accordingly defined as "the consequences for human populations of any public or private action that alters the way in which people live, work, play, relate to one another, organize to meet their needs and generally cope as members of society" (ibid.: 2).

The EIA process provides for public participation, and it is also expected that the information needed should be presented in an unbiased manner. However, lack of adequate information dissemination is likely to hinder effective public participation

as people cannot participate fully if they are not adequately informed, or if they are totally unaware of the process. The ECZ (2001: 152) has acknowledged that "assessment of current levels of implementation of the EIA Regulations in Zambia also reveals inadequacies in information flow between the head agency (ECZ) and the developer and the local communities on the importance and value of EIA for sustainable development."

There is also concern that, since developing an environmental impact statement is basically the responsibility of the developer, there is a possibility of concealing relevant information or playing down the negative impacts of the project while exaggerating the benefits. Political interference and corruption can also hinder the determination of what can reasonably be seen to be possible dangers or to have a significant negative impact on the environment.

The timing of the whole process, as stressed in the definition, is also crucial. If the EIA verdict comes too late in the decision-making process - for instance, when a lot of financial commitments have been made, - it is likely not to have any significant effect. In such cases, unnecessary tensions and legal absurdities that could have been avoided if the key players had been open and transparent from the start are likely to emerge. The much publicized issue of the construction of the Zambezi Oil tanks in Ndola just a few metres from the Ndola-Kapiri highway and under high voltage Zambia Electricity Supply Corporation (ZESCO) power lines, is a good example in this context. Such situations are also a recipe for corruption.

Government should realize that setting good examples and precedents is essential in ensuring that established environmental regulations and standards are met.

7.2 Economic Instruments

The kind of emphasis that has been put on economic factors alone also distorts or alters the relationship between society and the environment by pitting the economy against the environment. The unfortunate result is that both human beings and the natural resources are now just factors of production in the economic enterprise. In this scenario, economic calculations overshadow human moral agency and responsibilities. However, since human beings preside over economic enterprises, we then adopt a feeling of being separate from the natural environment and of being in control thereby reinforcing the utilitarian mentality.

A further concern about an almost exclusive focus on economic benefits is that the welfare of particular communities whose moral interests stood in the way of economic 'progress' has been undermined. Modern states and businesses tend to justify their impacts on indigenous people by claiming that the takeover of their land will contribute to an increase in aggregate general welfare (cf. Northcott, 1996: 279). Unfortunately, the affected communities have only too often not experienced meaningful benefits from such developments. In other words, business opportunities, social amenities and consumer choices may increase especially for

the rich minority while the quality of life for the poor majority is severely constrained in the process.

In the Zambian context, saying that the interests of the affected communities for example, by the construction of the Kariba Dam or the Lusaka International
Airport - were undermined is not to imply that these people should never have been
displaced in the first place. Rather, the concern is that these people were not
adequately compensated or taken care of. For the Tongas who were displaced by
the Kariba Dam, life will never be the same as the land to which they were
relocated is dry and infertile. Similarly, some of the people who were displaced by
the construction of the Lusaka International Airport were also relocated to areas
such as Chainda compound where they are now forced to settle on smaller pieces of
land with poor infrastructure and inadequate social services.

A conservation system based wholly on economic motives is hopelessly skewed and lopsided. It is not concerned about those elements that independently have no commercial value but which nonetheless are vital to the essential functioning of ecosystems. Hence, and as the WWF (1999: 49) acknowledged, "it is important that all people are made aware of the importance of inter-relationships and interdependencies of all organisms and the natural environment." Deep ecology and the land ethic emphasize the importance of acknowledging these relationships.

It is also important to get farmers or other land developers to understand and appreciate ecological values so that the decisions that are made about land use are not only about questions of profit but also contain a dimension of what is morally right or wrong. Environmental ethical awareness on the part of the major actors has an essential role to play in such decision making. Without adequate or heightened ethical awareness, the concept of stewardship will still remain dormant. People are only likely to respect and care for the environment when they are adequately informed and have developed the appropriate moral virtues.

Unfortunately, excessive focus on economic benefits and consequently on cash crops (in agriculture, for instance) has tended to undermine food security for some local communities and households. Some business enterprises have induced the local people to grow locally inedible crops for export and at exploitative wages thereby also forcing them to exploit the environment as social ecology rightly points out. Since most of the cash crops grown are raised in mono-cropping, the local people are denied the customary practice of inter-cropping. This latter practice was not only ecologically sound but also allowed households to harvest a variety of crops necessary for their diet from the same piece of land.

7.3 Ramifications for the Tourism Industry

The conception of development in pure economic terms is also likely to have serious negative impacts on the natural environment and on culture in sectors such as tourism. Tourism, which has been defined by Palmer (1997: 94) as "the practice

of short-term travel for leisure and pleasure (as opposed to work)" is one activity that thrives almost entirely on the natural resources and cultural features of the environment in both urban and rural areas. The primary environmental concern about tourism is the failure to achieve balance between visitor enjoyment on the one hand, and conservation needs and the integrity of such natural places on the other.

