To what extent do prescriptive decision-making models comprehend policy-making in the Third World with reference to South African environmental policy-making?

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LIST OF ABBREVIATIONS AND ACRONYMS

ANC	African National Congress
CE	Council for the Environment
CMA	Cape Metropolitan Area
CMC	Cape Metropolitan Council
CONNEPP	Consultative National Environmental Policy Process
CSIR	Council for Scientific and Industrial Research
DEAT	Department of Environmental Affairs and Tourism
EEU	Environmental Evaluation Unit
EST	Environmentally Sound Technology
GEF	Global Environmental Facility
FRD	Foundation for Research & Development
G-77	A group of developing countries
GDP	Gross Domestic Product
GNP	Gross National Product
IDRC	International Development Research Centre (based in Canada)
MINMEC	Committee of Ministers and Members of the Executive Councils: Environment and Nature Conservation
NGO	Non-governmental Organisation/s
R&D	Research and Development
RDP	Reconstruction and Development Programme
SADC	Southern African Development Community
UN	United Nations
UNCED	UN Conference on Environment and Development
WCED	World Commission on Environment and Development

KEY CONCEPTS & DEFINITIONS

Ecopolitics is defined by Guimaraes (1991:47) as "the study of the interplay between human activities and natural ecosystems".

Environment may be seen as a form of natural capital. This capital is meant to designate those ecological assets which are essential to our survival or well being. Forms of this natural capitol may include the ozone layer, marine resources and that of biological diversity (Pearce, 1993). The definition of the environment in this study also corresponds to that used in the White Paper on Environmental Management Policy 1998, as the conditions and influences under which individual or organism exists or develops. Thus the environment includes all living and non-living things that influence organisms (Moran, et al, 1986).

Environmental policy is a goal-seeking series of actions, designed to satisfy objectives normally defined by national governments (Park, 1986:28).

First World countries are to include those that can be regarded as developed. They are a group of countries which are largely pluralistic in which no particular political, ideological, cultural or ethnic group is dominant – they are democracies in which policy in which policy formulation is coloured by concensus (Park, 1986). Throughout this study, these countries will be identified as those which share similar demographic and socio-economic profiles such as including relative affluence, urban dominated societies, low levels of population growth and dominantly serviced based economies.

G77 originally referred to a group of 77 developing countries that in the 1960s identified common interests and campaigned for changes in the international economic system. Although this group has expanded to include more than 125 Third World countries, it is still known as the Group of 77, and it still represents its members' interests in international forums such as the United Nations.

Hazardous waste is flexibly defined, "but it generally refers to material that poses a threat to human health and the environment, especially if it is not properly managed. Waste materials usually described as hazardous waste include radioactive wastes, pesticides, toxic incinerator ash, chemical sludge, and organic solvents"(Miller, 1995:87).

Model is used in the context of helping to direct inquiry and research into public policy. More formally, a model will suggest relationships in the real world that can be tested and verified.

Policy is the result of policy-making. In the context of this study it is defined as a goal directed or purpose of action followed by an actor or a set of actors in an attempt to deal with a public problem (Anderson, 1979).

Policy-making is understood as the activity, usually a set of stages, preceding the publication of an intended goal (Hanekom, 1987). Copious definitions abound as to what constitutes an acceptable definition, but they all they seem to come down to the same thing. Central to policy-making is the underlying notion that there is no single process by which policy is formed and that it is an interminable. It must also be noted

that "variations in the content of public policy produces variations in the manner of policy-making". (Anderson, Brady and Bullock, 1978:7).

Sustainable development is defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs (World Commission on Environment & Development, 1987). Furthermore, it also encompasses that societies espouse to meet human needs both by increasing sustainable production and by ensuring equitable opportunities for all.

Sustainability indicator is derived from the Latin word "indicare" which means "to point out", "determine" or "estimate". Indicators aim to make large amounts of data valuable. They should be simple, quantifiable and easy to communicate. The main reason for establishing indicators is to measure, monitor and report on progress to towards sustainability. Sustainability indicators are tools to determine information regarding environmental, social and economic characteristics of a particular area (EEU(a), 1998).

Third World refers to those countries that share a set of historically determined socio-economic characteristics that result from their experiences with colonialism and imperialism. Miller (1995:19) clarifies the use of the term in this study: "It is not merely a geographic term referring to specific continents and countries; rather it describes the common experiences shared by the societies and the peoples of these countries".

Waste is defined "as an undesirable or superfluous by-product, emission, or residue of any process or activity which has been discarded, accumulated or been stored for the purpose of discarding or processing. It may be gaseous, liquid or solid or any combination thereof and may originate from a residential, commercial or industrial area. This definition excludes industrial waste water, sewage, radioactive substances, mining, metallurgical and power generation waste" (Integrated Pollution & Waste Management, 1998: 85).

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ABSTRACT

Policy research and analysis is a complex and dynamic field of study and practice. This study explores the field in terms of assessing the utility of contemporary policy techniques in the international context and the implications thereof for environmental policy-making in South Africa. More recently, the politics of environmental policy-making has emerged as a major issue on both the agendas of the developed and developing nations. As underscored by the seminal Rio Earth Summit of 1992 the environment is probably the most pressing challenge facing the globe in the new millennium. Addressing and prioritising these policy issues may require radical policy shifts. However, this study shows that policy conditionalities prevailing in the more industrialised nations have been developed in a different context and may therefore be irrelevant and of limited utility to less developed nations, forcing the latter to subvert the conventional policy cycle. Specifically, this study has explored the context of environmental policy-making in South Africa and extrapolated essential policy procedures and elements for its environmental policy-making along the policy-making continuum. In addition, an over-arching framework of sustainable development must support environmental policy development in South Africa. International experience regarding the emerging sustainability paradigm and its relevance for South African policy development is paramount if it is not to lag global environmental policy innovations and developments. Sustainability should emerge as a key organising principle for debate around policy content and structure with the imperative of responding to local policy conditionalities and priorities. As long as South Africa and many developing nations employ industrialised policy techniques, its policy processes and principles will lag effective and context specific policy research and development.

CHAPTER 1

1. INTRODUCTION

The first chapter of this study introduces the study and thereby leads the reader into the text and the mode of inquiry. This chapter will lay the foundation for addressing the key themes in this study before we proceed to more substantive issues. It begins by informing the audience of the context and background, which will be followed by sections such as the statement of the problem, the purpose and methodology employed. This marks the first of this type of condensed research as a pioneering effort for collective action.

1.1 Background and context

Public policy has long been a concern of political theorists and social scientists and the earliest writings of political philosophers reveal an ardent interest in the policies pursued by government and the related impact of these policies on society. Public policy per se, largely a ubiquitous phenomenon, can be thought of as the aggregation of a number of decisions; a copious amount of definitions of public policy abound, but this is not the immediate concern and may prove to be all too confusing as they all seem to boil down to the same thing (see Anderson, 1979; Bryson & Crosby, 1992; Dye, 1978; Easton, 1953; Hanekom, 1987; Hogwood and Gunn, 1984 and Kaplan and Lasswell, 1970). Public policies have influenced the development and downfall of nations, the fate of destiny, the fortune of people (Wissink, 1990). Every citizen is affected by the public policies executed by its government and other political office bearers; the effect of the forces of public policy is no less ubiquitous in the Third World, even more so in post-apartheid South Africa.

Specifically, this study discusses the implications of the limited utility of conventional models of decision-making in Third World nations for policy-making, as well as in post-apartheid South Africa as attempted in recent government policy documents pertaining to the environment. The focus on the environment as a policy issue augurs well for the South African policy-making agenda, in that, notwithstanding events like the Gulf Crisis, the fall of the Berlin wall and the Yugoslavia Conflict, the environmental sphere has always featured prominently on the international political agenda. It also stands out as an issue that politicians and strategists in South Africa, and the world-over, ignore to their peril. South African policy analysts have come to the very important realisation that the integration of many actors, departments and agencies will have to form the cornerstone of its present and future policies if it is to overcome the fragmented and top-down policy framework of apartheid policy methodology. Moving away from this highly bureaupathological system of policy-making will require that South African policy strategists incorporate the concept of sustainability. It is only through incorporating some over-arching framework of sustainability criteria that a democratising South Africa will be able to articulate and realise future policy models which are environmentally sustainable.

South Africa has crossed the threshold into a new future, poised with many uncertainties and new policy challenges and realities. The types of policy shifts that will be experienced in post-apartheid South Africa will at once have to respond to its unique policy conditionalities as well as incorporating elements of sustainability if it is to make the necessary changes in the public and private sphere. Any policy methodology should incorporate the imperative of sustainable development in order to

respond effectively to political change, which will be crucial if South Africa is to overcome the pressures felt earlier on under its new dispensation.

The new democratic dispensation will create a policy window which is far more conducive to mapping out policy frameworks and strategies which augur with the international trend towards sustainable development. As Braune (1992:83) notes: "overall, the indications are that the present political changes will create more opportunities for a movement towards sustainable development policies than a South Africa in international isolation, and fixed on an apartheid policy, has had"; the United Nations Conference on Environment and Development (hereafter cited as the UNCED), and its blueprint for sustainable development, Agenda 21, being the seminal policy drivers behind sustainable development. With regard to current developments in South African environmental policy-making, reference is made to the White Paper on Environmental Management Policy for South Africa (1998) and the Draft White Paper on Integrated Pollution and Waste Management for South Africa (1998) (hereafter cited as Integrated Pollution and Waste Management).

It is crucial that a path towards sustaining South Africa's resource base must be cognisant of its domestic context and policy priorities such as improved social equity and addressing past social imbalances, as well as being able to assimilate other relevant international experiences. "South Africa's development problems are not unique in international terms. The country has a lot to learn from international experience and approaches about massive upliftment programmes for the poor, especially for rural areas" (Braune, 1992:83). The path towards sustainable development and developing a policy model which is contextual seems more

conducive under South Africa's new democratic legal order, but constructing the building blocks of a sustainable development policy will be complex and contentious, given that South African analysts and strategists will be faced with the Herculean task of marrying the ideals of its minority First World class with the needs and aspirations of a Third World majority with regard to conservation; difficult and conflicting trade-offs are inevitable when incorporating a framework of sustainable development.

The nature of public policy is very rarely understood, if not perceived as a very complex and multifaceted act (Wissink, 1990). Indeed, Saasa (1985:309) cautions: "what this suggests is that public policy should not be conceived of as an isolated, single act, but as a dynamic social process which may be an aggregation of numerous smaller decisions which run over time and in which what is perceived as the final decision could mark not the end, but the beginning of a much wider process of alternative considerations". Given this, in most of the policy-making literature, there seems to be no universally accepted definition of public policy nor no one policy-decision model that is universally valid, both at the societal and organisational level (Hogwood and Gunn, 1984 and Saasa, 1985).

As a result of the multifaceted and complex nature of public policy, many theorists have commented and postulated on various models of policy analysis. These range from descriptive to prescriptive models in a bid to simplify and understand the complexities of policy analysis. The latter approach to policy analysis is to form the structural backdrop against which most of the analysis of this study will revolve; the prescriptive approach is appropriate from the perspective that it analyses "... policy results, impacts and consequences" (Hanekom, 1987).

However, just as there are many types of policy models, the type of model used for comprehending policy analysis differs from country to country and context to context. Certain contemporary policy models, such as the prescriptive models of comprehensive rationality (Anderson, 1979), mixed scanning (Etzioni, 1973) and incrementalism (Lindblom, 1968), originate from First World policy conditionalities. This study will examine the utility of these models given that policy conditionalities are so different in most Third World nations as compared to more developed nations.

Although the prescriptive mode of policy analysis include models such the rational, incremental and mixed-scanning models, the former two will largely compose our theoretical framework in this study. These models, together with a focus on the policy cycle, will provide the basis of enquiry for an assessment of the utility and their usefulness in comprehending the policy-making process in developing nations, and the implications of these for South African policy change.

South Africa finds itself attempting policy change across most public sectors under its new democratic dispensation. This seems to coincide with the moves to better and more open democratic governance, coupled with various urgent environmental scenarios, which has prompted most of the Third World (see Bromley, 1995; Dias, 1994; Garnett, Koenen-Grant and Rielly 1997; Glazewski, 1994; Macchiaville, 1997 and Martelli, 1994) to adopt and revise not only their existing policies and laws per se, but also the need to evaluate and review the sorts of public policy theories and frameworks used in formulating past, present and future policies. Some of these environmental scenarios have been addressed in seminal agreements during the UNCED process and Agenda 21. Holmberg et al note that some of the issues and

concerns addressed during the UNCED include: inequity between rich and poor, wasteful consumption patterns; increasing population growth rates and the need to integrate environmental concerns into economic decision-making (EEU(a), 1998).

The quest and yearning for more indigenous policy styles to the Third World, primarily the concern of this study, may seem Herculean, but a necessity to most Third World policy analysts. It should not be forgotten that the search for a Third World model of policy analysis takes place against a backdrop where significant differences exist between the policy styles needed to address the public agenda of industrialised democracies as opposed to those in the less developed and younger Third World democracies (see Saasa, 1985, Smith, 1973b & Rothchild & Curry, 1978).

Rothchild and Curry (1978:15-16) suggest that: "To dwell on such culturally oriented objectives as private enterprise or parliamentary democracy, as do many Western writers, is to limit the relevance of research conclusions as far as many African... observers are concerned... Western caution and pragmatism seems out of touch with the radical trends that inevitably mark Third World conditions".

Relating to contextually driven policy, South Africa's combination of First World infrastructure combined with high unemployment and poverty levels, has further implications for finding a suitable and sustainable synthesis of comprehending its policy realities. Furthermore, classifying South Africa as a developed or a developing nation adds another dimension of complexity in that it's policy environment is shaped by elements typical of both the First and Third World. Cloete (1991) underscores this

dualism from a policy perspective in noting that since the inception of the Union of South Africa in 1910, the policy process in the country has contained elements of both the industrialised and Third World policy-making models, probably reflecting accurately the institutional dualism of South African society.

Reiterating opening statements of this chapter, the challenge of finding an indigenous South African policy model, must be underscored by some degree of sustainability. It is imperative that sustainability indicators be incorporated along the policy process in order to measure, monitor and guide the policy process towards sustainability (EEU(b), 1998). Adopting a template of sustainability is crucial if the post-apartheid South African environment is "...to conserve the limited natural resource base and use the limited capital resources for development optimally" (Braune, 1992:83). For example, South Africa's socio-economic policy emphasis on basic needs will be well supported by a framework of sustainability since it is exactly this principle of international equity which has made the sustainability approach politically attractive to most Third World countries and South Africa in particular (Braune, 1992).

Post-apartheid South Africa is presently attempting to find contextual policy means for comprehending its policy issues and problems and caution will have to be exercised here. This is so as its policy context seems to challenge traditional Third World solutions and policy approaches as its policy conditions seem to fit somewhere along the First/Third classification continuum. This is largely evident by its mix of First and Third World socio-economic conditions. The observation by Cloete et al (1991:243) seems apt in this regard: "... the main challenge will, however be, to retain as much of the positive elements of the First World policy system which we

have had up to now, and minimise as far as possible the negative elements of Third World systems, which will inevitably become stronger in future" (p.243).

With the emergence of independence of several Third World countries, many administrative, institutional and political pathologies are still present. Although environmental policy has evolved at the global level to show definitive trends towards sustainability, the prudent analyst will rather than just adopt these international trends in their entirety, probe as to what extent Third World nations are able to absorb these trends of sustainable development given the different policy priorities and conditionalities in developed and developing countries. Indeed as the EEU(a)(1998) discussion document outlines: there are clear differences in priorities for the urban environmental management policy priorities between developed and developing countries. Herein lies the challenge for South African environmental analysts to address the environmental priorities of both the poor and the rich sectors of society, concurrently. This challenge is not made any easier with South Africa's acutely lopsided socio-economic system, resembling the image of a skyscraper surrounded by a shantytown, "reflecting symbolically the massive inequalities and injustices of the global economic system as well as the distortions within Third World countries themselves" (Turok in Hallowes, 1993:239).

In keeping with the above theme of context specific policy applications, The White Paper on Environmental Policy Management (1998) is one such attempt at formulating environmental policy frameworks which take into account local environmental conditions and challenges. As Smith (1985:144) opines, "What may be an appropriate evaluation strategy for the American experience may have very little

relevance or utility in very different societies or political systems such as authoritarian Third World regimes".

As past and present Third World policy-makers, including South Africa (Cloete, 1991; Bromley, 1995 and Glazewski, 1994), attempt to adopt Eurocentric decision-making modes and styles, the disappointing result has been a mostly ineffective response to its public agenda which consists of priorities which are very different from those of the First World. Various financial and human resource incapacities make it difficult to support policy techniques which are germane to the First World. These features include inter alia: relative regime stability, well institutionalised traditions of democratic practices, an abundance of resource infrastructure and strong public sector input. This is contrasted with centralist systems of policy-making, a lack of available information, a disempowered civil society and limited public sector involvement in the policy process, all too familiar features of the apartheid policy landscape. Applying context specific policies will lead to potential for greater equity, growth and sustainability and in turn a more effective response to the public agenda (Dias, 1994).

From the outset it is also necessary to classify South Africa according to its level of development, that is, whether it should be classified as a developed or developing country. Various indicators seem to suggest that South Africa places itself among the list of developing nations. In spite of the current political context, the countries of the Third World, including South Africa, "share a set of historically determined socio-economic characteristics" (Hadjor, 1993:3).

Statistically, South Africa's per capita Gross National Product (GNP) of $ 2 470 (1989) is indicative of a developing nation (Building the Foundation for the Sustainable Development in South Africa, 1992). According to the figures of the World Development Report (1993), South Africa is classified as a lower to middle income Third World nation (World Bank, 1993).

The above calls for a slight, but important digression. From a socio-economic perspective, maintaining South Africa's Gross Domestic Product (GDP) has important implications for sustaining post-apartheid (environmental) policies and projects. In the 1970s and 1980s, South Africa found itself in a high income producing economic bracket, and this economic status was maintained largely by socio-economic policies which discounted social and external environmental costs in the pursuit financial gains. Without taking into account the externality costs such as the displacement of people as well as environmental degradation, the apartheid government was able to maintain a fairly robust national economic.

The implications of discounting social costs become even more apparent when one adds to the equation, that 14 million people out of South Africa's population of 33 million, were crowded in homelands (Huntley, Siegfried & Sunter, 1989). The homeland system provided cheap labour inputs into South Africa's state economic entities such as its gold mines, which subverted the principle of competition for profit in order to protect its economic interests which resulted in high GDP listings, but only in a context divorced from absorbing any social costs and counting them into the price of the goods produced (Huntley et al, 1989). The state co-opted this principle of competition for profit, thus resulting in an uneven distribution of the benefits of

growth and development. In South Africa, much of its outcomes in terms of goods and services and incomes are channelled to a small privileged elite, whilst a large portion of the populace were living below the poverty line.

From the perspective of post-apartheid policy, with an emphasis on the reversal of the social and environmental crises caused by the governance systems of the 70s and 80's, is it possible to sustain GNP levels indicated earlier, given the inappropriateness of this capitalist courting model for reconstruction and development in post-apartheid South Africa with its associated social costs? Policies in post-apartheid development projects cannot rely on models of development and policy which pursue economic growth (GNP being a key indicator) without absorbing the social costs inherent in this pursuit. As Turok notes: "we must also examine critically the use of indicators like GNP to measure growth since they often include destructive factors as positive elements, especially in relation to the environment" (Hallowes, 1993:238).

Another indicator of developing nation status is pointed out by South Africa's national priorities which focuses on upgrading the living standards of the poor by mass electrification and employment creation via strategic initiatives like the Reconstruction and Development Programme (RDP, 1994). Furthermore, South Africa also displays First World problems such as over-consumption, acid rain and severe air pollution and this seems to give South Africa the additional classification as a microcosm of the North-South divide in terms of the challenges facing the globe.

This microcosm is nowhere more strongly portrayed in that South Africa has problems of acid rain, in addition to soil erosion caused by for example unsustainable

rural energy consumption patterns of biomass. Evidence of the First World environmental phenomenon of acid rain is evident in that South Africa's coal power stations often emit large quantities of pollutants which in turn cause acid rain (Coetzee & Cooper in Van Horen, 1996). In the (then) Eastern Transvaal Highveld, concern was raised that the high concentration of power stations and other sources of anthropogenic pollution, coupled with unfavourable atmospheric conditions, could lead to high levels of acidic deposition (Tyson et al in Van Horen, 1996). On the other hand, and more endemic to the Third World, soil erosion and forest denudation also form part of the South African socio-political landscape. According to Eberhard and Van Horen (1995:54), "rural households rely to a much greater extent on biomass resources for their basic energy needs than do urban households, with between 80 per cent and 100 per cent of rural households in areas surveyed using fuelwood". The effects of the fuelwood issue is a very complex arena, but the collection of fuelwood is one factor in the degradation of wood resources, along with others such as clearing land for agriculture which may lead to soil degradation and desertification (Eberhard & Van Horen, 1995). These brief illustrations reflect the microcosm which South Africa is, further complicating the issue of classification.

In the context of this study, South Africa will be classified as a developing nation and various additional factors can be identified to explain this assertion. Firstly, international consensus seem to indicate that a developing nation status is appropriate for South Africa – World Bank reports classify South Africa as a "non-oil" developing country. This is a rather contentious indicator in that many other nations classified as "Third World", such as Nigeria, Gabon, Libya and India have vast

quantities of oil, but the lack of infrastructure, may be amongst a host of reasons classifying these nations as developing rather than developed.

Secondly, countries such as Brazil and India comprising a similar mix of developed/developing conditions form part of the G77 group and are classified as developing nations (Wynberg, 1993). Although South Africa has not always been part of this group in that it was perceived as a pariah state by many Third World nations for decades, under its new political dispensation it seems to satisfy many of the characteristic of G77 status and consequently that of a developing nation (Miller, 1995).

It is also instructive to underscore the reasons as to why South Africa is selected as a case study. South Africa is not only a developing country, but also one of the world's most successful young evolving democracies. As one of the Africa's largest geographical lands, it boasts direct access to two of the world's major oceans. South Africa is blessed with an abundance of living and non-living natural resources, internationally acclaimed biological diversity, and a magnificent scenic beauty that is almost second to none (Ramphele, 1991). Conclusions drawn here will have important implications for Third World nations who share a similar natural heritage and policy environment.

Given that South Africa has in the past expediently employed First World models of policy-making, the advent of more open and democratic governance allows for an examination of the utility of these decision-making models and to what extent these models are useful in understanding post-apartheid environmental policy-making. In

addition, there also seems to be some intractable environmental policy reform problems in the midst of this natural bounty. The context of environmental reform and policy formation in South Africa must be seen in the context of typical developing country problems such as abject poverty, massive urbanisation and the concomitant demands for basic necessities of life such as food, water, services and the general aspirations for greater access to natural resources and political equality (Glazewski, 1994). Thus policy techniques will have to balance aspirations with resource realities as South Africa is still in the early stages of starting to develop more contextual policies to addressing its problems.

The above conditions are typical of a developing country entering the early stages of democratisation in which the public agenda is occupied with issues which require urgent social redress as espoused by South Africa's Reconstruction and Development Programme (RDP) document of 1994. The sorts of policy models used to address South Africa's public agenda need to take into account conditions such as rapid societal change, low administrative capacity, lack of information and minimum inputs from the environment, in order to be effective. These conditions are not typical of most First World nations and therefore their models will have limited utility for addressing the general and specific policy agenda issues in South Africa.

Although the making of environmental policy is not new in South Africa, the post-apartheid era has shown remarkable improvements in nearly all areas of policy-making. The return of the processes of democracy and political transparency which began in 1994 have contributed to greater citizenry involvement in environmental matters.

By implication, this political freedom has favoured South Africa's incorporation into the international arena. This has furthermore seen South Africa adopting several important international treaties and trade agreements. These developments in the post-apartheid era have also prepared South Africa, just like many newly independent countries, to re-examine policy approaches which were largely Eurocentric, colonial flavoured and catered for a white minority with First World consumption patterns. It is imperative that South Africa align itself favourably with international capital in order to overcome resource scarcities. This international relationship of necessity must be matched by domestic programmes and objectives which allow for international revenue to be circulated and distributed for the improvement of standards of living amongst all South Africans. In terms of South Africa's future position within the global economy, real trade-offs between reconciling the economic system goals of improved equity, satisfying basic needs and that of improved efficiency of goods and services will be amongst the most daunting policy challenges facing all sectors.

Most recently Garnett, et al (1997) summed up the state of policy formulation in most of the Third World in their article describing the establishment of a policy management group in Zambia's Cabinet Office and the management of its policy formulation and implementation during its democratic transition: "In the wake of the first multi-party elections, the emerging multi-party democracies around the world face the challenge of reforming government in accordance with democratic principles after decades of authoritarian rule. Given the enormity of the above task, it is important for these newly democratic governments to establish a team within the executive or cabinet office that will manage the introduction of new policy

formulation and implementation processes that will promote effective, accountable, and transparent governance. The old process, which was designed for centralized, bureaucratic, rule-driven government, will not be able to handle the demands placed upon the executive branch of government by the increasingly empowered civil society".

In the post apartheid South Africa, societal and organisational details have evolved and the largely First World models and policy frameworks would at times seem in conflict with the public policy agenda of post-apartheid, especially the environmental policy agenda, which is the focus of this study (Cameron in Cloete et al, 1991 & Glazewski, 1994). In considering future directions of South African environmental policy-making, the affluent First-World minority cannot rely solely on European and American prescriptive policy-making models; policy must be contextually driven in order to be of optimum use.

According to Saasa (1985), the prudent policy analyst will take care to survey existing policy models and from there identify those that may be relevant to a given situation. If necessary and/or possible, a theoretical synthesis relevant to ameliorating the ills which beset the national public policy agenda should be undertaken. Saasa (1985) further cautions that the analyst should not tie himself to one particular model for the sake of theoretical neatness, or as in the case of apartheid South Africa, for political expediency, at the expense of neglecting important and unique aspects of the environment under review.

