

**A STUDY OF THE ROLE OF NATURE CONSERVATION LAW
ENFORCEMENT OFFICERS AS FACILITATORS OF
ENVIRONMENTAL EDUCATION**

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ABSTRACT

This study explores the potential roles of a sample of 18 nature conservation law enforcement officers, as facilitators of environmental education. More specifically it examines their attitudes towards their dual duties of enforcing laws and providing extension services. Attitudes were examined by means of qualitative data analysis from semi-structured interviews. Officers' environmental attitudes, as well the relative emphasis placed on law enforcement and extension, and their own perspectives of working with communities, are explored. The historical and cultural context of officers' work, as well as worldviews and personality traits are also discussed. Certain recommendations regarding officers' roles as facilitators of environmental education are made.

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PREFACE

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CHAPTER 1

INTRODUCTION

Environmentalism is as much a social movement as a political activity.....it challenges almost every aspect of our daily lives, causing us to rethink to the very roots of our philosophies. (Timothy O'Riordan, Environmentalist 1981 :3)

1.1. The concept of modern environmentalism

Environmental problems exist all over the world, at every level of economic development and in every political ideology. Over the past few decades there has been an increasing recognition that these problems have a human as well as a biophysical dimension. The growth of the worldwide environmentalist movement represents a response to these problems.

Among the early influences which shaped modern environmentalism during the first half of the twentieth century were the writings of the American naturalists Thoreau and Leopold (Birke 1989). While recognizing that an *ethical* approach to environmentalism was needed, their main concern was the maintenance of the integrity of *wilderness*. During the 1960's Carson's (1962) book *Silent Spring* had a profound influence on the development of the environmental

movement, and since then people from a broad spectrum of disciplines, including 'activists', humanists, sociologists, and philosophers, have shown concern for the deteriorating state of the environment. Included among them are Gorz (1980), who considers ecology to be part of a larger *class struggle*; di Chiro (1987), who offers a *feminist* perspective of environmentalism; and Norton (1986), who argues philosophically for *species diversity*. Lovelock's (1986) *Gaia* hypothesis, which holds that the Earth functions as a whole organism, has also had a profound influence on environmentalism. This diversity of concern has led to the *non-scientific* analysis of environmental problems and in turn has been instrumental in a gradual shift away from a positivist, Cartesian paradigm, which held that humans and nature were independent entities (Sterling 1985). Increasingly there is recognition that a **new environmental paradigm** is needed for a sustainable world society, in which humans have respect and compassion for each other, other living organisms, and the environment which they share (Milbrath 1984).

The modern environmentalist movement embraces such diverse ideologies as **ecocentrism**, which holds that nature has an intrinsic value for the humanity of man, to **technocentrism**, which holds that science and technology will provide solutions for any environmental problems (O'Riordan 1981). However, it would seem that the **new environmental paradigm** leans more towards ecocentrism and holism, and emphasizes

the **interdependence** rather than the independence of humans and nature (Edgell and Nowell, 1989).

The new environmental paradigm is also rooted in ethical behaviour towards the environment, requiring humans to treat nature with respect and use natural resources in a sustainable fashion (Sterling 1985, Turner 1988). It attributes many environmental problems to humankind's apparent failure to embrace the concept of **sustainable use** of natural resources in a way which is **integral** to each society's **mores and values** (Milbrath 1984). The new environmental paradigm's acknowledgement of the **human dimension of environmental problems** strongly suggests that these problems cannot readily be resolved by science or technology; consideration should also be given to their social, cultural and economic roots.

The **World Conservation Strategy** (IUCN, UNEP & WWF, 1991) attempts to address these issues, as it emphasizes that environmental conservation should be concerned with people and their needs, in addition to the maintenance of ecological diversity and the wise use of resources.

Many espousing the new environmental paradigm also call for a review of the concepts 'nature conservation' and 'environmental conservation'. It is argued that nature conservation is mainly concerned with the conservation of plants and animals and neglects to address broader

environmental issues (Ntsala, 1991). More critically, nature conservation often fails to recognise that humans are integral to nature. In the South African context, the term 'nature conservation' is sometimes associated with an out-dated or *colonial* approach to conservation (Khan 1990) (Refer to section 2.1.). It would therefore appear that the broader and more holistic concept of **environmental** conservation is perhaps a more appropriate approach.

