#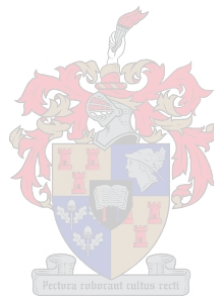 SHOULD WE SAVE NATURE WHILE PEOPLE GO HUNGRY? AN ANALYSIS OF NATURE PRESERVATION AND POVERTY WITHIN THE SOUTH AFRICAN CONTEXT.

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Assignment presented in partial fulfillment of the requirements for the degree of Master of Philosophy (M.Phil. in Applied Ethics) at the University of Stellenbosch.

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April 2003

DECLARATION

I, the undersigned, hereby declare that the work contained in this assignment is my own original work and that I have not previously in its entirety or in part submitted it at any university for a degree.

Signature::

Date:

ABSTRACT

South Africa is a land of stunning beauty and scenic wonder, with contrasts ranging from arid semi-desert areas to lush green forests; from flat plains to towering mountains. Socially and economically it is likewise a country of extreme contrasts (MacDonald 2002:13). The South African Constitution, as adopted on 8 May 1996, grants every citizen basic, inalienable human rights. Under certain circumstances, however, some of these rights can come to stand in direct opposition to one another leaving us with a dilemma to choose between two compelling actions. In this context, the right to a secure, ecologically sustainable environment and the right to food and water is in conflict. The greatest challenge to face South Africa is to eradicate poverty and develop its people while ensuring that the natural environment is not destroyed in the process. There must be development for this generation, but not at the price of destroying the natural environment for the next generation.

We have ample examples from the apartheid era of damage done both to people and to the environment through the "homeland policy". Millions of people were forced to eke out an existence on land that could not carry the number of people consigned to these remote areas. Erosion, deforestation and poverty are the heritage. There are increasing demands for development, but these demands are infinite while the resources of the world are finite. The question now arises whether the right to a safe environment or the right to sufficient food and water, both enshrined in the Constitution should be given preference. I aim to show that Holmes Rolston III 's article "Feeding People versus Saving Nature?" and the points made in Hardin's "Tragedy of the Commons" fail to satisfy public norms and therefore fall short to help us in solving this dilemma. I propose the bioregional management approach that focuses upon the political means to promote restoration and maintenance of the natural systems that ultimately support the people and nature in each area. I believe that this strategy could succeed in solving the impasse that the South African society has reached in solving this very complex dilemma.

ABSTRAK

Suid-Afrika is 'n land van ongelooflike skoonheid met kontraste wat wissel van droë semi-woestyne tot geil groen woude; van gelyk vlaktes tot hoë berge. Sosiaal en ekonomies is dit tegelyk 'n land van ekstreme kontraste (MacDonald 2002: 13). Die Suid-Afrikaanse Konstitusie, soos aanvaar op 8 Mei 1996, verseker elke burger van basiese, onvervreembare regte. Onder sekere omstandighede, egter, kan sommige van hierdie regte met mekaar in direkte konflik wees, en dié dilemma bring mee dat ons tussen twee belangrike maar konflikterende optredes moet kies. In hierdie konteks is die reg op 'n veilige, ekologies volhoubare omgewing, en die reg tot voedsel en water, in konflik met mekaar. Die grootste uitdaging waardeur Suid-Afrika in die gesig gestaar word, is die gelyktydige uitwissing van armoede en die ontwikkeling van sy mense, terwyl verseker word dat die natuurlike omgewing nie in die proses vernietig word nie. Daar moet ontwikkeling wees vir die huidige generasie, maar nie teen die prys van die vernietiging van die natuurlike omgewing vir die volgende generasie nie.

Ons het talle voorbeelde uit die apartheid-era van die skade wat aangerig is aan mense en hul omgewing deur die tuisland-beleid. Miljoene mense is geforseer om 'n bestaan te maak in gebiede wat nie die groot getalle wat na hierdie verafgeleë areas gedwing is, kon akkomodeer nie. Die nalatenskap hiervan is erosie, ontbossing en armoede. Daar is toenemende eise vir ontwikkeling, maar hierdie eise is oneindig terwyl die bronne van die wêreld eindig is. Die vraag wat nou onstaan, is of daar voorkeur gegee moet word aan die reg tot 'n veilige omgewing of die reg op voldoende voedsel en water, soos wat beide hiervan beklemtoon word in die Konstitusie. Ek poog om aan te toon dat Holmes Rolston III se artikel "Feeding People versus Saving Nature?" en die punte gemaak in Hardin se "Tragedy of the Commons" nie daarin slaag om openbare norme te bevredig nie en dus nie daarin slaag om die dilemma te oorkom nie. Ek stel voor dat die dilemma benader moet word vanuit 'n bio-regionale perspektief waarin daar gefokus word op die politieke middele om die restorasie en voortbestaan van natuurlike sisteme te bevorder waardeur die mense en natuur in elke area uiteindelik ondersteun word. Ek glo dat hierdie strategie daarin sal slaag om die impasse op te hef waarin die Suid-Afrikaanse samelewing verval het in hul poging om hierdie komplekse probleem op te los.

ACKNOWLEDGEMENTS

This endeavour is not a solo performance. My first and foremost thanks goes to my supervisor, Professor Johan Hattingh. Discussions with him were of importance for the conceptualization of the study; he was always ready to take time and give valuable suggestions and finally meticulously corrected an earlier draft and the final version of this assignment.

Among my personal friends with direct contribution to the success of this study, I would like to mention the following:

Steve Reed and Family, Clive, Garth and Sephora for introducing me to the Western Cape and for their memorable hospitality during my long stays there.

A special thank you to Loretta for her culinary contributions to the regeneration of my working spirit after tiring hours at the university.

Raj Maharaj for his intellectual stimulation and compassionate calls, which help keep the flame alight.

I reserve the last words for my family, whose belief, skepticism, criticism, praise, impatience, endurance and great solicitude were necessary conditions for seeing the work through.

NOTE ON RACIAL TERMINOLOGY

Although apartheid-era racial classifications are a social construct with no objective significance, the legacies of apartheid and the heavy correlation between race and class in South Africa are such that racial classifications remain an integral part of political analysis in the region. "African," "coloured," "Asian," and "white" will be used to describe the four major apartheid racial categories in South Africa, with the most common use of upper and lowercase letters being adopted. The term "black" is used to refer to Africans, coloureds and Asians as a whole, in recognition of their common oppression under apartheid.

Contents

INTRODUCTION

The international community has set itself an ambitious goal: to halve the number of people living on less than US$1 a day by the year 2015. As laudable the goal may be, the key to finding the way out of poverty for today's poor is not just about putting some extra dollars in their pockets, believes the ICUN –The World Conservation Union (Macleod 2002:28).

Today, 53% of the world's six billion people still live on land, while less than 1% are from oceans and other aquatic habitats. Even so, about one billion Asians rely on fish as their primary source of protein, while the fishing enterprise employs some 200 million people globally. Worldwide, 200 million indigenous people live in and depend on the forests for their livelihood, food and medicine. And the rest of the planet depends on forests – directly or indirectly – as a source of food, shelter and clean air.

Indeed, those who claim they do not need natural resources for their living would be either Martians or robots. The majority of the world's poor people continue to live in rural areas and depend heavily on natural ecosystems for their livelihoods. The challenge is therefore to accommodate growing and sometimes truly pressing needs of humankind with the capacity of nature to restore itself. Even more so if we're talking about a time span longer than human life. To face this challenge, IUCN mobilizes all expert knowledge to ensure that people can harvest wood, fish, and yield crops not only today, but also tomorrow (Macleod 2002:28).

The concept of sustainable development is persuasive in that it provides a language and a discourse that guides us to think through the issues of economic, environmental and social inter-relationships and their effects. The future of preservation and conservation will depend on our ability to redefine the terms of engagement with governments, the private sector and society at large. In a world of 10 billion people, the pressures of the wealthy and the poor on our environment will be even greater – a scenario less than 50 years away. Conservation must be seen as a force for development, not against development. Protecting an ever dwindling resource base against an ever growing demand for food, water, energy and biomass is doomed to failure unless it can help to provide practical answers to real dilemmas.

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The question "Is economic development and the protection of the environment inevitably in conflict?" is haunting the world like that cloud of pollution over much of southern and south-east Asia. For if these two goals are mutually incompatible then humankind faces a desperate difficult century. We have to be circumspect. To isolate a simple tradeoff as hungry people versus nature is perhaps artificial. If too far abstracted from the complex circumstances of decision-making, we may not be facing any serious operational issue. When we have simplified the question and made it more concrete, it may result, minus its many qualifications, in a different question. The gestalt configures the question, and the same question reconfigured can be different. So we must analyse the general matrix, and then confront the more particular people versus nature issue (Rolston 1996:351).

Those of us who wish to protect estuaries, forests, species and other aspects of nature may give any three kinds of arguments – instrumental, aesthetic or moral to support our conviction. We might argue on instrumental grounds, for example, that we should save species for their possible medicinal applications, or forests because they add to global oxygen budgets. An aesthetic argument, in contrast, would point to the magnificent qualities a ten thousand year old forest or estuary may possess. A moral argument describes obligations we have towards objects of nature insofar as we regard them with reverence, affection and respect. Such an argument may contend that humanity confronts a great responsibility in learning to share the world with other species. Love of or respect for the natural world increases our stature as moral beings, and it may teach us to be critical of and to change our preferences and desires. Within the next decade or two, we shall decide the fate of many estuaries, forests, species and other wonderful aspects of the natural world. How can we justify efforts to protect them? Will instrumental or prudential arguments do the trick?

Poor people generally do not need to be convinced that they would find a higher standard of living more enjoyable, for virtually everyone aspires to an improved quality of life. But their efforts to escape poverty, through the more concerted exploitation of natural resources, often damage the environment. Although they may realize that their action are creating problems for the future, people in such circumstances are forced through poverty to do things that help them and their families survive for the present (Yeld 1997:19). Poverty is one of today's greatest

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environmental and ecological problems. This is so because people who do not share in the wealth technology creates, must live off nature in their need to exploit the natural commons, they may destroy it. Analogously in an urban context, poor people have to send their children to work in sweatshops to survive. The problem, of course is not that poor people have wrong values. Extreme and deplorable inequalities in the distribution of wealth lead to the mistreatment of children and to the destruction of the environment.

South Africa in the mid-1990 faced urgent question: how to address the severe inequalities that developed under apartheid? How to build a stable democracy in the face of enormous unemployment and widespread poverty? And how to address the environmental degradation that resulted from apartheid and ensure that the path of development is sustainable? The greatest challenge to South Africa is to eradicate poverty and develop its people while ensuring that the natural environment is not destroyed in the process. There must be development for this generation, but not at the price of destroying the natural environment for the next generation. The natural wonders of our country, including the magnificent variety of fauna and flora, as well as our water resources, our topsoil, our grazing lands, our clean air, must be preserved and protected for future generations. We need to build an approach to human and economic development which includes a more deeply considered and appropriate use of technology, and which has environmental and natural resource issues as a cornerstone.

Although South Africa has undergone a dramatic economic, social and political transition in the last decade, many of the distortions and dynamics introduced by apartheid continue to reproduce poverty. The introduction of remedial policies has been recognized as priorities by both government and civil society. Statements made by government have recognized that planning needs to be focused on the objectives of narrowing inequality, breaking down the barriers that hamper participation in the economy and reducing poverty. As a diplomatic endorsement of this, in March 1995 South Africa joined the nations of the world in pledging to work towards the eradication of poverty at the World Summit for Social Development in Copenhagen (May 2000:2).

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What then is to be said about priorities between nature preservation and feeding people? Holmes Rolston 111(1996:352) is moderate in these matters. He argues from the moral assumptions of people in the world. The meeting of people's needs does not always take priority. For Rolston there exists enough good reasons to protect endangered species and certain areas of natural beauty and ecological significance against further encroachment from the human system, despite the pressures of hi-tech industry, commercial investment and population growth (Hattingh and Attfield 2002:85). Garrett Hardin (1964:56), a neo-Malthusian takes a global and pessimistic view of problems of poverty. He compares the world to a sea, with about one-third of the population in a lifeboat and the other two-thirds trying to avoid drowning and hoping to climb aboard. The lifeboat, he argues, has a limited capacity and cannot admit any more members. We have no obligation to admit anyone and certainly no obligation to surrender our place. Hardin asserts further that aid to the poor does not help them: on the contrary it damages the environment, leading to a "tragedy of the commons," and harms future generations. In a crowded world of less than perfect human beings, mutual ruin is inevitable if there are no controls, or if we strive to feed everyone.

An environmental ethic that suggests significant controls is bioregionalism. The bioregional position could be a possible solution to the saving nature versus feeding people dilemma. This approach focuses upon the political means to promote restoration and maintenance of the natural systems that ultimately supports the people and nature in each region. I concur with Pierce and Van De Veer (1995:175) to question the adequacy of the argument environmentalists often make that we must protect nature to provide for the welfare of human beings. I think it is also true that we must provide for the welfare of human beings (eradicate poverty) if we are to protect the natural environment.

Chapter one of this study is an in depth analysis of the problems of nature preservation and poverty in South Africa. It chronicles the environmental history and impoverishment in South Africa from apartheid to the present. Government's endeavours to overcome poverty and strike a balance between environment protection and development are also outlined. Chapter two seeks

position of bioregionalism as a possible route forward. My recommendations to the conundrum of feeding people against saving nature appear in chapter four.

The careful reader may discern favoured licks and familiar riffs reappearing from time to time within the choruses that the chapters of this work represent. Just like those recurring thematic motifs that give unity and texture to a good jazz solo, I have chosen to think. But, of course, the reader will be the best judge of my success in realizing my intentions in this effort.

While this thesis is intended for the general reader, who is assumed to have no special knowledge of environmental science and ethics, it is principally directed at two audiences: people who have decision-making responsibilities for managing resources (resource managers) and people who are in a habit of criticizing resource managers. Resource managers have an unenviable task. Some groups want more preservation and conservation, others more development. Since individuals have conflicting interests and different value systems, it is often hard to determine what the best way is to use our limited environmental and economic resources.

But as the trajectory of this thesis begins, I want the reader to know that I've done the best I can do to make it honest and true. The South African environmental crisis is, as we say it in Ladysmith (KZN), real as rain, and I cannot stand the thought of leaving my children with a degraded environment and a diminished future. That is the basic reason why I have searched so intensively for ways to understand this crisis and help solve it; it is also why I am trying to convince the reader to be part of the enormous change our nation must now undergo. I am struggling to be part of the same change myself, and my hope is that the reader will open his or her mind to the words and ideas that follow. They represent not only an expression of my beliefs but also a deep commitment to them. I hope you, too, will make a commitment to help bring South Africa back into balance, for as W.H. Murray has said: " Until one is committed there is hesitancy, the chance to draw back, always ineffectiveness. Concerning all acts of initiative … there is one elementary truth, the ignorance of which kills countless ideas and splendid plans: that the moment one definitely commits oneself, then providence moves too" (Gore 1992:16).

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CHAPTER ONE

NATURE PRESERVATION AND POVERTY IN SOUTH AFRICA – FROM THE APARTHEID ERA TO DEMOCRACY

The great red hills stand desolate, and the earth has torn away like flesh. The lightning flashes over them, and the clouds pour down upon them, the dead streams come to life, full of the red blood of the earth. Down in the valleys women scratch the soil that is left, and the maize hardly reaches the height of a man. They are valleys of old men and old women, of mothers and children. The men are away; the young men and the girls are away. The soil cannot keep them anymore (Alan Paton, Cry the Beloved Country, 1948).

In South Africa one must never lose sight of the land. For it is in the struggle with the soil in a harsh and dry climate that men and women have for thousands of years learnt to survive, changing from hunter and gatherer, to herder and cultivator and to underground miner in the process. It is the conflict over land, particularly between black and white, that has run like a seismic fault, through the body of South Africa, dividing people along a line that even today, three centuries after the first permanent settlement by well-armed invaders threatens to engulf the country in flames of civil war. And it is destruction of the land through modern foolishness and greed that may remove foundations of existence in the very place where humanity first evolved (Ramphele and Wilson 1989:34).