This study will attempt to search for a suitable theoretical syntheses and policy alternatives for comprehending environmental policy-making for South Africa. As Bromley (1995) aptly notes, the advent of a new democratic dispensation in South Africa provides a unique opportunity to assess environmental issues and its approach to policy formation at the same time that other economic an social circumstances are undergoing sweeping change.

1.2 Statement of the problem

There seems to be many deviations and subversions in contemporary policy techniques and processes. In addition, there appears to be no universally acceptable consensus concerning the best conceptual approach to public policy analysis. The combination these features imply that many newly democratised Third World countries find themselves in a difficult, but unique position to introduce new and relevant policy processes and models. In the absence of a universal policy model, developing nations need to find policy solutions germane to their policy context. South Africa finds itself in an imminent quest for an indigenous model of policy-making as it seeks to reform some of the bureaucratic and authoritarian policy models so characteristic of the past, especially in the environmental policy-making sphere.

As has been well documented (Cloete, Ch.3, 1991): these models favoured the more privileged minority elite, making these models almost obsolete in a post-apartheid era with its grand-scale social reconstruction projects (RPD 1994) which do not favour the incrementalist approach towards policy-making so ubiquitous to the First World.

As Saasa (1985) asserts, although incrementalism may be the most suitable policy-making approach in the First World, it has been argued that the results of decolonization and post-independence make incrementalism inappropriate in these societies. The underlying tenets of incrementalism advocate that policy changes occur on a minor scale and that very rarely are entirely new policies adopted. In this sense incrementalism may be partly inadequate for dealing with the sorts of policies favoured by most newly independent governments who want a complete revamp of the political, institutional and economic landscape. In the Third World, policy emphasis has proved to be more on large-scale-selective radicalism (Dror, 1988), typified by programmes such as South Africa's RDP (1994) with its focus on social justice and social equity.

With the above in mind, the research problem is such:

> To what extent are prescriptive decision-making models useful in comprehending policy-making in the Third World with particular reference to South Africa's analysis of environmental policy-making?

1.3 Purpose of the study

This study is written in the context of current South African environmental policy reforms. Those involved in drawing up and assessing new policy frameworks realise that different situations demand different models of policy analysis, and few will argue with the fact that many organisational, political and societal changes have taken place since 1994 which demand new and more relevant policy approaches. South Africa is undergoing rapid and far-reaching political and institutional changes and this

is bound to put pressure on past policy strategies that were unsustainable, exclusionary and internationally isolated. As the policy landscape evolves, conditions will become more conducive to policy strategies which are underscored by goals of sustainable development; seminal agreements like the UNCED and its blueprint for sustainable development, Agenda 21, are crucial reference frameworks in this regard (Wynberg, 1993).

This study attempts to analyse the utility of some current models of policy-making to developing countries and with this background make useful insights into the many Green and White Papers trying to formulate relevant environmental policy in South Africa. Where possible, this study will attempt to provide some viable options and solutions where perceived policy vacuums exist in national policy processes. Particular attention will be paid to the problem of waste management policy approach in South Africa.

As will be emphasised throughout this study, South Africa's policy environment is unique and that solutions to its environmental problems will have to be at once sustainable, but also appropriate and politically acceptable to its mix of First and Third world socio-economic conditions, exemplified by its "skyscraper economy" (Turok in Hallowes, 1993:239); the aim of finding a policy synthesis which responds to post-apartheid South Africa's policy realities will have to be within a sustainable context.

Thus, by raising pertinent and relevant issues, this study hopes to contribute to effective policy change, not only for a privileged minority as in the past, but

participation for the masses during the initiation of policy formation, and not only during the implementation phase so characteristic of many Third World policy processes.

A further concern of this study is to contribute to a wider pool of policy relevant knowledge which could be incorporated into refining policy skills, training and administrative capacity, usually absent in most Third World nations. This observation is also relevant to South Africa as many financial and material constraints pervade its policy-making structures. Very often during Third World policy processes, and South Africa is no exception, the lack of expertise and information to implement relevant and substantive policy changes act as constraining factors. This study undertakes to ameliorate these maladies and perhaps relieve some of these constraints.

In order to bring the above themes of this study to light, the following objectives will guide the study:

- Introduce the nature and origins of public policy and the associated field of policy analysis and show how certain conditions require specific policy models to be relevant
- Examine the general utility of the prescriptive models of policy as well as the policy cycle as applied to Third World
- Examine more specifically the utility of the prescriptive models to the South African policy environment and the relevance of sustainability indicators
- Explore the need for policy strategies which will be more conducive for First World conditions and policy techniques

In meeting these objectives, this research will indicate the extent to which prescriptive policy models are useful in comprehending public policy in the Third World and South Africa specifically.

1.4 Methodology

The underlying methodology used in this research incorporates the case study approach with particular reference to South African processes of environmental policy formulation and the White Paper on Environmental Management Policy 1998. Below is a survey of the methodological aspects used in this study which include: type and method of data collection; the significance of the study; the limitations inherent in the research; and finally, an overview of the organisation of the study is provided.

Data: collection and nature

Information gathered was of a primary, secondary and tertiary nature. The theory section containing the literature reviews of the selective literature on public policy and policy analysis constitute the bulk of the secondary resource base; the secondary resource base was composed of largely previously relevant researched topics in textbooks, theses and journals. The reason for collecting data of this nature was due to environmental policy being rather under-researched in government publications, as environmental policies were still under review. The secondary resource base was far more critical on the issues under review and gave greater insight into the area under study.

Government policies and other strategic papers and discussion documents, were obtained from the University of Cape Town and government archives and served as

primary data. To a limited extent, newsletters and bulletins dealing with relevant policy information were also incorporated.

This research also utilised informal discussions and interviews. These sources constituted tertiary sources of information. The sources and nature of the data indicate that the methodological framework of analysis employed in this study is to a large extent, qualitative.

Significance the study

With the advent of global democratic structures of governance over the last decade in most of the Third World, unique opportunities have abounded to assess policy-making procedures in the light of current international status quo of policy formation; that is, the prescriptive models have dominated policy analysis for decades, originating from Western-based literature.

In terms of increased environmental consciousness, this study can only add to that pool of public knowledge and information that will increase, indirectly or otherwise, the capacity for those previously excluded to participate in creating sustainable environmental governance. Leading the way to sustainable development in South Africa is in part achieved by building the capacities to speed up economic development in ways that are environmentally sound and that will contribute to a policy framework that can be sustained and articulated over time. This study will look at elements and innovative mechanisms which could aid South Africa to develop the building blocks, referred to as indicators, of sustainable development which is at once made of indigenous materials and also cognisant of international experience. A

sustainable policy approach in South Africa will have to take careful assessment of the capacity gaps along its policy process as these will enable South Africa to rise to the myriad of challenges brought on by an attempt to reconcile the often conflicting system goals of environment and development and the complex biological, social and economic issues involved in implementing an integrated set of environmentally sustainable policies.

This study is also significant from a comparative perspective. At the Third World global level, there is the increasing challenge to transform existing policy structures which could help to ameliorate environmental disaster and address urgent policy reforms. South Africa is a microcosm of the challenges facing the world and this study will contribute significantly to aligning local policy challenges and solutions with those experienced at the global level. It is a microcosm of global environmental problems where rich and poor, urban and rural, and where the dispossessed are [illegible] political structures. Just as the north-south divide profoundly influenced the outcome of the 1992 Rio conference, so too will domestic economic disparities influence the direction and development of future environmental policy (Glazewski, 1994).

The Third World, and South Africa, will only overcome these challenges by developing its own local capacity by educating and empowering itself to solve public policy issues with regard to local conditions. It is hoped that the policy suggestions and alternatives made in South Africa will have relevant implications for the globe

and its Third World neighbours and help developing nations balance environmental responsibilities with national development needs..

Lastly, as the status of environmental issues as well as the status of the Department of Environmental Affairs and Tourism (DEAT) has always been neglected, this study will contribute to elevating environmental issues on the public agenda. This is crucial if policy formulation and implementation is to be successful as environmental issues cut across many decision units and departments involved in the policy process.

Limitations of the study

The study is limited in the following areas. The degree of fragmentation between and within government departments makes for slow review and processing of policy informatics relevant to this study.

In keeping with the above limitations, due to the paucity and newness of policy research on environmental policy formation in post-apartheid South Africa, very little comparative research exists in terms apartheid and post-apartheid environmental policy analysis and formation, as the effects of the latter have not really been given time to unfold. This is especially evident in the attempt to analyse the implementation and evaluation phase of environmental policy in South Africa as a very limited extent of the environmental policies under reform, have actually been implemented in the post-apartheid era.

The return of democracy has had a related shift in terms of the types of policy areas under study. This is illustrated by the move to assess apartheid environmental policy

research at a great pace. Unfortunately, this has had both positive and negative consequences. The reasons for the former are explicit from the point that South African environmental policy and policy analysis per se will receive a much needed boost in terms of policy analysis research. However, this boon has made the little information that is available very difficult to get hold of and poses a constraint in terms of a wider pool of information, as has been the experience in this study. This, it is hoped, has not impeded a thorough evaluation of the salient issues in this study.

Organisation of the study

After the introduction covered in chapter one, chapter two outlines the various theoretical standpoints relating to the analysis of contemporary policy-making techniques, comprehensive rationality and Lindblom's (1968) theory of incrementalism forming our main focus. These two models form part of the theoretical framework developed which will be used in reviewing the utility of contemporary policy-making techniques to Third World policy-making. The policy process, as consisting of distinct phases will be explored in the context of more industrialised nations.

Chapter three analyses the policy process as its occurs in the Third World context. This chapter shows how the conditionalities of the Third World subvert the policy process known to the First World. The implications of this subversion of the policy process has important implications for policy change in South Africa, as its policy process still shares many features germane to the Third World policy process, midst its highly developed infrastructure.

Chapter four investigates the context of environmental policy-making and reform in post-apartheid South Africa. This analysis takes place against some political-historical time frame as the policy styles and decision-making structures under apartheid have a strong influence on the policy methodologies possible in the new South Africa. The inextricable link between environment and politics plays a key role in formulating successful, holistic and substantive policies. The White Paper on Environmental Management Policy 1998 will support the primary analysis in chapter four.

Finally, chapter five provides the main findings and salient themes undertaken in this study and in the process suggesting some alternative proposals and recommendations for overcoming conditions which adversely affect the democratisation of the South African policy process. These recommendations are supposed to pave the way for making the policy conditionalities more conducive for incorporating First World policy techniques as well as developing a template upon which sustainable policy-making future can be realised. This study finally provides a conclusion.

CHAPTER 2

THEORETICAL FRAMEWORK AND REVIEW OF RELEVANT LITERATURE

Introduction

The focus of this chapter is on the theoretical framework, as well as a review of literature germane to this study.

A theoretical framework is described as the restructuring of certain statements according to regulative interests or orientations and is based on known theories, qualitative and quantitative studies (Moss, 1988 & Mouton, Marais, 1988). The theoretical framework in this study will draw on models of analysis and provide a template in the search for policy alternatives that are contextually driven and of optimum utility for the Third World, and particularly, South African* environmental policy-making.

Closely related to the modes of policy analysis, the use of the cycle approach allows us not only to highlight the key elements necessary for policy effectiveness, but further allows us to draw comparisons and contrasts between policy cycles in different political systems (See Hogwood & Gunn, 1984; Hogwood & Peters, 1983; May & Wildavski, 1978 & Smith, 1985). Policy can be used in various contexts, but for the purposes of this study's framework we shall use policy in the context of process (See Hogwood & Gunn, 1984, pp13-19 for a presentation of the different uses of the word "policy").

* See chapter four of this study for analysis

Supplementing the policy cycle concept is the notion of sustainable, indicators. Indicators act as barometers to measure, monitor and report on chances in the process towards sustainability. Later in this study the relevance of these indicators to developing effective waste management policy frameworks will be discussed*. These indicators are a "virtual" framework towards attaining sustainable environmental policies.

Initially, the theoretical framework will be developed in order to form the structural backdrop against which this study will take place, drawing on the normative models of policy analysis. Prescriptive models, such as incrementalism (Anderson, 1979) and comprehensive rationality (Lindblom, 1968), will be used as a basis for analysis. In addition, this study will focus on the conventional policy cycle and its various phases, and explore the cycle in the context of Third World nations. The relationship between the sustainability indicators and the policy cycle will be explored as these are integral in terms of paving the way towards more sustainable and coherent policy processes. Thirdly, these models will form part of our literature review in our analysis in exploring the general applicability of conventional policy techniques to Third World policy-making. Finally, this review will also explore the literature on domestic environmental policy-making in the South African context with reference to government publications. This section will look at some international milestones and the relevance of these global initiatives for sustainable development and in South Africa.

* See chapter four for this analysis

2.1 Theoretical framework

Prescriptive approach to policy analysis

Models for policy analysis have either been of a descriptive or prescriptive nature. The latter category include models such as those of the rational-comprehensive, the incrementalist, bounded rationality and the mixed scanning model. Descriptive policy models include inter alia, the functional process model, the elite/mass model and institutional model. These models are not competitive but rather they seem to provide a separate focus on political life and can help us understand different issues within the public policy process (Dye, 1978). The prescriptive policy analysis approach will be used as part of the "mixed" theoretical framework in this study.

The rational comprehensive model: policy as efficient goal achievement

The earlier models of comprehending policy problem issues incorporated the concept of rationality; according to Haveman (1970), a rational policy is one that is designed to maximise "net value achievement"; the rational decision-maker aims at adopting a policy that achieves his society's requirements, assuming that he knows and understands the citizen's preferences (Smith, 1985). Essentially, the comprehensive rationality model suggests that policies are subjected to multi-step analysis before a decision is made (Kuye, 1998).

As a decision making model, the rational comprehensive model implies that the policy maker has a full range of options available.

Upon establishing his/her society's value preferences, a rational analyst would do the following:

- know all the value preferences and their relative importance;
- know all the policy alternatives available for achieving policy objectives;
- know all the likely consequences of each policy alternative;
- select the most efficient alternative, that is, the alternative to maximise "net value achievement" (Dye, 1978).

The above features indicate that the rational-comprehensive model is fairly complex and demands some detailed and careful analysis information in order to be effective and implementable.

One of the attractions of this model is that it has an aura of careful forethought and scientific precision that contrasts with some of the rudderless models of policy making (See Dye, 1978, CHs. 5&6 for an application of the rational comprehensive model). Due to its attention to detail and complexity, its most prominent feature is that it provides a desired result with the most efficient use of resources (Kuye, 1998).

The above exposition is intended to carefully build on a "mixed" theoretical framework used in this study and not to endlessly elaborate on the merits or demerits of comprehensive rationality as a mode of decision-making. Later these and other features emerge as important indicators in helping us understand why this model may or may not be of use in understanding (environmental) policy in microcosmic South Africa. It is now necessary to turn to the second model of analysis, that of

incrementalism, which so happens to be born largely out of deficiencies inherent in the comprehensive rational model.

Incrementalism: policy as variations of the past

The incremental model is a response to the limitations of the rational-comprehensive decision making model, its foremost critic being economist, Charles E. Lindblom (1968).

Lindblom's (1972) criticisms are largely premised on the notions that policies seldom changed radically and that in the real world, policies are changed incrementally (Kuye, 1998). Lindblom's critique largely relates to the decision makers' lack of analytical capabilities and also forms part of this study's framework for assessing the utility of this model in comprehending Third World policy-making as well as South African environmental policy-making.

"Incrementalism views public policy as a continuation of past government activities with only incremental modifications" (Dye, 1978:32). Thus, only a small number of changes will be adopted in order for policy to be effective. This model also acknowledges the presence of constraining factors such as time and the difficulty of assessing fragmented societal value preferences (Saasa, 1985). These analytical constraints such as time, intelligence and cost prevent policy-makers from making and identifying the full range of policy alternatives and their consequences.

Incremental policy is conservative and limited in scope as opposed to the rational actor, which is progressive and unlimited in scope (Hanekom, 1987). According to

Dye (1978), this conservatism is based on the prescript that existing programmes and policies are considered as a base and new programmes or policies occur through increases, decreases, or modifications of current programmes. In addition, adherents of this model accept the legitimacy of established policy frameworks and tacitly agree to continue previous policies (see Dye, 1978, Ch.11 for an example of the application of incrementalism).

Important in terms of underscoring the problem of this study, this model seems to work well in societies in which (a), the existing policy outcomes are congruent with the expectations of analysts and citizens, so that marginal changes are sufficient to meet the society's aspirations; and (b), the nature of the problem towards which those changes are being directed is fixed over a long period of time; and (c), a considerable degree of continuity exists in the means necessary to solve the perceived problem.

The above conservative mode of analysis seems to pose severe implications in terms of its application in predominantly newly independent Third World nations where, there is a high imperative on urgent socio-economic reform and grand-scale reconstruction; South Africa would be no exception, with its national campaign of reconstruction and development (R&D) launched via its Reconstruction and Development Programme (RDP) with its tight time and fiscal constraints.

As part of our conceptual framework, this study will outline the policy process, consisting of six stages of activity, a process less neatly and discretely defined in practice. The concept of the policy cycle has been addressed by numerous authors such as Nakamura and Smallwood (1980), Chelimsky (1985), Jones (1982) and Rist (1990). The consensus amongst most theorists is that the policy process appears to be

interminable and an amorphous set of activities, very rarely following an ordered and sequential pattern (Hogwood & Gunn, 1984 & Wissink, 1990). In terms of this study, the policy cycle approach reveals how the policy environment of the First World seems to favour most elements of the conventional policy cycle. Frequently Third World nations deviate from or subvert the conventional policy cycle to resonate with their policy environment (Cloete et al, 1991 & Smith, 1973a).

2.2 The policy process and sustainability indicators

In order to understand what occurs under policy implementation, it is necessary to explore the distinct phases of the policy process. Adopting the position by Wissink (1990), the policy process is that set of events that determines what actions government will take, and what effect these actions will have on social actions. He also indicates that: "... policy making is extremely complex and disorderly to which there is no apparent beginning or end, and exists between boundaries which are most uncertain" (1990:30).

For analytical purposes the policy process can be conceptualised as six distinct phases of activity: (a) problem formulation; (b) policy agenda (c) policy formulation and adoption; (d) policy implementation and (e) policy evaluation. These policy elements are not cast in stone, as policy analysts often have to adjust the constituent elements in order to suit the context of the issue being addressed. Later in this study it will be explored as to what extent the conventional policy cycle has to be adjusted to suit the policy-making context.

Before examining the various phases within the policy cycle, an appropriate conceptual digression regarding to sustainable development or sustainability is necessary. Sustainable development has become the primary focus of national and international environmental policy. The concepts of sustainable development, and sustainable development indicators in particular, have become imperative to the realm of policy-making. Besides exploring perspectives for developing a sustainable policy in South African environmental policy-making, this section will also explore the place of indicators in the decision making cycle as well as how these indicators contribute to both the articulation and realisation of effectively diagnosed and sustainable policy processes. Observations about the role of sustainability indicators are adapted from the EEU(1998) reference report on a "Guideline for the State of the Environment Reporting in the Cape Metropolitan Report" compiled for the Cape Metropolitan Council (CMC).

Sustainability indicators

- **Definition of sustainability indicators**

Sustainable development

There have been many contested literal definitions relating to "sustainable development", but it is not the purpose of this study to expound in detail on the various meanings relating to sustainable development and sustainability (see Lele (1995) for competing conceptions of sustainable development; similarly, Pearce et al document more than 60 definitions, said to be a conservative estimate (EEU(b), 1998).

In general, "the concept of sustainable development attempts to ease the tension between economic development and environmental integrity" (Silva in Fischer et al, 1995:105). The global milestone which popularised the term and brought it into the mainstream of the developmental debate, is the now well-referenced World Conference on Environment and Development (WCED) (1987) seminal meeting which released the much heralded report: Our Common Future. For the purposes of this study and in the light of the seminal agreements of the WCED (1987) report, sustainable development will refer to: "development which meets the needs of the present without endangering the ability of future generations to meet their own needs" (WCED, 1987).

Indicators

The concept of "indicator" is derived from the Latin word "indicare" which means to "point out", give notice of or "estimate". The sorts of qualities underscoring that of an indicator include those of simplification, quantification and communication (EEU(b), 1998). According to the EEU(b)(1998:6) document, the DEAT (1996) and Adriaanse (1992) agree that simplification encompasses indicators that have the ability to be measured fast, easily and cheaply; the quantifying aspect refers to its ability to track progress; and the communicative quality, "in order to improve the organisation, to communicate and make organisation, synthesis and use of information to non-technical user groups" and be representative to the field of information which they address.

The next step is to form some synthesis between that of an indicator and that of the concept of sustainability. As has been proposed, the idea of a sustainable development

"virtual network" should ideally underscore policy processes in order to ensure that environmental policies become viable planning methodologies for the management of an industrially sustainable future.

Sustainability indicators

The concept of sustainability indicators is largely contested. Although the EEU(b)1998 document defines sustainability indicators at the Cape Metropolitan Area (CMA) urban level, the concept could still be adapted to the national policy - making level. The definition of sustainability indicators include environmental, social and economic characteristics and four essential requisites:

- be fast, simple and cheap;
- track progress, regress or stability in certain phenomena;
- have the ability to inform and educate; and
- be representative (adapted from the EEU(b), 1998)

Role of indicators

The imperative for establishing indicators is to measure, monitor and report on changes in the process towards sustainability. The EEU(b)(1998:7) report notes that the DEAT (1996) "in itself should lead to better information, understanding, decision-making and leadership in environmental management". The idea of having sustainable development indicators is to impress upon the environmental policy - making process a "virtual network", which will guide that process toward greater sustainability. Later in this study, we shall elaborate on some of the reasons for improving the environmental policy process after Hammond et al (1995) with regard

to waste management. With the concept of sustainability indicators intact, the next sections will explore the various phases of the policy process per se.

Policy cycles

Problem formulation

Many problems arrive on the public agenda needing urgent relief, which the government seeks to resolve, cope with, or ignore. Problems come in all dimensions, such as inflation, economic growth and crime, amongst a host of others. Only those that move people to action, and are articulated, become policy problems (Smith, 1985).

The sorts of problems on the public agenda are often shaped by limited resources, the personal perceptions and the games political elites play. This leads us to the next phase identified by Anderson et al (1978) and Smith (1985) as to why some problems become public business and others not. It is exactly at this phase that the place of indicators comes to the fore in terms of constructing more sustainable and effective policy frameworks.

Agenda building

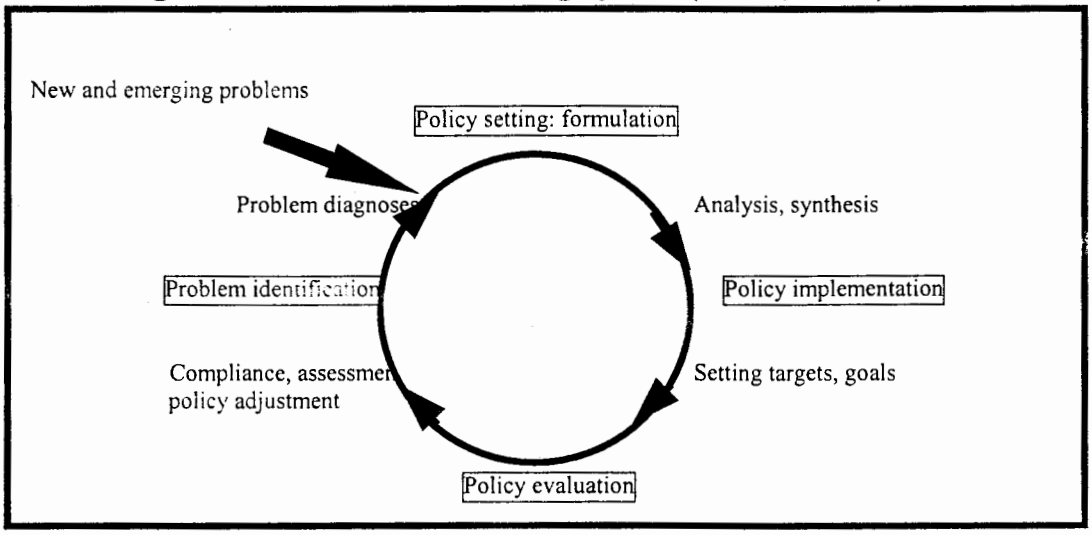
The process by which issues arrive on the public agenda (either to be resolved or ignored by affected people of authority) can tell us a great deal about the context of a policy cycle and the nature of public policy; those issues that inevitably reach policy makers contribute to the policy agenda, and the process is known as agenda building. There are several reasons why some issues achieve agenda status and others not. Issues usually reach agenda status via public fora, political parties, elections and political leadership (Anderson et al, 1978 & Smith, 1985). In a study by Kamieniecke

(1991) he remarks that: to a large extent, the mobilisation of environmental groups and other forces also explains the successful election of green party candidates to legislative bodies in Western Europe. Similarly, in terms of environmental policy agenda building, "populations that are environmentally aware and active... should elect officials who will in turn support their positions. Hence if the public widely supports environmental causes even at some cost... then political leaders will likely adopt policies to reflect those interests" (Payne, 1995:45).

Place of indicators in the decision making cycle **(adapted from the EEU(a), 1998)**

The first phase of the policy cycle is characterised by policy problem identification. Following this is the agenda building phase, characterised by awareness raising and problem diagnosis. Incorporating indicators allows less duplication and misallocation of scarce public resources during the rest of the policy process (see figure 1). This in turn may promote effective diagnoses of the problem and contribute to effective and focussed policy goals (EEU(b), 1998). Within the study done by the Cape Metropolitan Council (CMC), many initiatives have started to identify relevant indicators.