Of course, tourism may not be as destructive as other industries that involve resource extraction and consumption as it focuses more on experiences that nature and wildlife affords to visitors. This is what has come to be referred to as ecological tourism which 'involves travelling to pristine natural areas to experience the scenery' (ibid.: 94). Developments in the tourism sector, such as the increase in the number of people visiting particular places, raises ecological and cultural integrity issues. There is thus concern about the capacity of such natural places to sustain the increasing tourist activities without destruction of, or excessive interference to ecosystems.

The question then is, what is it that makes an otherwise rewarding activity like tourism potentially destructive? According to Carter and Lowman as cited in the IUCN (1985: 46), tourism is the second largest contributor to world trade, outstripped only by oil. With particular reference to Africa, as early as 1984, tourism was tipped as the fastest growing foreign exchange earning industry. Economists are on record to have advised developing countries to diversify in those

industries in which they have a comparative advantage as the NCS for Zambia stressed.

What makes tourism potentially destructive of the natural environment, then, is that it is no longer about people enjoying nature. It is about business, and that is where the utilitarian framework with its instrumental view of nature takes over. Terms such as 'product' increasingly enter the vocabulary used to depict natural or cultural features. The Victoria Falls, for instance, was to many indigenous people a magnificent wonder and source of awe, and it commanded an appreciation of natural beauty that amounted to respect. But for our current tourism industry and its marketing agents, it is a 'product' in need of maximum exposure, and so is the culture of the indigenous people. Consequently, tourism has been perceived more on the economic level than any other, whether environmental, social, or cultural. Hence, when these other areas are associated with it, they also become its products in need of maximum exposure and exploitation.

While certain economic instruments may be useful, too much emphasis on the same becomes the source of many environmental problems. The activity of economics and its underlying ideology and goal of profit maximization and cost minimization has played a major role in the present environmental disaster. Consequently, a major revision of these tendencies is imperative.

7.4 Legal Instruments

The legal instruments that are so much emphasized in Zambia's approach to environmental issues are not sufficient to ensure sound environmental management and equity. Legal instruments, which lack adequate consultations, appear to have elevated protection of natural resources above the needs of local communities. In the same vein, legal regimes appear to favour the interests of the rich who find it much easier to access such resources than the poor who are significantly restricted. Such measures, then, have not adequately addressed the plight of the poor.

Over reliance on legal instruments without effective social safety measures for the poor is a matter for concern. McLellan and Sayers (1990: 92) depict this type of situation as follows: "The apparent impartiality of laws ... conceals the fact that in unjust and unequal societies, they fall with a quite different impact upon the rich and privileged on one hand, and upon the poor and exploited on the other." Hence, such measures "treat as equals those who are not equals and makes no concession to actual misery and deprivation" (ibid.: 98). And herein lies the source of major hindrances to the attainment of social justice and equitable access to resources by all that government is allegedly concerned about.

Although laws have their limited role to play, it is nevertheless important to appreciate that voluntary compliance - which, in fact, facilitates the operation of laws in the most efficient manner - presupposes basic morality. Thus, in the realm of environmental management, public cooperation is very necessary. In this respect,

emphasis should be placed on incentives that induce sound environmental management and voluntary compliance as opposed to the predominant legal emphasis on the lookout for culprits. Maseka (1996) is clear on this point when he recommends that "new compliance strategies that give weight to prevention and restoration of environmental damage rather than punishment need to be designed". As the Zambia Wildlife Conservation Society learnt, assisting food insecure households in game management areas reduced potential threats to wildlife for they managed to turn 'poachers', as termed under the law, into farmers (cf. *Zambia Daily Mail*, September 30, 2002). Alternative livelihoods and food security are therefore essential to building responsible partnerships and skills for environmental protection and conservation.

7.5 Conclusion

The mindset of politicians and business entrepreneurs has in some cases reduced the essential process of EIA in environmental policy decisions to a matter of formality, merely to show that the EIA regulation was complied with. It thus transpires that the process of consultation has meant that one has an agenda to sell to government and to communities by dangling some expected benefits (or consequences, legal or otherwise, in the event that the project is interfered with). Consequently, the whole purpose of becoming aware of genuine environmental concerns from the relevant professionals, from the public and ultimately from the entire EIA process itself, is rendered irrelevant.

The undue preponderance of economic utilitarianism has in fact defeated the whole purpose and intent of integrating environmental concerns in the development process. This is so because we are trying to resolve environmental issues using a development model and process that is already predominantly utilitarian. In other words, threats to environmental welfare and integrity are already at work in the very measures that government is promoting to solve environmental problems.

The benefits from tourism ventures may, indeed, be visible at business and national government revenue levels. However, it is difficult to see how local communities can develop when all the revenue worth talking about is siphoned off from them by the government and foreign investors. In fact, at national government level, such resources are misdirected, mismanaged, or at worst 'plundered' by government officials. Hence, in view of the constraints that practices in the industry have tended to impose upon local communities, benefits to the local people from the tourism sector are still elusive. As it is, most local communities living around the major tourist attractions still wallow in poverty with no decent shelter or easy access to health and education.