Under the apartheid government, thousands of black South Africans were forcibly removed from their ancestral lands to make way for game parks, and billion of rands were spent on preserving wildlife and protecting wildflowers while people in the "townships" and "homelands" lived without food, shelter and clean water. In short, flora and fauna were often considered more important than the majority of the country's population.

The roots of South Africa's current poverty, and of the ongoing process of impoverishment, go deep into the past. But analysis shows that more recent developments, particularly those that have accompanied the emergence of the country's apartheid policies since the National Party (NP) came to power in 1948, have also contributed substantially to the problem.

The Apartheid Era, 1948 – 1989

The victory of NP in 1948 was not only victory of the ideology of racial separatism but also marked the beginning of a period of extreme politicization of environmental conservation and the institutionalization of environmental racism. Under apartheid, a body of laws was passed which further disempowered blacks and rendered them even more vulnerable to discriminatory action (Horrell 1978:22). By making genuine participation by blacks in the decision-making mechanism of society impossible, these laws ensured a neglible level of black involvement in environmental decision-making. In a system designed to racially categorize and divide all citizens and crush all dissent, it was inevitable that blacks would become progressively more marginalized economically and politically with negative consequences for preservation and conservation (McDonald 2002:20). This marginalization came about in several ways.

First, the government's 'homelands' policy aimed at moving Africans to ethnically divided rural areas, played a major role in perpetuating the spiritual and physical estrangement of blacks from the land. Despite the reality of urbanization, the government embarked on a policy, which confined Africans to small rural areas, where overpopulation, poverty and lack of basic services inevitably led to widespread environmental degradation (Durning 1990:40). This policy ensured that Africans were treated as foreign migrants in the land of their birth. As such, these measures continued and consolidated the facts of the Land Acts of the Union of South Africa that were passed in 1913 and 1936 respectively.

Apartheid institutionalized black poverty through a battery of laws and regulations, which placed enormous obstacles in the way of black socioeconomic advancement. Not only were severe restrictions placed on the activities of African traders, a wide range of jobs were effectively reserved for whites (Horrell 1968:255). In addition, blacks routinely receive lower rates of pay than whites and unequal benefits for undertaking the same or similar work. With the majority of blacks trapped in a cycle of poverty and a continuous battle to survive, few had the means, the inclination or the leisure to engage in preservation and conservation activities.

Third, a racially differentiated and inferior education system was introduced through the implementation of the Bantu Education Act (47 of 1953), which applied to Africans (Horrell 1968:15). While separate education systems introduced for Indians and Coloureds at a later date were also inferior to that of Whites. "Bantu Education" was specifically designed to educate Africans for a subordinate role in society (Pelzer 1966:36) and resulted in deterioration in the already very poor standard of education available to them.

Fourth, a range of legislature restrictions on freedom of movement rendered blacks unable to explore and become familiar with the broader environment. It was not only laws restricting freedom of movement which limited blacks opportunities to experience the environment, the application of other apartheid laws such as the Group Areas Act (41 of 1950) and the Separate Amenities Act (49 of 1953) also contributed in no small measure. Also since all blacks lacked meaningful political power they were powerless to prevent the obnoxious facilities such as sewage plants, polluting industries and landfills in close proximity to black residential areas. The reservation of separate Amenities Act provided that any public premises could be reserved for exclusive use of a particular race, and that such actions could be ruled invalid on the ground that separate facilities were not substantially equal (Horrell 1968:113).

It is an open question, however whether the latter provision was ever taken seriously by the apartheid regime. The state department and provincial and local authorities to provide a grossly unfair and unequal distribution of natural and recreational amenities used this Act. The exclusion of blacks from these amenities has undoubtedly had a detrimental effect on the environmental attitudes and perceptions of the affected communities, and should be considered a major factor contributing to a lack of interest in or hostility on the part of blacks to the whole concept of preservation. The cultivative effect of the battery of discriminatory laws enacted during the apartheid regime was to further alienate blacks from mainstream environmentalism. This was reflected in the membership of major conservation organization such as Wildlife Society and the Mountain Club of South Africa, which remained predominantly White during most of this period (Schweizer 1983:49). There is little doubt that these laws were in some measure responsible for stunting the growth of the environmental movement as a whole, and entrenching its narrow white support base. In addition, while it is true that a plethora of socially restrictive apartheid

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legislation existed, where organizations were prepared to meet certain conditions (such as applying for permits) it was possible to overcome these restrictions, and for mixed gathering to take place (Centre for Inter-Group Studies 1977). In many instances environmental non-governmental organizations (NGOs) voluntarily implemented the government's racial policies. Their motivation was either to pander the conservative political opinion of their membership, or an attempt to prevent the loss of continued financial support from the government (Horrell 1968:16).

The racial attitude of many whites involved in mainstream conservation was particularly obvious in matters involving the enlargement of protested natural areas, which affected blacks. For example during the Lake St Lucia Commission of Inquiry in 1964, there was a "complete disregard for the Black opinion" in a situation in which thousands would be made homeless by the enlargement of a conservation area (Frost 1990:24). Those involved in the Commission, as well as white members of the public who sent in comments, had little hesitation in recommending the forced removal of about 5000 people. Black alienation from mainstream environmentalism was aggravated by the many other cases where Africans were forcibly removed from their traditional lands in order to promote the aims of preservation and conservation (McDonald 2002:24). Apartheid not only degraded the inhabitants of our country; it degraded the earth, the air and the streams. "When we say Mayibuye Afrika, come back Africa, we are calling for the return of legal title, but also for restrictions of the land, the forest and the atmosphere: the greening of our country is basic to its healing. There is a lot of healing to be done in South Africa" (Sachs 1990:7). In spite of the above, and contrary to expectations, a strong environmental concern could be discerned in the struggle against apartheid. Sachs (1990:7) words is a clear confirmation of this.

There are grassroots struggles, which include greening issues that should be mentioned here. A grassroots environmental movement existed in embryonic form in the period between 1984 to 1986, the days of "People Power". Through street committees a great deal was done to organize garbage collections and establish people's parks with small rockeries and colourful painted tyres in many open spaces in townships throughout the country *(The Weekly Mail* 9 May 1986). At

grass root levels these efforts have always been a small part of a much broader struggle against apartheid. In 1987, the president of the Soweto-based National Environmental Awareness Campaign (NEAC) emphasized that apartheid was at the core of environmental degradation. Blacks always had to live in an environment that was neither beautiful nor clean, had no proper housing, roads or services. In the same year, NEAC members demonstrated with placards saying: "Protect our environment by removing the Group Areas Act" and "The Land Act and Apartheid makes our townships dirty" (*The Star*, 6 June 1988).

In 1989, the head of the African National Congress (ANC) Department of Economics and Planning, Max Sisulu, responded to a set of questions indicated the ANC's thinking on environmental issues. He attributed environmental degradation to apartheid. The ANC believes that a rational ecological protection policy requires the dismantling of apartheid. Widespread overgrazing, soil erosion and serious land degradation in the so-called 'homelands' constitutes the inevitable destructive consequences of apartheid. These cannot be reformed or rehabilitated by land-use management measures without first dismantling apartheid (Cock and Koch 1991:17).

Those who have benefited from the apartheid policies have always put the blame for environmental degradation on the oppressed people's inability to use resources in a wise manner. The actual cause is in fact the unfair distribution of resources and the racial manner in which support opportunities were made available to the people of South Africa. Accordingly, the ANC believes environmental reconstruction constitutes a major task of free democratic post-apartheid South Africa. Indeed an environmentally conscious society can only exist in a free democratic political environment.

Sisulu further said the ANC is committed to protecting wildlife resources, and is strongly opposed to the illegal poaching of rhino horns and elephant tusks. The ANC support the policy approach of some of the free Southern African Governments, which advocate full community participation in the management of wildlife resources and in the economic benefits from this resource. If the communities perceive wildlife as an asset where it exists, they will take it upon themselves to protect it and not be party to poaching and smuggling. The ANC is strongly

committed to combining economic development with environmental protection (Cock and Koch 1991:34). It was during the 1990s, when the political scene began to undergo radical changes and a major transformation began to take place within the environmental sphere, that black South Africans began to grapple with environmental issues in larger numbers than ever before.

Zooming in on Environmental Consideration for Development in a Non-Racial Democratic South Africa

For over forty years, the economic strategy of the successive white controlled government has been based on expanding industry through the substitution of imported goods. There has also been an emphasis on strategic industries such as arms and petro-chemicals. This resulted in a sudden emergence of a manufacturing sector that was intended to ensure the survival of the apartheid systems, but one, which was generally uncompetitive in terms of the international economy. As far as the agricultural sector is concerned, the government adopted a highly paternalistic approach towards the white farmers. This was characterized by heavy subsidies that tended to distort the functioning of the economy, and led to efforts to cultivate marginal land that, in some cases, made in large contribution to an ongoing process of desertification.

The economic development strategy of the South African government has thus been particularly destructive to the environment and the lives of the black workers in general. The welfare of these workers in the farming sector has never been of concern to the government. This problem was further aggravated by the oppressive laws that were used against organized labour in the industrial sector and the prevention of black workers from organizing themselves (Jack 1993:267). The social cost in these deprived communities have never been calculated.

The ANC's Policy Guidelines in this regard as adopted at the 28-31 May 1992 National Conference reads as follows:

> The ANC believes that the Citizens of South Africa at present and in the future, have the right to a safe and healthy environment, and to a life of well-being. Accordingly, the broad objectives of the environmental policy are aimed at fulfilling this right. In this context, growth and development within South Africa must be based on the criteria of sustainability.

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This statement emphasizes that all-South Africans irrespective of race, colour, creed, gender and religious affiliation have a right to a safe, healthy environment. The statement indicates that a non-racial democratic government will ensure that discrimination of any kind will not be allowed to take this right away from any South African. The statement further emphasizes that economic growth and development must ensure sustainability. In this regard, the ANC follows the recommendations of the 1987 Brundtland Report in which sustainable development was defined as "development that meets the needs and aspirations of the present generations, without compromising the ability of the future generations to meet their needs".

The guiding principles of the 1992 ANC policy statements are (Jack 1993:268):

- o Sustainable Development;

- o Equitable access to environmental resources;

- o Public participation in all planning decisions which affect the development and management of natural resources;

- o An interpreted approach to environmental issues that relate to all sectors of society;

- o Public right of access to information and the courts on issues of environmental concern.

In order to ensure that the policy guidelines are implemented with a high level of success, the ANC's policy objective stated at that time was to develop a framework aimed at creating conditions conducive to sustainable development. This requires that a future growth strategy be compatible with ecological and human right principles, and that growth is geared towards the provisions of basic needs to benefit the whole community, and is not seen as an end in itself. [ANC 1992:37]

In brief, the 1992 policy objectives consisted of the following important issues:

1. An affirmative action programme within a variable economic development programme that will ensure that all South Africans have access to the natural resources required to satisfy their basic needs and to restore traditional access to natural resources within ecological constraints.

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2. A bias towards development of appropriate environmental awareness programmes for all sectors of our society in order to reinforce harmonious and traditional links with the environment and also to empower people to participate in the planning, development and management of resources.

3. Comprehensive policies and programmes that will ensure adequate protection, conservation and restoration of the environment will be adopted.

4. The prohibition of import and export of any forms of hazardous waste.

5. The redistribution of land must take into account measures, which will ensure that these resources will be used in an appropriate and sustainable manner.

6. To ensure that other policy sectors incorporate the principles embodied in the environmental policy thus assuring the sustainability of development in a democratic South Africa.

For over 40 years the economic development strategy of the Apartheid Government has been particularly destructive to the environment and the lives of the black workers in general (Jack 1993:267). The condition of the environment and the welfare of workers in industrial and farming sectors were never of concern to such a government. This therefore means that any government that will come to power will be faced with two realities, namely, a high level of deprivation and poverty that affects the majority of South Africans and industrial and farming sectors that have no regard for sustainability in their production methods. In order to address these two problems; it is imperative that vigorous steps be taken to ensure that nature and environment are used wisely and sparingly by restoring it where necessary so that it can be passed on to future generations as intact as possible. However, the patterns of production and consumption shall impact on sustainability.

Further to changing the way we act, we should introduce measures to control the volume of waste. Technological innovation is an important instrument in achieving these particular

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objectives. Whereas technology was used in the past to introduce more and faster, the challenge today is to produce better, that is in a responsible fashion both ecologically and economically.

Technology is therefore a crucial link in the chain of ways and means of achieving this end. The future non-racial democratic government in this regard will be mainly concentrating on the technological and intellectual infrastructure, encouraging knowledge in the field of technology and also the transfer of that knowledge so that it can be used in places where it is needed. These policy objectives applied both to technology for the innovation of production processes (so that these become cleaner, process integrated technology) and add on technology, which does something to alleviate the environmental objections without the production process being radically changed.

At this juncture, I find it prudent to visit Shiva's discussion (1993:33) technological myth production. It is a popular image that poverty comes from a lack of western science and technology and affluence comes from its presence, that the magic of wealth is somehow located in the magic of technology. The North has been very powerful in generating technologies that are able to use resources in very intensive and very wasteful ways. Besides being resource intensive, the technology systems produced by the Industrial Revolution are also, characteristically, labour dispensing. Productivity efficiency is supposed to be broad measure of how much you produce with a certain amount of input. It is supposed to be ratio of output and input. But normally the only input ever considered is human labour so that designers try and create technologies that use less and less input of human labour. Shiva further cites Lovins soft energy paths. Lovins stated that its made to look like third world people are somehow inherently, intrinsically inefficient and somehow people living in industrial societies are inherently more productive, inherently more efficient. In the United States of America, by his calculation, a producer has 250 times more energy slaves than an average Nigerian. An average American uses 250 times more energy to do the same thing, and is therefore putting 250 times more pressure on this planet because the pressure is coming from resource use. The invisibility of the resources, which go into Western Production, makes it appear technologically progressive. Values relating to natural resources,

values of human and social contribution are all erased and relocated in technology. Technology appears as if above society, as if worked without natural resources.

This invisible destruction of entire regions to provide raw material, cheap labour, and in the final analysis, marketable commodities is where the real wealth transfer takes place. It is this process of wealth transfer which creates riches and wealth for one group of people, and impoverishment and dispossession for the rest. So the processes of the creation of wealth are the same as the processes of creation of poverty. It is not the case that wealth rises automatically from technology and poverty comes from the absence of those magical tools. Poverty comes from the application of those same tools.

These are only some of the aspects of the concealed faces of technology as environmentally destructive and as poverty creating. As South Africans, we need to start seeing them. We need to secure counter symbols. Gandhi's spinning wheel was such an example. He believed Indians had to have systems of production in which they could have a role (Shiva 1993:40). The lesson here is technology should not replace us but offer a better quality of life.

According to Shiva the most important issue in the area of technology development is that it is forgotten that technologies are actually invisible means of rewriting rights. If a trawler is introduced into a coastal zone where people have been using traditional craft to fish, their rights in that commons are written over as the private property rights of that trawler owner. That is, the trawler will over-fish and take away the resource from the traditional fisherman. If a Green Revolution seed is introduced into an arid zone, it requires excessive use of ground water. The ground water has to be taken away from other people. Common rights to water are thus rewritten as private rights to water and retained by those who control capital. A similar process occurs in every area, which has a close relationship with resource endowments.

Western technology has moved us to where we are. However the non-racial democratic government will have to encourage individual enterprises to regard investment in the environment a their responsibility. The ANC's 1992 policy guidelines seem to be aligned with Shiva's perspective (at least in theory). A bias towards development of appropriate environmental

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awareness programmes for all sectors of our society in order to reinforce harmonious and traditional links would be the environment and also to empower people to participate in the planning, development and management of resources and equitable access to environmental resources. The government's role should therefore be directed at facilitating the process of formulating an environmental policy where objectives are vigorously pursued. Lack of proper administration of such a policy will without doubt, frustrate the growth of the economy towards sustainable development (Alston 1993:173).