Figure 1: The decision-making cycle - (Holtz, 1991)



Policy formulation

"This stage involves the development of pertinent and acceptable proposed cases of action for dealing with public problems. This stage does not imply the formal adoption of a law, act or rules of some sort (Anderson et al, 1978). As is often the case, strategic initiatives like the White Paper on Marine Resources, are merely broadly formulated statements of government intent. Without legislation, one cannot hold others legally accountable in the case of the breach of its contents (Personal Communication: Prof. Jan Glazewski, Institute of Marine Law, University of Cape Town, 5 March, 1999).

Policy adoption

In any successful policy process, the procedure of adopting the available policy is crucial. Policy is only formulated as far as it will be acceptable to the people who make policy decisions. Those formulating the policy will be influenced in what they propose and do, and thus one moves in the direction of mustering majority support for the adoption of a proposal (Anderson et al, 1978). One related criticism to this stage is that, typically, only those options which have backers within the organisation will be considered, and that more independent analysis would help to identify a wider range (Hogwood & Gunn, 1984).

Policy implementation

This stage follows the adoption stage and is intrinsic because, without application, the policy has no effect; often the implementation of policy proposals changes the nature of policy itself. "Implementation must be seen as part of the policy process, since the interaction between policy making and its implementation is often very complex" (Hogwood & Gunn, 1984:9).

Muller (1995:45) underscores the importance of this implementation phase by noting that: "it is critical to go beyond analysis of the process, and to focus also on policy implementation, as this is where the success or failure of policy is determined". The concern of this phase becomes one of how to use the available resources in the most efficient and effective manner in order to have the most robust impact on the program or condition at hand (Rist, 1995).

Various sources of literature on policy and programme implementation illuminate the difficulties regarding the execution of some types of public policies, especially in Third World nations (see Rondinelli, 1982, Smith, 1973a,b & Smith, 1985). Other research literature commenting specifically on the policy and programme implementation include Hargrove, (1985), Pressman and Wildavski (1984) and Yin (1985).

"Time and again, policy initiatives are handed over to organisations and institutions incapable of taking on these added responsibilities. When this happens, the policy can not be well executed. Assessing capacity and the context before the decision is made to add responsibilities to any institution can help reduce the possibility of failure later"(Rist, 1995:xxi). This will greatly reduce the occurrence of the failure complex as posited by Hirschman (Smith, 1985).

Policy impacts and evaluation

The final stage entails an appraisal of the policy and those that are affected and interested, as well as examining the policy's efficacy. "The evaluation should extend to considerations of whether there are now strong contenders for resources elsewhere

in the organisation and whether the present policy merits priority or should be downgraded, or even eliminated" (Hogwood & Gunn, 1984).

Policy revision or termination

Usually most policy theorists omit the final phase, but Smith (1985) and Hogwood et al (1984) include this stage as necessary for more holistic policy-making. According to Smith (1985), in the ideal world, policies may be terminated after objectives have been achieved. Alternatively, policies are revised and made better in the light of better feed back from affected individuals and groups and information derived from evaluation. In addition, Hogwood et al (1984) opine: "the chances of successful succession or termination are enhanced if the possibility of replacing or terminating the policy at some future date was designed into the initial policy".

Although these stages are useful for describing the complex and mutually independent stages of the policy process, the framework outlined is by no means absolute. Policy-makers can avoid policy rigidity by being aware that policy processes do not usually commence at the beginning of an idealised cycle, or that for any public policy, all the phases of the cycle will be relevant; the policy process will frequently "loop" between stages (Hogwood & Gunn, 1984; Smith, 1985 & Wissink, 1990).

The policy cycle forms the structural backdrop against which this study will compare and contrast policy-type and -style in different organisational and political systems of the Third and First World. The next section reviews relevant literature, which interfaces with the theoretical framework just explored and also informs the theory around the problem under consideration in this study.

2.3 Selected literature review of policy techniques in the Third World

The literature commenting on the environment as an area of policy is not only copious, but also complex. The open–ended and contentious nature of the policy process shows that the process can be highly contentious as often policy outcomes affect some favourably, while denying access to others, especially in the realm of environmental policy-making. The literature commenting on the policy techniques and processes in the Third World has been forthcoming both from an international and Third World perspective (See Cloete et al, 1991; Rondinelli 1982; Rothchild & Curry, 1978; Rothchild & Curry, 1978; Saasa, 1985; Smith 1973a,b & Smith, 1985).

This pool of literature starts off from the premise that models of policy analysis used in the industrialised nations require certain conditionalities which are absent in the Third World, resulting in either a very limited utility of these models, or a deviation from the intended outcomes of these models and processes (See Cloete et al ch14, 1991). Authors like Saasa (1985) seem to conform to the observations made by Rondinelli (1982) and Smith (1973a,b): It is thus prudent that when attempts are made to apply largely Eurocentric models of analysis like rationality and incrementalism to projects and policies in developing countries, one must to take into account the unique organisational and institutional contexts of these societies.

Saasa (1985:320) went on to cite various examples like "relatively unstable regimes, minimum inputs from the environment, resource scarcities, and rapid societal change" which drive the policy environments of most Third World nations and impede the sorts of policy shifts achieved in more industrialised nations.

Whereas Saasa (1985) has largely attributed policy failure in the Third World to the limited utility of contemporary decision-making models, others like Smith (1973a; 1985) and Cloete et al (1991) have shown how the policy cycle in the Third World seems to deviate from that typically experienced in the more industrialised nations. The indiscriminate application of policy analysis models, largely more conducive to First World conditions, to the Third World has the inherent danger of ignoring context and conditionality (see Rondinelli, 1982). Further examination of the appropriate context for the application of a policy model appears in a related study in "Policymaking Under Adversity". In this article Dror (1988) relates some of the difficulties involved in applying prescriptive models like incrementalism under adverse policy conditions so ubiquitous to developing countries.

Dror's (1998) policy principle of "selective radicalism" is particularly pertinent in terms of locating the sorts of policy projects and programmes which most Third World nations undertake. According to this policy principle, "a limited number of societal variables are changed radically" (Dror, 1988:108), as is often the case with most Third World nations who have a desire to break from past totalitarian policies in order to 'catch up'.

In "Evaluating Development Policies and Programmes in the Third World", Smith (1985) goes on to summarise the distinctive characteristics of the policy cycle in the Third World. Hogwood and Gunn (1984) offer a generic, but salient overview of the analysis in the policy process; these authors seem to concur regarding the nature of the policy process. The consensus is that the divided lines between the various

activities are artificial and policy-makers are unlikely to perform them consciously or in the implied logical order.

Third World nations usually deviate from the conventional policy cycle due to a different policy environment and a mix of unique Third World policy conditionalities (Smith 1985;Cloete et al, 1991). From an evaluation perspective, Smith (1985) notes that what may be an appropriate evaluation strategy for the American experience may have very little relevance or utility in very different societies or political systems, such as in authoritarian Third World regimes as apposed to the more democratic and politically transparent First World nations.

Decades earlier, Smith (1973b) illustrated the importance of contextually driven policy-making by way of example: the advice one gives to the governments in Nepal about a particular policy-making structure or policy problem may differ quite significantly from the advice given to Canada or Germany. Smith's (1973b) study is particularly relevant in terms of developing policy models relevant to South Africa's environmental policy making process, as South Africa finds itself in a more democratic space and finds the need to adjust its policy modes to suit its post-apartheid context.

Just as Smith (1973b, 1985) has criticised the policy cycle in the Third World in relation to the factors which influence evaluation processes, Bamberger (1991), too, focuses acutely in his study on the evaluation process as it unfolds in Third World nations. Bamberger (1991:325) cites the major difference between the context of programme evaluation in the USA and developing countries as being the major role

international donor agencies have "in selection, financing, design, and use of monitoring and evaluation systems in developing countries".

External agencies are too concerned with pursuing policy methods to accommodate their funding criteria; meeting these criteria offers a sense of assurance that their funds are spent effectively, regardless of context. These agencies often present policy projects and programmes which will augur well with its agenda, regardless of the needs and priorities of the recipient country where the projects and programmes are to be implemented. Another dimension to this problem of externally funded evaluation is the over-reliance of foreign expertise which may unduly exclude the involvement of local government agencies. As Bamberger (1991:213) notes, "the primary concern of most donors is to ensure that their aid is properly used (according to the criteria of the donor agency)". In a sense, agencies are often only telling donors what they would like to hear. Some of the implications are that "inevitably, donor interests are not always consistent with those of recipient governments, which creates a series of issues and conflicts that do not exist in industrialised nations (Bamberger, 1991:213).

According to Bamberger (1991), most of the international literature discussing the politics of evaluation in developing countries is donor orientated (Bamberger & Hewitt, 1986; Casley & Kumar, 1987). In addition, Bamberger (1991) cites that there is a small amount of international literature covered critising the donor approach to evaluations explored by Gran (1983). Gran (1983) in Bamberger (1991), criticized organisations like the World Bank and USAID applying methods of evaluation which were not contextually driven and often not of benefit to recipients.

Turning to the World Bank's evaluations in Ghana he stated that: there was a focus on macroeconomic policy issues and inappropriate government policies when the real problems were issues relating to political economy, corruption and the world system (1983). The essence of the critique is that the World Bank adopts a developmentalist, neo-classical economic approach that implicitly accepts the political and economic systems within which projects are planned and implemented (Bamberger, 1991). This, again, has severe implications in that international donors are likely to recommend policy styles which are insensitive to local institutional and organisational contexts (See Stauth, 1983, pp 107&8 for an explanation of the difficulties involved in the application of economic principles to environmental planning).

The perspectives shared by these authors and Rondinelli (1982) alike, indicate that policy failures of various developmental Third World projects and policies are due to constraints which are frequently beyond the control of the analyst. Rondinelli (1982), for example, observes that the impediments experienced by internal agencies such as USAID are due to the application of policy methods and procedures traditionally employed in a First World context; these have been largely concerned with space exploration or defence systems and applied to development projects in developing nations like Nigeria and the Philippines with different policy conditionalities. The main thrust of Rondinelli's (1982) critique is that conditions of uncertainty, so characteristic of many Third World nations, make it nearly impossible to plan analyze, and manage projects in a highly rational and systematic way. Inherent in these observations, is that while policies may be formulated using conventional First World decision-making methods and procedures, material constraints largely impede

the implementation of these policies in the Third World (see Cameron, 1991, pp. 148-149 as exemplified in an overview of the material constraints).

Similar studies have been conducted by Hanekom & Sharkansky (1993), in which parallels are drawn between South Africa and Israel in terms of the making and implementation of policy in conditions of extreme uncertainty, and the implications such policy environments have for effective policy.

Like Rondinelli (1982), Hanekom and Sharkanski (1993) also point to political and institutional structures which produce conditions of uncertainty; both South Africa and Israel share commonalities of sharply divided populations, domestic violence, regional hostility and economies that are strained by outlays for security. Once again, these conditions do not seem to resonate with policy models which favour the less volatile conditions of the more democratised industrialised world.

In "The Study of Policymaking in Developing Countries", Smith (1973b) cautions about the inherent cultural biases found in concepts, models and theories of contemporary policy studies. Smith (1973b:247) notes: "primarily there should be a greater awareness and concern about the transfer of concepts, models, theories and techniques from one political system to another. Because of a particular pattern or a useful technique sounds plausible, or is found to be useful in the USA... it does not mean that the pattern or technique is universally applicable"

Similarly, in another study by Rothchild and Curry (1978), it is noted that "...the relevance of the current public policy literature and the usefulness of applying such

findings in the LDCs remains limited... All too often the conceptualisation takes place outside the Third World; it gives inadequate consideration to differences in political culture..." (p.26).

As asserted in a review by Cohen (1995), Fiorini's (1995) study underscores the bias American policy analysts and theorists have for adopting rational styles of policy-making. In his study on the complexities of environmental policy-making, Fiorini (1995) states: environmental policy objectives should be underscored by bounded rationality; bounded rationality being some derivative of comprehensive rationality which is said to be more easily accomplished than comprehensive rationality (Hogwood &Gunn, 1984), but still prescriptive.

Simon in Park (1986:26) furthermore underscores this policy bias towards rationality in environmental policy by noting: many environmental problems are extremely complex...such complex problems are best handled according to the principle of 'bounded rationality'". Though environmental policy issues are rightly complex, Simons's bold and sweeping prescriptions do seem to ignore the context in which these complex environmental problems unfold.

For example, many environmental problems are transnational (acid rain) and, therefore, geographically shared by both the First and Third World. Yet, given the very different social and institutional policy determinants found in the developing and developed world, Simon's prescription of "bounded rationality", seems to be imposing, almost ignoring, the unique context of policy formulation. One wonders whether Park (1986) would make the same policy prescriptions in a country like

Nigeria or Ghana, where very different policy contexts exist for nations like Canada and the USA, but still share some common environmental problems, like acid rain and global warming.

Payne (1995) extends these themes further by examining the connection between democracy and the environment, and questions as to whether democracies do in fact take better care of the environment. He explores several areas such as inter alia, individual rights and the open market to that of political learning which make for better environmental policy-making in more democratic states; the more industrialised nations of the west seem to be informed by a higher degree of democratic tolerance than most Third World nations. Payne's (1995) study cautions against using policy techniques for formulating (environmental) policy in a context devoid of democratic tolerance, as such is the case in most Third World. Less developed nations seem to make less room for the organisation of a more informed and vocal civil society to give inputs from the beginning to the policy agenda and the policy process. Policy inputs are instead shaped by a few autocratic individuals from within the ruling elite, who would probably benefit less were public inputs invited into the policy process, possibly resulting in demands for greater social system goals such as social equity, justice and empowerment. The ruling elite often has vested interests in preserving the status quo when the natural resource base needs to be distributed to those previously dis-enfranchised. The inevitable result of such autocracy is that policies are developed in a vacuum which are insensitive to the needs and aspirations of the polity which these rulers are suppose to serve, and too rigid to accommodate any flexibility.

In terms of Payne's thesis, South Africa's new democratic dispensation may well create promising conditions which will make it more conducive for South African

analysts to generate policies that are more sensitive to the environmental issues, and thus, elevate the status of the DEAT and related environmental policy initiatives.

Originating in the early '90s, the well cited and reviewed analysis by Roberto Guimaraes (1991) has served as an important benchmark for many analysts and scholars wishing to reflect on the ecopolitics of the Third World.

Guimaraes's (1991) study is based around Brazil's ecopolitical environment and his study is intended to lead to the understanding of the kinds of ecological and policy challenges created by Brazil's political development. Similarly, the challenges facing South Africa's policy-makers in addressing its environmental agenda can benefit from the advances made from this study. Guimaraes (1991) does not focus per se on specific environmental problems such as air pollution, but instead on bureaucratic procedures and politics involved in the formation and implementation of environmental policy.

Guimaraes (1991) seems to parallel the critiques of Smith (1973a,b;1985), Saasa (1985) and Rondinelli (1982) about the importance of policy styles being contextually driven as well as the biases inherent in contemporary policy tools. He notes that in terms of the contemporary study of environmental policy-making, "...this fairly solid body of knowledge for the study of ecopolitics concerns the most economically advanced nations of the world, both in the East and the West, for the so called developing world literature is still sparse and characterised by a fragmented approach" (1991:13).

2.4 Review of South African environmental policy-making literature

On its policy styles, the South Africa literature has received attention from numerous quarters in terms of developing more relevant and contextually driven policy management styles (Bromley, 1995;Cloete et al, 1991; Booth et al, 1994; Orkin, Tshandu and Dugard, 1997; Rabie, 1997 & Cowen, 1997).

According to Bromley (1995:6), the nature of environmental policy reform is not a once-off activity; "rather, environmental policy – as with all policy - must be understood as a continuing process of adjustment in the laws and administrative rules that define the domains of choice for atomistic economic agents".

In an earlier study Bromley states that there seems to be a perception in South Africa that now that the political landscape, as well as the policy process, is being democratised, "it will be possible to 'fix' environmental policy and then move on to other matters. This notion has the unfortunate effect of causing environmental policy to be regarded as a static idea..." (1994:27&28).

With regard to the nature of the policy process, Bromley (1994, 1995) concurs with other authors reviewed here. The formulation of the environmental policy in South Africa must be seen as interminable, as open-ended, as this will allow the prudent analyst to search for modes of decision-making which are more contextually driven.

According to Muller (1995), alhough the nature of public policy is interminable, it also seems to be explorative, iterative and incremental. In this regard, Bromley (1994) opines that: "in policy reform we learn what we want by discovering what we can have. And we cannot learn what we have without experimenting, without pilot

projects, and without repeated efforts to make incremental changes". In this sense, incrementalism can possibly serve as a temper against the sweeping, radically redistributive type policies that may come to dangerously alienate the previously privileged minority.

"In Policy Options for a New South Africa" 1991, the contribution by various authors critically evaluate the alternatives policy-makers are facing in the New South Africa. In the concluding chapters of this body of work, the study utilises the framework adopted by Smith (1985) and Saasa (1985) to evaluate the sorts of policy styles South Africa faces "against the background of the obstacles which policy-makers face in the Third World..." (Cloete et al, 1991). South Africa finds itself with a considerable resource advantage to most other Third World countries. In addition, its path to sustainable development is made more conducive due the fact that it has a functioning modern sector, a high level of technology, a proven management capacity and a strong wildlife conservation tradition that could turn the events of post-apartheid political landscape into an opportunity to put the country on a sustainable development path (Braune, 1992).

In the same body of work, Cloete (1991:19-42) reveals that, in the past, South Africa largely utilised First World policy-making techniques. This has important implications for the policy options adopted by post-apartheid South Africa in terms of context and relevance, given the now new social and organisational landscapes being a far cry from those identified by Cloete (1991) during apartheid.

"Policy Options for a New South Africa" 1991 is instrumental in terms of contributing to an indigenous policy synthesis for understanding the policy process and the policy modes South Africa faces. As Fischer et al (1995:xv) observe: "most important here is the idea that experts can calculate and plan the 'carrying capacities' of local and regional ecosystems"(p.xv). Most often these experts impose external policy methodologies which cannot be sustained, given the mix of unique and context specific policy conditionalities innate to the South African policy landscape.

Similarly, the main thesis of the study by Kamieniecki and Sanasarian, "Conducting Comparative Research on Environmental Policy" 1990, is helpful in pointing out that although South Africa, like Greece, shares many of the structural constraints of industrialising countries, domestic political and institutional factors must be taken into account if we are to understand its environmental policy trajectory and thus, be able to compare it to that of other countries (Kamieniecki & Sanasarian in Stevis, 1992).

In post-apartheid South Africa there have also been various studies attempting to implement policies which are germane to the local context. One such attempt is the State of the Environment Report for the Cape Metropolitan Area 1998, which notes that: "as result of the transition of South Africa to a democratic state, the CMA is also in need of new or adjusted policies if it is to establish a democratic society". Although these studies operate at a local level, these policy models and lessons can be extrapolated to the national level.

A related and important dimension of policy-making is that of legislation, and often, it is the lack thereof in most of the Third World which contributes to the

ineffective application of policy. South African environmental legislation can be traced back to the seventeenth century, but has only recently come to the fore, probably as a result of escalating pressure on the country's narrow resource base to satisfy short-term socio-economic needs. An extensive amount of literature has been posited around the inextricable partnership between legislation and policy (Bromley, 1995; Glazewski, 1994; Loots, 1994; Rabie & Glazewski, 1990 & Winstanley, 1997).

One area of environmental law specifically - which will be examined later on in this study from a policy process perspective - pertains to that of pollution control and waste management. The waste management issue is particularly important from an environmental policy perspective, since in recent times, all three constituent elements of planet earth, namely air, land and water, have been seriously degraded by pollution as a result of the pursuit of immediate socio-economic needs (Glazewski 1991). The policy-making structures and agencies will be analysed in their South African environmental policy-making context and mechanisms identified which could help improve the way waste management policies are formulated, incorporating international, national and local experience. These options and guiding mechanisms will serve as part of a pool of solutions and strategies which will be integral for formulating generic environmental policies and can rise up to the policy complexities and challenges facing South Africa in the 21st Century.

Although the partnership between legislation and policy-making is integral, it must be noted that not all policy needs to be promulgated in order to take effect. For example, South Africa's electricity utility monopoly, Eskom, may want to have a policy on changing its electricity generating technology from electricity to nuclear. No

legislation would have to be passed to effect this policy, but would nevertheless be binding.

In the above regard, Bromley (1995:25) stated that: "the evolution of environmental law in South Africa must be seen as an essential part of the development of environmental policy. Law and policy are but the same thing in different clothes". An authoritative class of literature seems to advocate that the evolution of public policy must be partnered with appropriate legislation (See Rabie & Glazewski (1990) for a good historical overview of the evolution of environmental public policy to form a legal perspective).

In another study, Glazewski (1994) examines the environmental law and the interim constitution (1993) of South Africa and states that future environmental law, and for that matter policy, cannot be premised on purely American policy models, a policy approach which cushioned the South African affluent first-world minority. This study once again highlights the imperative of utilising policy analysis models which will reflect consumption patterns of the type needed to address "...social equity, environmental sustainability and economic efficiency..."(Eberhard et al, 1995:18) in post-apartheid South Africa. Similar observations have been made by Rabie (1997) with respect to the context of policy management in the White Paper Environmental Management Policy (1997), which also holds true for its anti-cendent, the White Paper on EMP (1998).

In terms of the various White and Green Papers based on environmental policy-making, the White Papers on Environmental Management Policy (1997, 1998) have

been reviewed and critiqued from various sources (Rabie, 1997). Although the critiques of Rabie (1997) seems dated, many of the shortcomings this author has identified in 1997 still remain in force in the latest White Paper on EPM (1998), particularly with regard to the DEAT as lead agent.

2.5 Perspectives for sustainable policy development in South Africa

One of the most salient challenges which post-apartheid South Africa will face, is that of developing policy frameworks which are simultaneously sustainable and flexible enough to respond to local challenges, as well as to incorporate international experience. This task is compounded by the fact that South Africa encompasses problems typical of industrial consumer nations and the rural poor in underdeveloped nations. In addition to this, "South Africa is emerging from a period of unsustainable and inequitable development that threatened the livelihoods of unsustainable and inequitable development that not only threatened the livelihoods and degraded the quality if life of a large proportion of the population, but which was also responsible for environmental degradation" (Integrated Pollution and Waste Management, 1998:14). This context makes it imperative that whatever policy process or model South Africa adopts, it has to be underscored by economically, socially and environmentally sustainable indicators.

South Africa also has problems of economic inequity, typified by its highly dualistic economy, with a highly skewed income distribution between a minority white population and a majority black population; these patterns will remain for a long time to come due to an expected increase in the black population (Braune, 1992). According to Braune (1992:82), strong economic growth is a precondition for

sustainable development in developing countries and this has been acknowledged by South Africa's main political players, as well as its White Papers on Environmental Policy Management (1998) and Integrated Pollution and Waste Management (1998). Care should be taken to adopt economic and developmental trajectories which make use of "...a framework of integrated pollution and waste management to protect both the people of South Africa and the environment without continuous degradation of natural resources"(Integrated Pollution and Waste Management, 1998:14).

Reliance on non-renewable resources

Another area of concern is South Africa's strong dependence on the exploitation of non-renewable resources, such as coal. As Raimondo et al (1995) observe, the South African coal mining industry plays a key role in the local economy (2.7% of GDP), both in terms of the supply to the generators of power (about 74 Millions tons per year or 40% of total coal production), and the synthetic fuels sector (about 41 Million tons per year, or 31% of production). About R4460 Million through foreign exchange is earned by the industry each year and affects, approximately, 60 000 employees directly.

South Africa's heavy reliance on exploiting primary commodities such as coal puts itself at a disadvantage in the international market, as this reliance undercuts the sophisticated and skilled workforce needed to compete with more innovative, "greener" technologies. In other words, "to grow a successful economy, South Africa has to become more competitive in manufactured exports...more universal goods of social equity, environmental sustainability and economic efficiency which will increasingly replace the energy security concerns of the apartheid era" (Eberhard et al,

1995:18). Due to the low levels of black education, coupled with a reliance on primary products and an only too recent reintroduction into the competitive global economy, South Africa faces challenges which are at once Herculean, but necessary in terms of securing economic growth which will articulate and realise a path towards sustainability.

In South Africa, there is a strong correlation between energy usage patterns and the level of education, and the latter has a definitive impact on the nature of policies formulated. In the rural areas where between 80% and 100% of rural households use fuelwood instead of electricity, the social costs in terms of inferior education are enormous (Eberhard et al, 1995). According to Eberhard et al, (1995:18), "the additional time spent collecting and purchasing fuels where electricity is not available... represents the loss of time for potentially more productive or enjoyable activities such as... education. Furthermore, the lack of high-quality lighting in the home, which is delivered most effectively by electricity, severely impedes the education process..."(p.18). The lack of basic education of the majority, and even less so in conservation issues, has the inherent danger of satisfying short-term socio-economic needs over those of longer term sustainable development for the majority. It is thus crucial that any post-apartheid government policy be formulated along the educational strategies and thinking suggested by Agenda 21, with the realisation of mobilising the masses for conservation.

This brief digression has taken a snapshot of the energy sector and demonstrated that in a country where an estimated 25 million of a total of 40 million live without access to electricity, the social and environmental impacts are enormous. Any environmental

policy in the present and in the future must thus be cognisant of goals of equity and efficiency as part of a path towards sustainability. Although equity, efficiency and environment are a useful framework for effective policy analysis, these goals often compete at the expense of the other.

Milestones in environmental awareness and policy proposals

The global trend towards sustainable development and the seminal agreements reached at the UNCED at Rio of 1992 and the World Commission on Environment and Development (hereafter the WCED, 1987), seems to have been assimilated into most of South Africa's environmental policies and strategies over the past decade. As the White Paper on Integrated Pollution and Waste Management (1998) indicates, these international decisions such as Agenda 21, form the broad context for pollution prevention and waste minimisation in South Africa, and that part of its mandate is to ensure that the South African government strive towards the proposals of Agenda 21. Other important steps in the direction of the international trend toward sustainable development include:

- the Framework Convention on Climate Change (ratified in August 1997)
- the Report on a National environmental policy and strategy for South Africa
- the Basil Convention
- section 24 of the Constitution of the Republic of South Africa of 1996
- the Environment Conservation Act, 1989
- the White Paper on Environmental Management Policy for South Africa (May 1998), DEAT

In the context of this study, the White Paper on Environmental Management Policy for South Africa (1998), and the White Paper on Integrated Pollution and Waste Management (1998), will largely inform the analysis of the state of environmental policy-making and the state of sustainable development in South Africa.