Legal instruments are essential in the sense that they enhance government's regulatory position, but they can only be effective if they are adequately enforced and complied with, which unfortunately is not the case in Zambia. On the one hand, legal protection of certain areas and elements of the natural environment can also ensure the preservation of natural resources in a manner that safeguards their

intrinsic value. On the other hand, however, legal reforms in Zambia, particularly in the Third Republic, have been so much tied to economic motives that they now serve economic utilitarian interests to the detriment of other ethically relevant environmental values.

CHAPTER EIGHT

CHANNELS FOR RAISING ETHICAL CONSCIOUSNESS IN ZAMBIA

8.1 Government Policy

Both the NCS of 1985 and the NEAP of 1994 upon which government has attempted to base its position on environmental issues have acknowledged environmental education and awareness as key factors in environmental management. Indeed, it was explicitly stated that "environmental awareness is crucial for the successful implementation of NEAP" (MENR, 1994: 5). Lack of awareness would in most cases entail that, although exposed to the effects of environmental degradation, many people would not regard themselves as party to these issues, and may not in fact appreciate the link between their practices and the degradation of the environment. Should this be accompanied by unwillingness on the part of individuals or groups to care about the environment, then we can safely say that ethical consciousness is also lacking.

The SOE report of 1994 asserted that people have to be enlightened on the dangers of environmental mismanagement, on their roles and responsibilities in sound environmental management, and ultimately on the need for their voluntary participation in solving environmental problems (ECZ, 2001: 155). However, it is important to consider factors such as illiteracy that may hinder public understanding of the scope and meaning of the physical and social aspects of the

environment without ignoring traditional knowledge and understanding of their environments.

The valuable insights alluded to above have, of course, been compromised by government's preoccupation with legal instruments which, unfortunately, are neither adequately enforced nor complied with. Legal instruments are quite helpful by making compulsory those moral or ethical codes that some people are not willing to abide by voluntarily. Perhaps, as Niccolo Machiavelli put it, "whoever desires to found a state and give it laws must start with assuming that all men are bad and ever ready to display their vicious nature whenever they find occasion for it" (quoted in Christian, 1994: 343). Notwithstanding this contention, voluntary compliance would presuppose some basic morality which rigid adherence to Machiavelli's assertion cannot help very much to cultivate. Hostilities and mistrust towards enforcement officers in Zambia have indicated the truth of this in most cases. Enforcement officers in the Zambia Wild Life Authority (ZAWA) as well as in the forestry and fisheries departments have experienced these difficulties. This is likely to be the case, particularly where legal instruments have tended to alienate people, or deprive them of resources fundamental and vital to their existence without offering any alternatives. A case study that was conducted in Luapula Province on the fish ban policy by Dennis and Evelyn (1999: xii), under the Environment Support Programme (ESP), drew the following significant conclusion:

The study concluded that fishermen/women are knowledgeable and aware about the existence of the fish ban policy, its requirements and how to observe them. To the contrary, [however,] fishermen/women do not observe

these requirements or stipulations of the policy due to poverty, lack of alternatives during the fish ban period and other socio-economic factors.

Fishing is clearly a vital source of income for the livelihood of individuals in these communities. Thus, as the study findings indicate, these people appreciate the importance of conserving fish even though they do not condone the effects of the fishing ban on their livelihoods.

With the onset of globalization and the dominance of the corporate business culture in urban areas, the influence of western worldviews and values are too significant to be ignored. At present and for the future, it is hardly possible for any community to remain homogeneous both in terms of values and membership. While the indigenous person might not have completely lost his or her 'roots' in community, at least there is an element of widespread disillusionment. It is difficult to determine where one's allegiance lies in modern day society. What can be termed as the clash between the western and the indigenous worldviews has posed a significant challenge to the need to create effective environmental awareness that puts issues in their fuller context.

For instance, emphasis on formal institutions such as schools and colleges has almost excluded informal channels that were quite central to indigenous approaches. As expressed by the WWF (1999: 52), "for the vast majority of Africans, education in the ways of a specific culture was an informal but integral part of everyday life". This sort of approach was indeed practical as well as holistic

and had a better chance of ensuring the all-round development of essential virtues and attributes in a person. This is an important emphasis in virtue theory.

The unfortunate thing, however, as has been widely acknowledged, is that western pressures from the time of colonialism have significantly overshadowed what the traditional culture was able to offer. Hence, indigenous knowledge systems and practices have been severely constrained. Recovering from this trend may not be an easy task as western influences continue to overrun traditional political, economic and social systems.

8.2 The Role of the Environmental Council of Zambia

While government policies are not explicit about moral issues, there are regulations and processes that the ECZ should utilize to accommodate relevant value judgements about environmental matters. The EIA statutory regulation of 1997, and the processes it stipulates, is one such piece of legislation.

It is possible, and indeed most likely, that some of the expressed value judgements from the public may merely express personal preferences. Thus, it is important not to be swayed on the basis that a given preference is popular or common. There is need to involve ecologists and other relevant professionals to provide the information that would help in evaluating such preferences in order to ensure that they are environmentally informed. In this regard, it was in fact recommended in the SOE in Zambia 2000 Report that "the regulations should

incorporate a review stage in the EIA process, during which independent experts give their point of view in respect to the EIA of any project" (ECZ 2001: 153).