The ANC's policy guidelines on environment though laudable, are not a blueprint, instead they spawn widespread recognition of a powerful change in thinking.

The Winds of Change become a Storm

The root of the environmental justice movement in South Africa may be traced to the enormous social political change that took place during the post apartheid period of transformation (from February 1990 to April 1994), when there The root of the environmental justice movement in South Africa maybe traced to the enormous was a discernable shift in attitudes towards, and perceptions of, the environment. One of the most important catalysts in bringing this about was the unbanning on 2nd February 1990 of the ANC, the South African Communist Party (SACP), the Azanian People's Organization (AZAPO) and the Pan African Congress (PAC). The notion that equated "conservation" with the protection of wildlife and the preservation of the natural environment began to give way to a more holistic approach embracing economic and political aspects as well as ecological concerns. It began to be increasingly acknowledged that, in order to win broad base acceptance, environmental issues had to be take cognizance of the basic needs of human beings to a clean, safe and healthy environment were a legitimate environmental goal (McDonald 2002:16).

During this transitional period, the resurgence in public support of the environmental sector was increasingly characterized by environmental action at grassroot levels. Impoverished

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communities in both rural and urban areas began engaging in campaigns such as: protests against plans to site a nuclear power station in their area; demonstration against the proposed constructions of toxic waste recycling plants and the launch of an anti-pollution environmental health campaign (Weekly *Mail,* 20 Dec 1990 – 10 Jan 1991*)*. A wide range of community based organizations in both rural and the urban areas undertook greening projects, which included the creation of parks, the cultivation of indigenous plants for use as traditional medicine, and the establishment of food gardens (Khan 1992:37). Such projects were practical expressions of the desire of the poor to take constructive action against the environmental poverty of their immediate surroundings, and to enhance the quality of their environment.

While the political winds of change were undoubtedly making an impact on the environmental arena this does not mean there were no conflicts between the poor and the privileged over the issue of the protection of the natural environment and its resources. On the contrary, the era of transition was one of slow and painful progress, with numerous setbacks for the conservation cause, as poor communities, emboldened by political change, began to demand that past injustices be remedied. Many of the resulting protests centred on the loss of traditional land and natural resources to conservation authorities. For example, in 1992, villagers outside a nature reserve in Eastern Transvaal kidnapped the managers and locked them up in chalets overnight as part of a protest action in which they demanded compensation for the land lost during the reserve's expansion (*Weekly Mail* 28 August – 3 September 1992*)*. In KwaZulu-Natal, from 1990 onwards, squatters started a series of land invasions into the protected forest of Dukuduku (Douglas 1996). While the nature reserve of Dwesa and Cwebe in the Eastern Cape, where locals had fruitlessly demanded access to resources traditionally utilized by them for generations, were invaded in 1992 and again in 1994, and plundered for seafood and timber (*Sunday Times,* 20 November 1994).

In addition to the conflict over land and natural resources, this period also witnessed numerous other environmental conflicts in which poor black communities were at a disadvantage, and which were testimony to the enduring impact of the apartheid era (Ramphele and McDowell

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1991:46). Indeed the era of transition proved to be a difficult period for the implementation of environmental justice, for a while the demand for social justice within the environmental sphere could not be rejected, it was frequently accommodated more at a level of theory and principle than in action.

The Long Walk of Democracy – May 1994 to the Present

South Africa's first democratic elections in April 1994 not only heralded the dawn of a new political era; it also brought a political climate in which environmental concerns could flourish. This was most noticeable in the unprecedented growth in action taken by environmental non-governmental organization (NGOs) based in townships and rural areas. Community initiated environmental action included the establishment by the Tsoga Environmental Centre in Langa, Cape Town, a garden for indigenous plants *(Argus,* 4 November 1994) the initiation by the Modulaghowa Environmental Project in Botshabelo, in the Free State, of recycling projects and the provision of assistance to small scale farmers; the establishment by the Mafefe Environmental Protection Committee (Albertyn 1995) of an environmental education campaign aimed at alerting villagers to the danger of asbestos; and initiative to save the Wotgot Nature Reserve on Cape Town's False Bay coast from degenerating into a desolate wasteland (Wotgot Nature Reserve 1995) .

The environmental agenda of community-based organizations and environmental NGOs targeting the poor revolves mainly around basic needs (brown issues) rather than the "green" issues traditionally associated with the environmental movement. This is partially evident in the growth of national environmental coalition the Environmental Justice Networking Forum (EJNF) and scope of its projects. The EJNF has, since its formation in 1993, grown to encompass more than 600 organizations. It has assisted many poor communities faced with a ravage of problems such as the consequences of being sited in close proximity to a hazardous waste dump or working under unsafe and dangerous conditions (Kerley 1997:41).

The South African environmental movement comprises of a diversity of bodies, but few can claim to fairly represent the view and concerns of black communities, and fewer still to have significant black support. Not withstanding the establishment of many townships-based NGOs in recent years (EJNF membership attest to this), there is a long way to go before it can be said that a strong indigenous environmental movement that reflects the concerns of the majority of South Africans has been established, instead, a myriad under-resourced, understaffed, and financially embattled NGOs with a predominantly black membership are engaged in a continual struggle to survive. These small bodies, many without a proper office or adequately paid staff, lurch from one cash crisis to the next. Lacking such essentials as the skills to write good funding proposals, useful contracts among donor organization, a proven track record, and the resources and experience to implement projects, these township-based NGOs, effectively function as the "outreach" project of donors and lose their autonomy completely.

Despite the lip service paid by many mainstream as well as radical NGOs to the politically correct strategies of "community-driven projects" and "community empowerment," the often-unequal power relationships between white NGOs and mainly black NGOs persist. While the situation is undoubtedly changing, it would be true to say that the skills, expertise, and resources are still largely concentrated in the hands of mainstream NGOs, whose staff and membership base are still largely derived from the white sector of society – a situation which simply reflects that of South Africa as a whole. Given this context, it is clear that before historically disadvantaged communities can effectively speak and act for themselves, a strong indigenous environmental movement needs to be nurtured. More specifically, particular problem areas have to be addressed: lack of power; lack of organizational autonomy; and unequal access to skills, resources, information, and funding.

The generally polarized environmental perceptions of privileged and the poor have remained largely unchanged. This dichotomy was well illustrated by the controversy generated in 1995 by the proposal to build a steel plant in Saldanha Bay on the Western Cape Coast. Ranged against the establishment of the plant on the ground that would pose a threat to the adjoining West Coast National Park, and especially the Langebaan Lagoon, were bodies such as the National Parks

Board and NGOs such as Earth Life Africa and the Wildlife Society. In stark contrast was the almost unanimous support for the proposed development displayed by spokespersons for black communities on the West Coast (*Cape Times*, 2 August 1995). In many ways, the situation was reminiscent of the support given to the "pro-mining options" by adjoining black communities in St. Lucia, Natal, during a public participation process conducted two years previously (Mlambo and Mzimela 1993). As in St. Lucia, support for the Saldanha Project amongst the west coast communities was wholly based on concern about the wide spread poverty and unemployment in the area and the hope that the development of the steel plant would generate jobs. This point of view was powerfully conveyed by Ebrahim Dalwai, who addressed the Board of Inquiry into the Saldanha Steel Project on behalf of seven African National Congress Branches in Saldanha and surrounding areas:

> We are all environmentalists and love our environment, nature and the sea-life. The West Coast is traditionally known for its fishing industry and we believe it must stay like that. We will do everything in our power to protect and preserve the environment and fishing resources for the future generations as we have been doing all along. We also strongly feel that the go-ahead for the Saldanha Steel Project should not be delayed any longer... We see no need why the proposed site should be moved elsewhere… we will ensure that development takes place not at the expense of the environment. [Board of Inquiry 1995, 435-36].

The Dynamics of Ecological Change in an Era of Political Transformation: The Case of the Eastern Shores of Lake St. Lucia

In South Africa, the conundrum of 'mining versus people' remains largely unresolved and development versus conservation issues still present major problems to conservationists and policy makers. This is nowhere more evident than in lake St. Lucia region, which boasts a unique wetland of international importance and the largest inland body of water in Southern Africa. The Eastern Shores of St. Lucia exhibit in microcosm all the complex problems facing South African conservationists and policy makers. Conservation of the region is countered by land claims, poverty, a profound need for development in the region, and a proposal to mine within the region.

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How does one reconcile the desire to maintain St. Lucia as a conservation site when this option is set against the competing and desperate needs of the people of the area? Resolving these issues will require innovation and strong political resolve, which are not found in developing countries with large disadvantaged communities as exist around St. Lucia. Solutions to the complex problems facing this region will require policy-makers not only to look into the future, but also to examine the past. This is required to ensure that the problem is not viewed as simply an environmental conservation issue, but to broaden it to include the concept of sustainable development of St. Lucia and the broader region.

The 1990s brought changes, new hopes, new challenges and a new democracy to South Africa. The Eastern Shores of St. Lucia illustrate all these factors, for in this region can be found all the examples of the mosaic that had come to constitute the South African 'system' with all its inherent cultural and political idiosyncrasies. Moreover, nowhere is it more evident than in St. Lucia region that development and economic growth are desperately needed to generate the means to rebuild the communities and redress the decades of neglect of the many needs of the majority of the population.

The 1990s began with a plan to mine sections of the dunes of the Eastern Shores. A mining company, Richards Bay Minerals (RBM), had been granted mining leases in 1972, at the height of the apartheid era. These leases were extended in 1976. In 1989 RBM, having completed a successful prospecting programme, applied for rights to mine the dunes in their lease areas for rutile, ilmenite and zircon. These deposits posed a dilemma for the government. It was government policy at the time to increase the mining base of the country in order to help foreign earnings, which was in short supply because of the sanctions applied against South Africa (Dovers 2002:202). Yet the area had been recognized as a unique natural asset and part of a wetland of international importance.

In view of this dilemma, RBM commissioned an environmental impact assessment (EIA) of the lease areas. The EIA however was flawed because it had not allowed for the complex and changing social and political dynamics involved. To be successful, conservation must be

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sensitive to the interests of society. According to Thompson (2002:205 – 206) the terms of reference of the EIA did not allow for the consideration of the complex and diverse land issues in the St. Lucia region, which are inextricably linked to socio-economic as well as political problems.

The most important factor to note is perhaps that mineral rights on the Eastern Shores cannot be separated from the land rights of local communities. In order to understand this aspect it is necessary to look at the history of the Eastern Shores region and at the political environment, which characterized its development. Until the advent of colonialism the local communities' modes of resource use appear to have been sustainable. They altered their landscapes without jeopardizing the underlying functioning and productivity of the ecosystem. This relationship with nature changed with the arrival of the first white settlers, the delicate balance between sustainable resource use and unsustainable exploitation was soon shattered. The local communities and their environment were subjected to the influences of a market economy, firearms and industrialization. They could only stand by as these new peoples first decimated much of the wildlife in the area and then later, with the expansion of commercial agriculture, watch as vast areas of indigenous vegetation were swallowed up by sugar and pine plantations.

The Eastern Shore communities were, however, allowed to remain where they were, though their rights were limited, and the state had the right to evict them provided that reasonable notice was given. Their access to land was therefore severely limited. The situation was to deteriorate further with the passing of the 1913 Land Act, which prevented African ownership of land outside of the scheduled reserves. Dispossession of land rights was further entrenched by the 1936 Native Trust and Land Act. There was nothing that could be done other than comply with the regulations or move.

It is these injustices that the South African government is trying to address through its new Land Reform and Redistribution Policy. It is in the light of past injustices and present policy that we must view solutions for the problems facing the future of St. Lucia conservation area and, more particularly, that of the Eastern Shores region.

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Despite the past draconian laws, growth and development are clearly needed. The question is: in the light of the goals of the new government, what type of growth and development, and with what environmental impacts? The conventional view is that Post Apartheid South Africa will only be able to redress the inequalities of the past if it achieves growth. The widely accepted definition of sustainable development is broad and it is not clear whether it means preservation of the existing resource and environmental component of the nations total capital stock. This is a particular concern for the New South African government because, as in many less developed countries, the existing natural stocks have been significantly depleted already. Sustainable development, while admirable, is not very helpful without a more explicit definition and some sort of suggested strategy to achieve it.

Thus it would appear that development is being redefined to mean providing the impoverished with the means with which to survive sustainably. This redefinition of development creates the need for radical redistribution of access to resources as well as to the institutions and systems that had previously managed them. These changes will in turn change the relationship between society and its environment and are indeed necessary if seen in the light of the claim that it is the combined destructive impacts of an impoverished majority struggling to stay alive and an affluent minority consuming resources in excess that are destroying the environment. This set of circumstances is clearly observable in the environs of St. Lucia, where necessary industry, commercial agriculture and abject poverty have all taken their toll on an exceptionally unique environment. It is equally clear that the poor can no longer bear either the blame or the cost of these impacts. New solutions need to be found (Thompson 2002:211).

The challenge lies before us. The sword is still in the stone. How will we – as a country – respond? How do we combat poverty without destroying the natural resource base and the integrity of the ecosystem needed to do that?

Combating Poverty: The Government's Perspective

According to *ANC Today* (vol. 7 2002) the government is working to improve the lives of millions who subsist in extreme poverty by tackling a range of basic needs. One area of focus

is the development of a new comprehensive social security system. A committee of enquiry has recently completed a report. The committee dealt with pensions, social insurance and social health insurance. Along this policy work, government will build on substantial progress made in the administration of social grants and their impact on the lives of hundreds of thousands of people. The number of grants paid out increased by half a million to 3,8 million by December 2001.

A major focus of the year will be to increase the number of people registered and able to receive social grants. The social development department aimed to register a further one million children to receive the Child Support Grant in 2002. It will also work to ensure as many children as possible benefit from other grants, such as foster care grants and care dependency grants aimed at helping children with disabilities.

This will be among a number of initiatives that target children in the first six years of their life. This year will see the finalization of legislation to protect all children from neglect, abuse and exploitation and provide a framework for appropriate systems of care.

According to Alexander (2002:57-63) the RDP is the Government's national strategy to combat poverty and unemployment, and is underscored by the Growth, Employment and Redistribution Strategy (GEAR). The basic tenets of the GEAR policy are the maintenance of a fiscally prudent policy via a competitive and more labour intensive growth path; an accelerated creation of employment growth. The Integrated Sustainable Development Strategy and Urban Renewal Program provide a framework to address poverty. The aim is to conduct a sustained campaign against rural and urban poverty and underdevelopment, bringing in the resource of all three spheres of government in coordinated manner. These programmes will entail investment in the economic and social infrastructure, human resource development, enterprises development, the enhancement of the development capacity of legal government, poverty alleviation and the strengthening of the criminal justice system.

The SA Government distinguishes between poverty alleviation, which is a matter of welfare, and poverty eradication, which is a matter of employment creation through increased investment in

the manufacturing sector, and economic empowerment in addition to financial incentives conducive to the creation of new small enterprises (MacDonald 2002:21). Several other policies have been developed which take poverty issues into consideration: the Water Supply and Sanitation Policy, and the National Water Policy, supported by the National Water Act (1998). Equality in the value of social grants, the amalgamation of the pension system and the introduction of the Child Support Grant represent some of the steps taken by the Government since 1994. A Committee of Inquiry into Comprehensive Social Security was appointed in 2000 to develop options for a comprehensive system of social security that prioritises the most vulnerable in our society. The Population Policy for South Africa, 1998, places population at the center of development as its driving force and ultimate beneficiary *(Mail and Guardian*, 12 August 1998).

Among the poverty relief programmes are: an Integrated Nutritional Project aimed at improving nutrition and linked to the production of goods that require cheap appropriate technologies; the National Housing Programme aimed at provisions of housing and services while at the same time creating job opportunities and providing training, electrification schemes designed to provide electricity on a mass scale to reduce dependence on wood and fossil fuel; the Land Reform Programme, aimed at the redistribution and restitution of land to previously disadvantage communities, especially women; the Water Supply Programmes, aimed at poorer, rural communities to improve living standards and equity in water provision; and the Social Security and Welfare Systems, to provide assistance to the most severely affected sectors of society (Alexander 2002:74).