Relevant texts and reports which parallel the seminal agreements reached at Rio 1992 and the WCED 1987 include: "South African Environments into the 21st Century" (1989); the documents by the Environmental Evaluation Unit on Metropolitan Environmental Management Policy (1998); and that of "Managing Sustainable Development in South Africa" (1997).

Although work by the Environmental Evaluation Unit (hereafter the EEU) of the University of Cape Town focuses on the development of an urban environmental management policy, the observations and conclusions may be extrapolated to a national and even a global context. These works attempt to relate South African environmental policy-making to global developments by "identifying some key global, regional and national initiatives and developments driving urban environmental sustainability internationally and South Africa"(EEU(a), 1998:1). These studies contribute to an environmental policy management synthesis which is sensitive to the local policy context, incorporating the international trends towards sustainable development and complimenting the way forward for sound future environmental policy process approaches. More specifically, some of these reports aim to identify and map world-wide trends in metropolitan environmental management policy, in order to determine the essential elements for policy development and implementation, as well as how these can be applied within the

South African urban context (EEU(a), 1998). It is must be borne in mind that the conclusions drawn in an urban context may be extrapolated to a national policy level, and are thus, highly relevant when attempting to explore mechanisms and means for developing sound national policy processes.

Agenda 21

Agenda 21 (1992) describes a number of mechanisms for reducing poverty and promoting self-reliance among communities:

- strengthening of legal frameworks for access and ownership of land;
- integrating informal sector activities into the economy and making lines of credit available;
- promoting co-ordination structures within communities; and
- implementing mechanisms for popular participation (Wynberg, 1993).

Firstly, the issue of greater socio-economic parity in terms of reducing the gap between rich and poor is addressed through Agenda 21's recommendations on changing consumption patterns and is also pertinent to South Africa, especially given its new democratic dispensation, with an emphasis on redistribution and equity.

According to Wynberg's (1993:61) analysis, "the basic needs approach advocated by Agenda 21 (1992), is intrinsically tied to reducing inequalities between population groups, and thus directly contradicts the luxury consumption patterns evident among wealthy South Africans". The emphasis on greater equity is bound to bring about conflict as this sort of policy shift is rather radical in light of past apartheid policies which were largely exclusionary. Integrating greater equity and changing

consumption patterns will prove challenging "as the government has to tread a fine line between meeting the expectations of the majority of the population whic is poor and black (which tends to mean increasing government deficit spending), and frustrating those aspirations in the interests of good housekeeping. (Munslow et al in Fitzgerald et al, 1997:55).

Secondly, the international community and its trade systems has over the last decade, attempted to integrate and advocate the principles of sustainable development, both in political and donor agencies; many developing nations have acceded that current developmental practices are unsustainable (Braune, 1992). The seminal agreements reached at Rio 1992 produced and reinforced various existing and future financial mechanisms necessary to facilitate sustainable development and included means such as: Official Development Assistance (ODA), financial commitments by industrialised countries, the International Development Association (IDA), regional banks, UN agencies, bilateral aid programmes, private funds and the Global Environmental Facility (GEF). Although these mechanisms are steps in the right direction on a more macro level, "developing countries have further denounced UNCED financial arrangements for failing to rethink the concept of aid and ignoring measures relating to trade liberalisation" (Wynberg, 1993:183).

Incorporating sustainable development criteria as part of the policy-making process is imperative if South Africa intends to "...conserve the limited natural resource base and use the limited capital resources for development optimally" (Braune, 1993:83). The present policy window in South Africa has resulted in many more people holding the government accountable for maximising social and economic system goals. South

Africa's development process will attempt to maximise sustainability across the social and economic policy sphere, especially the environmental sphere, as the pie has to be not only cut up in so many pieces, but also handed around to so many different hands. Although there are almost insurmountable obstacles, comparatively South Africa finds itself in much better "technological, scientific and management capacities" (Wynberg, 1993:200) than most other developing countries and can possibly therefore succeed in terms of incorporating greater sustainability into its policy frameworks.

In summary then, this review has covered the following ground: the present status of the White Paper on Environmental Management Policy (1998), as well as other local government policy initiatives, include several factors which act as a barometer for measuring the degree to which South African policy methodologies and conditionalities are able to accommodate the policy processes and models outlined in the conceptual framework. The review of past and present works of literature will assist this study in developing policy options and processes that respond to the realities of the new trends of the South African policy environment. Only by investigating the present status of environmental management and policy-making, and being cognisant of South African conditionalities such as poverty, democratic intolerance, lack of environmental inputs, inadequate communication and inter alia, can better tools of analysis be created for effective policy in South Africa.

CHAPTER 3

PRESCRIPTIVE POLICY-MAKING AND THE POLICY CYCLE: APPLICABILITY TO DEVELOPING COUNTRIES

Introduction

The purpose of this chapter is to selectively explore the utility of prescriptive policy-making techniques in comprehending policy formulation processes in developing countries. The intent is to sketch for various reasons as to why First World policy literature is limited in the understanding of Third World strategic policy issues.

Firstly this chapter will point out the conditions under which Western-based methodologies have traditionally evolved and the difficulties of transplanting these methods to Third World nations, relying largely on the study undertaken by Smith in "Evaluating Development Policies and Programmes in the Third World" (1985). Secondly, this chapter explores the context of the policy process in the Third World and the factors which have caused these nations to deviate from the conventional policy process. Thirdly, this chapter focuses specifically on some of the policy gaps which contemporary policy techniques like incrementalism and comprehensive rationality face in understanding Third World policy-making processes. In the latter sections, attention will be given to outlining means by which policy models and processes, regardless of whether they are rational or incremental, can incorporate the tenets of sustainable development The seminal agreements of the UNCED and its blueprint for sustainable development, Agenda 21, will largely inform these proposals.

3.1 First World policy conditionalities

The genesis of policy planning processes in the West inhibits its practical application on the African continent because of the non-transferability of experiences from these highly industrialised societies...Western caution and pragmatism seems out of touch with radical trends that inevitably mark Third World conditions (Rothchild et al, 1978). The tools of analysis which have been used in the policy sciences have to a large extent evolved within in a First World context. Their transposition to the Third World by technocrats, international donor agencies and multilateral institutions have produced various problems due to the differences in the policy choice situation; that is, the imperative of using contextually driven policy models were largely ignored by these agents. It is by no means disputed that their intentions were good, but wholly out of touch with the policy environment in Third World, surely courting the danger of the irrelevance of Western policy sciences.

There are various reasons as to why the conventional policy literature and techniques continue to face difficulties in Third World nations. Following is a selective exposition of the conditions found in most First World nations which are meant to facilitate prescriptive policy-making in these contexts (Smith, 1985).

Stability in political and administrative institutions and processes coupled with regular elections allows for better application of conventional policy techniques. This is true for incrementalism which requires institutional and organisational environments where policy change is incremental. South Africa, during its policy

reform era wanted to keep the support of its white population and maintain political stability and expediently incorporated incremental policy analysis to its reforms.

"Indeed, Lindblom himself admitted that his 'muddling through' thesis is applicable only to conditions of stability, and hence suitable to relatively stable countries such as the United Sates and the Soviet Union" (Saasa, 1985:315). Though with hindsight, the same cannot be said for the latter as Saasa had no idea of the events which were to unfold in 1990, characterised by the now disintegrated countries of the former Soviet Union. The stability which characterised the former Soviet Union has disappeared and been replaced by economic and political instability, as many states of the former Soviet Union seek independence or have done so already. It now too has to reconsider new policy options as the agenda is now clouded with issues which the former Soviet Union could easily address through its centralist and top-down bureaucratic empire.

Most First World nations have endured democratic traditions and practices such as group freedom, 'open' governance, and an investigative media, transparency in government, public participation and criticism of public policy and programmes. Unlike most authoritarian Third World regimes, there is a tradition in America of publicly challenging and debating the worth of government activities. For instance, in democratic states, a vocal civil society has helped ensure that environmental interests are served by its government. Contemporary models of the relationship between public opinion and policy outcomes suggest that the public is relatively well informed about major issues, that opinion is fairly stable over time, and that these views

influence policy makers to change policy in the direction favoured by mass opinion (Payne, 1995).

In terms of influencing the public agenda, the media is an integral instrument. As Booth et al (1994:41) opine: in the developed nations, "through carefully planned and targeted media campaigns and institutional networks, the environmental message is probably the most widely advertised commodity anywhere – perhaps rivaled only be war and politics". Thus, "thanks to free speech, a free press...it is possible for the combined forces of the mass media...to monitor the activities of the most prominent sources of environmental degradation...and publicise their findings, however critical" (Payne, 1995:44).

A lower rate of corruption seems prevalent in more industrialised democracies which may be related to the transparency and openness to political and administrative practices. Less corruption is crucial for more successful implementation as often administrators are vulnerable to bribes during this phase. "Since interests groups... are often excluded from the policy formulation arena, they articulate their interests in the implementation phase of the policy process. It is in the implementation phase of the political process that policies can be modified to suit individual or group interests" (Smith, 1973(b): 246-247).

Compared to developed countries, the public is involved in the policy process from its inception, but in more developing nations, the implementation phase is usually the

only point of input. This phase usually invites some form of subversion via bribery or corruption as some groups may have the resources to articulate policy outcomes in their direction as apposed to those who have less bargaining power (Rothchild et al, 1978 & Smith, 1985).

Indeed, some of the factors propagating corruption include: socio-economic or political inequalities, too little or too much government control and weak administrative detection and control mechanisms (Werner, 1983). In more democratic states, the public service is more professionalised, with many internal watchdogs and a tradition of whistle-blowing which helps to curb corruption. This has given way to what is called the "soft state" of the Third World, characterised by a well-entrenched process of corruption in the political and administrative (Myrdal in Smith, 1985) sphere.

As developing countries modernise they seems to be more prone to corruption. "Every modernizing system was regarded as being susceptible to corruption...developing countries, therefore, were assumed to allow corruption to become a usual and expected part of the maturation process" (Werner, 1983:147). Although "corruption is universal" (Werner, 1983:148), a more highly professionalised bureaucracy combined with First World policy conditionalities makes the developed nations less likely to be susceptible to corruption and less likely to subvert and modify the policy process, especially during its implementation.

Open and democratic societies also tend to be less rigid and centralised in their administrative and bureaucratic organisation. The devolution of powers between tiers of government promotes possible checks and balances and facilitates more effective implementation. The fact that these countries also have adequate human and financial resources also makes for more efficient and effective policy-making. However, while the principle of devolution of power is laudable and meets the demand for greater grass-roots involvement by local communities in running civic affairs, it has proved problematic in some instances. According to Glazewski (1991), difficulties arise in instances where one has to pinpoint responsibility in particular problem areas where the DEAT is charged with setting policy directions, while provincial authorities are concerned with implementation and enforcement in environmental policy and legislation. In addition, Dorm-Adzobu notes that another problem may arise where the decentralisation of environmental management responsibilities is reassigned to local government, but financial and institutional capacity at local government level do not exist (EEU(a), 1998). The situation is no different in South Africa where many unfunded or underfunded mandates for environmental management at the provincial, metropolitan and local levels is a stark reality (EEU(a), 1998).

Decentralisation versus centralisation

It is instructive to look at the findings of the EEU(a)(1998) discussion document in terms of coming closer to resolving the debate between decentralisation versus centralisation of terms of policy responsibility. This discussion is particularly relevant in South Africa where "the location of the environmental management function

remains a core debate within the local government transition in South Africa..."(EEU(a), 1998:38); currently South Africa operates with a two-tier system at the metropolitan level.

According to Smith's study on functional efficiencies in pollution control agencies in the United States of America suggests that implementation through decentralised agencies is more efficient from cost and compliance perspectives; local knowledge may be a major contributing factor to increased efficiency and this may be applied to the implementation of local metropolitan environmental policy (EEU(a), 1998). In keeping with the above and acknowledging that implementation must take place at the local and metropolitan level, the following proposals may be incorporated in terms of the decentralistion versus centralisation debate (Smith cited in EEU(a), 1998):

- separate policy formulation, policy compliance monitoring, and planning from routine implementation duties (Rondinelli cited in EEU(a), 1998);
- avoid duplication of highly specialised skills at the local council level;
- enable the application of local skills in decision-making

As the political system is usually very stable, more politically liberal and the seat of power is usually revolved via contests in the electoral arena, this institutional and organisational culture also affects the way public policy is made. "Democratic governments are less likely to abuse the human rights of environmentalists or

suppress their criticisms, and more likely to be accountable..." (Payne, 1995:43). In effect there is a lot of room for maneuver and public policy formation is underscored by slow, deliberative and incremental processes.

A very obvious and necessary indicator for effective formulation of public policy is reliable, accurate and instant information infrastructures. The West has a very well developed census system which provides important social and economic indicators and this is largely absent in the Third World. From an eco-political perspective, "the free market in ideas also encourages environmental improvement. Press and speech freedoms...directly or indirectly promote environmental objectives" (Payne, 1995:43).

Rondinelli (1982:56) points out: "systematic planning and management procedures require information and data that are simply not available in most developing countries. Such demands force administrators to use whatever data are at hand, regardless of the appropriateness or accuracy". This impedes effective policy formulation and makes for First World techniques which rely on sophisticated techniques, even more implausible.

The above exposition does not exhaust all the conditionalities under which conventional policy techniques and processes unfold. Its use lies in that it points to the difficulties in applying First World models to the Third World policy context. As Rothchild and Curry (1978) opine, the limited utility of First World methodologies

may be due to the existing literature's focus on experiences in developed capitalistic countries (particularly the USA); different variables required for the success of a policy is crucial, as conditionalities differ between the First and Third Worlds.

The focus on the conditions under which Western policy techniques unfold will be instrumental in terms of understanding their limited utility in Third World settings. South Africa in the past has employed conventional First World policy techniques as it was able to do so by largely ignoring the majority and catering for the white minority; this minority shared similar consumption patterns and policy aspirations as the more industrialised nations. As South Africa evolves under its new dispensation, these policy techniques may be inappropriate as it makes a break with the past, due to changing policy imperatives and realities.

As Cloete et al (1991) note: Although incrementalism may be suitable for industrialised nations, it has been argued that the results of authoritarianism (a sharp break with the past) make incrementalism singularly inappropriate in these societies. The policy emphasis is rather more on Dror's (1988) policy principle of large-scale "selective radicalism" as evidenced by South Africa's Reconstruction and Development Programme initiated in 1994. These observations have important implications for policy-making in post-apartheid South Africa.

The next section examines selective elements of the policy process more generally as experienced in the Third World. South Africa in its post-apartheid state will probably employ a combination of Third and First World policy process elements as it slowly

approximates First World policy conditionalities, amidst intractable Third World problems.

In the above regard, Cloete et al (1981) indicate that there seems to be a 'normalisation' of the policy process in South Africa. By examining how Third World nations deviate from the conventional policy process, South Africa may benefit by taking "very seriously the lessons the Third World has to offer due to our comparative resources advantages to devise appropriate policy strategies which do not under-estimate the constraints on implementation" (Cloete et al, 1991:278); certain assumptions have been made based upon the Western experience that are not necessarily relevant for the policy process in developing nations (Smith, 1973b).

3.2 The policy process in the Third World

South Africa, a microcosm of the public policy issues facing the globe in many respects, will benefit from the observations made in the First and Third World with regard to its policy-making process. As the next chapter will show, the analysis of the policy process in the Third World will have important implications for the utility of conventional policy cycles and policy styles in South Africa. The deviation of Third World countries of the policy process is well captured by Thomas B. Smith who has summarised the policy cycle in the Third World in a sequential order. Smith's (1973b & 1985) studies will underscore most of the analysis in later sections.

Problem formulation and agenda building

This phase of the process constitutes how issues reach the agenda. Unlike most industrialised nations, issues reach the public agenda not through competing interests and environmental inputs, but rather through centralised, top-down institutional and political systems. As Smith (1973b) notes: "...in many African and Asian political systems, interest groups and political parties may be weak, inarticulate, or even abolished by a section of the government". Thus the ubiquitous inputs experienced by most Western political systems are largely absent in developing nations. Unlike more democratic states, these governments are accountable to public opinion which has the effect of pushing government policy and action to preserve the environment, eptomised best perhaps by the success of environmental friendly legislation of Western European nations like Germany.

In addition, the types of issues reaching the public agenda is also influenced by exogenous variables. Rondinelli (1982) and Rothchild and Curry (1978) note: exogenous variables emanating from the international system have a definitive impact on the content and design of public policy issues in developing nations. "The policy-making system is penetrated by outsiders who usually control the funds and control policy-making in developmental areas. In this way some rather unrealistic policies can be forthcoming – especially if foreign aid agencies compete with each other for sponsorship..." (Smith, 1973b:245). Developed nations are far more secure in the international system and the content of their policy cycles is less likely to be influenced by say, the World Bank or International Monetary Fund (IMF). Borrowing from Bamberger (1991): probably the single most important difference between the context for programme evaluation in the

USA and developing countries is the major role that international donor agencies play in the selection, financing and design in evaluation systems in the developing countries.

Chronic political instability, regime changes and a tendency towards bureaucratic-authoritarianism characterised by military juntas, charismatic and grand coalitions normally lead to the politics of survival (Cloete et al, 1991 and Smith, 1973b & 1985). Often the policy choice is one that has short term benefits as incumbents muster as much power in the face of insecure office tenure and in addition, often replacing previous policies with totally new ones; policy formulation takes place within the context of "the politics of regime survival" (Cloete et al, 1991:272).

The uncertainty and complexity of development problems and the complexity of relationships between developing nations and international assistance make it nearly impossible to design policy in rational and systematic ways. The most serious impediments include inter alia: difficulties in project objectives precisely at the outset; lack of appropriate data and information; inadequate understanding of local conditions and the low levels of administrative capacity to plan in the prescribed ways (Rondinelli, 1982).

Policy change

This study has already noted that the institutional and organisational context of the more industrialised nations is comparatively more stable and policy vacuums rarely persist as a result of existing policies being replaced by completely new ones. In First World nations,

where the conventional emphasis has been on incremental policy change, newly independent governments in the Third World tend rather to practice selective radicalism whereby grand-scale macro socio-economic reforms are usually undertaken; South Africa has been no exception in this regard with its emphasis on massive reconstruction and development.

Policy implementation

"Implementation must be seen as part of the policy process, since the interaction between policy-making and its implementation is often very complex" (Hogwood & Gunn, 1984:45). Implementing public policies occur far more successfully in more developed nations due to the incremental nature of policy and a well-developed bureaucratic and administrative infrastructure. In contrast, many laudable policies seem to atrophy in the implementation phase due to lip service, poor design, lack of resources, and a weak or corrupt bureaucracy (Cloete et al, 1991 & Smith, 1985). In many Third World nations, the bureaucracy "...is not an effective, efficient, goal oriented agency of the government" (Smith, 1973b: 246).

There are many normative and material constraints which constrain successful policy implementation, inducing what Hirschman has called the "failure complex" (Hirschman cited in Smith, 1985). As a result of deeply constraining factors such as lack of technical and financial resources, policy implementation takes place in a milieu characterised by a lack of enthusiasm; "policies are expected fail, and the alleged failure of past policy-

making induces the expectation of renewed failure..." (Hirschman cited in Smith, 1985:138).

Policy impact and evaluation

The impacts of policies in Third World nations are negatively influenced by what has gone before this phase. Due to phenomena like the policy failure complex, there is the expectation that policies will not be effectively executed. Various material and normative constraints make it impossible for Third World governments to conceive, implement and accurately evaluate policies successfully (Cloete, et al, 1991). The Third World faces an additional problem in terms of assessing policy success given the many diverse groupings of peoples, language and culture. Consequently, "what one group proposes as a remedy for a particular problem is often considered to be precisely the problem by another group (Sloan cited in Smith, 1985:137).

The above policy process indicates clearly that the conventional policy cycle seems out of context with the policy realities of the Third World. As already pointed out, the First World conditionalities together with a host of other institutional and organisational issues makes it nearly impossible to conduct evaluations and projects as traditionally done by the West.

South Africa faces some momentous choices as its policy process tends to greater democratisation in the post-apartheid era. By this is meant that the policy environment in South Africa seems to be slowly approximating the sort of policy

behavior long experienced in the more industrialised nations. However, as has been indicated, South Africa still finds itself with intractable Third World problems; the prudent analyst must take heed not to lose sight of the policy the needs of the majority of South Africans. A cautious and realistic approach to policy-making must be seen against the backdrop that since the inception of the Union of South Africa in 1910, the policy process in the country has contained elements of both the industrial and Third World policy-making models, probably reflecting accurately the institutionalised dualism of South African society (Cloete in Cloete et al, 1991:275). A complete adoption of First World policy models will not augur well for effective policy-making, nor respond to the policy realities of former disenfranchised South Africans.

3.3 Rational models of decision-making in the Third World

The lessons learnt from the utility of prescriptive policy-making in the Third World will help South Africa overcome certain obstacles to policy formulation and identify the extent to which it can incorporate prescriptive policy-making. We thus proceed with selectively identifying some limitations of the rational model of decision-making, followed with the same analysis of the incremental model.

Rapid change and uncertainty

According to Saasa (1985), employing rationality in general during developing countries' policy-making processes is highly constrained by rapid societal transformation found in most of these countries. Regime change is often not regulated

in the electoral arena and often the use of force via military juntas serves as the means for displacing the ruling power. In addition rapid changes in society and the uncertain dynamics of political interaction make systematic theories of social change almost obsolete before they are even started (Rondinelli, 1982). As Rothchild et al (1978) observe, whereas a developed country can determine the line of action with some reasonable expectation so that it can be implemented, no such assumption is warranted for most of the African states. Even when policies are formulated, there is usually no certainty that it will be implemented.

This state of affairs compromises the efficacy of the rational model in terms of comprehending public policy in most Third World nations. The rapid turnover at a policy project level contributes to an environment of uncertainty and incongruency of policy objectives. Rondinelli (1982:49) notes that the rapid turnover of personnel in international funding institutions, in national ministries and agencies, and among technical consultants hired to assist with design, often leads to increased inconsistency and confusion... With changes in personnel, conflicts developed among consultants, headquarters staff, and the field personnel of the USAID Mission over concepts and components of these projects"(p.49).

Unreliable data in developing countries

The rational techniques of analysis are inappropriate for comprehending Third World public policy issues, information inadequacy and unreliability being the most prominent handicaps. The amount of information required for this model is usually

unattainable due to the costs and the analytical handicaps in terms of the volume of issues which require attention at any one time (Saasa, 1985).

In the opinion of Rothchild et al (1978:16): "In many African lands, statistics are notoriously undependable; where such information is available, it is not always clear what measurements are to be applied to the data if meaningful conclusions are to be reached". This has the detrimental consequence of Third World analysts making recommendations of poor substance (Smith, 1973(b)).

Allied to the information inadequacies, is the danger of official secrecy surrounding information relating to environmental issues. Payne (1995) is of the opinion that official secrecy can exacerbate environmental hazards by allowing policy-makers to ignore possible solutions. The Soviet government withheld important information about the 1986 Chernobyl nuclear-reactor incident for several years..."(p. 44). Secrecy of relevant environmental information weakens effective policy as well as stopping the free-flow of information, expeditiously needed in the important discovery and utilisation of innovations for effective environmental policy-making (Payne, 1995).

The above is in stark contrast to the policy researcher in the North American context in which many of these data and information are available in census and other data archives and over long periods of time (Smith, 1985). Given that most developing nations do not have a highly trained pool of either techno – or envirocrats due to years

of technological isolation, colonial intervention and the "brain drain", they cannot provide the expertise needed for the rational comprehensive model. This means that few Third World countries have the required knowledge, expertise, technology, and finances to perform complex or large-scale government functions, even at a central level (Cameron, 1991).

Clearly the lack of inadequate and unreliable data in most developing countries makes for very limited utility of the rational comprehensive model as very few of these countries can boast the type of information systems and methodological rigor used in more developed countries. Although the rational comprehensive model seems of limited utility to the Third World, Bamberger (1995) insists that we are talking about a continuum rather than a dichotomy as some of developing nations like India and Brazil are fast rapidly developing computer systems and networks of evaluation, but have not developed the same methodological rigor as most developed nations. In keeping with the above, Third World nations vary amongst each other in terms of the level of resources and maintaining systems of evaluation and data capturing. For example, South Africa may appear at the one extreme with large staff and information technology systems and the Republic of Chad on the other hand, may be without any formal systems of information gathering.

Incrementalism, as a model of analysis seems to face many handicaps as a tool of analysis in the Third World context and it should form part of South Africa's policy development. The next section focuses on this prescriptive model and its utility in

understanding Third World policy-making. Although this chapter analyses the models as separate entities, this is done for the sake of analytical clarity, as in reality the incremental model faces many of the obstacles that the rational actor does given that they originate from the same industrialised policy context. Indeed, most policies in the real world are made up of a mix or compliment of these models. We proceed by positing some reasons as to why incrementalism seems to be of limited utility in the Third World context

3.4 Incremental policy-making in the Third World

Continuity

Continuity being a central characteristic of incrementalism is largely unachievable under "conditions of capitol and manpower scarcities usually associated with developing nations" (Saasa, 1985:315). Continuous policy-making is constrained due to a limited amount of resources having to be spread over many policy projects and programmes, often leaving some policy initiatives aborted even before they are formulated.