Furthermore, the ECZ should encourage this process even where no formal environmental impact assessment or enquiry is involved or required as long as environmental value conflicts are raised or anticipated. After all, it is part of the responsibility of the ECZ to elicit relevant views and to inform the public.

In this process, the relevance of other ethical perspectives on the natural environment should be incorporated as a counter balance to the dominance of the utilitarian framework and, more particularly, economic utilitarianism. Without adequate integration of the other perspectives, the utilitarian framework is a threat to any adequately informed ethical decision. The common danger with the preponderance of the utilitarian framework has been to confuse ecological worth with economic evaluation. Ecological evaluation refers to the relative evaluation of ecological features whereas the economic evaluation involves attempts to place purely economic value on environmental features. It is abundantly clear, as Coker and Richards (1992: 172) observed, that if we consider the complexity of ecosystems and the multiple functions they perform, attempts to value such features in purely economic terms have proved to be difficult if not unrealistic. In other words, and as one officer of the ECZ in Ndola put it, "You cannot put monetary value on environmental values"

8.3 Formal Education

The process of individual human development for all in Zambia is very fundamental. Hence, the institutions responsible for fostering this process should be more enhanced. At present, there appears to be a rift between the institutions of the family and the school. During a focus group discussion at the Copperbelt Teachers Training College, this was expressed as follows:

Children should learn moral issues from the family, but since they spend a lot of time in school, schools should do more. It is becoming increasingly difficult for teachers to control and discipline pupils. It appears that there is too much freedom at home with little or no guidance at all.

This comment suggests that the harmony and understanding that was there between schools and communities may have been disrupted in some areas. There is clearly need for the two institutions to work hand in hand in order to supplement each other's efforts in promoting individual and social development. If they can produce responsible individuals who have developed moral virtues and are able to respect and care for our natural surroundings, we would be well on the way to meeting the challenges of ensuring that the environment is well looked after.

According to the SOE Report of 2000, "environmental awareness is a limited term which means 'having knowledge about the environment' " (ECZ, 2001: 155). Although used interchangeably with 'environmental education', the Report suggests that environmental education is a broader term which is taken to include the essential component of "recognizing values" in addition to the more

knowledge-related component of the understanding of relationships between various elements and systems in the natural environment. It reads:

Environmental education is *the process of recognizing values* and clarifying concepts in order to develop skills and attitudes necessary to understand and appreciate the interrelationships between humans, their culture and biophysical surroundings (WWF, 1999: vii – my italics).

Consequently, if environmental education is not properly and effectively conducted, it ends up by merely imparting some limited knowledge about the environment. It does not motivate participants to commit themselves to the problems at issue and to exercise responsibility. In sum, environmental education must include an explicit focus on ethical values - which, in practice, seems to be sadly lacking - as well as on knowledge and skills.

While the integration of environmental education into the formal school system by the Ministry of Education was not only well intended but necessary, there is need to recognize the shortcomings of the school system in delivering effective environmental education. On paper, the mission and goals set for the education system appear to be fairly well balanced and informed by the need to enable individuals to live responsible and informed lives. However, oversights in translating these into practice have tended to upset this balance. The outcome has been a situation where some aspects of education have become more dominant than others.

In addition to the fact that some relevant subjects are optional, many of the activities relevant to environmental issues have been relegated to extra-curricula activities where involvement is not compulsory and is thus minimal. The fact is that not much has been done to cultivate interest in environmental issues among pupils. Furthermore, where work in terms of taking care of the school environment is compulsory, pupils are coerced to do the work. Little effort is made to ensure that they value the importance of what they are doing. In some schools, much of this work is allocated as punishment, a trend that has negatively affected the attitude of pupils to the natural environment.

The acquisition of knowledge and skills, according to the mission statement of the Ministry of Education, should go hand in hand with some measure of moral uprightness. Moral awareness is crucially important as it is at the root of responsible conduct. But moral awareness is not something that is readily available in every subject offered in the school curricula. The element of specialization as one moves up the educational ladder has somehow tended to lose sight of the importance of forming good moral character as well as in generating knowledge and discipline. Specialization appears not to be set to serve personal human development but rather to equip an individual with the skills needed to serve the industry. Consequently, the school system by its nature and track record has unwittingly been instrumental in the transmission and perpetuation of the western industrial worldview with its attendant social and economic pressures.

As the Zambia national policy document on education, *Educating our Future*, indicates, the goal of basic education is primarily to equip pupils with writing, reading and numerical skills. As stated in this document, "It was intended that nine years of compulsory education would allow pupils to grow ... before they would have to fend for themselves in the world of work" (Ministry of Education, 1996: 9). To a large extent, the school system is not only competitive but also individualistic and mechanistic. Very few students take the time to reflect about who they are and what it means for their individual human development to go through the process of formal education. The mindset is rather to pass examinations and to get the qualifications needed for a preferred kind of training and work, or just to get finished with the schooling process.