The Community Public Private Partnership Programme (CPPP) is an initiative of the Government's Department of Trade and Industry to revitalize depressed rural economies through the linking of resource-rich communities with relevant state and private investors interested in the sustainable utilization of natural assets (McDonald 2002:207).

The primary role of the Department of Trade and Industry (DTI) in this respect is to facilitate access to sustainable economic activities and employment for all South Africans. The key objectives include: attracting higher levels of domestic and foreign investments; increasing

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market access to foreign investment; and achieving a far more efficient and competitive market places for domestic and foreign businesses and consumers (McDonald 2002:209).

These processes must lead to specific outcomes of which the most important are the following:

o   Promoting the development of Small, Medium and Micro-Enterprises (SMMEs);

o   Increasing opportunity for Black Economic Empowerment;

o   Reducing inequality and poverty;

o   Strengthening the international competitiveness of South African business;

o   Developing the SADC region; and

o   Servicing the economic citizen.

As an example, in the Northern Cape Province, the project includes an integrated poverty eradication strategy involving previously unemployed persons. The Coast Care Project is aimed at training individuals in business development as well as the sustainable use of living marine resources. Multi-Purpose Resource Centre (MPRCs) provides people with access to information via training seminars and the internet, and are increasingly the focal points for micro projects. Other poverty alleviation funded projects include the South North Tourism Route, waste management in coastal and rural towns; the Working For Water Project and, the Orange River Mouth, a succulent plant nursery and community based tourism facilities. Many households in the Northern Cape, however, still have unsatisfactory access to clean water, energy health care and education. It is estimated that 39% of the population is vulnerable to food insecurity (*Mail & Guardian,* 5-12 April 2000*)*. This article indicated that 72% of South Africa's poor live in rural areas, which are often highly dispersed and difficult to access for support and service. Of the population 61% African, 38% Coloured, 5%Indian and 1% White can be classified poor. Poverty is distributed unevenly across the 9 provinces. It is more severe in the Eastern Cape, Free State and Northern Province. The report further suggests that the poverty rate amongst female household is 60% compared to 31% for male-headed households. South Africa is also characterized by large-scale unemployment in the formal sector of the economy.

Over 10 000 people participated in the NGO Coalition poverty hearings, March to June 1998. The hearing indicated the incidence of poverty spans a wide range of issues. These included insufficient employment opportunities, dispossession of land, lack of implements, fertilizers, seeds and water to work the land, the lack of affordable housing and poor standards of houses, inadequate services in relation to water and infrastructure, the inability to afford payments for services such as water and electricity, health related problems such as HIV/AIDS and tuberculosis, education related problems of people not attending school due to the lack of financial resources, social security problems resulting in difficulties accessing grants, environmental problems involving workplace injuries and illness leading to unemployment and death with no compensation, or holding onto unsafe jobs in desperation for survival. Capacity building efforts at a provincial level include workshops held for women, unemployed youth, and leaders from local development forums and disabled youth. Several training workshops have also been held in business skills, marketing, social development and economic capacity building. Self-employment has therefore become an important option.

In terms of the RDP, the improvement of the quality of life is one of the five national priorities, as are: options for income generations in economically depressed communities; the development of low cost on-site treatment technologies, designed to ensure safe water for human consumption; and the Flagship Programme for Unemployed Women with Children under Five Years, with the objective of increasing educational and training opportunities for women. In tandem with the addressing of poverty, a new era of development, which does not undermine our natural resources, needs to be promoted.

On this basis one can question whether a developing country such as South Africa has done the right thing to have adopted the notion of ecologically sustainable development as a major policy objective. The objection is namely, that it could be seen as laying the foundation for the saving of nature while people are left to starve to death (Hattingh and Attfield 2002:69).

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Integrating Environment and Development in Decision-Making: The South African Vision

A new institutional structure has been approved by the Government in 1998 to allow for the full integration of environmental and developmental issues, at all levels of decision-making. Coordination is achieved among the different levels of government through the system of cluster committees of heads of department and cabinet members, e.g. economic, social, etc. South Africa has adopted a number of measures aimed at ensuring that environmental protection is an integral part of the development process.

The Environment Impact Assessment (EIA) regulations and the associated schedule of activities as well as the Guideline Document for the Implementation of the Environmental Impact Assessment regulations were adopted in 1997 (McDonald 2002:81). The Development Facilitation Act, 1995, is another piece development-oriented legislation that explicitly requires consideration of environmental factors. Principles to encourage sustainable land development practices and processes are incorporated into this Act. The Development Facilitation Act, 1995, has its objective, the introduction of extraordinary measures to facilitate and speed up implementation of development programmes and projects in relation to land. It lays down general principles concerning land development throughout the country. All of the new legislative and policy-development processes in the field of environmental management have included comprehensive public participation processes. Participatory decision-making is covered in the national environmental management principles and is further addressed in the National Environmental Management Act's provision relating to environmental impact assessments and regulatory powers. The National Environmental Management Act, 1998, (NEMA) provides for thorough and uniform control of environmental impact management of development projects.

This Act also makes provision for the establishment of a Committee for Environmental Coordination to handle issues related to environment amongst all relevant national Government Departments. It is the Department of Environmental Affairs and Tourism's (DEAT)

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responsibility to facilitate the integration and coordination of environmental management in development decision-making. In addition, in terms of Schedule 6 of the Constitution of the Republic of South Africa, the provincial governments were given the responsibility for decision-making with regard to development.

The Provincial Departments of Local Government and Housing are implementing the Development Facilitation Act, 1995.The National Department of Mineral and Energy is responsible for decision-making with regard to the exploitation of mineral resources, and the National Department of Water Affairs and Forestry is responsible for decision-making with regard to water resources and forestry developments. The Growth and Development Strategy is a fundamental pillar of the transformation process of spatial and development planning (Alexander 2002:148).

This Development and Growth Strategy has been initiated by the National Departments of Land Affairs and Housing, and the Development Planning Section in the Deputy President's Office and will be implemented by the provincial departments of Local Government and Housing. Several local authorities are assisted in developing local government strategies and actions plans as part of the Local Agenda 21 initiatives in South Africa. Through the requirements of Minerals Act, 1991, the Department of Minerals and Energy attempts to integrate environment and development at policy, planning and management levels. Through the process of Environment Management Plans, Government aims to achieve integration of environmental concerns in decision-making processes by all other departments.

In 1989, the first version of Integrated Environmental Management (IEM) framework was published. IEM is a procedure that provides an integrated framework for environmental management and decision-making to promote sustainable development and the equitable use of resources. The fundamental principles of this framework are an open, participatory approach with interested and affected parties, the consideration of the whole project life-cycle, the pursuit of a balance between social and environmental costs and benefits of decisions, informed and accountable decision-making, a holistic consideration of the environment, the consideration of alternatives, mitigation of negative impacts and enhancement of positive outcomes and regard for

the democratic rights and obligations of individuals and communities.

However, after much deliberation by South Africans, it is a lean towards anthropocentrism that is reflected in NEMA, Act 107 of 1998 and in the White Paper on Environment Management Policy for South Africa. According to Hattingh (2001:10) the debates about the implementation of sustainability or sustainable development often leads to different interpretations of the question as to how much of nature needs to be conserved in order to achieve sustainability or sustainable development. Hattingh (2001:11) concurs with Michael Jacobs (1991:31-32) that this constitutes one of the major fault lines within the concept of sustainability or sustainable development, placing anthropocentrists and ecocentrists in the debate in a position of confrontation with one another. On the anthropocentric pole of the divide the emphasis will be on conservation of the resource value of nature. Accordingly, anthropocentrists would not be disturbed if nature, conceived of as natural capital, were successfully converted into human or financial capital. For them, sustainability would simply entail a state in which the total stock of capital in the world is maintained. We can therefore legitimately sacrifice nature if we can compensate for that by achieving important human goals such as raising the general welfare in society. Ecocentrists would argue in terms of which nature is valued for its own sake, and as far as possible saved from being totally subservient to human needs and wants.

If we place the notion of sustainable development that is supported in NEMA (Act 107 of 1998) within the context of the observations made above, it is clear that our national policy framework about environmental matters is dominated by an anthropocentric view that gravitates towards a minimalist interpretation of sustainability or sustainable development. From a fairly strong anthropocentric point of view, however, the principle that is literally stated first in NEMA is that environmental management must put people and their needs at the forefront, and must serve their interests fairly (Hattingh 2001:14).

It appears South Africa is at crossroad, engaging ecological sustainability as a key policy objective and anthropocentrism in NEMA.

Conclusion

In this chapter an overview was given of the environmental and structural challenges facing developing countries. These are challenges that emerge where ecology meets economy and the conditions and context of human survival and development are determined. In the political struggle characterizing this process of determining, two major paradigms about which more will be said in the study can be discerned. One paradigm is ecologically based, people-centred and earth-oriented, the other paradigm is financially based, corporate centred and trade led. The first paradigm is the one that inspired the Earth Summit at Rio, the Agenda 21 commitments, the Conventions on Biological Diversity and Climate Change. The other is the paradigm underlying the World Trade Organization (WTO) rules of trade and the World Bank / IMF Structural Adjustment and Trade Liberalizations Conditionalities.

Perhaps, its time to bring the economy back to its roots in ecology. It is time to return home to "oikos" (household). Peace, justice and sustainability demand it. It could be a celebration of ending another apartheid – the environment apartheid based on unequal sharing of resources that is at the root of poverty and underdevelopment in South Africa (This would be taken up in chapter three). Or does Holmes Rolston III have an alternative, which we seek? Will we take to Garrett Hardin's "tragedy of the commons" as a possible route? The critiques of both these positions are taken up next in chapter 2.

CHAPTER TWO

TWO POSSIBLE APPROACHES TO SOLVING THE CONUNDRUM "FEEDING PEOPLE AGAINST SAVING NATURE?"

Chapter one traced the recent history of injustice with reference to black South Africans and the environment. With the birth of democracy, poverty eradication and preventing ecological degradation are included as important principles in our Constitution. But, can a country such as South Africa really afford ecologically sustainability, given the fact that it is a developing country characterized by alarmingly high levels of unemployment, poverty and deprivation? (Hattingh and Attfield 2002:68). Do we defend a notion in terms of which we only focus on scientifically managed nature conservation, or do we rather defend a position in which transformation of society and the eradication of poverty, domination and exploitation form the main focus? Or do we seek some blend of these stances? Will Rolston or Hardin or a combination of these theories help us overcome this impasse?

Holmes Rolston 111: Unveiling the dilemma of <u>Feeding people against saving nature</u> – A critique

" The Zimbabwean policy is right "writes Holmes Rolston about the shoot to kill policy for rhinoceros poachers (Attfield 1998:28). The context concerns his answer to the question, " Ought we to save nature if this results in people ... dying?" And the Zimbabwean policy is cited in favour of a qualified affirmative answer. Given the fact that rhinos have been drastically reduced, given that the Zimbabweans population is escalating (the average married woman there desires to have six children), one ought to put the black rhino as a species first, even if this costs human lives. Rolston goes on to argue that feeding the hungry is not always our primary obligation, and that it may sometimes be right to allow not just poachers, but even ordinary inoffensive malnourished people to starve, granted that they have other options which could fend off starvation (Attfield 1998:30).

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I concur with Attfield (1998:32) that the issue, however is not a straightforward conflict of interests between Zimbabwean poachers or Zimbabwean mothers and their offspring on the one hand and Zimbabwean rhinos on the other. For the grounds of preservation include the interests of future Zimbabweans and also, to some degree, the interests of future rhinos, if any of these creatures are allowed to continue existing into the next century. What, then is to be said about priorities between saving nature and feeding people?

Feed People First? Do we? Ought we?

" Feed people first!" That has a sound of righteousness the Rio Declaration insists," all states and all people shall cooperate in the essential task of eradicating poverty as an indispensable requirement. Eradicating poverty is an indispensable requirement! Yes, but set these ideals beside the plain fact that we all daily prefer other values. Every time we buy a Christmas gift, or go the symphony concert, or give a college education to a child, or drive a late model car, we spend money that might have helped to eradicate poverty. We mostly choose to do things we value more than feeding the hungry (Rolston 1996:245).

But we place decisions here on a scale of degree, and we do not feel guilty about all these other values we pursue, while yet some people somewhere on earth are starving. Our moral systems in fact do not teach us to feed the poor first. The Ten Commandments do not say that, the Golden Rule does not, Kant did not say that, nor does the utilitarian greatest good for the greatest number imply that. Eradicating poverty may be indispensable but not always prior to all other cultural values. It may not always be prior to conserving natural values either (Rolston 1996:246).

Although Rolston's argument that the starvation of people can sometimes be justified in the name of environmental protection is highly controversial, one of the strong points that he makes in his article is that we cannot answer the question of saving nature versus feeding people (that is, nature conservation versus creating jobs, ensuring economic growth etc.) if we stay on the level of an abstract dilemma where the value of conserving nature or using it sustainably is pitted against the value of caring for people. We only discover what are the real questions with regard

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to the relationship between development and conservation when we reflect on economic and real life, the kind of circumstances in which have been made. Only then can we apply our minds to determine whether forms of development driven by existing structures have to encroach upon nature, whether particular so-called 'developments' amount to development at all, whether conservation of nature really undermines our ability to ensure the well-being of people or whether policies can be found in which both development is promoted and nature conserved (Hattingh and Attfield 2002:85).

However, part of the global scenario is that of abject poverty. This is not the result of an inescapable natural process, but rather of a long history whereby people, through a complex chain of economic, social and political processes – that is, through human decisions – have been marginalized to such an extent that they are, literally as well figuratively speaking, pushed up in some cases against the fences of nature conservation areas. The question is thus raised of what should be done and of whether nature should be sacrificed in order to meet the needs of people (Hattingh and Attfield 2002:86).

In what seems at face value to be an inhumanely harsh answer, Rolston answers that we should not pull down the fences and allow people to consume of nature just because they are hungry. He offers a practical reason to support his view. He points out that we will soon find that the remaining parts of nature that we are still conserving will not last long – and when they are completely destroyed in the name of feeding people we will have nothing left. In other words, his argument is that this kind of strategy may turn out to be unsustainable. So, people regarded as dependent on this option of survival are actually not helped (Hattingh and Attfield 2002:86).

Instead of sacrificing the last of nature in order to feed people, we should reverse the unwise policy choices that have been made in the past that marginalized people and brought them to the point of starvation in the first place. Only when we have exhausted all our options in this regard – for example by making agricultural land more productive by applying appropriate science and technology, and by reversing unjust systems of land ownership through land-restitution and land re-form – only then might there be enough justification to sacrifice conservation areas (Rolston 1996:257).

Now, if this argument is sound, and we believe that it is insofar as it reflects and addresses the politically economy of both conservation and the eradication of poverty, the conservation of nature and natural ecosystems need not be incompatible with human interests in survival. In fact, if what is conserved is the natural pre-conditions of life on earth, and therefore of all development and all human needs satisfaction, then we have very strong grounds to say no to any so-called 'development' that may put these pre-conditions under threat. The question of course remains how much of nature we actually need to protect (Hattingh and Attfield 2002:87).

Preserving the last members of a wild species makes a much greater difference to the total value in the world than preserving the same numbers of members of a currently plentiful species could do. For it preserves not only current lives but also the possibility of countless future members of the species coming into being in the future. It thus justifies preserving also the territorial niches necessary for such preservation. In theory the case for such preservation could conflict with sustainable colonization, but in practice such conflicts would be rare, granted the argument already put forward concerning the way in which sustainable development allows for the sustaining of wild species and systems.

But a further question arises: are population policies important? Does the fact that our traditional ethics provides no clear solutions here mean we should not seek ethically sound solutions?