Administrative incapacity

Ineffective and disorganised administrative capacity in most Third World nations inhibits the effective implementation of policies. The paucity of administrative structures acts as a major constraint on the application of prescriptive policy analysis and gives these nations limited room for maneuverability. A paradox presents itself in that these nations often want to pursue new policies but are ironically limited by an

ineffective and inefficient administrative structure. In terms of the scope of its policy evaluation systems, organisations such as the U.S General Accounting Office are able to draw on longitudinal data sets that permit sophisticated time-series analysis of a level that could probably not be attempted in any developing country; hence making sophisticated incrementalism singularly inadequate to developing nations (Bamberger, 1991).

Public input

There is a tradition in America of public policy challenging and debating the worth of government policy (Hoole in Smith, 1985). These conditions do not exist in many developing countries and incumbents will more likely tolerate interest group criticism of their activities. The presence of interest group activity encourages the development a more vocal public voice as well as facilitating internal government "watchdogs" in the pursuit of creating checks and balances. The absence of these may contribute to the undermining of Lindblom's (1972) incrementalism as it relies on inputs from the environment in order to monitor or enforce policy behaviour.

Grass roots participation has had much less success in influencing policy in developing countries. For example, in 1977, Chico Mendes helped found the Xapuri rural Workers Union, a group of rubber tappers in the rain forests of the western Amazon. Mendes was killed later due to his active protest against policy of forest removal. Conditions like these in the Third World hinder the formation of grass roots movements. "The dominance of the insider-access model of agenda building in the

Third World often prevents the public from influencing environmental policy" (Kamieniecki, 1991:348).

Paradox of choice: the gap between aspirations and reality

The exogenous variables emanating from the international system due to colonialism, external debt and increased protectionism, combined with administrative resource scarcities, "...lead to a sense of urgency with respect to overhauling economic and political structures and processes. As a result, it is the polities with the lowest capabilities which often evince the strongest preference for comprehensive planning" (Rothchild & Curry, 1978:304).

In reality, the policy choice should be that Third World nations with low administrative capacities should steer towards greater incrementalism, but instead go for grand-scale comprehensive planning. "Developing nations, with much lower control capacities than modern nations, tend more to favour planning when they may well have to make to do with a high degree of incrementalism, while modern pluralist societies – which are more able to scan and, at least in some dimensions control – plan less" (Etzioni in Rothchild & Curry, 1978:304). These nations endowed with conditions of low administrative capacity tend to inevitably create policy vacuums as new policies hastily replace distasteful old ones.

For example, Botswana's scarcity of human fiscal and material resources for administrative purposes remains an inhibiting factor with respect to the development

efforts in the 1970's. Under such circumstances the most prescriptive plans can be rendered ineffective by an insufficiently developed political and administrative structure (Rothchild, et al, 1978). The scarcity of human and financial capitol was largely underscored by the inaction of colonial officials. As a result, administrative agencies could not evolve to meet the "expanded economic and social activities of the independence period" (Rothchild, et al, 1978:24) with an emphasis of redistribution and development. A combination of an ineffective and non-goal oriented bureaucracy presented little promise for implementing an effective and sophisticated programme. In order to cope with these incapacities, both administrative and fiscal, implied a deviation of the policy process as "the politically articulate members of society may come to lose confidence in the efficacy of comprehensive planning before giving it an opportunity to organise the process of change" (Rothchild et al (1978:25). The perception exists that policy analysts begin with laudable policies only to see them atrophy before they are even implemented and quick-fix short-term policy trajectories are expediently chosen.

Debt

Many of the Third World nations find themselves in similar positions (See Booth et al, 1994, p7 for economic indicators of the debt service of developing countries as a percentage of exports) of a climbing debt burden and therefore it is "...unlikely that most southern African countries will be able to advance in the areas of environmental regulation and management until the debt burden is reduced" (Booth et al, 1997:7). Debt repayment is an exogenous variable that impinges on the fiscal control

developing countries have over policy projects and capacity building. These conditions do not allow these countries to develop policy systems or adopt policy tools due to the debt trap.

The above matters seem to run counter to the utility of either rationality or incrementalism in most developing nations. Exogenous variables, such as debt, influences the ability of most Third World nations to adopt policy tools which are contextually driven. "...They can make some basic value decisions over international alignments, trading partners, and nationalisation programmes, but once established, these fundamental preferences curtail subsequent choices on public policies (Rothchild et al, 1978:20).

Still within the realm of incrementalism, Lindblom (1972) has posited two conditions which underscore this model, those policy principles of "fragmentation" and "agreement". The South African environmental policy in the White Paper on Environmental Management Policy (1998) attempts to specifically address these two conditions from and integrated and coordinated perspective.

Fragmentation

In terms of applying incrementalism as a tool of policy analysis, "fragmentation" is perhaps the greatest obstacle to Third World policy analysts. In terms of incrementalism, "fragmentation" of decision units is supposed to bring about checks and balances (Saasa, 1985) and improving upon policy evaluations. Third World

linguistic and cultural diversity adds another dimension of problems to the condition of "fragmentation". Overlaying this diversity, the urbanised educated elites design policies without public inputs which are largely inappropriate and unrealistic.

As a result, the policy type and content is top-down, leaving no room for those who will be affected to check the indiscriminate policy designs. The situation seems no less different in South Africa in terms of its policy-making process where policy structures contain many bureaupathological elements; these are slowly being challenged by policy initiatives like the White Paper on Environmental Management Policy (1998) as it attempts to challenge the bureaucratic syndrome.

Agreement

Lindblom (1972) has argued that agreement amongst those affected by policy options and analysts involved should be used as a test of policy quality. However the institutional and political structures in most developing countries makes it nearly impossible for agreement amongst decision units.

Thus, public inputs often give way to "withinputs" from the bureaucratic elite as the majority of the population are not part the policy process or are too ill-informed to understand its mechanics. "Owing to the dominance of 'withinputs' in the decision-making process in developing countries, many Western analysts have maintained that democratic decision-making in these countries is absent" (Saasa, 1985:317).

'Agreement' is very difficult, if not impossible, to achieve in these conditions where the population is not part of the initial process of agreement about a particular aspect of the policy process and rather only become involved at implementation. Instead policy decisions are usually as a result of top-down, instead of bottom-up processes.

Policy priorities in developed and developing countries

As already emphasised, developing countries suffer from many resource scarcities in terms of implementing effective policy. The sorts of policy priorities which developing countries undertake are in contrast to the issues more developed countries prioritise. There are numerous case studies which illustrate differences in the approach to prioritising policies (adapted from the EEU(a), 1998):

- The city of Leicester, in the United Kingdom prioritises environmental protection and enhancement; energy resource conservation; recycling; pollution management; and promoting a sense of individual responsibility for the built an natural environment
- The City of Vancouver, Canada, prioritises air quality; sustainable land use; solid waste management (re-cycling); hazardous waste management; increasing environmental awareness (education and auditing); and energy utilisation.

Cities in developing countries tend in contrast to prioritise the lack of basic human needs and social equity. These issues include sewage disposal, water reticulation, solid waste removal and management as illustrated by the following case studies:

- Accra, in Ghana, prioritises sanitation, focussing on solid and liquid waste; environmental health; flooding and drainage; and in addressing the problem of pollution of Korle Lagoon;
- Dar-Es-Salaam, Tanzania, identified two main issues for immediate action, viz., solid waste management and servicing urban land. Other issues that were identified included managing surface waters and liquid waste; integrated informal trading into the economy; managing coastal resources; upgrading unserviced settlements; and, managing open spaces and recreational areas.

It is clear from the above that the policy conditionalities and certain resource constraints are bound to influence the sorts of policy issues that governments and analysts are able to pursue. Coupled with this is the notion that the limited resources available to implement environmental management policy within local government will significantly influence the emerging and institutional structures (EEU(a), 1998).

Once issues have been prioritised, underscoring these policies with the principles of sustainable development as outlined by the UNCED, becomes even more challenging and not to mention costly. From the outset it was clear that the success of the seminal initiatives like the UNCED would largely be determined by two factors: adequate provision of financial resources, and the affordable transfer of environmentally sound technology (EST) to developing countries and it is the former aspect that will be explored in the next sections. The reasoning behind this is clear: implementing

Agenda 21 and the conventions are costly, and developing countries can ill-afford additional financial commitments (Wynberg, 1993).

3.5 Financial mechanisms for sustainable development

According to details emanating from the UNCED (1992) report, the then costs of implementing Agenda 21 in developing countries was $600 billion per year between 1993-2000. Of this amount, $125 billion should originate from foreign international aid; this represents $75 billion of concessionary funds over and above the current official assistance ($50 billion). The remaining $475 billion is expected to come form developing countries (Wynberg, 1993). Immediately one is alerted to the degree of sovereignty countries on the receiving end have over their policy issues and development projects. Many developing countries may find themselves of having their policy priorities conditionally tied by international aid agencies and other foreign aid. Support for constructing policies of sustainable are laudable, countries like South Africa should scrutinise present and future foreign investment and be in accordance with agreed codes of conduct (Wynberg, 1993).

With the above in mind this section explores a number initiatives that have been proposed to fund sustainable policy approaches like Agenda 21. The analysis used by Wynberg (1993) will largely underscore the approach in this study; the following mechanisms are largely consistent with those principles emanating from the agreements of Agenda 21.

Official Development Assistance (ODA)

A target of 0.7% of GNP for ODA was initiated in the 1960s, but has only been committed to by a few countries. According to feedback from the "Our Common Future" (1987) report, as a benchmark to measure the UNCED's success, $10 billion would be needed. The result has been very despondent in that the proposed benchmark figure has never been reached.

Another dimension to securing ODA was related to the "guns and butter" issue in terms of the industrialised nations pumping billions of dollars into unsustainable mega military projects. Okie-Fouracre notes: around the time of the Rio Summit, "around 12% of annual global military spending was equivalent to the $125 billion needed to fund sustainable development each year"(cited in Wynberg, 1993:177). One shudders to think what sort of money was spent during South Africa's military excursions into South West Africa/Namibia during its conflict with SWAPO, given that probably only a fraction of this amount would be needed to fund many of South Africa's sustainable policies and projects.

Debt relief

For a long time, the net flow of resources from the developing countries to commercial banks have been detrimental in terms of retaining the "hard" currency necessary for infrastructural development. The World Bank recently announced that it would be selling off its gold bullion as a measure of debt relief which could provide the much needed resources for initiating sustainable development policies; Agenda 21 has been one of the

main drivers behind decisions like those by the World Bank and other First World creditors in terms of scrapping Third World debt.

Other suggested financing mechanisms

Wynberg (1993) notes quite a number of strategies outlined by Agenda 21 (1992) to fund sustainable development initiatives: regional and sub-regional banks, relevant specialised agencies and international organisations, multilateral institutions for capacity-building and technical cooperation, bilateral assistance programmes, voluntary contributions and foreign investment. Other innovative mechanisms include various environmental and economic regulatory incentives such as tradable permits, emissions limits, and taxes which have been alluded to in various South African policy documents and will be examined in the next chapter.

These mechanisms outlined suggest ways in which the UNCED and its core plan, Agenda 21, can complement the financial resources needed to underscore elements of a sustainable development plan throughout the Third World. Although the financial mechanisms of the UNCED are laudable, and a step in the right direction, there are a number of mechanisms which should be prioritised. For example, Federoviski is of the opinion that introducing market pricing for environmental resources would result in an annual transfer from industrialised to developing nations of an estimated $700 billion. Similarly, strictly implementing the "polluter pays principle" and reforming current structures of energy, agriculture and forestry would similarly release massive funds for sustainable development (cited in Wynberg, 1993).

The global division between the developed and less developing nations has been further entrenched due to the lack of serious commitment by the more industrialised nations. The seminal agreements borne by the UNCED (1992) have "...failed to rethink the concept of aid and for ignoring measures relating to trade liberalisation" and "thus in the absence of both reform and financial commitments, a gloomy picture for implementing sustainable development in developing countries is presented" (Wynberg, 1993:183).

This chapter has attempted to portray the limited utility of the rational actor model as well as that of incrementalism in understanding the public policies of the Third World. In addition, it has posited various plausible reasons as to why this is the case and has illustrated that prescriptive policy models do not seem to capture the conditionalities of Third World policy-making. This points to the necessary goal of developing models which are contextually driven; models which take into account that "varying policy contexts may require different tools to explain and appreciate all the variables at play" (Saasa, 1985:318).

The next chapter explores the context of environmental policy formation in South Africa and how adequately prescriptive policy tools respond to new and changing political and institutional realities. As policy methods need to be context specific, South Africa will have to devise policy trajectories which will ensure that environmental policy responds to the needs of all South Africans in a sustainable manner. It is in this context that this study will later assess the relevance of the elements of sustainable development, especially those relating to the financial dimension, as South Africa embarks on assimilating some

measure of a sustainable development policy framework in its post-apartheid policy environment.

CHAPTER 4

Introduction

South Africa finds itself in a position where its infantile democracy seems to be encouraging the development of context specific environmental policy frameworks. This development is underscored by the principles of sustainability and democratic governance, features already peculiar to the more developed democracies.

In the context of being a young democracy and a fast developing nation, one must not also lose sight of the matter that South Africa presents itself as a special case; it is a microcosm of the problems facing the globe with First World infrastructural development amidst Third World poverty. Herein lies the challenge of developing policy frameworks which reconcile the country's affluent minority with the other nearly two-thirds poverty stricken poor. "However, this is not a zero sum game and herein lies the magical ingredient of politics. Effective political leadership and communication can help build popular appreciation of the financial constraints in operations and trade-offs that need to be made. This promises a more tolerant and enlightened electorate but requires greater transparency and probity on the part of government" (Munlsow et al in Fitzgerald et al, 1997:55).

Earlier, reference was made to underscoring environmental policy frameworks with sustainable development indicators. Although this is a laudable strategy, as it resonates well with sound policy development, the imperative of sustainable

development needs to be secured with feasible financial mechanisms and other means.

Under the new democratic legal order, South African environmental policy analysts will have to adopt developmental objectives and strategies which will have to accommodate the entire socio-economic spectrum, and not just a privileged minority accustomed to First World consumption standards and patterns. Evidence of more inclusive environmental policies is emulated by section 24 of the South African Constitution (1996), which makes provision for a so-called "green right", incorporating the truism of a sustainable environment (Knoetze, 1996). However, even with this constitutional recognition of an environmental "right" as one statutory means of securing sustainable development, South Africa's unique policy environment still poses many challenges to the adoption of the international trend of sustainable development. This section will assess to what extent post-apartheid South African policy processes incorporate the elements of sustainable development as espoused by seminal agreements like Agenda 21 (1992), the reports of the World Commission on Environment and Development (WCED) (1987) and the UNCED, 1992.

Under the apartheid policy-making era, First World policy tools such as incrementalism ignored the needs of the majority and premised policy decisions on minority consumption patterns that were akin to those living in the more industrialised nations. These policies were based on unsustainable consumption

patterns and thus a more sustainable policy synthesis will be necessary in the post-apartheid era. This synthesis will have to respond to the concerns of environmental justice and the demand for opportunities of equitable advancement. The new democratic dispensation will create more opportunities for a movement towards sustainable development than a South Africa in international isolation and fixed on an apartheid policy (Braune, 1992). This point is driven home by Paehlke in Fischer et al (1995:127):"environmental protection will be most effectively achieved through the continuing enhancement of democratic practices. Pluralistic democracy advanced as the only system capable of legitimately balancing basic environmental values – ecology, health and sustainability – against other first-order values such as social justice, economic prosperity and national security. Democracy... is our best hope for mobilising a transition to environmental sustainability"(p.127).

Effective and sustainable environmental policy will only be met if South Africa takes "...advantage of the comparative resource advantages and devise[s] appropriate policy strategies which do not under-estimate the constraints on implementation" (Cloete et al, 1991:278). Against the backdrop of the conditionalities under which contemporary policy is made, and the obstacles which Third World policy-makers endure, we examine environmental policy-making and the utility of contemporary decision-making models in its design in the new South Africa. Thus, a basic question posed by the new and challenging environmental policy-making context is "whether theories and concepts, with respect to political decision-making, developed in previous decades, are adequate for dealing with environmental concerns and for

predicting how the system and individuals will respond to environmental imperatives" (Van Reenen, 1994:36-37).

In keeping with the above, the next millennium for South Africa and many other Third World countries will be a critical period for setting environmental policy, as well as re-defining the sociopolitical and scientific agendas for the 21st century. This study will also look at one important environmental policy area, that of waste management, which occurs in the starkest relief in a country like South Africa. The relevance of elements of sustainable development as part of a waste policy strategy will also be explored. Strategy elements will be addressed with particular reference to pollution and waste management which will point South African analysts towards development strategies which are economically, socially and environmentally sustainable.

4.1 The context for environmental policy analysis

In South Africa, the development of environmental policy has been formulated and implemented for several centuries, but it is only in the 1970s that the focus of concern has become more comprehensive. Pioneers in the publication of the first government environmental policy initiatives were the White Paper on National Policy, regarding Environmental Conservation of 1980, followed by several other White Papers and the most recent policy initiative, the much heralded White Paper on Environmental Policy Management for South Africa (1998).

The overarching framework policy of the White Paper is that it applies to all government institutions and all activities that impact on environmental concerns. This White Paper (1998:9&13) also "contains the government's environmental management policy and describes the context in which it has been developed and is part of the government's new vision for integrated and holistic management system for the environment...". The White Paper on Environmental Management 1998 as well as other environmental policy initiatives will be used to analyse to what extent First World policy techniques are able to respond to South Africa's environmental policy process.

4.2 Rationality and South African environmental policy-making

Material constraints

There are a number of material constraints which seem to impede effective policy implementation in most Third World societies, as well as South Africa. These include a lack of expertise, training, information technology and infrastructure. These constraints also have an impact on the sorts of models of analysis which South Africa is able to employ in formulating environmental policy.

Inadequate, inaccurate and unreliable information

The lack of rudimentary and unreliable information forces policy-makers to project policy processes under a cloud of risk and uncertainty, leading to miscalculations and

misdiagnoses (Smith, 1985). Commenting on the status of information adequacy in South Africa today, the White Paper on Environmental Management Policy (1998) states that at present much important information is inaccurate, incomplete and inaccessible. A case in point is approximately 1 600 'scheduled processes' which fall under the Atmospheric Pollution Prevention Act (1965), about which no information is available to the public (Muller, 1995). In another instance, the South African government severely restricted energy related information and statistics. The Petroleum Producers Act (No. 120 of 1970) prohibited publication or dissemination of information on the source, manufacture and consumption of oil products produced, or acquired, by South Africa.

The lack of a comprehensive, accurate and relevant data base is also largely attributed to the types of institutions and organisations which undertook environmental policy research and the establishment of other important social and economic indicators. Of importance here, are the parastatals, universities and NGOs, of which the Center for Scientific and Information Research (CSIR) and the Foundation for Research and Development (FRD) constitute the most important parastatal research centers. With regard to research and information management specialists in the CSIR, universities had little sense that their research had any bearing; NGOs were poorly funded and ill articulated (Orkin et al, 1997).

South African analysts find themselves in a position where data is skewed and unreliable and have to deviate from the conventional way of formulating policies.

Information management was skewed by powerful parastatals and research centers like the Foundation for Research and Development (FRD) and the Council for Scientific and Industrial Research (CSIR). These organisations had almost 100% of their research efforts funded by the state. A case of not biting the hand that feeds you came to describe the relationship between these institutions and government (Orkin et al, 1997).

Effective policy formulation is further hampered, due to Universities being subsidised in the past on the basis of communication with their peers rather than communication with the public, funding criteria stressing the importance of peer review (Breen, Mander & Little in Orkin et al, 1997). These constraints greatly reduced a more widely accessible pool of data, but there is hope that in the future Universities will produce more policy relevant research which is contextually driven and can effectively address the policy agenda of post-apartheid South Africa.

These conditions add to a great measure of uncertainty in the policy process and it is unlikely that the rational model of analysis can be utilised in these conditions. As (Hanekom & Sharkansky, 1993:97) note, uncertainty in the South African policy making context appears to produce "...a variety of unsettling conditions that seem likely to add to their own disturbances to any aspiration for a rational, technocratic appraoch to society's problems".

The White Paper (1998) acknowledges that reliable and accurate information is a basic requirement for democratic environmental governance, as affected parties which do not have access to information cannot effectively participate. Although the DEAT has launched many initiatives in terms of Consultative National Environmental Policy Process (CONNEP), Committee of Ministers and Members of the Executive Councils: Environment and Nature Conservation (MINMECC), the Center for Scientific Information and Research (CSIR), the Foundation for Research and Development (FRD) and other information capturing initiatives, there still remain impediments to adopting the prescriptive policy instruments. As stated earlier, the situation is made less optimistic in that the White Paper (1998:74) has indicated that, in terms of information management, much important information is inaccurate, incomplete, contradictory, and inaccessible...".

Lack of skilled human capital

In addition, there is also a lack of skilled and experienced manpower and technical backwardness in South Africa, impeding the decisions required to sustain the types of policy decisions prescribed by the rational-deductive model. In an effort to address the lack of expertise in the DEAT, in 1989 the Council for the Environment (CE) was established.

From a sustainable development perspective, "people are at the heart of the quest for sustainablility, both as a means by which development activities are carried out, and as the reason why development happens in the first place" (Cook in Fitzgerald et al

1997:12). Looking at one of post-apartheid's most ambitious redistributive policy projects, the implementation of the RDP was dependent on the rapid development of human capacity. Thus, one could probably conclude that its failure was largely due to the fact that there was not enough improvement of magnitude order in performance in South Africa's public institutions, based on a massive increase in capacity (Cook in Fitzgerald et al 1997). The White Paper on Environmental Management Policy 1998 is explicit in stating the need to promote capacity building programmes and projects that assist people to manage their environmental policies and the environment per se, paying particular attention to using local as well as external knowledge to develop social and organisational skills. The White Paper on Environmental Management Policy (1998:73) underscores that there are capacity problems in government due to the lack of "human, financial and organisational resources to enable civil society, and community based organisations in particular, to participate in environmental management".

The lack of skilled manpower is partly due to the alienation of the majority of South Africans from the policy arena and produced what has come to be known as the "failure complex" (Hirschman in Saasa, 1985). This is largely due to the fact that "for the majority of our people environmental issues mean no clean water, no electricity and no proper sanitation" (Cock & Koch, 1991:4). The implementation of policy experienced opposition from those groups alienated from the policy process and contributed to implementation taking place with a distinct lack of enthusiasm (Smith, 1985), and hence the development of a "failure complex".

Thus the legacy of the authoritarian conservative perspective is that many South Africans view environmental issues and policies with suspicion, contributing to a dearth of human capitol in terms of participating in the environmental policy-making process. This is also reflected in the negative environmental perceptions and attitudes of many black people, ranging from apathy to hostility (Khan in Cock et al, 1991:1).

Urban-rural divide

Another concern was the urban developed bias which the government displayed in its research commissions to the CSRI (Orkin, et al, 1997). By implication, the majority of South African's did not engage through healthy and vigorous debate, claiming their rightful stake in the environmental agenda, and consequently, lost out on certain skills which could have been useful in terms of designing and initiating policy. Policy formulation and design is generated in isolation from civil society, the bureaucrats having the most important input. The consequent result is a history of dissatisfaction at an illegitimate policy process and a largely non-proactive public in environmental matters. According to an interviewee quoted by Orkin et al (1997), the DEAT's concept of participation is described as "handing a draft paper around the table".

Mogomane (1994:2) reflects on the lack of environmental policy skills among South Africans as a whole: "Most of the time of blacks is taken up by struggle issues and hence little energy remains for them to contend with environmental issues... township and rural/village life offers very little exposure to the connection of immediate

individual action to the broader and longer implications of environmental degradation". The rational comprehensive model is thus further limited due to the policy skills and knowledge base occurring exclusively within the state, with policy-relevant research contributions and, to a much lessor extent, for concerned NGOs.

Rigidity and centralisation

There was no policy window for pluralistic group interaction from which normatively sound resource policies, politics and programmes could emerge. Thus the political and institutional structure suffered from a 'bureaucratic' syndrome where "political decision-making in South Africa has always been characterised by rigid, centralised authoritarianism...The predominant emphasis on policy-formulation and political decision making in environmental affairs has until now been on the resolution of conflict and struggle... and very little information has been given on how the system handles scientific and technical knowledge and information" (Van Reenen, 1994:37).

Incrementalism amidst rapid social change

Post-apartheid South Africa finds itself in a position to brake from the past policy practices which relied largely on incremental policy analysis. Incrementalism as a policy tool, was instituted as part of a political strategy to maintain the status quo of apartheid. The apartheid government instituted its programme of reform in the early 1980s via incrementalism as a policy tool of analysis. Incrementalism in this sense, was politically expedient in that "Agreement comes easier in policy making when the items in dispute are only increases or decreases or modifications to existing programmes" contributing to greater institutional and political stability (Dye, 1985:34).

modifications to existing programmes" contributing to greater institutional and political stability (Dye, 1985:34).

As a consequence, this model has the potential to reduce conflict. It has been documented that since 1982 political changes have mainly been incremental, as illustrated by political institutional developments during these years. (Cloete in Cloete et al, 1991). Apartheid South Africa did not want to alienate or destablise its support base, and thus incrementalism was favoured over more radical and sweeping policy models.

Incrementalism consequently dominated policy formulation under the old South Africa, but given the transition to 'the new South Africa', "the advent of full democracy and its associated developments gave rise to a fundamental revision of government policy and the procedure by which it was determined. Every government department has become involved in initiatives aimed at producing and implementing new policies" (Rabie, 1997:316). A strong break from past policy making procedures, akin to that of "selective radicalism" (Dror, 1988) seems to be happening in post-apartheid South Africa in order to bring the present government's policies more in line with the needs and demands of society.

New policy directions are also indicated by the fact that "previous formulation of the environmental right contained no explicit obligation on the State to take any positive steps to uphold the environmental right" (Winstanley, 1997:138). These new policy

and legislative principles deviate from incrementalism, as they completely replace or fill the legislative and policy vacuum relating to the environmental "right".