The integration of environmental education with other subjects - a task to which the Training Manual for Teacher Educators by WWF Zambia was tailor-made - is really dependent on personal interest on the part of teachers themselves. However, it appears that there are very few teachers with a keen interest in environmental issues. For instance, among the 14 basic schools I visited in the eastern part of Lusaka town in September 2002, only one member of staff on average had some interest in environmental issues out of the total number of staff ranging between 22 and 34 in the various schools. On the other hand, while some teachers were handpicked to be in charge of preventive maintenance or other relevant clubs, they exhibited lack of interest and motivation. This was also the trend at the Copperbelt Secondary Teachers Training College, which I also visited during the same period.

Only one student teacher out of a particular intake had a keen interest in environmental concerns and he was the only one taking a subject in environmental conservation issues as an elective (optional) subject.

A shortage of relevant materials on environmental education has compounded the problem. While other materials in fields such as geography, biology, environmental science and social studies do have relevant components with reference to environmental issues, these are not sufficient in terms of creating adequate ethical awareness. Knowledge and skills taught in science subjects do not automatically translate into environmental ethical awareness. For example, the Environmental Education Manual for Teacher educators produced by the Zambia Environmental Education Programme/WWF which is by far the most elaborate document in this field in Zambia devotes four out of the five chapters to scientific issues. Reference to the relevant ethical values only appears in the definition of environmental education contained in the preface and in the last chapter of the document. Scant attention, if any, is given to ethical values in the main body of material.

Environmental education is a lifelong process that involves both formal and informal channels. Its goal is about heightening environmental awareness by imparting ecological knowledge, appropriate attitudes and values, and ultimately ethical responsibilities for the rational use of resources and care about the natural

environment. Consequently, effective environmental education is measured in terms of commitment to desirable and appropriate action.

8.4 The Mass Media

The mass media are part of what has been referred to as the informal system in terms of its role in environmental education and public awareness in general. The informal system of environmental education covers the knowledge and information that is acquired 'in passing' through news by way of newspapers and other relevant publications, radio or television and personal conversations (cf. ECZ, 2001: 154). It has been suggested that there has been growing public awareness in terms of environmental issues. This trend has been attributed to the increase in the coverage of environmental issues both by the print and electronic media and, in part, to growing civil society and government programmes as well as public comments expressed in person or through the media (ibid.: 155).

Some of the notable media programmes shown on the Zambia National Broadcasting Cooperation (ZNBC) television, for instance, include, 'Down to Earth', sponsored by the Leadership for Environment and Development (LEAD) Southern Africa which presented a series of discussions by a panel on environmental issues. There are also community messages from time to time sponsored by the ECZ and the Central Board of Health (CBOH) jointly or individually on radio and television. Other in-house programmes by ZNBC such as

'The Reporter' and 'Focus on the Copperbelt' had some significant content on environmental issues.

As for the print media, the various articles are rather too numerous to itemize here. However, there are some notable periodic columns such as 'Agriculture in Focus' in the *Zambia Daily Mail* and 'Environmental notes by Warthog' in the *Sunday Times of Zambia*. The *Green Times*, published by the Green Living Movement, began in January 2003 and is an important publication that is significantly dedicated to environmental issues. Newsletters such as the *Enviro-line* by the ECZ and *The Environmentalist* by WWF Zambia Environmental Education Project are also helpful materials.

It has been acknowledged in recent times that there has been some improvement in the coverage of environmental issues by the media. Nevertheless, in view of the enormous potential of the media for informing the public and heightening their awareness of environmental degradation, a lot more needs to be done. Some media personalities have, in fact, been challenged by the extent to which the western media have raised environmental issues with reference to Third World countries. Indeed, local media have found themselves quoting foreign media as their source. Media coverage on environmental issues has its own strengths and weaknesses. The impact of the media in drawing people's attention to issues is undeniably significant, but much depends on how issues are approached and presented. It has been widely observed that environmental issues are mostly covered as news items.

Feature articles and documentaries that give an in-depth and detailed presentation of issues are relatively few. Unfortunately, there seem to be very few journalists who have a keen interest in environmental issues probably due to the fact that their training does not encourage greater focus on this dimension.

One shortcoming of event-centred coverage on environmental issues is that once the event is over, the mass media usually diverts its attention to other things thereby shifting the attention of the majority of the public also. Consequently, the results of major global Summits on the environment have failed to have substantial impact on public awareness. The situation is even worse regarding national workshops and seminars which may only be covered once in a newspaper edition, or as a news item on radio or television, as opposed to global Summits whose coverage normally spans a number of days.

Related to the above is the failure by most media professionals to articulate the relevant ethical issues and values. The general excuse for this failure is likely to be the quest for objective and unbiased reporting. This is not true, of course, given the fact that some media reports, and media institutions in general have been biased even when they have failed to articulate the relevant ethical values in the manner in which they have presented issues. This could be because the relevant ethical values were overlooked. But, of course, we should not rule out the possibility that the people concerned may have been ignorant of the relevant ethical values.