Putting People into Perspective: Environment and Population

The rapidly growing population creates ethical conflicts which have previously never been considered. There is no precedent to look to; we are currently forming the precedent for future generations. There are many genuine conflicts as a result of our population increase that our traditional ethics cannot solve. It becomes clear that in certain circumstances our traditional ideas of what constitutes ethically good or bad behaviour may not be applicable.

Since the industrial revolution population has escalated at an astonishing rate. Achievements in the fields of medicine, sanitation and technology have provided a more stable life and allowed

more people to stay alive to reproduce (Klugman 1993:193). These achievements, such as the eradication of diseases, are considered to be some of the great moments in the history of our race. In fact, our population increase is a manifestation of the achievements we value most.

There is a direct correlation between the growth of the human population and the deterioration of the biosphere. As our population continues to rise, more natural habitats need to be destroyed to accommodate our needs. There is no reason to believe that further population will result in similar effects on even a larger scale. As products of a finite environment with finite resources, we cannot continue to grow indefinitely.

If we acknowledge that the growth of the human population is indeed a problem many ethical conflicts arise between traditional ethics and our desire to slow the rate of increase. For example, traditional ethics tells us that genuine altruism in the form of charity or aid to the needy is always a good thing. It is seen as loving, compassionate and generally good behaviour. But if giving aid to the needy allows them to stay alive, reproduce, and contribute to the overpopulation problem is it always the right thing to do?

Holmes Rolston in this article points out that humanitarian aid for the starving "seems humane but when we face up to what is really going on, by just feeding people without attention to the larger social results, we could be feeding a kind of cancer." Rolston (1996:256) is showing that a genuine ethical conflict exists in this case. This is not a case of bad people doing bad things or good people doing good things. Those charitable people who desire to feed the needy are behaving in a way that has been previously encouraged by traditional ethics but when this behaviour takes place under the framework of the population problem, an ethical conflict arises. By helping individuals in need, they are actually contributing to overpopulation. While it seems inhumane not to help those who are poor and starving, Rolston argues, it may be a necessary evil (Rolston 1996:258).

Another conflict arises when you consider advances in medical technology. Each time a new discovery is made that benefits the human race, it is considered to be a good thing. Collectively, we devote tremendous amounts of money and resources each year to develop new technologies

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and medicines. Today, people live longer and have a better chance of living long enough to reproduce. The infant mortality rate has decreased drastically. Traditional ethics supports these advancements, but these advancements are part of the reason we have a high population. Thus, we have a conflict. Those medical developments that we cherish and those that we desire to discover are contributing directly to the population problem. In effect, overpopulation is what we are trying to encourage. Is a decrease in the infant mortality rate really a good thing? Though the answer previously seemed obvious, in this context it is not so clear. In fact, what Rolston conveys to us in terms that can make many cringe, is that the morality of a choice or an action is a function of the state within which it takes place (Rolston 1996:259).

At this juncture I see it fit to examine the causes of high population growth rate in South Africa. Once this is identified, its impact on the environment can be determined and a pragmatic route could be mapped.

Causes of high population growth

South Africa's population is higher amongst poor people than amongst the rich, it is higher amongst rural people than amongst urbanites, it is higher amongst people with little education than amongst those with education (Klugman 1993:196).

There are a number of key factors which influence population dynamics in South Africa. The first and most significant is the system of migrant labour. The separation of husbands from their wives undermines the most basic relationship in society and, in doing so, it undermines the patterns of reproduction, the systems through which people have children, which work effectively for a society. Relationships between men and women are not as they are used to be. In the past, African societies' birth rates matched people's capacity to produce and live off the land. With the undermining of the fundamental social relations in society, that balance between production and reproduction was also undermined.

Related to this, the system of influx control, the prevention of the inevitable process of

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urbanization during industrialization, meant that the international trend towards decreasing family size associated with urbanization and industrialization did not occur. In addition, the forced removal of over 3 million people added to the disjunctive between the process of economic development on the one hand, and population settlement on the other. It is in this context of massive population movement and lack of control over the process of production, lack of a guaranteed capacity to ensure one's livelihood, that population growth rates escalate. And this has been the problem in South Africa.

The traditional view of population trends argues that population growth rates increased with the introduction of modern medicine and improved nutrition, which were the benefit of colonization. The South African case, however call this to question. There is convincing evidence that both the introduction of new diseases and the escalation of poverty-related diseases such as TB and AIDS are the products of colonization. In addition, nutrition levels have declined rather than improved. It was the blacks that were subjected to the evils of apartheid. This explains, in part why demographic trends are so dramatically different for the rich and poor in South Africa (Klugman 1993:194).

It is poverty and social disruption, which lead to a high population growth rate; it is when people feel little control over their lives and their futures that the population growth escalates. The most rapid decline in population growth rates in South Africa is occurring amongst those sectors of the population who lead secure lives, with jobs and homes and the option to plan their futures (Klugman 1993:194).

Is population growth destroying the environment?

It is clear that charging population growth with the responsibility for destroying the environment is denying many of the major environmental hazards in South Africa, from toxic waste to acid rain. Moreover, many problems, which are caused by population number, arise because of the policies, which shoved too many people onto too little land in the "former homelands", rather than allowing and planning for urbanization (Klugman 1993:198). In urban areas, these

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environmental problems that relate to poverty come again from deliberate failure to plan for urban development. So does one blame the people or the policies?

We may say "yes", people cut down trees for fuel, "no" the problem is that there has been no policy for fuel provision, electrification and so on. We may say "yes", look at the water and soil pollution or we may say "no", any civilized country would have made the provision of piped water, sanitation and refuse removal a national priority.

So, we are stuck with a "yes" and "no" answer. However, even if, overnight, no more children were born in South Africa, we would still have to deal with both the environmental damage wrought by the extent of overcrowding in the "former homelands", and the desperate need for the development of basic infrastructure in both rural and urban informal settlements.

We need to accept that the more people there are in any society, the more people must be clothed, fed, educated, offered recreational facilities, etc. While in a context of a strong economy, more people may be required to build a strong economy. In our present context, there is little doubt, with the best will in the world; we are going to battle to make basic provision for all South Africans; a growing population cannot be seen as advantageous.

According to Klugman (1993:200) even if there were an equitable distribution of wealth, the human population cannot go on escalating without people becoming all equally poor. Of the 90 million new people who will come on board planet Earth this year, 85 million will appear in the Third World, the countries least able to support such population growth. At the same time, each North American will consume 200 times as much energy and many other resources. The 5 million new people in the industrial countries will put as much strain on the environment as the 85 million new poor. A parallel can be drawn for the South African context.

There are three problems: overpopulation, over consumption and under distribution. Sacrificing nature for development does not solve any of these problems, none at all. It only brings further loss. The poor, after a meal for a day or two, perhaps a decade or two, are soon hungry all over again, only now poorer still because their natural wealth is also gone (Rolston 1996:257).

Rolston (1996:258) goes on to show that in certain circumstances the interest of nonhuman animals do take precedence over those of humans. Traditional ethics supports behaviour that benefits humans regardless of the damaging effects on the environment or to other species. Now, with the current population problem, it is impossible to ignore the consequences of our destructive behaviour. Behaviours which were previously acceptable, are now restricted because of the amount of people doing them has multiplied. This ethic will regularly be constraining individuals in the interest of some larger social and ecological goods, which confirms the view that the morality of an action is a function of the state of the system within which it takes place.

South Africa latches onto nonhumans taking priority

Minister Valli Moosa has declined Eskom's proposed R2, 5 billion pump storage scheme. The scheme was to be built between Collings and De Beers Pass, near Braamhoek, on the KwaZulu Natal / Free State border. However, it was deemed to pose a threat to an endangered bird. The scheme, proposed in August of last year, was halted by an objection from a University of Natal researcher, Donovan Kotze. He was adamant that the scheme would have jeopardized the bird-life in that area, being an internationally important bird area and habitat to the endangered white winged fluff tail (*Ladysmith Gazette*, 10 May 2002).

It is believed that there are only 750 white winged fluff tails left in the world. The bird is listed as 'globally endangered.' Out of these 750, 95 of the estimated 230 fluff tails in South Africa are found in this area.

The scheme was supposed to have pumped water during the night, from a reservoir on the Klip River through an underground tunnel system, about seven to eight metres in diameter. During peak power times, water would have released back into the lower dam through underground ducts, driving turbines that would have generated and fed over 1000MW of electricity into the national grid within minutes.

Eskom's Environmental and Nuclear Services Manager, Tony Stott, said that Eskom's commitment to provide for the energy needs of the country is underpinned by the inter-relationship between socio-economic factors and environmental considerations. "Eskom is thus currently evaluating the implications of the Minister's decision on the overall plan to determine how best the plan can be implemented and how the electricity needs of the future can be met", said Stott (*Ladysmith Gazette*, 10 May 2002).

In our country, the EnviroLaw 2002 policy aims to stem the tide of nature crimes. This law hopes to establish partnerships between government's enforcement agencies, civil society representations and intergovernmental organizations such as the UN Environmental Programme to establish a framework for more effective action. Besides the illegal trafficking of endangered animal and plant species, EnviroLaw 2002 will focus on illegal logging, illegal trading in precious minerals and the dumping of toxic wastes (*The Star*, 21/08/2002). In the same issue of *The Star,* Samantha Enslin reports that organized crime had significant resources and political power to corrupt officials from ministerial and local echelons to customs and wildlife ranks.

In face of this, one of the biggest challenges facing EnviroLaw 2002 will be addressing poverty as a key factor in the proliferation of environmental crimes. In Rwanda, a live baby mountain gorilla can fetch as much as US$125 000 on the black market. In 1996 ivory carved from 70 tusks, worth $90 000 was shipped to Japan and in the financial year 2001, abalone worth about R23 million was confiscated at Johannesburg International Airport. Biodiversity protection is not popular, our environmental minister reported, but poverty eradication is. Both are possible if we change our values and priorities and stop wasting money on arms (if we took the $900 billion, about R9,5 trillion the world spends annually on arms and put that money into overcoming poverty, land degradation and pollution, we would meet the current challenges of the world). Oh, the world argues; think of all the jobs created in the defense industry. But beat those swords into ploughshares and there will just be many jobs created. If we, the electorate, demand accountability from our politicians for biodiversity and poverty expenditure, there will be change. We must move away from passionate single-issue advocacy towards negotiating more holistic solutions.

No known ecosystem has ever functioned for long when the needs of only one of its constituents species are met to the exclusion of others. The needs of all constituent species must be met for the system to function as a complete system. The earth's entire ecosystem will be no exception to this universal law of ecology. Similarly, no organism can outlive its life support system for very long, so it would make sense for all humans to preserve and protect the multiple life forms upon whom our life depends.

Though these issues are complex and our traditional ethics provide no clear solutions, we need to seek ethically sound solutions. To choose to neglect these issues because we have no precedent to refer to would be a horrible mistake that would be felt not only by us, but by future generations as well. We need to figure out what we believe would be the ideal balance between humans and nature and try to make that ideal world a reality. Our generation is currently at a critical junction; we have the ability to set an ethical precedence that can outlive us as individuals. We need to realize that the human population cannot continue to grow indefinitely and behave accordingly. Our idea of what is good and bad behaviour is already beginning to change under the framework of the population problem. To fail to develop ethically sound solutions to the population problem and our relationship with the biosphere is a mistake we cannot afford to make.

And to continue the line of thinking with regard to reversing the unwise decisions that have led us into our environmental predicaments in the first place, it might not be a bad idea to include in all environmental assessments and all public decision-making processes in future explicit requirements to determine whether a project, plan, programme or policy continues or reverses trends of an unsustainable kind. At this stage South Africa (like most other countries) does not have this kind of guideline for our environmental assessment and decision-making processes. It is perhaps high time we start to introduce them (Hattingh and Attfield 2002:88).

There is nothing wrong with humans exploiting their environment, resourcefully using it. Nature requires this of every species, humans not excepted. But, can a finite world carry an infinite population? Garrett Hardin posed a far-reaching answer to this question but does he provide an

adequate ethical theory for rational environmental decision-making? An evaluation of his position follows.

Hardin's tragedy of the commons

A central issue for ecocentrics is that of limits to the carrying capacity of the earth's ecosystems. If animals or humans attempt to use the resources provided by ecosystems beyond those limits, then the ecosystems change to other sorts of ecosystems which may be less productive (Park 1997:9).

This problem was graphically expressed by Hardin's parable (1968) reviving a scenario proposed by mathematician William Lloyd in 1833. 'Picture a pasture open to all,' said Hardin. 'It is said to be expected that each herdsman will try keep as many cattle as possible on the commons'. Each herder reckons to gain all the proceeds from selling each extra animal which they rear on the commons. Yet the costs of grazing each extra animal, in wear and tear on the soil are shared *by all.* Apparently because the land is in common, herders either do not realize or care about the full costs of their individual actions (Pepper 1996:57).

So carrying capacity becomes exhausted, soil poaches and the grass dies off. Individual freedom in the commons has brought ruining to all. Hardin maintains that if there were a few grazes the problem would not have been serious. Similarly, the earth's commons (oceans, air, National Parks) become degraded because too many people try to exploit them for their private gain.

Most infamously, Hardin (1974) proposed a lifeboat ethic. If ten men were adrift in the lifeboat with exactly enough supplies for ten any compassionate attempts to save drowning people by dragging them into the boat were doomed: they would merely overtax the boat's carrying capacity and all would perish. Hence not all third world countries could or should be saved from famine by the western lifeboat. Only those with a vigorous population policy should be aided (Pepper 1996:58).

Today, much radical environmentalism adopts almost an exactly converse position: that

environmental problems result from an exploitative Western economic system which particularly victimizes the Third World. Despite the popular myth of aid flowing from North to South in fact there is a large net outflow of wealth in the reverse direction when debt trade and aid are aggregated (Pepper 1996:97-98).

According to Pepper (1996:57) Hardin rejects both unfettered privatization of the commons and state control as feasible solutions to this problem of people treating resources as 'free' when really they are scarce. Instead, he advocates mutual coercion, 'mutually agreed on", to stop people irresponsibly overbreeding and overusing the commons. This is not as authoritarian as it sound, says Eckersley (1992:67), being really a version of liberal contract theory. Nonetheless Hardin's thesis does seem illiberal, since it reasons that people should not be allowed the freedom to be 'irresponsible'. They must be forced to behave properly or will inevitably suffer:

> Injustice is preferable to total ruin … To couple the concept of freedom to breed (a UN human right) with the belief that everyone born has an equal right to the commons is to lock the world into a tragic course of action (Hardin 1968, cited in O'Riordan and Turner 1983:297).

Mainstream economists, scientists and lawyers have adopted Hardin's parable as a model for what is happening to the environment, though they may draw different implications from it. The mainstream generally favours as much privatization and is practicable, together with state and meta-state solutions such as international management agencies (O'Riordan and Turner 1983:298).

Private property rights, it is argued, ensure that individuals will not overuse their resources for fear of devaluing them. However, common property rights over resources lead to overuse because no individual feels a specific in protecting them (Goodin 1992:105-108). Economists of the free market societies add that property rights over environmental goods make it easier to identify and sue the culprits in cases of abuse such as pollution (Pepper 1996:58).

Influential as it has been, the common's parable has also attracted many objectors.

Objections

Some maintain that Hardin's assumption of finite carrying capacity is inaccurate because developments in technology and environmental design will extend this capacity. Others lack of faith in coercive law, tied to private or state ownership. For it cannot be assumed that the law will be neutral, acting only for the general environmental good. Its concepts, statues and practitioners will not be divorced from the vested interests of particular groups like the state or landowners (Pepper 1996:58).

Still others question the accuracy of Hardin's assumptions about people's actual attitudes to the commons. O'Riordan and Turner see about them today encouraging science of public-spiritedness and willingness to try to formulate international environmental agreements. They content that commons users never were oblivious of the common good. In the early commons in England 'a powerful sense of community obligation' caused users to talk with others before adding to their herds. Cox (1985) confirms that the traditional commons were mostly managed sustainably for mutual benefit. McEvoy (1987:297) describes how farmers met biannually to plan future production. Similarly, immigrant Californian fishermen, twentieth-century users of the ocean commons, tightly controlled their own allocation and harvesting of resources, to produce optimal yields for *the group*. Hence Hardin's unidimensional generalization of humans as alienated, utility-maximizing automata who do not communicate about common interests is inappropriate, although it may describe human behavior in a particular context, for example in capitalists United States of America. For McEvoy (1987:300) therefore:

> Resource depletion may be more a social problem – evidence of a community's inability
> to integrate its social order in a self-sustaining way – than it is a product of the alienating
> self-regarding profit motive that Hardin posits as simple human nature.