Inclusive environmental policy formulation

The move from seeing environmental policy issues shift from the elitist and conservative perspective, to planning for the environment in a broader and more grassroots perspective, indicates another radical policy break from the past. This also challenged the bureaucratic syndrome of top-down and exclusionary conduct, which came to characterise environmental policy formulation and decision-making in the past. This shift comes at a time when the policy process is being greatly democratised. The net effect being that "the political liberties granted to citizens of free societies can thereby generate and sustain environmental policies" (Payne, 1995:45).

In the past, environmental policy was underscored by an ethos of conservative authoritarianism. This perspective is captured by a rural worker: "If conservation means losing water rights, losing grazing and arable land, and being dumped in a resettlement area without even the most rudimentary infrastructure and services, as was the case when the Temple Elephant Park was declared in 1983, this can only promote a vigorous anti-conservation ideology among the rural communities of South Africa" (Richard Clasey in Cock et al, 1991:2). The White Paper on Environmental Management Policy (1998) concurs in this respect, noting that environmental issues

in South Africa have had a low priority, being narrowly defined as nature conservation. A previous minister of Environmental Affairs has been quoted as saying that people who support "green" movements are "fanatics who do not listen to reason" (Cock et al, 1991:5).

The changes that post-apartheid South Africa is undergoing at a societal and organisational level seem to be closely reflected in the types of environmental policy currently being implemented. The White Paper on Environmental Management Policy (1998) underscores the radical stance undertaken by the DEAT, by committing itself to (p.13) "equitable access to land and resources", and "public participation in environmental governance", policy goals unprecedented during apartheid. In this context, incremental modes of analysis seem singularly inappropriate. The present DEAT seems bound to undertake a policy emphasis underscored by sweeping breaks from the past policy approaches, such as incrementalism, in the midst of rapidly evolving socioeconomic conditions.

In keeping with the above themes, Rondinelli (1982) also underscores the difficulty in employing the rational model in the South African context: Since the ability of planners and administrators to understand complex social problems is always limited, as is the case with South Africa's many languages and ethnic groupings, partial and tentative are bound to be presented. As the rational model requires much detailed information before a decision can be made, the policy environment lacks many socio-economic indicators which are at the one hand not easily amenable to quantification,

and on the other, just not well-developed. This brings us to the next point, which is to remain a contentious issue in future policy-making. As has been explored, the policy making-process could be contentious, especially in diverse societies so characteristic of the developing world.

Ranking and ordering of values

South Africa's policy-making seems to be happening against a background of changing values and goals and has important implications for rational modes of analysis. The complexity of ranking and ordering value preferences must also be seen against the background that the broader South African society has not previously been involved in the formulation of environmental policy.

"Policy formulation is normative in the sense that it is concerned with the recommendations and the rules based on standards and values of society within that country" (Park, 1986:25). In South Africa the values and standards are rapidly shifting amidst sweeping institutional and societal changes and will consequently be difficult to rank and order.

The environmental movement and the policy process in South Africa may face huge structural constraints in this regard. This is evident in the attempt to prioritise diverse interests of labour, on the one hand, and capitol on the other. As Lincoln (1992:7) asserts, the constraints "...are made more formidable by the strength and political inclination of South Africa's labour movement and the general thrust of the broader

liberation movements: a happy marriage of socialist and ecocentric politics is without historical precedent in capitalist society"(p.7).

Park (1986:25) is of the opinion that "policy decisions are not neutral or value free. The value system underlying decisions is a very important influence on how the decisions are made, and what factors are taken into account". A wide variety of values involved in South Africa's environmental policy process will include "aesthetics, democracy, efficiency, equality, freedom, material comfort, individualism, nationalism and science. Those people involved in environmental decision-making should strive to make explicit the contextual factors which govern their decisions..." (Potter & Norville in Park, 1986:25).

The issue of allocating values or interests which are intrinsic to the policy process becomes complex for policy analysts working in a diverse and multifaceted society such as South Africa. David Easton (1953), in his seminal definition, defines public policy as the authoritative allocations of values for society. Bromley (1995) asserts that policy is nothing but a struggle over whose interests or values the coercive power of the state shall advance. In terms of environmental policy, the concern is one of who shall determine the nature and extent of natural resource use in the new South Africa such as land and clean water.

As for the task of ordering and ranking people's value preferences before a 'rational' decision is made, this task seems Herculean in the quest of creating a more

representative South Africa. The challenge of developing indicators of a policy for sustainable development for South Africa becomes even more contentious when one considers its socio-economic make-up. On the one hand, part of its population emanates First World consumption patterns, generally accepting the need for environmental sustainability to maintain the quality of life. While on the other hand, there are those who have been motivated by the struggle of the individual for survival and material gain, regardless of environmental consequences (Pienaar, 1991).

How does one rank or reconcile the value preferences from one group who sees the infant mortality rate as not having the same fashionable appeal as the conservation of the rhino (Cock et al, 1991)? In other words, ranking goals in the context of conflicting values will prove difficult for analysts, as the rural communities have to share the same natural resources as their middle-class counterparts. According to Bromley (1995:55), "new policies will be particularly difficult in South Africa because of the highly charged legacy of the past...Those formerly well served will balk at the loss of social and economic advantage. Those seriously deprived in the past are now quite ready to share in the benefits of the future".

Third World demographics do not approximate the homogenous populations of the First World. Those that participate in the policy process, if they get the chance at all, are composed of many ethnic origins and are often socially fragmented. South Africa has over 11 official languages with many diverse groupings and administrative departments coming in from the former homelands. This, in turn, provides greatly

diverging views on the cultural aspects of an environmental policy in South Africa. The immensity of the task was demonstrated during CONNEPP 1 August 1995, where 600 delegates, representing all sectors of society, attended the first phase of the policy process (White Paper on EPM, 1998). Canada's green plan in which more than 15000 people were consulted in the process and over 5 000 meetings were held for public consultation, demonstrated the difficulties in terms of satisfactorily representing societal values (Muller, 1995).

Achieving sustainable values, practices and aspirations is a crucial challenge given that the minority can longer rely on First World consumption patterns (Bray, 1998). South Africa is a microcosm of the globe's consumption patterns, where a majority is beset with underdevelopment and a minority with an abundance of natural resources. As such, "behavioural changes towards the new ecological paradigm (which should be seen in the context of reconstruction and reconciliation), may prove to be quite difficult" (Bray, 1998:12).

In concluding the above themes relating to the ranking and ordering of value preferences, rational tools of policy analysis may be put at bay for the moment in South Africa, as so many conflictual values seem to be at stake. It may well be that the ecological paradigm requires a slower pace of development, the ability to act before all the information is in, and the acceptance that some ecological dynamics are unknowable. This observation also seems to be incongruent with the detailed

information required by the rational comprehensive model before a policy decision can be made, hence the limited applicability of this model.

The above shortcomings of the rational actor model, as a tool of analysis for understanding public policy in South Africa, seems to be at odds with its policy environment. Underlying much, the argument is the fact that the system of governance is politicised, and rationality takes the back seat. The following sections follow the same format, in which an appraisal of the incremental model is given.

4.3 Incrementalism and South African environmental policy-making

In the past, South African policy-making has, to a large extent, courted incrementalism. In fact, Cloete et al (1991) were very explicit about South Africa's use of this model, particularly during the decade of the 1980s which showed a definite use of the incremental strategy in government policy reforms. Incrementalism may have been the most suitable policy model of analysis then, given that the beneficiaries of these polieies were treated as if part of an industrialised society, and indeed, their consumption patterns attested to this. Today, South Africans may find this choice of policy analysis singularly inappropriate for a number of reasons.

Resource scarcities and human capacity

In South Africa, the DEAT has always received the smallest cut of the budget and it has not developed the status of its counterparts, such as the Ministry of Defence. The environment has always been a junior ministry, with the lowest share of the budget –

0.3 per cent in 1994, as compared to the Department of Defence, which received just under 20% (Orkin, et al, 1997). It has been quoted by Muller (1995) that the DEAT has deliberately been kept a junior ministry for the last 40 years. If the government wanted to demote a minister or demploy just before retirement, he/she was assigned the portfolio of the DEAT.

The report of the IDRC Mission (1994) states that many of the problems experienced in the management of environmental resources in South Africa are due to the junior status incumbent on the DEAT and that: "Without a strong 'champion', national environment security is at risk from shorter term and more sectoral interests, and there is the danger of neglecting the importance of the 'precautionary principle' in pursuing economic and social goals" (IDRC in Muller, 1995:70).

"Bureaupathology" in the South African policy process

According to Cloete (1991), despite certain exceptions, the chronology of events in the 1980s indicated a definite trend in governmental reforms, in contrast to the so-called 'rational' model of policy-making. The type of administrative structure closely underscored the type policy process and policy models in the making of environmental decisions.

The system of decision making which pervaded all levels of governance and policy was characterised by rigid, centralised authoritarianism. "The predominant emphasis on policy-formulation and political decision-making in environmental affairs has until

now been on the resolution of conflict and struggle... the application of consensus models to decisional situations has been totally absent and very little information has been given on how the system handles scientific and technical knowledge and information. Political decision-making is suffering from a bureaucratic syndrome which results in the unquestioned and subservient acceptance of the norms and values imposed by powerful centralised pro-government bureaucratic institutions" (Van Reenen, 1994:37).

In keeping with the above notion of the pathologies which characterised the apartheid policy process, the day-to-day policy-making must avoid a rush to the technical, not only because it may result in bad environmental policy, but also because a politically and administratively privileged science, can pose a threat to democratic decision-making.

Lack of public input

Apartheid policy-making agents and structures failed to notice that although scientists and technocrats were crucial to the policy process, science in and of itself, was not sufficient to the task, for environmental policy decisions in almost every case, involve a value as well as a scientific component. Indeed, scientists and political elites can usefully contribute to the policy process, but their views are most decidedly not the only ones that must be heard. As the vestiges of apartheid have shown, "technocracy and environmentalism are, in many ways, opposite poles" (Fischer et al, 1995:131).

The implications have been that policy outcomes have been based on inputs from political and bureaucratic elites and, as a result, policies did not have the interests of the people at hand. This leads to a lack of accountability as well as a waste of resources due to the wasteful and ineffective allocation of resources, as policy objectives and goals are not consistent with public inputs and all affected and interested parties. This top-down style of policy management underscored the bureaucratic syndrome which came to characterise the apartheid policy process and its associated decision-making units suffered.

Incrementalism and the new millennium

Under apartheid, incrementalism as a tool of policy analysis was also fueled by the fact that policies were designed to cater for a white minority who were accustomed to policy conditionalities mostly found in more industrialised countries. Under apartheid, policy processes occurred in a vacuum divorced from the realities and needs of most South Africans. As a result, changes in policy needed only to occur incrementally, as no new policies, such those akin to the RDP, could compete with those championed by apartheid. From a purely political perspective, incrementalism was still appropriate, as it served the purpose of not alienating its support base and destabilising society, whilst achieving substantial reform (Cloete, 1991). Reiterating earlier observations, incrementalism became "politically expedient" (Dye, 1978:33) in that apartheid policy analysts wanted to reduce conflict, maintain stability and preserve apartheid. The political climate is very different in South Africa today and the types of policies it pursues can no longer be for the sake of political expedience, but need rather be in tune with the policy realities of most South Africans.

Environmental policy and the new millennium

With respect to environmental policy-making, it is essential that current South African administrative practice and procedure are fundamentally re-evaluated against the principles of good democratic governance (Rabie, 1997). The "normalisation" of the policy process in post-apartheid South Africa is increasingly being driven by good governance, "incorporating political elites which are more representative of the majority of the population and society at large, slowly being drawn into the policy process..."(Cloete et al, 1991:275).

Evidence of huge shifts in policy emphasis is found in South Africa' s RDP, and the new Constitution (1996) makes specific provision for an environmental right in the Bill of Rights and other provisions which impact on the environment. These provisions, which pertain to the making of environmental law and policy, seem to be happening at a time when the changing socio-political climate has also reflected public frustration with the policy process, and placed demands for more equitable access to resources, and greater public participation in decisions affecting the environment, that is, a greater push for the democratisation of the policy process.

The inclusion of various provisions will build up a significant body of jurisprudence, and this will improve the quality of South Africans and their environment (Glazewski, 1994). Such groundbreaking reforms are in line with South Africa's goals of social reconstruction and more democratic environmental governance. In this context,

incrementalism seems out of touch with the environmental policy-making needs and realities of post-apartheid South Africa, as "selective radicalism" (Dror, 1988) seems the way forward for effective environmental policy formation and the normalisation of the policy process. More recent shifts towards the normalisation of the policy process may be found in the South African White Paper on Environmental Management Policy 1998, to which further scrutiny is presented.

The White Paper on Environmental Management Policy 1998: more scope

In terms of its scope, the White Paper on Environmental Management Policy (1998) has been hailed as being the most comprehensive, capable of filling policy vacuums brought about by the "bureaucratic" syndrome characteristic of past environmental policymaking. The broad-ranging compass of this White Paper is unprecedented, for its actions impact even on other government departments and all functions relating to the environment. Not even the maligned and pervasive policy of apartheid remotely affected such a wide variety of actions (Rabie, 1997).

For example, under apartheid, functions like atmospheric pollution control were with the Department of Health and Population Development, and water pollution with the Department of Water Affairs. The situation is currently very similar and this is why the White Paper seems so unprecedented in its scope, as it aims to eventually amalgamate those functions. This is partly due to the all-embracing and broad definition of the "environment" to include the biosphere in which people and other organisms live (White Paper, 1998).

This White Paper (1998), as well as other environmental policy initiatives like the White Paper on the Conservation and Sustainable Use of South Africa's Biological Diversity (1997), are products of a consultative process and as a consequence "...indicate a fundamental change away from previous narrow, fragmented, discriminatory and ineffective policies" (Bray, 1998:11), as well as the "normalisation" of the policy process.

Incrementalism and the White Paper

The above shortcomings place severe constraints on incorporating incrementalism as a tool of environmental policy analysis and formulation. The ideological conservatism which underscored the apartheid era of policy-making seems to be eroding in the face of "top-down policy reform gradually being replaced with bottom-up policy change (Cloete et al, 1991). The majority of South Africans and it's analysts want to pursue policies which are more representative of the needs of today, and government will be wise not to formulate policies too incrementally. This may just result in losing public confidence, limited changes being viewed as being pro-inertia and out of touch with the urgent pace at which policy is to be pursued (Saasa, 1985).

In post-apartheid South Africa, policy changes unfold within the context of a "populist African state" (Cloete, 1991:43) with a policy process which will be more in congruence with the realities of a democratic South Africa that is contextually driven and seems to be underscoring the policy change process. Contextually driven policy, in addition to the "normalisation" of the policy process, may create greater

legitimacy at the mass level and avoid the pitfalls of policy error that most other Third World nations have experienced. These factors can only enhance the potential for better implementation of environmental policy.

The above themes bring this section to a very important dimension of incrementalism, that of its reliance on "agreement" and "fragmentation" of decision units as the test of a policy's good quality, where analogously these decision units represent various government ministries, departments, the public and affected individuals or groups. The focus on these two issues is reiterated by Kamieniecki et al (1968): a fragmented structure permits multiple actors and multiple political units to initiate, participate, and partake in coalition activity and may produce results where a hierarchical centralised structure may not. Similarly, Dror (1988) is of the opinion that in regard to "some requisites of high-quality policy-making fragmentation has advantages. For example, ...fragmentation may be conducive to alternative innovations of policy learning" (p. 108). Furthermore, a fragmented policy system facilitates entrepreneurship because of the multiplicity of different political settings and widely dispersed resources increases the opportunity and motivation for risk-taking involved in innovative change (Ingram Ullery in Kamieniecki, O'Brien & Clarke, 1986:19); an approach which South Africa's environmental policy-making process is more likely than not to benefit from.

Paying more detail to these features of incrementalism is apt, given that the White Paper on Environmental Management Policy (1998) has as unique challenge of the

integration and coordination of all decision units which are affected by environmental policy and its management.

Fragmentation and agreement: the White Paper on Environmental Management Policy (1998)

In South Africa's environmental policy process, ineffective policy implementation is largely due the fact that they fail to start with the logic of identifying which level in the policy hierarchy (the policy hierarchy consists of horizontal and vertical fragmentation of decision units) is the necessary and sufficient one for choice about environmental matters as well as clearly communicating this choice (Bromley, 1995). This approach to environmental policy formulation is largely due to the "bureaucratic" syndrome which was inherited from the apartheid era, characterised by rigid and centralised authoritarianism.

In addition, as the certain levels of governance have inadequate resources to implement policies, central governments take over functions from sub-national authorities because of the latter's inability to perform such services adequately (Kasfir, 1983; Rondinelli, Nellis & Cheema, 1984 in Cameron, 1991). Consequently, the most routine policy decision must be confirmed with some central authority, causing delays and duplications in the policy implementation process.

Another point of fragmentation is that the South African Constitution (1996) which has federalism at heart will further entrench fragmentation in terms of both

environmental legislation and national environmental management. The new Constitution (1996) makes provision for provinces to undertake autonomous and concurrent decisions, but the latter may create unique provincial goals and targets and this would lead to the duplication and fragmentation of policy goals.

Although fragmentation of policy units seem imminent, there are possibilities of policy initiatives pursuing policy processes which allow for more diverse and fragmented input centers of power and in this respect may approximate the "fragmentation" which incrementalism demands. In terms of implementing environmental policy, a much broader polity will be captured than before. Indeed, a perennial criticism of the DEAT is the total lack of consultation in public policy formulation, as chief policy inputs come from senior bureaucrats. As one public official remarked not too long ago from the DEAT, public participation as akin to "handing a draft paper around the table" (quoted in Orkin et al, 1997:461).

In the above sense, South Africa does not seem to be approaching the "normalisation" of the policy process and this further erodes the confidence of developing a policy system which has in-built checks and balances. These sorts of policy actions do not seem to meet the normative requirements of incrementalism that there ought to be some fragmentation of decision units.

According to Lindblom (1972), agreement among analysts and those affected by the policy process, should be used as a test for the quality of policy. The structure of the DEAT has been such that an integrated environmental response has been nearly Herculean. Due to many functions relating to the environmental policy are found in other departments and environmental policy reform in South Africa finds considerable fragmentation in both the horizontal and vertical sense. Horizontal fragmentation is found where a variety of departments have competence for but a piece of the environmental sphere. Vertical fragmentation is found when authority over the environment is scattered among the three tiers of government (Bromley, 1997).

Muller (1995) goes on to note that "one of the reasons cited for the fragmentation is that the DEAT has no regional departments enabling monitoring of the situation, except for the Sea Fisheries Department in the Cape". In addition, Loots (1994:23) notes that "the Presidents Council Report on a National Environmental Management Systems identifies the fragmented nature of the environmental legislation and diffusion of responsibility for the administration and enforcement thereof as being the most serious problems relating to environmental law in South Africa".

Reiterating earlier observations, a fragmented policy culture becomes apparent in the case where policy on air pollution is formulated within the Health department and water pollution within Water Affairs and Forestry. This imparts a fragmented and duplicated nature of environmental policy and legislation which is scattered around

different departments and brings about uncoordinated and uncooperative efforts amongst departments (Phadu in Orkin et al, 1997). As Rabie (1997:321) notes: "for the DEAT to coordinate and integrate the environmentally relevant subjects of the many current policy initiatives of various central government departments, with its own initiatives will already constitute a formidable challenge". This brings us to a brief exploration concerning the policy workings and structure of the DEAT

Lead agent: the DEAT as "super department"

In terms of the White Paper on Environmental Management Policy (1998), fragmentation will probably be further offset due to the unique status which the White Paper confers upon the DEAT. This responsibility is necessary if it is to meet the Herculean challenge of coordinating and managing decision units which are affected by the environment. The challenge itself is immense as environmental concerns seem to cut across all decision units and territorial integrity often raises questions of jurisdiction.

In principle, unitary organisations substitute a single power for intergovernmental relations or other programme features that diffuse programme control and are generally run from the top (McCurdy, 1968). Extending this principle of a unitary decision system, the White Paper (1998) appointed the DEAT as the lead agent in which it is responsible for exercising government's custodianship of the environment and to integrate all spheres of governmental functions affecting the environment. Lindblom (1972) would see this as creating the policy environment where policy

outcomes would be akin to that of offshoots of centralised policy-making rather than products of multiple decisions of fragmented state institutions, or aggregates of various conflicting value preferences (Saasa, 1985). This underscores the "bureaucratic" syndrome so ubiquitous to the policy-making process of most Third World nations.

However, this unitary structure of the DEAT as lead agent may produce a policy process characterised by greater overall efficiency, both administratively and in the way decisions are made. Given the administrative incapacity experienced by the DEAT, this would be most welcome. This efficiency is underscored by the White Paper on Environmental Management Policy (1998) giving more opportunity for intergovernmental jurisdiction over environmental legislation and policy decisions (McCurdy, 1968). This will allow for less interference, duplication and time delays in the implementation of environmental policy. Indeed, as Rabie (1997:320) pointed out on the previous draft of the White Paper on Environmental Management Policy (1998): The conferral of coercive powers on the DEAT will elevate it to a super department and will accordingly violate the autonomy which individual government departments enjoy.

The DEAT and local level policy implementation:

Cameron (1991) has identified the lack of both material and human resources for the failure of the implementation of policies at local government. There is often a lack of trained staff at the local level of government and this is due to the more skilled human

resources being located at the central government. For this reason, the DEAT as lead agent in the implementation and coordination of environmental policies, may be in a position to ensure less "...administrative inefficiency and the failure of decentralisation programmes" (Mawhood, et al in Cameron, 1991). Thus the lack of resources not only at the vertical level (between levels of governance), but also at the horizontal (the bureaucracy and its polity) level makes it conducive for the DEAT to take over these functions.

The absence of a "super department" DEAT has shown by experience, that should the DEAT merely exercise advisory powers (up till now it has always been a junior ministry) over other departments, coordination will tend to fail. This "super status" of the DEAT is tempered by the notion that the South African Constitution (1996) renders some environmentally related areas as concurrent functions between national and provincial tiers of governance. Environmental "programmes are overly susceptible to political interference" (McCurdy, 1968:88), especially in South Africa with its future emphasis on federalism. South Africa's vertical system of fragmentation provides politicians with the opportunity to interfere with environmental policy programmes, especially during the implementation phase (McCurdy, 1968). If the White Paper (1998) is to rise to the unique administrative and institutional challenge of providing integrated and coordinated environmental management, then interference by politicians is the last thing it would need, hence, the proposal of conferring the DEAT lead agent status.

Even as South Africa makes its transition to a new democratic dispensation, fragmentation still persists in the drafting of policy; this was most notably happening with the passing of the Environmental Conservation Amendment Bill. The lack of inputs from the environment was most evident in that "neither the Council for the Environment, nor the National Parks Board, nor any of the provincial nature conservation departments, nor any NGOs, nor the public at large were consulted before the publication of the Bill (Van Reenen, 1994:40).

Allied to Lindblom's criterion of fragmentation, the absence of fragmentation is supposed to allow for little input from the populace. "...Policy-makers in developing countries make efforts to find intellectual solutions to perceived policy problems, often independent of the 'illiterate' and 'apathetic' populace"(Saasa, 1985:316). The lack of public awareness and community involvement in environmental management policy formulation and implementation has been linked to a "lack of political will" (USAID cited in EEU(a), 1998). South Africa may have suffered from such limited public inputs in earlier environmental policy initiatives, but under its new dispensation, as portrayed by the White Paper on Environmental Management Policy (1998), things may be looking very differently as the following section shows.

The policy process and public inputs

The White Paper on a Policy on a National Environmental System for South Africa ignore policy inputs to a large extent. "The Department's commitment to approach environmental management on the basis of partnership between government and the

people was contradicted by the absence of reference to contributions of NGOs, let alone individuals and the public at large, involved in government protection (Van Reenen, 1994). Since the policy process has become more democratised the White Paper on Environmental Management Policy (1998) has made considerable headway in terms of incorporating and acknowledging that public participation and policy input in South Africa tends to a "normalisation" of the policy process.

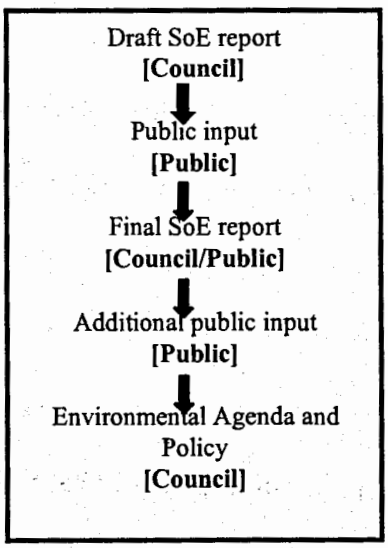
Other essential vehicles for involving civil society and implementing environmental policy include partnerships between civil society and local government (ICLEI cited in EEU(a), 1998). The idea of a partnership implies one of equal footing in terms of access to resources. Often this is not the case in many "developing countries where sectors of society, especially community organisations, lack the capacity, including skills, organisational abilities and finance, to participate as equal partners" (EEU(a), 1998:39).

Many instances of the democratisation of the policy process abound in the formulation of the White Paper on Environmental Management Policy (1998). CONNEP and MINMEC were instrumental vehicles for involving the broader South Africa society; comprehensive participation is a corner stone of this White Paper (1998). Among the initiatives to involve the public were: the staging of a national conference of 600 delegates in Johannesburg, representing major sectors and stakeholders who reached an agreement on a participatory process to develop a new national environmental policy; various discussion documents relating to

environmental management, including MINMEC, a multi-stakeholder team consisting of business, industry, community based organisations, provincial governments, NGOs and organised labour (Van Reenen, 1997). CONNEPP TWO was held from the 24-25 January 1997 which supported a similar comprehensive public approach to environmental policy-making which was included in the White Paper on Environmental Management Policy (1998).