A major weakness with regard to the effectiveness of the media in Zambia is that they are concentrated in urban areas. The network in some rural areas is poor, if not non-existent. Furthermore, in a country like Zambia, quite a significant number of people are illiterate whereas the current media publications are only accessible to the literate.

8.5 Conclusion

The participatory and awareness creation approach is premised on the fundamental basis that people are essentially rational and moral beings and can fully cooperate when they have seen the need to do what is good and beneficial. Hence, there is need on the part of government to balance its approach effectively. Government should enhance its recognition, approval and support for all institutions that are relevant in bringing about responsible ethical behaviour in individuals. Social, cultural and institutional issues have to be addressed in order to develop, promote and sustain individual ethical attitudes and practices. The point being underscored here is that individual awareness and moral character cannot dispense with the importance of institutional arrangements.

In spite of the difficulties that our education system is going through, the schools remain key players in the process of preparing individuals to live informed as well as responsible lives. Even in the face of the fact that a teacher's position in society is no longer what it used to be, the teacher is still a figure of authority both in terms of knowledge and example to the young ones. It is imperative, therefore, that

teachers, during their training and service, are made to appreciate their responsibility not just to focus on knowledge but also to help develop moral values. While education is a lifelong process, it is nevertheless important to appreciate that the foundation is crucial in so far as building moral character is concerned. The limitations of the formal school system have to be taken seriously and addressed if the relevant values in addition to knowledge and skills are to be communicated.

The media should play a facilitative role, which would require some editorial effort in order to integrate the relevant ethical values, and as a way of counteracting some of the negative influences of the 'western media' which have disoriented most of our young ones, or some families in general. In as far as the general public is concerned, the media have an important role to play both as a tool for creating awareness, and as the watchdog of society. In this regard, calls for the free flow of information and the freedom of the press are very reasonable. Government should heed such calls. This is essential in order to ensure that those who are entrusted with public goods and resources provide the facilities needed to create an environment that would make it easier for people to translate environmental ethical consciousness into practice.

CHAPTER NINE

GENERAL CONCLUSION

Colonial events and later developments in the global environmental agenda have had a significant bearing on environmental issues in Zambia. These developments have not only dominated the thinking about ways of solving environmental problems, but they have also influenced the conception of problems and thereby significantly determined the major thrust of government programmes. As a result, most of the solutions implemented have undermined the cultural background and integrity of indigenous communities and their local environments.

The conception of justice as being served by the rule of law is not sufficient to ensure equity and environmental welfare. This has to be supplemented by an understanding, as Aristotle noted, that "justice is rooted in a community whose primary bond is a shared understanding both of the good for man and the good of that community" (cf. Shlomo and Auner, 1992: 2). The moral imperative that follows from this is that we should consult before making decisions that affect communities so as to safeguard community interests and concerns. The economic entrepreneurs and the State must be answerable to the local communities in particular. Since non-exploitative relationships are a key requirement for sustainable development, it is important to build bridges and generate trust and cooperation between communities, businesses and government that would ensure

sustainable relationships that provide mutual and equitable benefits. Once mutual respect has been attained, it is much easier for all concerned parties to respect ecological values.

Most development initiatives have failed and may have had adverse effects on the environment because they did not take into account the strengths and limitations of the local communities. The need to arrest environmental degradation is bound to fail if similar mistakes are not rectified in the future. Poverty reduction and food security are vital to reviving improved environmental management practices on the part of local communities. This needs to be supported by empowering and enabling groups, including the involvement of women and youths, so that they can assume responsibility for environmental management at particular local levels. Strategies to protect and conserve the natural environment that alienate people in the manner that most legal instruments have tended to do are very unlikely to yield the much-needed results. Indeed, environmentalists are rightly concerned that strategies that have been used to conserve and protect the environment since colonial times have in fact undermined traditional institutions and indigenous knowledge systems (source: www.allafrica.com/2002).

The assertion made in the SOE Report 2000 that poverty underlies all environmental problems in Zambia can distort and misrepresent issues if not properly qualified. This assertion is a reflection of the acceptance of western perspectives without subjecting them to serious evaluation. While poverty has

compounded the problem in some areas and respects, it does not underlie all or every environmental problem in the country.

Furthermore, this school of thought tends to present the environmental crisis as an object to which one best single solution, i.e. economic growth, has been found after an alleged precise examination of the problem. However, the environmental crisis, as Black (1970) acknowledged, is not just a matter of the changing nature of the 'natural' environment; it is just as much about the changing nature of our societies, namely, who we are and how we do things. In other words, the problem is not just out there in the physical environment, but in our social institutions, in our communities and in our families. Therefore, in the absence of real institutional responses to social problems, widespread negative population attitudes, as reflected in some anti-social and uncooperative tendencies, will continue. Addressing these social problems, particularly among the young is a vital factor in cultivating environmentally friendly behaviours in the long run.

Effective environmental management in view of the perceived need for development is not simply about pursuing economic growth. It is just as much about reshaping social systems and the aligning of traditional and modern institutions. It is also about a careful reevaluation and reassessment of the intentions and achievements of development projects and programmes for the wider society for it would appear that the inadequacies and failures of the development process

underlie a great many of the environmental problems in Zambia today, including poverty.