McEvoy (1987:303) points out how the existing economic system automises society, encouraging individuals to think narrowly, in space and time, their individual selves and short-term gain. It is rational to think is such terms in capitalism says Stillman (1983:301). His radical solution is to

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change the herdman's rationality, to see the long-term community interest as their own. If we were to regard others as part of us, not external to us, we would automatically identify our individual interest with those of the wider community – 'externalizing' social and environmental costs of what we do would be impossible. Many ecocentrics proposed this solution, long familiar to socialists and anarchists: a planned, corporative society involving full democratic community participation, based on a deep sense of communality.

The most important substantive lesson to be learned is that it is possible for individuals facing a Commons Dilemma in natural settings to design their own institutional arrangements that change the very structure of the situation in which they find themselves. Thus, Hardin's adage that the solution to the tragedy of the commons lies in "mutual coercion mutually agreed upon", seems to be indicated.

Unfortunately, situational ethics creates difficult problems for the law. It is difficult to write statute law if we are deprived of the simplicity of flat, unqualified do's and dont's. Qualifications can be written into law, but is hard to foresee all the particularities of future situations. The practical question we must face is how far can we safely depart from the ideal under the pressure of ecological necessity? (Eagles 1984:25).

The question of equity, the fair sharing of society's natural and environmental resources, is a key part of any environmental decision. It is also a very difficult part.

Conclusion

Do we as South Africans have the will and capacity to follow such patterns of life as sketched by Hardin? Are South Africans prepared to change their habitual behaviour and make the necessary sacrifices for our collective survival?

There is mounting evidence that our collective capacity to forge new policy tools, create new

institutions and develop new leadership qualities is most urgently required. But it seems that our ability to formulate effective public policy is not evolving quickly enough to match the accelerating pace of national environmental decline.

At the ideological level, the propagation of what is, in effect, a doctrine of free market fundamentalism (Hobsbawn 2000:69), by people who still consider themselves to be 'communist' and 'socialist' is the most startling reality South Africans have to deal with. But, then again this is not very different from what has happened in most countries in the world since approximately 1985 (Alexander 2002:2). No self-respecting leadership can (or would) ever admit to selling out its constituency and, consequently, the question has to be asked: how do the present leaders of South Africa justify their 180 degree ideological and political turn? In particular, how do ex-communists and former revolutionaries explain their coming to terms with the most barbaric consequences of capitalism or the free-market? Suffice it to say that these men and women most genuinely believe that they have the acumen and leverage in the international arena to change the manner in which the world economy actually operates and, thus, to negotiate the best possible place for themselves, for South Africa and for their allies in Africa and in the rest of the South in the global system (Alexander 2002:3). Kamenka (1982:8) stated that many socialists consider that, by definition a truly communist society must also be an ecologically sound one.

So it seems that Hardin's theory as a possible solution for "feeding people against nature" seems distant. Natural consideration for others would make the behaviour described in Hardin's commons unthinkable. This would lead to about 40 percent of South Africa's population to starvation or even death, and the flourishing of capitalism. This is no way to address my thesis satisfactorily. It appears that Rolston and/or Hardin's theories could not be adopted or adapted to the conundrum of poverty against nature preservation with a win-win situation.

To my mind, an environmental ethic can help us in this regard. Environmental ethics does not land us in a muddle, but is an invitation to moral development. Within the South African context, I have the firm conviction that bioregionalism could help us overcome the impasse of feeding

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people against saving nature. It offers a way of life in a fractured environment and advocates multiple levels of analysis. In chapter three, I précis the need for environmental ethics and take on bioregionalism as an environmental ethic and work out the implications it would have for the practice of environmental management in general in South Africa today hoping to bring to a close the problem of poverty against nature preservation.

CHAPTER THREE

BIOREGIONALISM – DECONSTRUCTION OF BARRIERS BETWEEN POVERTY AND NATURE PRESERVATION

Introduction

The South African Constitution, as adopted on 8 May 1996 grants every citizen certain basic inalienable, human rights. In the wake of the Rio Conference of 1992 and the Bill of Rights in the New Constitution guarantees the right of everyone "to an environment that is not harmful to their health or well-being" and places certain responsibilities on the state to protect the environment. This context demands an integrated policy, which brings together concerns for environmental, economic and social sustainability. However, it is "anthropocentrism" that is reflected in the National Environmental Management Act (NEMA) Act 107 of 1998 and in the White Paper on Environmental Management Policy for South Africa. I aim to show that such a management approach is inadequate in addressing the needs; especially short term human needs which are always changing and usually escalating and this usually involves transforming or exploiting the environment. I propose the position of bioregionalism and shall elaborate on the connotations for the practice of environmental management. Bioregionalists aim to find a balance between the resident community's needs for livelihoods and the potential for natural resources in their bioregions, as defined by their ecological, economic and social criteria. Put simply, Bioregionalism has the potential to feed people and save nature. Bioregionalism is rapidly spreading throughout the first world countries and it appears to be transferable.

The White Paper on Environmental Management sets out the overarching policy framework for environmental management in South Africa. It outlines the government's vision for environmental policy and the Department of Environmental Affairs and Tourism's mission statements. Broad outlines of the government's strategic goals and supporting objectives have also been included. This Paper also reflects governance issues, defining the powers and responsibilities of different spheres of government and civil society. The White Paper is a result of a comprehensive consultative process, known as the Consultative National Environmental

Policy Process (CONNEP). The overarching goal is sustainable development .The intention is to move away from a previous situation of unrestrained and environmentally insensitive development to sustainable development with the aim of achieving a stable state economy in balance with ecological processes.

Environmental issues, historically, have had a low governmental priority. This has been due partly to these issues being narrowly defined as relating mainly to nature conservation. It has also resulted in a failure to integrate environmental concerns into economic planning and decision-making at all levels in society. Government policies, plans and programmes have generally not been subjected to environmental assessments. In addition, little attention has been given to creating awareness of environmental issues among the general population, or to enhancing their ability to play a role in effective environmental management and governance.

Against this backdrop, together with trends in globalization, development, macro-economic policies, information technology and increased environmental consciousness, the need for a new environmental policy becomes clear. But, is the current environmental management practice with a strong flavour of anthropocentrism the best for South Africa? In terms of this approach, nature is considered to be of value only in so far as it can be utilized as a resource for humans. Feeding people simply means sacrificing nature.

As a point of departure of this chapter, I would question the need for environmental ethics and re-visit the history and description of bioregionalism. I shall then proceed to justify its implementation in tandem with a critique of the current environmental management policy; then map out the implications it will have for environmental management policy making in general in South Africa today. Put simply, I shall view the current environmental management application through the "bioregional lens" and explicate possible amendments to the current White Paper on Environmental Management in an attempt to convince South Africans that such an approach is the way forward to solve the dilemma in question.

The need for environmental ethics?

That there ought to be some ethic concerning the environment can be doubted only by those who believe in no ethics at all. For humans are evidently helped or hurt by the condition of their environment. Environment quality is necessary, though not sufficient, for quality in human life (Rolston 1988:6). Human life filled with its artifacts is lived in a natural ecology where resources – soil, air, water and climate – are matters of life and death. All that we have was grown in or gathered out of nature. Culture and nature have entwined destinies, similar to the way minds are inseparable from bodies. So ethics needs to be applied to the environment. Environmental ethics in the *primary*, naturalistic sense is reached only when humans ask questions not merely of prudential use but of appropriate respect and duty (Rolston 1988:7).

Two observations are worth making at the start. Environmental ethics will mix descriptions of what is the case (derived from science, from metaphysics, from judgments of intrinsic values present or absent there) with prescriptions of what ought to be right and wrong in human conduct. It is never clearer than now that an ethics attaches to a world-view, but we trying to see further than humans have seen before, struggling for coherence, surveying a complex historical place. But environmental ethics has not succeeded in developing a value theory, in the form of a single coherent doctrine, profound enough to support the practical concerns of environmentalism, and is unlikely to develop one in the near future. This is no cause for despair: such diversity should be understood as a characteristic of the historical phase within which environmental ethics finds itself, and as a rich source of creativity from which to draw when we conceptualize and respond to environmental problems (Hattingh 1999:2).

However environmental ethics is practically urgent. Theoretical questions will make a practical difference: encounters in practice will force us back to theoretical reflection. We must then map unexplored theoretical ground in philosophy, make unexpected crisscrossings from science to ethics, and re-evaluate on the scene wildlife and wildland encounters. It is sometimes thought that environmental ethics is not very important, peripheral to the urgent issues of human relations – poverty, war, crime, and man's inhumanity to man – and further, that it is only a matter of application rather than theory.

But not so. Few ethical explorations run so deep or so quickly from theory to practice; few make such an evident difference on the world scene. Environmental ethics is both radical and revolutionary. Bioregionalism is a prominent position in radical environmental ethics. This position will now be applied to the South African landscape.

The history and description of bioregionalism

Bioregionalism is one of the four socio-philosophical movements that could be characterized as "radical ecology" movements, the other three being deep ecology, ecofeminism and social ecology. Peter Berg and Raymond Dasmann first popularized the concept of bioregionalism in the mid-1970s. The concept was ready to be born is shown by its appearance in 1975 in the novel, *Ecotopia*, about an ecological nation in northern California, Oregon and Washington. A year later, David Haenke, a bioregional author and activist, began making plans for holding an Ozark Community Congress, the first bioregional gathering of its kind (Alexander 1984:163).

Bioregionalism is a grassroots, "bottom up" approach led by communities themselves, primarily in North America, but increasingly in Australia and Europe, too. Kirkpatrick Sale (Alexander 1984:162) offers perhaps the most concise definition of a *bioregion* as being "a place defined by its life forms, its topography and its biota, rather than by human dictates; a region governed by nature, not legislature". Bioregionalism offers a radical critique of the conventional approach to *place*, revolving around the idea of ownership of land and the attendant right to develop and exploit. Political control over the ecology and the economy of local regions rests with the nation-state government, which is generally allied with and supportive of the interests of large industrial corporations. The bioregional approach advocates replacing the man-made, historically arbitrary political boundaries of nations, states and counties. It suggests, instead, using natural ecosystem features, such as watersheds, mountain ranges and entire biotic communities (human and non-human) as the defining features of a given region. The primary values, from a bioregional perspective, are not "property rights" and "development", but preserving the integrity of the regional ecosystem and maximizing economic self-sufficiency within the region. Political control would thus rest with the community of people actually living in the region (http://www.rmetzner-greenearth.org/ecopsych.html).

The bioregional movement, like the other radical ecology movements, contains within it a challenge to change our perception and understanding of the human role in the natural world. It encourages us to become aware of native plants and animals in the region where we live so we can feel and experience our actual place in the natural order. It encourages us to learn about the historical and present day indigenous peoples of that region, and how they sustained themselves before the arrival of European culture with its industry and technology. It thus forges an explicit connection and solidarity with existing native people, their cultures and their struggle for autonomy. These cultures are clearly bioregional in their explicit sense of rootedness to the land, and have been gently offering a radical critique of Eurocentric arrogance ever since the time of Columbus and the Conquest. In a very real sense, bioregionalism seeks to fulfill Aldo Leopold's notion of a "land ethic". After emphasizing the significance of membership in an interdependent community for the development of an ecological conscience, Leopold wrote in *A Sand County Almanac* (1949) that " The land ethic … enlarges the boundaries of the community to include soils, waters, plants and animals, or collectively: the land … In short, a land ethic changes the role of homo sapiens from conqueror of the land-community to plain member and citizen of it." (http://www.wri.wri.org/wri/wri/biodiv/bioregional-management.html).

Bioregionalism also involves something like consciousness-raising practice or, we might say, an ecopsychological practice. Such a practice can affect our sense of identity, our self-image. By creating bioregional maps that depict watersheds, rivers, forests and mountain ranges, rather than roads and cities, we come to a renewed appreciation of the ecological complexity of the place we inhabit. What is a place, and how does it relate to and differ from the concept of space? (http://www.wri.wri.org/wri/wri/biodiv/bioregional-management.html).

A place is a localized, particular region, whereas space is abstract and infinite. A place can be delimited, mapped and described. In the unfathomable vastness of macroscopic space, a galaxy, a solar system, a planet, is localized, identifiable places. On the continental landmasses of the earth, we can map and identify local places of different size: deserts, mountains, forests, cities, houses, trees and rocks. Speaking geographically or topographically a place always has *boundaries*. They may be very definite or fuzzy and indistinct; and certain boundary regions or borderlands are

themselves identifiable places, often of special significance. A key aspect of the bioregional agenda is to change the way we define boundaries of a place (http://csf.colorado.edu/bioregional/era.html).

Places always have a certain *size* or *extension*. Surveyors and cartographers measure and map the size of the place with all its details and features. The size of a place may be large, medium or small. From this perspective of size, we could say the bioregion is intermediate between the global and the local. If we are to think globally and act locally, should we perhaps learn to feel bioregionally? (http://www.tnews.vom/text/mcclosekey2.html).

A particular place always has *internal divisions* and structural features in which it resembles and differs from other places in a large variety of ways. These internal divisions can also be mapped, described and named. The exceptions to the principle of internal divisions occur with the oceans (and to some extent certain deserts). The vast, undifferentiated expanse of oceans is often disorientating to land dwellers such as humans, precisely because we cannot find landmarks or other distinctive structural features. Scientists can map the ocean floor, with its ridges and troughs, and sailors can learn to navigate by stars and instruments to traverse the oceans. But "being at sea" is similar to being lost, and even the sailor has to "come home from the sea" (http://www.tnews.vom/text/mcclosekey2.html).

Most places, at least on land, also have a center: this is the fulcrum or hub around with the events and activities in the place organize themselves. Towns and cities have centers, often marked by a plaza or other public structure, where people tend to congregate for trade and entertainment. In older towns the center of community life is usually marked by a church, temple or shrine. In a dwelling, the center of family life is usually the living room or in some dwellings it may be the kitchen and eating area (http://csf.colorado.edu/bioregional/era.html).

A place may also be said to have *inhabitants*, dwellers, those who are "from there". Both human and non-human dwellers make up the community of that place, whether or not the humans recognize that. Inhabitants might be natives (humans, plants and animals), or immigrants, or invaders. Part of the bioregional agenda is to raise consciousness about plants and animals that

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are native and therefore sustainably adapted to the regional environment. With this comes the recognition that non-native plants and animals can sometimes be invasive and destructive to the ecosystem. The bioregional philosophy advocates that we should learn from the surviving native people in a given region how to live sustainably in that area. This is the project of *reinhabitation*: learning the habits of living that will enable us to survive sustainably in the *habitat* (Hattingh 1999:7).

Places have *names*. This allows us to talk about them, and to talk about the spirits of that place, and about our own relatedness to that named place. In ancient times, the name of a place was related to the spirit of that place, the *genius loci*. Indeed, the whole planet Earth was the home of the goddess named Gaia or Gaea, from which our words "geology" and "geography" are derived. The Sun, Moon and the planets were each given the names of gods and goddesses. In indigenous societies such as the First Americans and the Australian Aborigines, great importance attaches to the relatedness of a person to a particular named place. A person may introduce himself/herself by saying: "I am from this place, and my father's family comes from these mountains and my mother comes from this river." In Euro-American society, we are much more likely to introduce friends and ourselves by saying what we "do", our profession, accomplishment and the like. We don't know where we are from very often. From a sociological perspective, bioregionalism seeks to generate a new social bond beyond both the restrictive ties of ethnicity and the open but empty ties of bureaucracy. For, as Jon Furberg puts it, "a culture takes its own distinctive form from a distinct place – it is the commonly known and enacted imagination of how these people live here" (http://www.tnews.com/text/mcclosekey2.html).