For policy to be relevant, inclusive and effective, public participation must be essential to the policy process. "Thus, goals and objectives cannot be derived from scientific studies alone. Integration of scientific and popular input is essential for the formulation of relevant and informed policy" (EEU(a), 1998:28). South Africa has undertaken public initiatives to include the broader polity, but not to the extent such as the Canadian Green Plan. The City of Vancouver policy model shows exactly when and how public participation was incorporated into the policy process as illustrated in Figure 2.

Figure 2: Policy-making process of the City of Vancouver, Canada



Source: EEU(a), 1998

The public should be involved from the outset of the process, thereby ensuring that priorities are correlated with public demands and perceptions. Mechanisms to facilitate public inputs include councils such as those found in the City of Santos, Brazil, which have been used for increasing public participation in policy formulation and planning. Other means of including public inputs include: clear delegation of functions and responsibilities for involvement; resources (financial, organisational and technical) made available; and a continuous capacity building programme to secure involvement (EEU(a), 1998).

Sustainability indicators and the policy process

This study has already noted the relevance for incorporating sustainability indicators as part of the policy cycle. These indicators should not arise solely from consultation with specialists, but must also include the public and other interested and affected parties. Some of the key roles of these sustainability indicators are to:

- instititionlise national environmental management policy;
- to monitor and assess conditions and trends on a national, regional and global scale;
- to compare situations;
- to assess the effectiveness of policy-making;
- to progress against a stated benchmark (clean water; waste dumping sites)

- to ensure understanding, participation and transparency in information transfers between interested and affected parties; and
- to forecast and project trends (adapted from Hammond et al, in EEU(a), 1998)

As already noted, sustainability indicators help us to know that we are moving in the right direction, towards that of an articulate and realistically sustainable community. In the following sections we explore some sustainability indicators in the context of waste management and as part of a general process of environmental policy-making.

4.4 Elements for sustainable policy development

According to the EEU(a)(1998) document, two sets of indicators, that of sustainability indicators and environmental indicators, are relevant to sustainable development and environmental policy management. "Sustainability indicators combine ecological, social and economic components and also refer to institutional, historical, political or technical aspects, etc" (EEU(a), 1998). Although there are obvious linkages between the sustainability and environmental indicators, in that environmental indicators form a component of the more comprehensive suit of sustainability indicators, it is the former which is of concern (see figure 3).

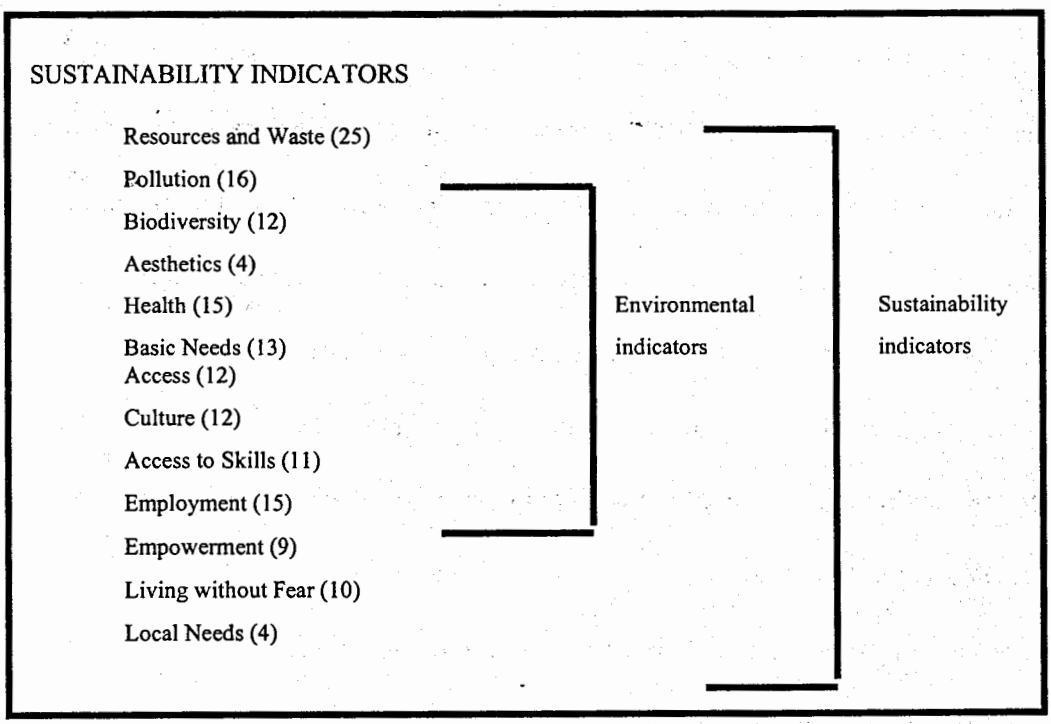
With reference to waste management, the following sustainability indicators will be explored as well as there general relevance to sustainable environmental policy-making:

- achieving equity, transforming public attitudes and practices
- conserving and enhancing the resource base
- stabilising world population
- empowering communities
- reorienting technology(EPD as cited in EEU(a), 1998).

It is imperative to note that including sustainability indicators will not in itself ensure that environmental policies are sustainable, but indicate to us that we are moving in the right direction towards sustainable development.

Source: EEU(b), 1998

Figure 3: Environmental and sustainability indicators



Relevance of sustainable development indicators for waste policy management

According to Noble as cited in Wynberg (1993), South Africa produces approximately 420 million tons of solid waste per annum and the bulk of this is due to the consumerist lifestyles and rapidly expanding populations characteristic of the urban centers (Wynberg, 1993). The South African White Paper on Integrated Pollution and Waste Management is the beginning of a long overdue response to a policy vacuum characterised by departmental fragmentation and an ethos of inadequate waste management. This is seen as the beginning of a national effort to expose the importance of making people once again the custodians of the environment and minimising the wasteful and polluting impacts of continuous degradation of natural resources: "The past has been characterised by a period of unsustainable and inequitable development that only threatened the livelihoods and degraded the quality of life of a large proportion of the population, but which was also responsible for environmental degradation" (Integrated Pollution and Waste Management, 1998:14). In order to move towards development that is economically, socially and environmentally sustainable, all sectors of society will have to meet the challenge of redefining the way in which pollution and waste will be managed.

Various strategies for achieving sustainable development have been forthcoming over the last two decades such as the seminal UNCED 1992 report. Elements which could be supporting a template of sustainable development to accompany the environmental policy-making process are discussed below. Supporting the forthcoming analysis,

sustainable development strategies will be discussed with their relevance to waste and pollution management as observed by Braune (1992):

- achieving equity
- transforming public attitudes and practices
- conserving and enhancing the resource base
- stabilising world population
- empowering communities
- reorienting technology

Achieving equity

Since Agenda 21 and the WCED report, there has been a strong international conviction that the equity principle, as well as combating poverty, should be essential elements of all sustainable development strategies (UNCED, 1992 & WCED, 1987). Specifically, Wynberg (1993:53) asserts: "Agenda 21 proposes the immediate alleviation of extreme poverty as well as the development of an adequate and integrated strategy which targets the causes of poverty, reduces inequalities between various population groups and secures the sound and sustainable management of the environment". This must be seen in the context that of the 4.2 billion people in the developing world, about 1.2 billion live in extreme poverty, deprived of many basic services. In addition, every day, over 800 million people go hungry and some one and half billion people do not have primary health care and are threatened by a host diseases. Chief amongst these are the inequalities between developed and developing

countries: 77% of the world's people earn 15% of the total income, with per capita incomes of the rich nations being 65 times of those of the poorest nations (Wynberg, 1993). In order to the secure the sustainable management and improvement of the environment would require that the poor who make up the majority in the world today, to share in policies promoting growth. Echoing the poverty combating strategies of Agenda 21, Braune (1992:83) asserts: "a world in which poverty is endemic will always be prone to ecological and other catastrophies".

As has been posited throughout this study, South Africa embodies both First World consumption patterns and Third World poverty, thus mirroring global trends whilst producing on of the most inequitable societies in the world. "This dichotomy exists in a number of other countries - notably India and Brazil – but in South Africa, apartheid has added a complex dimension to the issues" (Wynberg, 1993:47).

The seminal agreements reached at UNCED concerning the issues of poverty and equity provide some relevance for addressing effective waste management in South Africa. The White Paper on Environmental Resource Management (1998) endorses the need to promote equitable access to, and sustainable use of, natural and cultural resources, and promote environmentally sustainable lifestyles and also to integrate environmental impact management with all economic and development activities to achieve sustainable development with the emphasis on satisfying basic needs and ensuring environmental sustainability. Long-term efforts to reduce poverty will depend on effective, low-cost initiatives which promote self-reliance among

communities and are focussed on basic needs. Agenda 21 describes a number of mechanisms which are relevant for South Africa:

- strengthening of legal frameworks for access and ownership of land;
- integrating informal sector activities into the economy and making lines of credit available (Wynberg, 1993).

The basic needs approach advocated by Agenda 21 is intrinsically tied to reducing the inequalities between population groups. In South Africa, the more affluent population groups may purchase "environmentally-friendly products", but the wider connections to lifestyle patterns are often not made. This is aggravated by lax labeling laws on consumer products in South Africa and a largely unaware and apathetic public. Among disadvantaged South Africans, aspirations tend to shift towards luxury consumption patterns and a lifestyle which is largely unrealistic and unattainable for the immediate future. Policy analysts will have to be strategic about challenging these aspirations which will help to reduce the levels of waste typified by affluent consumption standards. Challenging these aspirations are necessary in order to demonstrate the links between basic needs and environmental issues (Wynberg, 1993).

Transforming attitudes and practices

The chief impediment to overcoming the steady deterioration in the quality of the environment is failure to develop sustainable behavior patterns among the majority of

the world's population. Processes will have to be instituted in order to fundamentally transform people's attitudes and practices by deliberate and coordinated efforts like:

- promoting a world ethic of responsibility amongst women, youth and children, indigenous groups, NGOs, trade unions, business and industry, local authorities, the scientific and technological community and farmers respectively (Agenda 21, 1992);
- widespread communication of information about the status and trends of the environment and methods of using resources sustainably (WCED, 1987); and
- promoting education, training and public awareness (Agenda 21, 1992)

The implications and relevance of these proposals for South Africa are significant. There have been a number of government and non-government initiatives which strive to educate and raise responsibility amongst South Africans about waste management education. The White Paper on Integrated Pollution and Waste Management (1998:43) supports a policy goal which "promotes the education and the empowerment of South Africa's people to increase their awareness of, and concern for, pollution and waste issues, and assist in developing the knowledge, skills, values, and commitment necessary to achieve integrated pollution and waste management solutions".

More specifically, attitudes and practices are to be transformed by the following actions:

- developing a culture amongst all South Africans to discourage pollution and waste degradation
- ensuring that integrated pollution and waste management education programmes and projects foster a clear understanding of the inter-relationships between pollution and waste, and of the economic, social, cultural, environmental and political issues in local, regional, national and global spheres

These efforts at making people more responsible custodians of the environment have contributed to a better understanding of the relationship between waste pollution and other economic, social, cultural, environmental and political issues at the local, national and global sphere (White Paper on Integrated Pollution and Waste Management (1998). Although this White Paper and other administrative actions have gone a long way in changing peoples' attitudes and practices, more reliance should be placed on the public's growing understanding of natural systems than following traditional species protection policies. It is imperative that government's intention to reach the disadvantaged sections of the population revolves around a pragmatic ecosystem conservation message and one that does not alienate them from environmental issues. Braune (1992:84) notes that at the highest policy level, "natural resource accounts and their annual debate in parliament could bring conservation more clearly into public focus". As lead agent, the DEAT has undertaken to:

- supervise, audit and review the environmental performance of national, provincial and local government institutions
- monitor and review the environmental performance and activities of other national departments to determine whether they are complying with the government's national policy on environmental management, legislation, norms and standards (White Paper on Environmental Management, 1998:84)

Stabilising world population

Wynberg (1993) observes that a recent study by Harrison (1992) has shown that an increase in population may lead to greater environmental degradation characterized by higher levels of pollution and waste. Environmental degradation such is often encouraged by:

- land scarcities;
- low income levels;
- increased methane emissions; and
- increased levels of poverty(Harrison cited in Wynberg, 1993)

In addition, abject poverty lends itself to higher infant mortality; lack of education; absence of security in old age; and the inability to afford family planning (Harrison, 1992). In terms of developing an effective waste management strategy, there is little doubt that rapid population growth adds to environmental degradation and this must

be addressed as part of any sustainable development policy. Proposals and strategies which have emerged are:

- managing population growth (including economic incentives and disincentives to lower fertility rates, improve the position of women; improved social security and public health care and family planning services) (IUCN 1991; WCED, 1987) and;
- implementing integrated population, environment and development programmes at the local and national development policies and planning (Agenda 21, chapter 5)

The interface between population growth and environmental degradation in South Africa has been well documented, as far back as the "Wildlife Society which was the first to stress the importance of a population policy as part of a national conservation strategy" (Braune, 1992:86). Although South Africa has long since noted the importance of addressing the population/environmental degradation interface, any present and future solution to managing environmental issues such as waste must be done in an integrated fashion. As Wynberg (1993:59) asserts: "effective solutions to population growth, poverty and over-consumption will only be found if we confront these issues in an integrated fashion. The fragmented, narrow vision which has typified thinking on these matters, both globally and in South Africa needs to be fundamentally changed".

Recent efforts to integrate population issues into a sustainable policy framework include the White Paper on Environmental Management (1998) and that of the White Paper on Integrated Pollution and Waste Management (1998); the latter inadequately addresses the rate of population growth and its impact and implications for patterns of resource use and impacts on human health and the environment. However, the White Paper on Integrated Pollution and Waste Management (1998) does consider the nexus between pollution, waste and gender, as it considers the development of women in relation to integrated pollution and waste management important for a number reasons. Women suffer the most in terms of having disproportionate access to environmental resources and it is through education of and communication with women that basic attitudes to integrated pollution and waste management will change (White Paper on Integrated Pollution and Waste Management, 1998).

Although the White Paper on Integrated Pollution and Waste Management, 1998 accedes to the importance of representing women as much as possible in a national waste management strategy, more emphasis should be placed on making the connection between women, population growth and environmental degradation. The White Paper on Integrated Pollution and Waste Management 1998 should have paid more mention to empowering women by promoting appropriate educational and literacy programmes and uplifting of their status as this is the most crucial ingredient to controlling population growth and thus reducing the destructive environmental patterns characterised by high levels of waste. This strategy is particularly relevant to South Africa as a society which has been both sexist and economically exploitative.

Given that, to-date, there have been few truly national woman's empowerment programmes and in addition to the lack of available funds, initiatives like the White Paper on Integrated Pollution and Waste Management, (1998) and NGOs should take hold of every opportunity to stabilise population growth as a means of empowering women (Wynberg, 1993).

Empowering communities

The effective implementation of a set of sustainable development indicators will depend not only on the more visible and well-organised urban communities, but that of the empowerment of the individual at the local level and rural villages. It is instructive perhaps to recall the comment by Braune (1992:89) that "it is at the local level – the level of the individual, community and locality – where ecosystems are conserved or destroyed, needs are met or frustrated, and ecological, social, and economic factors are integrated". Agenda 21 proposes that empowerment and active participation of communities, individuals, youth children, indigenous peoples, NGOs, trade unions, business and industry and farmers and the technological community, and above all the, the broad participation in all aspects of decision-making in order to articulate sustainable development (Wynberg, 1993). Community empowerment and people-centered sustainable development is a laudable indicator, but without delivering real material goods and much needed resources to live sustainably, will amount to nothing more than policy rhetoric. As Turok notes: "In arguing for a grass-roots, bottom up development, they fail to provide scientific support for the view that it will actually provide the needed resources... some who champion the creativity of the people and emphasise the primacy

of human relations, living and working together in what are often the artificial collectives, do not actually advance the cause of real improvements" (Hallowes, 1993:244). Some strategies of empowering communities and individuals to adopt sustainable livelihoods, which would favorably impact on policy implementation, include:

- education and training;
- increasing their control of the resources they use; and
- the capacity to influence decisions that effect them

Although the issue of community-based environmental management is a crucial element in terms of underscoring the transition towards sustainable development, Wynberg (1993) notes that of all the groups throughout the UNCED process, the women's lobby was the best organised, and consequently the most effective. Hopefully this organisational and group ethos will filter down to the way local communities communicate. This will have the effect of developing processes whereby communities can apply their capabilities for the care of their environment and the satisfaction of their needs. Broad public participation and empowerment, especially at the local community level, are important prerequisites for the successful implementation of sustainable development. As the work by the EEU(a)(1998:33) observes: "Environmental management priorities become the focus of environmental policy, and must of necessity be the result of a process of effective public participation. If the priorities identified do not correlate with the needs of the city's

residents, the policy will be inappropriate and as a result will not enjoy public input and interest".

The above principles have been largely acknowledged at a policy level and has been highly relevant in South Africa. At a policy framework level, both the White Papers referred to above promote environmental literacy, education and empowerment of South Africa's people. More specifically, the White Paper on Integrated Pollution and Waste Management, 1998), advocates the participatory and empowerment strategies by:

- promoteing "outreach programmes" aimed at people in rural areas and the education of decision-makers
- promoting capacity building programmes and projects that assist the people, particularly those from disadvantaged sectors of society, in developing social and organisational skills to employ local and other knowledge in assessing and addressing their pollution and waste management concerns

As mentioned, these strategies proposed by Agenda 21 and those emerging out of the UNCED process are particularly relevant given South Africa's past policy frameworks which were exclusionary, top-down, rigid and authoritarian, resembling a policy process which suffered from Van Reenen's (1994) "bureaucratic syndrome". Although South Africa'a waste management strategy and environmental policy per se

have made laudable commitments in terms of empowerment and participation, "for public participation to be truly representative, a climate of tolerance, accountability and cooperation will first need to be fostered" (Wynberg, 1993:260).

Reorientating technology

Agenda 21 (Chapter 34, para.1) proposes that environmentally sound technologies (ESTs) are able to "protect the environment, are less polluting, use all resources in a more sustainable manner, recycle more of their wastes and products and handle residual wastes better than previous methods". In order to reduce the wasteful and polluting effects on the environment due to increased pressure on the natural resource base, their needs to be a major reorientation of technology – the key link between humans and nature. Various activities and elements have been proposed to facilitate the reorienting of technology (all chapter references refer to Agenda 21):

- capacities to develop and manage ESTs should be strengthened at the national, regional, sub-regional and international level (chapter 34, para.20)
- public policy that ensures through incentives and disincentives that commercial organisations find it worthwhile to take fuller account of environmental factors in the technologies they develop (WCED, 1987:222-223)
- international information networks should be developed, linking national, sub-regional, regional and international systems. Information on available

technologies will be disseminated by regional clearing houses (SADC), which should focus on the information needs of users (chapter 34, para.15)

- enhancement of capacity for technological innovation in the developing world. In addition collaborative arrangements should be promoted between enterprises of developed and developing nations, and between suppliers and recipients of technologies. Multinational companies are recognised as important channels for such transfer (WCED, 1987:87-89; chapter 34,para.26)

The cost of implementing these activities is projected to have been in the region of $450 and $600 million per year (1993-2000) from the international community on grant concessional terms (chapter, para.29).

Presently, international consensus notes that ESTs may, for example, be part of the mapping the road towards greater sustainable development and a less waste-infected and polluted environment. However, this proposal has implicit in it a double-edged sword. According to Harrison, when applied inappropriately (e.g., the Green Revolution) the social and environmental impacts can be severe. Harrison further notes, that when used to reduce environmental impacts it can similarly have detrimental effects: chemical fertilisers reduced the area of land needed to grow food, but increased the pollution of the pathways (cited in Wynberg, 1993:46). Even though ESTs and other measures may induce sustainable development practices, "technological change, although important, is

not the panacea which some make it out to be" (Wynberg, 1993: 46) as many intractable conflicts may arise.

In South Africa, research is making headway in terms of reorienting technology which would support a path of greater sustainable development and less path polluting industrial practices. As part of its shifts in technological use and sustainable development practices, the White Paper on Integrated Pollution and Waste Management (1998:62) stresses "policy development and decision-making on pollution and waste management... should be directed to the development of appropriate technologies and methodologies to ensure sustainable research use, management impacts and achieve cleaner production". The White Paper on Environmental Management (1998:32), reinforcing a number of objectives for integrated pollution and waste management commits, itself to use market based instruments to "promote the use of appropriate technologies that will reduce resource use, waste generation and pollution".

As mentioned, although these initiatives are laudable and a step in the right direction in terms of delivering environmental policies which are sustainable and articulate, these policy efforts require certain essential means to come to fruition; those essential means are largely financial in nature. Padayachee asserts that in terms of sustainable development frameworks for local government, "the single most significant barrier to sustainable local government remains councils' lack of financial resources" (cited in Fitzgerald, 1997:401).

Creating the essential conditions for

sustainable development: financial mechanisms

- **International organisations and bilateral agencies**

South Africa should solicit greater cooperation with the United Nations (UN) now that it is recognised within the international arena. South Africa will likely be assessed as a developing country, and will probably qualify for development aid. As South Africa has a per capita income of less than $4000, it would qualify for GEF funding, a funding facility set up with a three year mandate in 1991. The World Bank, the UN Development Programme (UNDP) and the UN Environment Programme (UNEP) administer grants to the Global Environmental Fund (GEF) for investment projects, technical assistance and research respectively; Wynberg (1993:201) notes: "global warming project, for example, is presently under-funded, and this could be a fruitful area to investigate...equally, the small grants programmes could be worthwhile avenue of funding for community development projects". Along with international cooperation and international development aid, obligations and opportunities such as those with the World Bank and IMF may surface, but South Africa has to be critical about these commitments (Wynberg, 1993). Given South Africa's resource constraints affecting implementation of policy, applying for foreign aid to overcome these obstacles may allow for this external support to interfere with the policy process and the issues it addresses. Hardoy rightly states: "the funding agency or country may often dictate their policy issues over those of citizens and authorities"(cited in EEU(a), 1998:32). In addition, Wynberg (1993), observes: the lack of financial commitments at the UNCED indicates that South Africa's sustainable

development initiatives have to be generated from endogenous resources rather than foreign aid.

- **institutional development**

As mentioned, negotiating with various bilateral agencies in support of sustainable policy initiatives and processes must be done cautiously and judiciously, as these international financial obligations often come with conditions which may interfere with South Africa's domestic policy priorities and issues. International co-operation is to be best affected by the strengthening national institutional capacity in the first instance. "To this end, the institutional capacity of development and environment organisations in the non-government sector would require strengthening and expansion and – most importantly – integration" (Wynberg, 1993:210).

- **economic instruments**

The use of "economic instruments can enable improvement to environmental performance beyond the minimum legal requirements..." and some of these instruments generate income to provide further finance for sustainable environmental management (EEU(a), 1998:45). The DEAT has already begun experimenting with economic instruments during its policy implementation process by means of taxation, charges and levies, deposit/refund schemes, tradable emissions permits, grants and subsidies, and demand side management.

Taxation

Sometimes referred to as "green taxes", taxation is applied to encourage compliance with environmental performance and related standards. Taxes may be placed on those technologies, processes and technologies which have a detrimentally high impact on the environment (EEU(a), 1998). The revenue acquired could be used to subsidise local technological development that is oriented towards more sustainable practices. For example, the United Kingdom (UK) has a differential tax on leaded and unleaded petrol. South Africa currently employs such a differential tax, but the advantages of this tax may not be as apparent as catalytic converters have to be retrofitted on vehicles, adding another dimension of complexity in terms of who should be footing the bill for retrofitting converters. Caution should be taken that not too much subsidisation takes place as experience has shown that this may lead to a disincentive to conserve the resource base and possibly higher pollution levels.

Charges and levies

This tool is similar to the an environmental tax in that it encourages compliance with particular environmental indicators and management objectives, but may be applied at a more localised scale (EEU(a), 1998). The EEU(a)(1998) notes that in the UK a levy is placed on waste going to landfill in order to encourage the reduction in the production of waste. Before such a levy for waste disposal sites can be initiated for South Africa, the registration of waste disposal sites needs to affected as there is currently a lack of control in terms of legally allocating waste disposal sites. This task could be more efficiently completed if the responsibilities of the Departments of Water Affairs and Forestry and

that of the DEAT integrate their responsibilities for allocating waste disposal sites to either of these departments. The fragmentation of environmental decisions and responsibilities within and between departments in the past has proved to be both inefficient and a waste of resources in terms of duplication and time delays in executing policy.

Local council development

Another means by which the issue of financial sustainability could be addressed could be by focussing on local economic development initiatives as part of one more element of a more holistic approach to creating sustainable governance structures. According to Pycroft, financial sustainability from a local council context could be approached from two possible perspectives (Fitzgerald et al, 1997):

- *utilizing the existing resource base*

Local authorities have a well established local tax regime consisting of rents, rates, service charges and turnover levies, but this system is being paralysed by a culture of non-payment due to systematic anti-apartheid era of rent boycotts (Reyneveld cited in Fitzgerald et al, 1997). In order to overcome these lags in tax collection, the government should attempt to voluntary "coerce" communities into payment, as demonstrated by the

Masakhane Campaign. In this regard, Pycroft states that any imposed tax collection regime "would be politically dangerous for local councils" (Fitzgearld et al, 1997:401).

By increasing the local tax base through "non-coercive" mechanisms, revenue might be strategically placed to feed into local sustainable development initiatives; payment itself is already a step in the right direction in terms of making communities responsible for their environment and transforming attitudes. However, a more successful tax regime is not the panacea to the financial impediments to sustainable policies as care should be taken that local revenue is not returned into the general government fiscus.