Supported by some expert advice, policy makers in Zambia claim that they have embraced the concept of sustainable development. However, not much has been achieved on the ground in terms of translating such pronouncements into tangible results or concrete action. Any such claims will continue to beg the question as to whether or not our programmes are, in fact, fulfilling the goals of sustainable development. Such questions cannot be determined simply by statements appealing to the concept of sustainable development itself.

It is important to remember that the concept of sustainable development emerged in the context of global debates. Hence, it is a serious oversight to present it as if it can be implemented in the Zambian context without some serious interpretative efforts and difficulties. The process of institutionalizing what the concept entails is quite demanding and it requires that the local situation and local conditions be appropriately addressed.

One of the major challenges to be addressed is the need to reorient our state machinery, our politico-economic system, so as to enable local communities and groups to regain influence, access and control over resources and essential services. If such commitments can be realized, they will prove to be fundamental in addressing the disparities between rural and urban opportunities and will help a lot

in restoring the integrity and dignity of both the environment and of local communities. As we have seen from the social ecological perspective, these aspects are essentially intertwined. Sound environmental policies need to move in tandem with sound social policies. Unfortunately, however, Zambia's social policies have been grossly ineffective.

Efforts to inculcate a sense of care and responsibility in most people have also failed partly because the approaches involved have utilized ineffective means to accomplish the task. As noted earlier, the approach of government is based mainly on economic incentives and legal statutes. However, the ethical evaluation of key regulatory instruments has revealed that these have not been adequate. Indeed, these instruments have in fact worsened social and environmental problems. In particular, the emphasis on economic and legal incentives has reinforced the economic utilitarian framework and the exploitation of resources for private gain.

While human welfare is in practice the basic concern about environmental issues, it is important at the same time to appreciate the extent of our dependence on the natural environment as our life-support system. Environmental phenomena have value in their own right independently of their use and the contribution they make to human welfare. In fact, without their intrinsic value, it is hard to see how they could be of any use to us. Consequently, our responsibility for the environment can only be adequate, according to deep ecology, if it is appropriately and

adequately informed by an awareness of the different kinds of environmental value, i.e., intrinsic and inherent as well as instrumental.

Social issues cannot be divorced from environmental issues. Hence, it is important to attend to and address the effects of economic and political imbalances in society in order to ensure environmental justice and, in return, to facilitate sound environmental management and practices. The plight of the poor on the one hand and of women on the other, as highlighted by social ecology and ecofeminism respectively, is a matter of serious and immediate concern. There is urgent need to tap their potential so that they can contribute positively to community efforts aimed at protecting the natural environment.

In an era of privatization where the emphasis on individual interests and private gain has come to the fore, the sense of community is seriously under threat. While this may not be so pronounced or relevant in urban areas, the prospect of sustainable livelihoods in rural areas is rooted in the survival of communities. Any agenda that favours private gain at the expense of community concerns and interests, as the communitarian perspective has cautioned, is destined to result in serious injustices.

Perhaps one of the things that has often been distorted and misrepresented is the notion of community benefits that are usually expected to arise from prospective private commercial projects. The issue of employment is commonly emphasized.

Unfortunately, however, the only employment opportunity for most local people in these communities is 'casual labour' which in fact only covers a small minority. In any case, in a country like Zambia where casual employment operates under exploitative conditions, such opportunities only enhance the potential of such investors to take advantage of local communities. This trend requires serious evaluation and rethinking of what people are sacrificing because, in most cases, this usually includes the loss of some of the most valuable things that their forefathers left in their custody such as land and other natural habitats.

These trends have gone to an extent where, for instance, and as reported in one EIA report, a local community was to be compensated for the loss of their ancestral grave. This was in addition to the fact that the community stood to loose access to grazing land for their animals and their only common water source (cf. "Sugar Plantation Swallows Nampundwe Graveyard", *The Green Times*, January, 2003: 8).

The natural law perspective has emphasized environmental justice in the sense of respect for both people and the natural environment. We have to appreciate our position in the context of natural systems and begin to value our natural heritage for what it is. As evidence has shown, exclusive focus on the economic benefits that can arise from the same have tended to undermine the intrinsic value of most aspects of the natural world. In addition, the rights of people in the affected communities have been seriously violated.

It is essential that communities are sensitized about their rights, not only to ensure that such rights are not falsely and forcefully withdrawn from them, but also to facilitate a relationship in which they will embrace their responsibility for resources to which they have easy access. This process would be much easier and effective if the whole, or at least, a large proportion of society, were adequately enlightened.

The formal approach to environmental education, and the school system in particular, assumes that by imparting knowledge, it will produce responsible citizens that will respond adequately to social and environmental obligations. What has been obtaining on the ground is, however, at variance with such expectations.