However, there can be a close negative connection between our personal and social lives and the life of our natural environment. The central theme of the present age is "displacement". It involves a double displacement of land and its people. Consider, for instance, the analogues between ecological and economical invasions: how "weedy, opportunistic" exotic species invade an ecosystem, and how this intrusion is linked to disturbance regimes such as clear cutting, how prodigious volumes of resources have long been extracted and sent far away, sucking the land and people dry, how habitats degrade and communities devolve, how the diversity of species and

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cultures fade as well as ecological legacies and cultural traditions, the forest and society almost irretrievably fragmented. And how what plant ecologists term a "Neo-Europe" invades and pervades ecosystems, economies, and cultures everywhere in the world in the name of universal "progress" (http://www.tnews.com/text/mccloskey2.html).

The history of the Great North Cascades Ecosystem in North America, for instance, involves the loss of the integrity of the ecosystem itself and the loss of vitality of native peoples and rural communities. The primordial bonds of kinship, the ties of the local community, the strength and diversity of cultural and regional traditions, the viability of species, habitats and ecosystems all become victimized, part of the unwritten history of each place (http://www.tnews.com/text/mccloskey2.html).

Engaging the bioregional lens

Huntley et al (1989:47) assert that 'the greens' have gone wrong. The greens contradict themselves by demanding socialism and a clean environment at the same time. Socialism leads to the malfunctioning of the economy, which means no money is available for conservation. By denying that self-interest is a valid principle, socialists are suppressing people's innate ability to think in an efficient manner. The flip side, many people believe, is capitalism, an economic system obsessed with growth and expansion that has created many of our environmental problems. Capitalism can indeed survive only through permanent expansion, which in turn means the accelerating contraction of our life-support systems (Porrit, 1984:36).

In South Africa it is capitalists who are climbing on 'the green bandwagon' to promote consumption. It is capitalists who, in the name of 'growth' and 'development' are destroying our coastlines and restricting its use to those who can afford to buy property in their costly marina developments. The bioregional lens however, will not give such a system even a fleeting glimpse.

It is widely agreed that to achieve the aims of green politics and end exploitation of both people and environment, change is required. But what is hotly contested is the nature of that change. The more general view is that problems can be put right by a few adjustments to the system – less

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with the processes of ecologically grounded cultural creativity and with mutualistic, co-operative process of self-expression by the human community and nature (http://www.cato.org/pubs/policyreport/prop.html).

Learning to come home to bioregions or homelands involves two basic processes: reinhabitation of our life places and restoration of natural systems.

a) *Reinhabitation as Living in Place*: More than ever today we need to develop an ethic of place. No amount of governmental rules and obligations will ever suffice if people do not know the land, love and care for it in their hearts as their home. Far too many of us remain like isolated atoms or egos, floating in a kind of abstracted, universal "it's all the same everywhere" Cartesian space. They neither know nor care where their water, fuel wood or fertile soil come from as long as someone, somehow keep the juices flowing or where their garbage or sewerage or other waste goes, as long as it's out of sight and mind, nor do they care about the real costs involved. But if you don't know where you are, then you don't know what you are doing (http://www.rmetzner-greenearth.org/ecopsych.html).

Finding our way home in a dark and confusing time involves a necessary reengagement with the world. It means leaving the "City of the Mind" and returning to our "common house" of Nature. Rather than remaining mere residents or exploiters, it means becoming mindful, even soulful, dwellers in the land, friends of the place. Living in such homelands involves two processes: orientation and identification. It means finding a truer orientation to the character of the life-place we inhabit and becoming more present there, and deepening our identification with it. While such an attunement is an individual endeavour, it is also a collective, culture-creating process (http://csf.colorado.edu/bioregional/era.html).

As Peter Berg and Raymond Dasmann suggest (Alexander 1990:165): "Living in place means following the necessities and pleasures of life as they are uniquely presented by a particular site, and evolving ways to endure long-term occupancy of that site. A society that practices living-in-place keeps in balance with its region of support through links with human lives, other living

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creatures and the processes of the planet — seasons, weather, water cycles, as revealed by the place itself. It is opposite of a society which makes a living through short-term destructive exploitation of land and life."

It is an easily observed fact that people living in hamlets, villages, towns and small cities have a strong identification with the communities in which they live and a strong sense of local pride. In addition, many citizens' groups have chosen the municipality as a convenient organizational unit for combating ecologically hazardous projects (Alexander 1990:159). In the article, *Local Government Takes Initiative* (*Mail and Guardian*, June 28 – July 4, 2002), the reporter states that more than 6 000 municipalities in 113 countries are actively promoting sustainable, equitable and secure local communities. A report called *Local Government's Response to Agenda 21*, released recently by the International Council for Local Environmental Initiatives (ICLEI), records that in the past ten years 6 416 local governments have started a Local Agenda 21 process. Local Agenda 21 is the municipal response to the 1992 Earth Summit's Agenda 21, the global plan of action for sustainable development. It is multi-dimensional process aimed at addressing local sustainable development priorities through the implementation of a long-term strategic plan. In Africa, more than 150 municipalities in 28 countries have started Local Agenda 21. In these municipalities, economic development is of particular concern, so Local Agenda 21 processes in the region commonly focus on poverty alleviation, economic development and community development. Where Local Agenda 21 has taken hold, concrete achievements in governance and priority issues such as water and electricity supply have resulted. It appears that bioregionalism has begun its initial diffusion into societies.

Often our inherited mindsets no longer serve to orient or ground our identities in the place together. Consider for a moment the simple question of "where we're at". We may say, " I'm from Umtata or Transkei or Eastern Cape or from the Eastern Seaboard." But these notions reveal as much as they conceal; we need to think more clearly about our natural address. As Berg Remarks (Alexander 1990:163): "Everything that pertains to the feeling of belonging in a place has almost nothing to do with state, provincial or national borders surrounding them in the region." It does little good to speak to people in the arcane language of ecosystems analysis, for

this kind of distracting language is often part of the old story. We need poetics of a place as much as ecologists.

Reinhabitation of an area that has been disrupted and injured through past exploitation would mean becoming native to this place through being aware of the particular ecological relationships that operate within and around it. It involves becoming fully alive in and with a place. Capital investments in farms and distribution networks will be needed. For the landless, however, the only salvation will be to multiply the job opportunities in the other sectors of the economy. This calls for training and development, easier access to capital and the sweeping away of all obstructions to opening up small services and manufacturing businesses. All this has to be done in consultation using the bottom up approach and within the boundaries set by local life supporting systems (http://www.wri.org/wri/wri/biodiv/b014html).

b) *Reinhabitation as restoration of natural systems*: The discussion above inevitably leads to the second key theme of preservation and restoration of natural systems. We need to go beyond "saving what's left" – it's as if the mainline environmental movements are running a hospital with only an emergency ward. There are several challenges any vision for the future of fractured environment must address: first, maintaining the vitality of natural ecosystems on a bioregional scale, and second, maintaining the sustainability of the regional economy and society. We need to articulate a long-term commitment to conservation and restoration of the ecosystems. Events have forced us to recognize that we cannot hope for a sustainable society without a sustainable and more self-reliant regional economy; and we cannot hope for either if the life support systems themselves have lost their viability and diversity. "No sustainability without viability" – that is precisely what is at stake here (http://www.wri.org/wri/wri/biodiv/b014html).

Where do any of us belong, and how can we generate new and lasting ties with a damaged milieu? To make visions viable we must consider what it takes to help seed a placed people here that will love and defend her. Only then will there emerge generations of deeply-rooted folks to help preserve the ecosystem, restore the viability of the watersheds, revitalize local communities and sustain regional economies, and build a vibrant, indigenous culture which celebrates the benefits of this place. Only then can we hope to "heal the earth".

Implications for management choices

What are the implications of the above in environmental management strategies? These can be stated as follows:

1. Constitutions should be amended. Bioregions are not defined by political jurisdiction. There is no set size, shape nor boundary to a bioregion. It should be large enough to maintain the integrity of the region's biological communities, habitats, and ecosystems in order to support important ecological processes and be small enough for local people to consider home (Alexander 1990:167).

2. The fundamental principle of bioregional management is collaborative decision-making that utilizes the consensus process. Bioregions shall encompass provinces and hundreds of local government bodies. There is virtually no hope of developing and implementing a comprehensive, integrated plan for conserving the biodiversity at the bioregional scale through the traditional process of decision-making on public policy issues. According to Dryzek and Schlosberg (1998:25) local authorities are seen as obstacles to bioregional management. Stakeholder councils are the alternative of choice. When one encounters a stakeholder council, it is usually seen as a single-issue activity. The idea that it is a part of a bioregional plan is beyond the comprehension of many. Those who are promoting a particular objective through a stakeholder council are unaware that what they are doing is part of a broader agenda. The broader agenda is Agenda 21. Agenda 21, a masterfully written, soft law document, provides a broad policy foundation for this societal transformation. It is a document that comprehensively addresses every aspect of human life. The recommendations set forth in Agenda 21 represent, and give definition to the term "sustainable development".

3. We should strive towards keeping the meaning of sustainable development open and this could be achieved by taking seriously the principles of context, place, time, situatedness, limitations and ideological bias when we interpret and consider the goals we set for socio-economic development and conservation and assess what people have to say about what they find problematical in their bioregions. Participative democracy should be taken as a norm (Hattingh and Attfield 2002:82).

4. Within this framework the generation of waste should be prevented, and the emphasis should be on the generation of byproducts that could become an ecologically safe and sound resource. If waste is already in existence, waste should be disposed at its source in an ecologically safe and sound manner ensuring that nothing is being stored that could, if an accident occurred, cause harm to the environment. If no assurance could be given that waste would not cause potentially significantly adverse effects, then the activity that is generating the waste should cease, or permission to undertake the project would not be granted (http://csf.colorado.edu/bioregional/era.html).

5. Given the history of the apartheid government, and the tremendous environmental degradation incurred, the governments should seek compensation from companies that can be shown to have consistently contributed to environmental degradation. The funds from environmental compensation should be put in to developing BEST (Best Ecologically Sound Techniques). There exists a notion that environmental degradation is reversible; it can be restored and rehabilitated. This notion, however, should never be used as a justification for the causing of environmental degradation.

6. The ensuring of consistent protection means ensuring the variation in air, water, and soil conditions across a bioregion and the variation in effects of different substances emitted. All discharges, no matter where they are located in a region, will be equally affected by the criteria. Ensuring consistent protection also means that governments will not transfer

its population problems onto other bioregions nor governments relax standards in order to attract industry. Criteria must ensure acceptable ambient environmental conditions across bioregions.

7. A biosphere reserve is a specific type of conservation area that accommodates and benefits both the natural environment and the communities living in and around it. This is possible because a biosphere reserve consists of three different but associated zones.

    o   Core zone: the most ecologically sensitive and pristine area where nature conservation is a priority and low impact activities (for example: hiking and bird watching) are allowed.
    o   Buffer zone: a less ecologically sensitive, but mostly natural area where recreation (example: camping, boating, mountain biking), and sustainable utilization of natural products (example: fishing, wildflower harvesting) can be accommodated.
    o   Transition zone: the least ecologically sensitive area where a great variety of land uses occur (example: farms, commercial plantations and towns).

All zones are interdependent and are managed and protected according to the definitions above. By linking conservation, development and the sustainable use of natural resources, harmony and balance between nature and people can be achieved (http://www.rmetznergreenearth.org/ecopsych.html).

Conclusion

It seems painfully obvious that the economic system must be transformed if we hope to protect natural systems from destruction. What's needed is an economy that takes into true account the cost of biospheric destruction and at the same time feeds the family. A move towards socialism or an acceptable combination of capitalism and socialism can be developed to remedy the problem of saving nature versus feeding people. The best place to meet this challenge is where you live – that is, personally and within the community.

Its probably also fairly plain that changing the economic system will involve changing our conception of what constitutes a fulfilled life and cracking the cultural mania for mindless consumption and its attendant waste. To realize what is alive within us, the who of who we are, we have to know what we truly need, and what is enough. As Marshall Sahlins (1978:52) has pointed out, affluence can be attained either through increasing production or reducing needs. Since increased production usually means ravaged natural systems, the best strategy seems reduction of needs, and hopefully the consequent recognition that enough is plenty. A truly affluent society is one of material sufficiency and spiritual riches.

The chances of bioregionalism succeeding, like the chances of survival itself, are beside the point. If one person, or a few, or a community of people, live more fulfilling lives from the bioregional practice, then it is successful. This country has a twisted idea of success: it is almost always a quantitative judgment – salary wins, the number of rooms in the house, the amount of people you command. Since bioregionalism by temperament is qualitative, the basis of judgment should be shifted accordingly. What we now call subculture, we shall call friends.

Most of the people I talk to, feel that we have a fighting chance to stop environmental destruction. If we want to see the results of this transformation, we might as well start it right now, with the finest expressions of spirit and style we can muster.

In these communities the motor vehicles have been tamed; many transportation exists and fundamentally human mobility and freedom are enhanced. These are communities in which the economic base is viable as well as environmentally and socially restorative. This vision of place emphasizes both the ecological and the social, where quantity of consumption is replaced with quality of relationships. In short the vision is about creating places citizens can be proud of – places of enduring value that people are not ashamed to leave to their descendants.

To realize fully the potential of such a vision, South Africans must begin to rethink in fundamental ways their approaches to planning, designing and managing places. Such an approach seeks a way of living on the planet that respects the limits of its ecological health – the

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finiteness of land, biodiversity and other natural resources – while finding hopeful alternatives to the many ways in which current approaches to planning and place making are unsuccessful at meeting human needs and desires.

Agonizing about the conundrum, 'Saving nature against feeding people' should be substituted by devising policies of development and preservation in which local people can participate policies which will encourage people to save nature and to feed themselves. Such a vision seems to be embedded in bioregionalism which appears to be coherent for our present status.

CHAPTER FOUR

Overview and recapitulation

In this assignment the ethical dilemma of feeding people versus saving nature in a developing country such as South Africa was discussed. In chapter one a sketch was given of an array of government policies, strategies, plans, and projects, to facilitate development and overcome poverty in South Africa, while simultaneously maintaining a constant natural stock. However, it was found that there are numerous practical, conceptual and ethical stumbling blocks impeding the achievement of these goals. One of these stumbling blocks on a conceptual level, is that the dichotomy of overcoming poverty and conserving nature proves to be a false dilemma that cannot be addressed if the problem is posed on an abstract level outside of concrete decision-making contexts. Accordingly, chapters two and three aimed to place the tensions between development and the saving of nature within the ambit of concrete decision-making where, sometimes, hard choices have to be made and justified.

In chapter two, evaluation was given of Rolston's controversial article "Feeding People versus Saving Nature?" and the equally vexing perspective developed in Hardin's "Tragedy of the Commons" – all in an attempt to get to grips with the concrete contexts of decision-making where this dilemma can be addressed in a much more meaningful manner. It was found that Rolston does advance some valid points in his discussion. For example amongst others, he espouses instead of sacrificing the last of nature in order to feed people, we should revise the policy choices that have been made in the past that have marginalized people and brought them to the point of starvation in the first place (Hattingh and Attfield 2002:69). However, Rolston's discourse of uncontrolled human population growth as cancerous is profoundly dangerous. If beyond certain numbers, humanity comprises a cancer, then the motivation to save human life, to heal injury and to cure illness are ready to lapse. In fact, Rolston's argument, pushed to its extreme, can imply that there is virtue in letting such individuals die (Attfield 1998:296). The important lesson that Rolston has for the South African situation, however, is that we should seriously look at policy choices of the past that have been institutionalized and become normal practice, and still function to create, perpetuate and justify the poverty of some in this country,

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and the affluence of others. If we follow Rolston in this regard, we should seriously look at these policy choices, institutions and practices, and reverse them as quickly as we can, lest we continue unwise decisions and allow poor people and nature to pay the ultimate price for it.