❖ *broaden local economic base*

A second technique proposed by Pycroft refers to that of broadening the local economic base, to increase the number of individuals, organisations, and companies to pay local taxes; developing the local economic base has traditionally not been a priority in South African local governance (Fitzgerald, 1997). The "institutional thickness" of local councils can be strategically developed by influencing the local economy in many ways (Pycroft in Fitzgerald, 1997) such as:

- employment;
- purchasing;
- municipal contracts;

In many ways concentrating and emphasising on local "institutional thickness"(Pycroft in Fitzgerald, 1997:402) will not only give national government better leverage and support for bargaining for international sustainable development assistance, but also affect policies which are accurately focussed on community needs, putting people back on the center stage of development. In a previous European local council study, Pycroft has noted that "councils can play a significant co-ordinating role as the fulcrum of local economic development partnerships, placing themselves at the center of alliances between the public private, voluntary, and international donor communities" (Fitzgerald, 1997:402). Revenue derived from these two mechanisms at the local council level need to be returned into the local fiscus funding sustainable development initiatives. By stimulating local economic initiatives, communities are encouraged to return to their custodial duties of their environment.

- ***Privatisation of public assets***

In terms of releasing funds for much needed development initiatives relating to sustainable development, the issue of privatising public assets, which could release considerable funds, was advocated by Munslow and Fitgerald (in Fitzgerald et al (1997). The financial gains made from privatising state assets like forests and buildings, and parastatals like Telkom and Foskor, would serve to ease the national debt, and this would in turn release the much needed resources to support infrastructural projects necessary for sustainable development. The retrieval of debt is indispensable to socially just and ecologically sustainable development (Hallowes, 1993).

Many other instruments and implementation tools are discussed in both the White Paper on Integrated Pollution and Waste Management (1998), the White Paper on Environmental Management Policy (1998). These tools should not be implemented in isolation, but be complemented by environmental education, training and communication which will contribute to more effective environmental management. As the EEU(a)(1998) observes: these tools play an important role in raising public awareness and resulting in not only greater political will for sustainable development and its associated indicators, but also compliments the essential financial means for realistically supporting a sustainable development framework.

The above exposition indicates that policy models and cycles should be contextually driven as well as indicate the difficulties and complexities involved with attempting to incorporate First World policy-making models and international trends towards sustainable development to understanding post-apartheid South African environmental policy-making. This section also contextualised the seminal agreements and proposals concerning the necessary financing mechanisms for a realistically achieving sustainable development.

The difficulties encountered in terms of assimilating Lindblom's (1968) policy criteria have largely been unobtainable in the South African environmental policy process due to its complex and unique policy context. Throughout the analysis of the process of South African environmental policy-making, the leitmotif has been on

emphasising the complexities of applying First World decision-making techniques to the domestic context. Added to this, the policy processes, and whatever model of decision-making South Africa adopts, must be underscored by a realistic framework for sustainable development if post-apartheid South Africa wishes to move away from the exclusionary, autocratic and ecologically suicidal policy practices and attitudes.

South Africa, as the next chapter will show, has not outrightly rejected or failed to meet criteria of the First World prescriptive policy models. However, whatever recommendations are to be synthesised, they will have to simultaneously accommodate the best of the First World policy process, while being cognizant of its Third World policy environment. In the words of Cloete et al (1991): the main challenge will be, however, to retain as much of the positive elements of the First World policy modes and minimise as far as possible the negative elements of Third World systems. The next chapter concludes with possible ways of improving South Africa's policy process as well as creating the sorts of conditionalities conducive to applying more Westernised policy methodologies and tools of analysis.

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

This chapter will draw together the salient themes and objectives as well as present conclusions and recommendations. The main research question was to examine the utility of First World policy techniques in the Third World and use this as a basis for exploring to what extent South African environmental policy-making can accommodate First World techniques. This chapter will describe recommendations necessary to address future action for overcoming the obstacles in developing environmental policy techniques which are more contextually driven and which create the conditions necessary to incorporate

prescriptive policy-making.

5.1 RECOMMENDATIONS

It should be borne in mind that just as the policy process itself and policy-making is indeed complex and interminable, the suggested recommendations are by no means definitive and absolute. Recommendations have been made in the spirit of moving South African environmental policy in the direction of being more contextually driven, responding to the new policy realities of a post-apartheid South Africa. As Cloete, et al, 1991 concur, the a new policy framework efforts should be made to retain the positive elements of First World policy techniques and minimise as far as possible the negative elements of the Third World.

In summary the following recommendations have made:

Positively encouraging public inputs

Policy processes should not rely too heavily on an elitist technocratic input as this may have the erode contributions made by the wider populace. Past environmental policy-making occurred largely within elitist institutions, quite possibly alienating the majority from the process.

Thorough information bases

Information and statistics should be more accessible and greater resources devoted to creating databases thereby assisting in creating more effective policy formulation. These initiatives could take place through national on-going environmental audits of both industry and the public sector which would facilitate a more accurate, current and reliable data base. In the past much information was either skewed or secretive for strategic reasons. As a consequence, present policy analysts tend to make inaccurate and dangerous policy projections.

More accurate and reliable information statistics will also help the DEAT gauge the success of its policy initiatives and greatly democratise the policy process, challenging the lack of transparency which characterised most other Third World nations and South Africa's policy process in the past. Greater legislative power should be conferred on research institutions like the Central Statistics Service, the FRD and the NISR to collect statistics from industry and the government, contributing to a more sophisticated database on which most prescriptive models are dependent.

Micro-economics

During policy formulation, more attention should be paid to micro-economic indicators. Micro-economic indicators such as poverty and illiteracy are often difficult to quantify and therefore easily ignored. If there is any hope of addressing environmental concerns, these micro indicators should be integrated during the policy process. Policy analysts run the risk of applying quantitative techniques more readily, and as such, exclude vital information in terms of formulating effective and contextual policy.

Public participation and inputs

Under its new dispensation, South Africa should encourage a multiplicity of participation fore those formerly excluded. Public participation as opposed to mere consultation must seriously underscore the policy process in coming decades. In here lays the imperative that the South African environmental policy process is slowly normalising and positing greater inclusiveness. The environmental policy process will be enhanced as the public and NGO sector become crucial partners with government decision units. Grass roots participation structures should be encouraged, so facilitating a policy shift from the authoritarian and exclusive policy-making processes. Measures like these will contribute greatly to the monitoring and normalising the policy process.

Public participation should be instituted from the beginning of the policy process so that when policies are implemented they would tie up closely with intended beneficiaries. In most First World nations public participation is part of the policy

process from its inception rather than at the implementation phase, at which time the policy may be too prohibitive to change due to financial and human resource constraints. South Africa should learn from Canada's green plan which practiced the concept of public participation thoroughly (see the EEU (a)(1998:29) report for an overview of public policy inputs during the policy-making process of the City of Vancouver, Canada).

The policy police

There should also be an externally democratically elected "watchdog" organisation, similarly to that found in the USA, to ensure that corruption, especially at the implementation phase of the policy process, is minimised. This will ensure that less organised or resource poor groups are not disadvantaged by those who are able to influence the politicians and policy analysts. The "watchdog" organisation will ensure the much needed checks and balances over the DEAT and other policy decision units.

Education and literacy

The DEAT should step up its environmental education and literacy programmes so that those previously excluded from the policy process can contribute to a healthier debate of the issues which indirectly or directly affect them. According to Khan (1991:15), "...as South Africans continue the difficult process of self-examination and social transformation, what is needed is not a reiteration of the now familiar litany of environmental horror stories, but a firm national commitment to the implementation of mass environmental literacy".

Education the public will underscore South Africa's democratisation. Experience has shown that First World policy techniques have met with limited success due to factors such as illiteracy. Consequently these people became disempowered and could not effectively compete at forums that required some environmental knowledge.

Addressing fragmentation of decision units

South Africa should look at how other federal countries have overcome fragmentation amongst various tiers of governance. In this sense, South Africa's policy process approximates Lindblom's (1972) conditions of agreement and fragmentation as test of good policy. Canada's green plan is a good example of how one can get the state, federations (provinces) and local levels coordinated and cooperating in the process of a national framework for environmental policy formulation. The White Paper on Environmental Management Policy 1998 has already incorporated some of these experiences.

Elevate the DEAT

The importance of environmental issues should be elevated so that the profile of the DEAT is improved. This "junior" ministry status is partially due to the DEAT being used as a political football. As environmental issues cut across all government decision units, the DEAT should be given more legislative power in the way policy is implemented in other departments. The role of the DEAT as lead agent, or "super department", should be encouraged as this will allow for accountability of other departments not complying with general environmental policies. By conferring grater

powers to the DEAT, the locus for policy implementation and formulation is much clearer than a fragmented structure and allows for locating policy failure or success more easily.

Increase remuneration

Remuneration should be competitive with industry, thereby decreasing the chances of corruption during the policy process. Better remuneration also attracts a more qualified and experienced pool of experts to build local capacity in the DEAT. Supplementary sources of income could be harnessed from the imposition of failing to comply with, for example ambient pollution standards which can be enforced through the DEAT. There is the danger of these supplementary revenues circulating through the general government fiscus and this should be monitored.

Develop endogenous sources of funding

Although South Africa is dependent on foreign donor assistance for many developmental projects, the DEAT should strive as much as possible to utilise independent endogenous resources. This contributes to developing policy objectives and evaluations will be contextually driven as these agencies often have concerns and methodologies different to that of the donor country which may compromise policy objectives and priorities.

Address the rural-urban divide

The government should as far as possible commission research which corrects the negative bias towards rural based studies. This will allow for a more holistic and inclusive policy process and also enhance the democratisation of the policy process.

Devolution of power

Resources should be devolved to the local policy-making level The impacts of environmental policies are often felt at the operational level where policy implementers and evaluators come face to face with the target group. Local constituencies will best know what the local policy priorities should be. Crucial to the success of local policy decision units determining the policy outcomes, is the devolution of resources to affect support of these local policy initiatives.

5.2 CONCLUSIONS

This study has attempted to analyse the utility of some conventional policy-making techniques in terms of understanding public policy in developing countries and the implications these have for South African policy-making. The findings have shown that to a great degree, policy conditionalities found in the Third World seem to be incongruous to those found in the more industrialised world. For these reasons, and a host of others, the modes of analyses used in the latter nations seem to gain a degree of irrelevance in understanding policy issues in most Third World nations. A leitmotif throughout this study has been that contextually driven policy-making is crucial if the policy agenda issues are to be effectively and amicably resolved.

Allied to these contemporary models of analysis, this study has explored the use of the policy cycle as a means of formulating and implementing policy. The decision-making cycle formed the structural backdrop against which one could highlight the differences in policy priorities and inputs between the developing and developed countries. In this sense, juxtaposing the policy cycle in various contexts was instrumental in highlighting that local conditionalities are crucial if the policy cycle is to produce policies which are implementable and effective. The differences in policy priorities between developed and developing countries clearly seem to influence how the policy cycle may be subverted in order to accurately address the policy agenda.

The seminal issue of sustainable development has also been briefly explored in terms of its relevance for the South African policy-making landscape. The international trend towards sustainable development has far-reaching implications for South Africa, as it has to embrace this concept to some degree. The tenets of sustainable development is a crucial vehicle for improving the social equity of its people as well as issues of efficiency and economy.

Specifically, this study also looked at the issue of waste management and how a set of sustainability indicators could be used to guide the policy process towards greater sustainability. The place of sustainability indicators is crucial in the decision-making cycle if South Africa is to move towards a situation of a normalised and democratised

society. These indicators act like the intuitive handrail towards articulating and realizing a future of sustainable development.

Pursuing sustainable development is a laudable step in the right direction in terms improving the policies for a national economy. However, any sustainable development trajectory needs to be secured by feasible and realistic financial policy initiatives. Innovative financial means and mechanisms were gleaned from various seminal sources, Agenda 21 and the UNCED being the foremost. As sustainable development is often a process which is iterative and often conflicting with local norms and values, financial resources are needed if projects and policies are to see themselves come to fruition and address the priorities and goals of its beneficiaries.

Reiterating a dominant theme in this study, the organizational and institutional variables differ between the developing and developed countries and this may often cause the latter to deviate or subvert conventional First World policy cycle. If Third World nations are to make a success of relying on contemporary policy processes, then they should take into account local policy conditionalities. This may possibly avoide the attrophication of otherwise very laudable policies and programmes.

One of the many far-reachning conclusions drawn from this study, is that both the rational actor model as well as Lindblom's (1972) incrementalism is to a large degree very significant in terms of understanding the policy agenda and priorities of the Third World. Yet, without being sensitive to Third World policy conditionalities and

priorities, Western-based policy literature and methodologies seem largely irrelevant and out of touch with policy realities and priorities. In other words, the danger exists that policy processes which have developed largely within a First World context does not augur well for the policy process encountered in a Third World context. In addition, South Africa posits itself as a microcosm of the problems facing the globe and in this context South Africa's policy processes face the Herculean challenge of reconciling the aspirations and environmental problems of a very socio-economically skewed society.

South Africa, too, finds itself in a transition with very different policy priorities when compared to the apartheid era. This study has attempted to examine whether "apartheid policy tools" such as prescriptive methodologies will have any utility in the post-apartheid era. As South African environmental policy-makers employed prescriptive policy techniques in the past, the utility of those techniques have been questioned by this study. The White Paper on Environmental Management Policy 1998, hailed as one of South Africa's most important policy initiatives under its new dispensation, served as a reference point for exploring some of the above assumptions and questions. This White Paper is intended to facilitate consistency in environmental policy-making by providing some over-arching template within which all affected units should operate. This study has also concluded that unless more attention is given to local policy priorities and identifying existing capacity, this White Paper, and others like it, will fall short of effectively utilising the constituent policy elements of

First World policy tools and effectively mobolising these experiences for good policy-making.

South Africa is a slowly evolving democracy and in order to create policy conditionalities more conducive to practicing First World policy techniques, it should first respond to local policy needs. For to do so, would allow not only the normalisation of the policy process, but also the support of contemporary techniques which can only underscore its democratic transition as these techniques are bound to foster protection and respect for the environment. "Democracy is the guiding value, both as an end as a means. Environmental protection in particular will be most effectively achieved through the maintenance of, indeed, the continuing enhancement of democratic practice" (Peahlke in Fischer et al, 1995:129). The future of policy-making and its governance in South Africa seems secure. Many government initiatives like the White Paper on Environmental Policy Management (1998) are finding utility in international policy experiences for enhancing local policy projects and programmes and deploying these techniques to enhance the welfare of all the citizens of South Africa instead of just privileging the views of the technocratic and political elite. Most importantly, it is imperative that South Africa nurtures its public space and fora to foster democratic participation in the policy process in the hope of realizing a more sustainable future.

BIBLIOGRAPHY

A. Reports, Articles, Thesis

BROMLEY, D.W (1994): Environmental issues in South Africa: development options and policy concerns; University of Wisconsin, Madison

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

DEPARTMENT OF ENVIRONMENTAL AFFAIRS (1992): Building the foundation for sustainable development; Pretoria

DRAFT WHITE PAPER ON INTEGRATED POLLUTION AND WASTE MANAGEMENT FOR SOUTH AFRICA: A policy on pollution prevention, waste minimisation, impact control and remediation (August 1998); No. 19161, DEAT, Pretoria

ENVIRONMENTAL EVALUATION UNIT (a) (1998): Trends in metropolitan environmental management policy: considerations for South African cities, University of Cape Town

ENVIRONMENTAL EVALUATION UNIT (b) (1998): Guidelines for the state of the environment reporting in the Cape Metropolitan Area, University of Cape Town

HAMMOND, A, a.o (1995): Environment indicators: a systematic approach to measuring and reporting on environmental policy performance in the context of sustainable development, World Resource Institute, Washington

HOLTZ, S (1991): Reporting environmental information: themepaper 3 in *Guideline for state of the environment reporting in the Cape Metropolitan Area, EEU 1998.* University of Cape Town

KUYE, JERRY O. (1998): Public policy: theory and practice; University of Cape Town

MULLER, LOUISE (1995): Strategies for the formulation and implementation of a national policy for the environment; Thesis, University of Witwatersrand

RAIMONDO, J, Van Zyl, H, Bonner, S & Brownlie, S (1995): Environmental cost internalisation in the South African mining industry; report prepared for UNCTAD, African Environmental Solutions (Pty) Ltd

WHITE PAPER ON ENVIRONMENTAL MANAGEMENT POLICY FOR SOUTH AFRICA (May 1998);No. 18894, DEAT, Pretoria

WYNBERG, R. P (1993): Exploring the Earth Summit: findings of the Rio United Nations Conference on Environment and Development: implications for South Africa; Thesis, University of Cape Town

WCED (1987): Our Common Future; Oxford University Press, New York

WORLD DEVELOPMENT REPORT (1993): Oxford University Press, New York

B. Journal Articles

BRAUN, E (1992): "The applicability of the concept of sustainable development in South Africa with reference to soil and water resources utilization" in Africanus, Vol 22; Iss 1; pp78-93

BRAY, ELMENE (1998): "Towards sustainable development: are we on the right track?" in SAJELP, Vol 5

DIAS, AYESHA (1994): "Environmental law, policy and practice in India" in Environmental Liability; 1994; pp 86-92

GARNETT, Harry, Koenen-Grant, Julie and Rielly, Catherine (1997): "Managing policy formulation and implementation in Zambia's democratic transition" in Public Administration and Development; vol 17; pp 77-91

GLAWESKI, JAN (1991): "Current and future directions in South African environmental law" in Strategic Review for Southern Africa; Vol 13; Iss 1; pp 12-31

GLAWESKI, JAN (1994): "The Environment and the new interim Constitution" in SAJELP;

GLAZEWSKI, JAN (1994): "Environmental law and the new South African constitutional dispensation" in Environmental Liability; 1994; pp 16-21

HANEKOM, S.X & Sharkanski, I (1993): "Policy-making and implementation in conditions of extreme uncertainty: the cases of South Africa and Israel" in SAIPA Journal of Public Administration; 1993; Vol 28; 94-116

KAMIENIECKI, SHELDON (1991): "political mobilization, agenda building and international environmental policy" in Journal of International Affairs; Vol 44; No 2: pp339-357

KAMIENIECKI, Sheldon & Sanasarian, E (1991): "conducting comparative research on environmental policy" in Natural Resources Journal; Vol 30; pp321-339

KHAN, F. (1991): "The environment and post-apartheid South Africa" in Earthyear; 1991

LELE, S (1989): "Sustainable development: a critical review" in World Development

LINCOLN, DAVID (1992): "Despatches from a natural site of struggle: environmentalism in a 'New' South Africa" in SA Sociological Review; Vol 4, No1, pp2-12

LOOTS, CHERRYL (1994): "Making environmental law effective" in SAJELP; Vol 1

PIENAAR, L.A (1991): "The South African in the 1990s: viewpoints and issues – opening address" in Strategic Review for Southern Africa; Vol 13; Iss 1; pp 4-11

PAYNE, RODGER A. (1995): "Freedom and the environment" in Journal of Democracy; Vol 6; No 3, July

RABIE, ANDRE (1997): "The development of environmental policy in South Africa" in SAJELP; Vol 4

RABIE, M.A & Glazewski, J.I (1990): "The evolution of public policy with regard to the environment: a legal perspective over the last fifty years" in Suid Afrikaanse Tydskrif vir Wetenskap; Vol 86; Julie-Oktober

RONDINELLI, DENNIS A. (1982): "The dilemma of development administration: complexity and uncertainty in control-oriented bureaucracies" in World Politics; Vol 34, No 1: pp43-72

SAASA, OLIVER S. (1985): "Public policy-making in developing countries: the utility of contemporary decision-making models" in Public Administration and Development; Vol 5, No 4: pp309-321

SMITH, THOMAS B. (1973a): "The policy implementation process" in Policy Sciences; Vol 4; pp197-209

SMITH, THOMAS B. (1973b): "The study of policy-making in developing nations" in Policy Studies Journal; Summer; vol 1; part 1

SMITH, THOMAS B. (1985): "Evaluating development policies and programmes in the Third World" in Public Administration and Development; Vol 5, No 2: pp129-144.

STEVIS, DIMITRIS (1992): "The politics of Greek environmental policy" in Policy Studies Journal; Vol 20; NO 4

VAN REENEN T.P (1994): "Environmental policy-making and effective environmental administration" in SAJELP; Vol 1; pp35-48

WADE, R. (1982): "The system of administrative and political corruption" in Journal of Development Studies; Vol 18; No 3; pp287-328

WERNER, SIMCHA B. (1983):"New directions in the study of administrative corruption" in Public Administration Review; March/April

WINSTANLEY, TERRY (1997): "The final Constitution and the environment" in SAJELP; Vol 4; No 1

EBERHARD, A. & Van Horen, C. (1995): Poverty and power: energy and the South African state; T J Press, England
EASTON, DAVID (1965): A Framework for political analysis; Prentice-Hall; Inc., Englehood Cliffs; N.J

EASTON, DAVID (1953): The political system; Knopf, New York

FIORINI, DANIEL J. (1995): Making environmental policy; University of California Press, Berkeley

FISCHER, F & Black, M. (1995): Greening environmental policy: the politics of a sustainable future; Paul Chapman Publishing Ltd, London

FITZGERALD, PATRICK, McLennan, A & Munslow, B (1997): Managing sustainable development in South Africa; Oxford University Press, Cape Town

GUIMARAES, ROBERTO P. (1991): The ecopolitics of the development in the Third World; Lynne Rienner Publishers, Boulder & London

HADJOR, KOFI BEUNER (1992): Dictionary of Third World terms; I. B Taurus and Co.; London

HALLOWES, DAVID (1993): Environment, development, justice: South Africa and the global context; Natal Witness Printers, Pietermaritzburg

HANEKOM, S.X. (1987): Public policy: frameworks and instruments for Action;Sigma, Pretoria

HARRISON, P (1992): The third revolution: environment, population and a sustainable world; I.B Taurus, London

HOGWOOD, B.W & GUNN, L.A. (1984): Policy analysis for the real world; University Press, Oxford

HUNTLEY, Brian, Siegfried & Sunter, Clem (1989): South African environments into the 21st Century; Human & Rousseau, Cape Town

KAMIENIECKI, Sheldon, O'Brien, Robert & Clarke, Michael (1986): Controversies in environmental policy; State University of New York, Albany

LINDBLOM, CHARLES E. (1972): The science of muddling through in Thompson, D.E (Ed), *Politics, policy and natural resources*, Free Press, New York

LINDBLOM, CHARLES E. (1968): The policy-making process; Prentice Hall; Englehood Cliffs, N. J

MAY, J. B. & Wildavski, A. (1978): The policy cycle; Sage, Beverly Hills

McCURDY, HOWARD (1968): Environmental protection and the new Federalism: the Sagebrush Rebellion and beyond in Kamieniecki, Sheldon et al, *Controversies in environmental policy 1968.* State University of New York Press, Albany

MILLER, MARIAN A. L. (1995): The Third World in global environmental politics; Lynne Reinner Publishers; Boulder, London

MOGOMANE, M. (1994): Black environmental capacity building initiative in Fitzgerald, Patrick *et al, Managing sustainable development in South Africa 1997.* Oxford University Press, Cape Town

MORAN, J.M, Morgan, M.D and Wiersma, J.H. (1986): Introduction to environmental science; W.H Friedman; New York

MOUTON, J & Marais, H.C. (1988): Research methodology: basic concepts in the methodology of the Social Sciences; HSRC; Pretoria

MUNSLOW, B & Fitzgerald, P (1997): Search for a development strategy: RDP and beyond in Fitzgerald, Patrick et al *Managing sustainable development in South Africa 1997.* Oxford University Press, Cape Town

NAKAMURA, R.T & Smallwood F. (1980): The politics of implementation; St. Martin's Press, New York

ORKIN, M, Tshandu M, Dugard, J. (1997): Policy research and formulation: two case studies in Fitzgerald, Patrick et al *Managing sustainable development in South Africa 1997.* Oxford University Press, Cape Town

PARK, CHRIS C. (1986): Environmental policies: an international review; Croom Helm, London, Sydney, Dover, New Hampshire

PEAHLKE, ROBERT (1995): Environmental values for a sustainable society: the democratic challenge in FISCHER, F & Black, M., *Greening environmental policy: the politics of a sustainable future* 1995. Paul Chapman Publishing Ltd, London

PEARCE, David (1993): Blueprint: measuring sustainable; Earthscan Publications Limited, London

PYCROFT, CRISTOPHER (1997): Prospects for sustainable development in Fitzgerald, Patrick et al *Managing sustainable development in South Africa 1997.* Oxford University Press, Cape Town

RAMPHELE, M (1991): Restoring the land: environment and change in post-ppartheid South Africa; Panos Institute

RIST, C. (1995): Policy evaluation: the International library of Comparative Public Policy; University Press, Cambridge, Great Britain

RIST, C. (1990): Programme evaluation and the management of government: patterns and prospects across eight Nations; Transaction Books, New Brunswick, N.J

ROTHCHILD, D & Curry, Robert L., Jr. (1978): Scarcity, choice and public policy in Middle Africa; University of California Press, Los Angeles, London

SILVA, EDUARDO (1995): Environmental policy in Chile: the politics of the comprehensive law in FISCHER, F & Black, M., *Greening environmental policy: the politics of a sustainable future 1995.* Paul Chapman Publishing Ltd, London

STAUTH, R. B (1983): Environmental economics in Rabie, M.A & Fuggle R.F, *Environmental concerns in South Africa 1983.* Juta & Co, Ltd, Cape Town

TUROK, BEN (1993): South Africa's skyscraper economy: growth or development? in Hallowes, D., *Environment, development, justice: South Africa and the global context 1993.* Natal Witness Printers, Pietermaritzburg

UN CONFERENCE on ENVIRONMENT and DEVELOPMENT (1992)

VAN HOREN, C. (1996): Counting the social costs: electricity and externalities in South Africa; UDMS, Observatory

WISSINK, H.F (1990): Policy analysis in public administration; University Publishers, Stellenbosch

WORLD COMMISSION on ENVIRONMENT and DEVELOPMENT (1987): Our Common Future; Oxford University Press, Oxford