Traditional communities were far more concerned about environmental values than communities today. They taught what was necessary to develop values of responsibility, respect and appropriate behaviour towards the natural environment. However, modern day education has gradually shifted its emphasis from values to knowledge, a process which unfortunately has also become almost synonymous with having information. Education is now measured in terms of how much information has been imparted to the recipients and not in terms of how the recipients are responding in terms of their own appreciation of the issues. This trend has significantly compromised the learning process, and has significantly hindered personal development in terms of responding to social and environmental values.

The media, as the vital component of the informal channel of environmental education, needs to do a lot more than just giving information if it is to play its key role in heightening environmental awareness. While the media have, indeed exposed irregularities, inconsistencies and political interference with such vital institutions as the ECZ, nevertheless the general picture is that many issues relating to the environment have not been given the attention they warrant in an adequate and transparent manner.

Some of the changes that have taken place in our society in Zambia have resulted in serious social maladjustments. The family and the community are hardly what they used to be. While there were admittedly negative elements in the traditional setup, massive changes have eroded the positive elements in a people's way of life and culture. For instance, a virtue ethic was traditionally encouraged where respect for others and for adults in particular was emphasized. It was also important to learn community values in addition to the development of one's personal attributes and skills. This ensured that people in the community had a common vision about how to live properly with others and in harmony with their natural surroundings. Such an approach to life helped to ensure that community members were cooperative and that they respected their natural environment and ecosystems as emphasized by Leopold's land ethic. This, of course, sharply contrasts with current individualistic and environmentally destructive tendencies.

In order to live in harmony with the natural world, we need, first of all, to appreciate it for what it is. Secondly, we need to understand and appreciate the interconnections of its various components as well as our dependence on these elements and the services they provide.

Harmony within society is equally important, particularly in terms of equitable access to resources by all the people. Therefore, the sharing of resources should go hand in hand with a duty to respect others and a commitment to care for the natural environment. This has serious implications for our life styles, and for the manner in which we relate to everybody and everything around us. In this regard, we need the guidance of sound moral principles which will heighten ethical consciousness and generate the kind of motivation required for the protection of the natural environment, while at the same time fulfilling our basic human needs at present and for the future.

Poverty can hinder the poor people from acting responsibly towards the environment, just as much as greed can lead the rich to exploit others and the natural environment. Hence, it is advisable to deal with environmental problems within a broader perspective that also addresses the factors underlying poverty and inequalities in society.

It is also important to evaluate the effectiveness of our policies in all relevant aspects and not just in narrowly defined economic terms at the expense of other

concerns. There is therefore need to guard against the purely instrumental view of our institutions vis-a-vis our natural environment. Real progress will only come about when a developmental path that is well informed by the various issues and values alluded to in this study is adopted.

In order to heighten the level of environmental ethical consciousness in Zambia today, the following recommendations are put forward with a view to enhancing responsible environmental management and practices in the country.

9.1 Recommendations

- In general, there is need for government to improve its leadership role by adhering to sound ethical principles and established environmental regulations.
- There is also need for government to urgently address the structural and institutional issues that disadvantage communities from participating fully in the decision-making process, particularly in terms of determining the available options and alternatives to the management of natural resources. Lack of community or broad-based public participation in environmental workshops, for example, has contributed to their ineffectiveness in terms of practical impact.
- Government should provide, or facilitate the provision of incentives that will
 enable people to improve the quality of their lives and promote alternative
 livelihoods to those that are environmentally unsustainable.

- The ECZ should strive by all reasonable means to be 'pro-environment' in order to mitigate economic and political pressures, and the undue preponderance of the economic utilitarian approach to environmental issues.
- The ECZ should also promote the informal aspects of the EIA process. This would help in ensuring that people develop a tendency to assess the environmental effects of their activities in a fashion somewhat similar to the EIA regulation.
- There is need for the ECZ to facilitate mutual understanding between itself and the public in order to enhance the formation of strategic partnerships. In particular, the education and communication department of the ECZ should strive to go beyond mere public relations and enhance its operations in a manner that will help to cultivate values and attitudes that would ensure public commitment to the prevention and solving of environmental problems.
- Effective environmental education can only be measured in terms of positive
 action and public involvement in solving environmental problems. Thus, there
 is need to identify and articulate relevant environmental values and ethical
 responsibilities in order to motivate the public towards action and commitment.
- Since environmental education is a lifelong process, there is need to develop a
 holistic view of our education system that would include a more explicit focus

on our essential relationship to the natural environment. In particular, environmental education should be given higher priority from the lowest up to the highest institution of learning.

- In order to make the school system relevant to community environmental needs, community concerns should play a pivotal role in the development of environmental education. Specifically, there is need to appreciate that one's upbringing at home plays a significant role in a person's life. Consequently, since the school and home environments are relevant to all attempts to promote responsible environmental practices, there is need to facilitate synergistic linkages between these two important institutions.
- As the informal channel of environmental education, there is need for the media
 to articulate relevant environmental values and the ethical responsibilities of all
 human beings. Hence, reporting about environmental issues has to go beyond
 mere news reporting of events, government programmes, or the exposing of
 government irregularities and negative public environmental practices.
- In order to instill more conscious awareness and appreciation of environmental values in the public, there is need for understanding and respect for the natural environment to be an essential ingredient in the training of media reporters.

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