In the same chapter, Garrett Hardin's analysis of the causes and remedies of the tragedy of the commons was also scrutinized. Hardin's argument boils down to the observation that freedom in the commons brings ruin to all, and accordingly that the solution lies in "mutual coercion mutually agreed upon" – or, formulated differently: that we should get rid of the commons. It was pointed out, however, that strong reservations should be raised regarding as a route forward. To trounce the dilemma under investigation, Hardin not only articulates a morally callous life boat ethics in which the poor of the world are denied poverty relief and development aid, and thus left to die; he also argues for some kind of centralized world authority that should take charge of all human affairs. Besides the insurmountable practical difficulties to implement such an authority, in principle it also seems to have fascist overtones with devastating implications for human freedom.

In chapter three, bioregionalism was presented as a possible way to go in future. Bioregionalism is a new concept of social organization that seeks to "conserve, sustainably use and equitably share the benefits of biodiversity." To accommodate human populations, bioregionalism suggests numerous strategies and organizational transformations that will enable communities to live sustainably within the limits of supporting ecosystems as theses exist within well-defined bioregions (http://csf.colorado.edu/bioregional/era.html).

Tackling poverty, unequal distribution of resources and degradation of the environment, a bioregionalist approach demands more sensible supporting policies. It also requires the support of local people, broad access to natural and financial resources, and administrations that are actually able to do what they are supposed to be doing.

Applied to Third World conditions, a bioregionalist approach would require of governments to provide (if they are serious to address and arrest environmental degradation and poverty) a

conceptual framework that links the natural, human and capital assets (or limits) of a place with, on the one hand, the vulnerability and opportunity of various livelihoods and, on the other hand, institutions (governmental and non-governmental) and processes (like planning, legal, etc.) that have the potential to transform the situation from an ecological and socially unsustainable to a sustainable set-up. The bioregionalist framework is thus holistic not sectorial. It embraces the poor people but also keeps the supporting environment centre stage. What has surfaced from this work in chapter three, is that an emphasis on nature preservation need not be at the cost of human needs.

In the following section, a number of particular conclusions from this study are articulated. Each entry, as it were, starts with a general observation, which is then translated into a specific recommendation pitched at the level of policy choices and/or requirements for the practice of strategic development planning and management, aimed at the eradication of poverty while not compromising supporting ecosystems.

Recommendations and concluding remarks

The developing world (or less developed countries to use the terms of the Brundtland Report) is a very different place from what it was fifty years ago. Its human population has more than doubled from 1.7 billion to 4.5 billion and at the same time its natural resources has been hugely degraded. In the next fifty years human population will increase to at least 6 billion (the lowest projection) and may well than double to 12.8 billion (the medium projection). Fifty years ago, only seventeen percent of these people lived in towns and cities, now it is 35 percent. There has never been a greater need for development planning and good management of natural resources and poverty eradication and this is no time for the faint hearts (Gore 1992:73).

o To be effective, local planning should operate within a truly domestically-driven vision of the future at national and also sub-national (where appropriate) levels – not tied to party, tribe or sect – within which participation can operate, and for provision made for co-ordinated strategies at national and district level to work toward this vision in a coherent

manner that do not overlap and duplicate efforts. In South Africa political accommodation is so recent that effective institutions of local government have yet to be built (Clayton et al 2000:75).

Recommendation

A vision of the future commanding wide support is a prerequisite of effective development and a necessary framework within which planning should operate. A process to develop this vision (e.g. round tables at local to national levels) must include all stakeholders – resource users, rural and urban people including minorities, government and NGOs. District, provincial and national strategies should be coordinated to realize this vision.

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o   The concept of sustainable livelihoods provides a focus for development strategies. It concentrates attention on the need for secure livelihoods underpinned by sustainable management of national resources and by human, social and financial capital. It is a holistic perspective in contrast to previous piecemeal support for physical infrastructure and specific commodities (Lichfield 1990:37). Planning holds the key to this conundrum – if it enables decision-makers to work effectively and equitably on the basis of sound information about the status of natural resources and other forms of capital; and people's social and economic aspirations

Recommendation

The sustainable livelihoods concept is a powerful tool for analysis, and for the development of visions and strategies.

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o It is unrealistic and unhelpful to consider rural planning and urban planning as separate entities. Urban centers are absolutely dependant on their hinterlands for water, fuel food and waste disposal; there are important flows of people, goods and capital between them as well as more subtle social links; urban activities like industry occur in rural areas and rural activities like urban farming occur in urban areas. It does not help that rural planning, land use planning are quite different schools that scarcely communicate (Bannister et al 1999:147).

Recommendation

Urban-rural links should be recognized in the planning process and there should be dialogue between town planners, rural planners and economic planners.

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o Planning has very much a technocratic approach and putting the security of livelihoods (eliminating poverty) and the sustainable use of natural resources at the heart of the planning process will require fundamental shifts in what currently goes by the name of planning. It has to integrate elements that have been the domain of quite separate professions – not just soil and water resource conservation, irrigation and drainage, but water resource allocation and total catchment management; development of sustainable production systems and their supporting infrastructure; and the development of the human capital of rural areas (Clayton et al 2002:79).

Recommendations

i. *Planning should not be undertaken exclusively by professionals remote from the area Concerned. To be successful, a plan needs to be developed in partnership by all of those with a legitimate interest, particularly residents of the area and those whose*

livelihoods depend on its resources. Identify these people first and establish a mechanism to participate in the planning process.

ii.   *Address social issues, especially land tenure and access to resources, as well as physical or environmental issues.*

iii.   *Try to reach consensus, taking particular care to include marginalized groups e.g. women and minorities.*

iv.   *Build and support local institutions that can manage common property resources and devolve authority to them.*

v.   *Common property or unpriced resources such as land, water, pastures, forests and wildlife has economic values and is not infinitely substitutable. There needs to be an accounting system to assess depreciation of these natural resources and a mechanism to ensure their sustainable management, otherwise they are likely to be exploited to the point where the system is destroyed.*

o   At the district level, the key functions are:
   -   Delivery of local services (schools, clinics, technical advice, etc);
   -   Strategic planning of infrastructure and services. Allocation of rights to water, common grazing, timber, wildlife and other resources, according to national legislation and monitoring and policing of this use; and coordination of local development (Lichfield 1990:24).

Recommendations

i.   *Devolution of enough power to exert significant influence over local affairs;*

ii.   *Reliable mechanisms for accountability to local communities;*

iii.   *Adequate technical and institutional capacity on local level to accomplish those ranks.*

Conclusions

If planning is to become effective and make a difference to the well-being of people by eliminating poverty and contribute to a more sustainable management of natural resources, thereby promoting nature conservation, each of the foregoing issues must be tackled.

Local strategic planning requires information about the condition and trends of natural resources, social and economic conditions as they concretely exist "on the ground". Methods to gather, synthesize and interpret this information are well established. Methods and mechanisms to enable the participation of stakeholders in this process of interpretation also exist.

At district level the key for both service delivery and local strategic planning, namely professional and financial resources are not sufficient for the task, partly because we are dealing with poor communities. Nevertheless I conclude that it is at the district level that the needs and priorities of rural and urban communities and the environment can best be met.

Bookchin (1982:79) although he is better known for his social ecology, came closest to an authentic bioregional approach when he explained "localism taken seriously, implies a sensitivity to speciality, particularity and the uniqueness of place that involves deep respect to of/for the areas in which we live and that are given to us in great part by the natural world itself". I sincerely believe that the key to the resolution of this dilemma of feeding people versus saving nature can be found in this kind of approach and the practice that it leads to.

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BIBLIOGRAPHY

Albertyn, C. 1995. "Mafefe: The Asbestos Dumps of death in Northern Province." *Environmental Justice Networker* 16.

Alexander, T. 2002. *From Apartheid to Nation-Building*. Cape Town: Oxford University Press.

Alexander, D.1990. Bioregionalism: science or sensibility? *Environmental Ethics* 12 (1990): 161-173.

Alston, B. 1993. Putting People into Perspective: Environment and Population Policy In Hallowes, D (ed) *Hidden Faces*. South Africa: Earthlife Africa.

Attfield, R. 1998. 'Saving Nature, Versus Feeding People and Ethics', *Environmental Values,* Vol.7 pp.291-304.

Bannister et al.1999. *Environmental Land Use and Regional Plans*. Massachusetts: Edward Elgar Publishing Ltd.

Beatley, T and Manning, K.1997. *The Ecology of Place*. Washington: Island Press.

Bookchin, M. 1982. *The Ecology of Freedom*. California: Cheshire Press.

Clayton, et al. 2000. *Environmental Planning Issues*. No. 20, Dec 2000.

Cock, J and Koch, E. 1991. *Going Green. People, Politics and the Environment in South Africa*. Oxford: Oxford University Press.

Cox, S. J. 1985. No Tragedy on the Commons - *Environmental Ethics*. Vol.7 pp.49-61.

Douglas, R. 1996. "St Lucia: Ecotourism Challenged." *Africa, Environment and Wildlife* 4(6).

Dovers, S. Edgecombe, R. and Guest, B. 2002. *South Africa's Environmental History – Cases and Comparisons*. Cape Town: David Philip Publishers.

Dryzek, J. S. and Schlosberg, R. 1998. *Debating the Earth. The Environmental Politics Reader*. New York: The Guildford Press.

Durning, A. 1995. *Apartheid's Environmental Toll*. Washington: Worldwatch Institute.

Eagles, P. 1984. *The Planning and Management of Environmentally Sensitive Areas*. New York: Longman Incorporation.

Eckersley, R. 1992. *Environmentalism and Political Theory: Toward an Ecocentric Approach*. Albany: New York Press.

Ellery et al, 2000. *Sustainable Use of Hardwood in the Thukela Basin*. MSc University of Natal.

Frost, S. 1990. *Lake St Lucia: Public Opinion, Environmental Issues and Government Opinion*. B.A Honours thesis, University of Natal.

Goodin, R. E. 1992. *Green Political Theory*. Cambridge: Polity Press.

Gore, A. 1992. *Earth in the Balance*. New York: Penguin Publishing Group.

Hardin, G. 1964. *Population, Evolution and Birth Control*. San Francisco: Freeman Press.

Hardin, G. 1974. *Environmental Insight: Readings and Commentary of Nonhuman Value*. New York: Harper and Row.

Hattingh, J. 1999. *Finding Creativity in the Diversity of Environmental Ethics*. South African Journal of Environmental Education no.19. Vol.2

Hattingh, J. 2001. *Conceptualizing Ecological Sustainability and Ecologically Sustainable Development in Ethical Terms: Issues and Challenges*. Stellenbosch.

Hattingh, J. and Attfield, R. 2002. *The International Journal Of Human Rights*, Vol.2 pp.65-92. London: Frank Cass.

Hobsbawm, E. 2000. *In Conversation with Antonio Polito*. London: Abacus.

Horrell, M. 1968. *Bantu Education to 1968. Johannesburg*: South African Institute of Race Relations.

Horrell, M. 1978. *Laws Affecting Race Relations in South Africa*. Johannesburg: South African Institute of Race Relations.

Huntley, B. Siegfried, R and Sunter C. 1989. *South African Environments into the 21st Century*. Cape Town: Human and Rousseau Tafelberg.

Jack, B. 1993. The Importance of Environmental Considerations for Development in a Non-Racial Democratic South Africa In Hallowes, D (ed) *Hidden Faces*. South Africa: Earthlife Africa.

Kamenka, R.1984. *Living With Contradictions*. California: Wadsworth Publishing Company.

Kerley, G. 1997. "The Winning Game: An Ecotourist Success Story that Almost Never Happened." *African Wildlife* 51(2).

Khan, F. 1992. "Targeting Environmental Poverty: The Role of Community Based Greening Projects." *Veld and Flora.* 78(1).

Klugman, B. 1993. Putting People into Perspective: Environment and Population Policy In Hallowes, D (ed) *Hidden Faces.* South Africa: Earthlife Africa.

Lichfield, N. 1970. *Evaluation Methodology of Urban and Regional Plans.* Regional Studies 4 (2) pp.151-165.

Macleod, F. (Ed). 2002. *Managing Ecosystems for Livelihoods* –vol.2, 2002. Earth Year. Auckland Park: M&G Media

May, J. 2000. *Poverty and Inequality in South Africa: Meeting the Challenge.* Cape Town: David Philip Publishers.

McDonald, D A. (ed) 2002. *Environmental Justice in South Africa.* Cape Town: UCT Press.

McEvoy, J. 1987. *Environmental Economics.* New Jersey: Prentice Hall.

McKean, P. 1984. *Ideology in the Commons.* New York: Columbia University Press.

Mlambo, B. and Mzimela, T. 1993. *St Lucia Rural Communications Programme: Comments on the Environmental Impact Report.* Pretoria: Council for Scientific and Industrial Research.

O' Riordan, T. and Turner, K. 1983. *An Annotated Reader in Environmental Planning and Management.* Oxford: Pergamon. pp. 265-288.

Park, C. 1997. *The Environment.* London: Routledge.

Pelzer J. 1983. *Verwoerd Speaks: Speeches 1948 – 1966.* Johannesburg: APB Publishers.

Pepper, D. 1996. M*odern Environmentalism.* New York: Routledge.

Pierce, C. and VanDeVeer, D. 1995. *People, Penguins and Plastic Trees.* California: Wadsworth Publishing Company.

Porrit, J. 1984. *Seeing Green.* Oxford: Pergamon Press.

Ramphele, M. and McDowel, C. (eds). 1991.*Restoring the land: Environment and Change in Post- Apartheid South Africa.* London: The Panos Institute.

Rolston III, H.1988. *Environmental Ethics Duties to and Values in the Natural World*. New York: Temple University Press.

Rolston III, H. 1996. 'Feeding People versus Saving Nature?' in William Aiken and Hugh Lafollette (eds), *World Hunger and Morality*. New Jersey: Prentice Hall.

Sachs, A. 1990. *Eco-justice: Linking Human Rights and the Environment*. Washington, D.C.: Worldwatch Institute.

Sachs, S. (ed). 1993. *The Development Dictionary*. Johannesburg: Wits University Press.

Sahlins, M.1978. *Culture as Protein and Profit*. New Jersey: Princestown University Press.

Schweizer, C. D. 1983. *Environmental and Related Interest Groups in South Africa*. MSc Research Report, University Of Cape Town.

Shiva, V. 1993. Technology's Myth Production In Hallowes, D. (ed) *Hidden Faces*. South Africa: Earthlife Africa.

Stillman, G. 1983. *Decomposability*. New York: The Guildford Press.

Thompson, G. 2002. An Environmental History Of The Eastern Shores of Lake St. Lucia In Dovers et al (ed). *South African Environmental History*. Cape Town: David Philip Publishers.

Wilson, F and Ramphele, M. 1989. *Uprooting Poverty – The South African Challenge*. South Africa: Creda Press.

Yeld, J.1997. *Caring for the Earth – South Africa: A guide to sustainable living*. Stellenbosch: WWF South Africa.

INTERNET SOURCES:

http://www.rmetzer-greenearth.org/ecopsych.html.

http://www.tnews.com/text/mcclosekey2.html

http://www.wri.org/wri/wri/biodiv/bioregional management.html

http://brindco.uma.edu/140/hardin.html

http://www.mnforsustain.org/hardinlivingonalifeboat.htm

http://www.queensu.ca/sam/Announce.htm.

http://www.masungulo.org/Immigration.Africa.htm

sacoast.uwc.ac.za.education/resource/coastalhike2.htm

NEWSPAPERS:

Ladysmith Gazette. 10 May 2002.

Mail and Guardian. September 8 –14, 1999.
                               April 1–7, 2002.
                               August 7 –14, 2002.

The Argus. 4 November 1994.

The Cape Times. 2 August 1995

The Star. 6 June 1988.
          21 August 2002

The Sunday Times. 20 November 1994

The Weekly Mail. 9 May 1986.
                          20 December 1990 – 10 January 1991.
                          28 August – 3 September 1992.

ANC Today Vol.7, 2002.