1.2. The concept of Environmental Education

Environmental education...is education toward world citizenship in an interdependent global community. (Gary Knamiller, Environmental Educator, 1981 :92)

The development of environmental education has been parallel to, and may be seen as a consequence of the emergence of the new environmental paradigm. Historically, environmental education has evolved from a form of nature study to a sophisticated and dynamic concept, which seeks to promote the interrelatedness of humans and their environments (Gough 1987).

A widely accepted definition of environmental education as developed by the IUCN (1971 :17) is as follows:

"Environmental education is the process of recognizing values and clarifying concepts in order to understand and appreciate the inter-relatedness among man, his culture and his biophysical surroundings. Environmental education also entails practice in decision making and self-formulation of a code of behaviour about issues concerning environmental quality".

The Tblisi Principles (UNESCO-UNEP 1978) support and further clarify environmental education. Drawing on these, environmental education is: holistic, integrated, and non-reductionist (Irwin 1991); it is essentially humanistic in nature; it recognises the complexity and dynamism of social, cultural and political processes (Huckle 1986); and it emphasizes *inter alia* ethics, norms and values (Sterling 1985).

It might be argued that there is little hope of resolving environmental problems unless education enables people from all walks of life to comprehend the fundamental interaction between humans and their environment, and provides them with skills to address these problems. For this reason environmental education has a potentially vital role to play in empowering people to address environmental problems because it emphasizes participatory, problem-solving processes (Greenall 1986).

One of the characteristics of environmental education is the emphasis given to addressing human needs, and the supposition that a healthy environment is fundamental to human well-being. In view of these considerations, the researcher considers that the concept of 'environmental conservation' rather than 'nature conservation' is the more appropriate to use as a basis for environmental education. (Refer section 1.1).

Environmental education has important implications for environmental conservation in South Africa. South Africa's heterogeneous society, with its diversity of norms and values, makes the attainment of widespread *environmental literacy* a complex and challenging task. In this context, the Third World perspectives of Agarwal (1986) and Okut-Uma and Wereko-Brobby (1985) could provide useful insights, as the social and cultural dimensions of environmental education addressed by these authors are in many respects analogous to those of southern Africa. In most countries, including South Africa, state conservation authorities are charged with the protection and conservation of the environment. These authorities have a range of options available to address environmental conservation, ranging from, on the one hand, state enforced legislation, to, on the other hand, education and the promotion of ethical behaviour towards the environment.

In the South African context, there are indications (Fuggle and Rabie 1983) that these state conservation authorities have historically placed more emphasis on legislation and law enforcement, than on striving for environmental knowledge, awareness and concern or **environmental literacy** (Khan 1991), through education. There is however a strong body of international evidence (Irwin 1991) to suggest that environmental education could be a more effective way of motivating people to conserve the environment.

In view of the above points and her own experience in environmental conservation, it is the researcher's opinion that if conservation authorities are genuinely concerned with achieving environmental literacy, the following strategies might be considered: These authorities would perhaps need to embrace a philosophy which recognises people's well-being as intrinsic to environmental conservation and which places greater emphasis on education than on law enforcement. It should naturally follow that people who are employed by such organisations also broadly embrace these ideals. This is especially important for employees whose duties bring them into contact with the wider public. This study sets out to investigate one such group of individuals within a conservation organisation.

1.3. *The aims of the study*

The aim of this study was to examine the role of nature conservation officers within the section known as 'law enforcement' of the Chief Directorate Nature and Environmental Conservation, (CDNEC) Cape Provincial Administration, as facilitators of environmental education. Within that framework the specific goals of the research were to:

- (1) gain insights into the level of awareness of environmental issues within the broader social, economic and political context of South Africa, of law enforcement officers;
- (2) determine the emphasis placed by these officers on law enforcement and extension respectively. In this context extension refers to the educative aspect of these officers' duties;
- (3) investigate the officers' perceptions of their own role as communicators of environmental concerns, and *their* views of how they thought they are perceived by the communities in which they work.

This research had the support of the Chief Director and the Director of the CDNEC.

1.4. Approach employed

There are increasing calls for a new approach to research into environmental issues, which takes human as well as biophysical dimensions into consideration (Kellert 1986). As environmental education acknowledges the relationships between humans and their environments, research in this field often tends to be a form of social enquiry. This in turn suggests that environmental education research could provide an interface between the human dimensions of environmental problems and attempts to resolve these problems.

In keeping with the paradigm of modern environmentalism, the approach adopted in this study is holistic and eclectic, and seeks to qualify and understand, rather than quantify trends, patterns and phenomena. In so doing, it embraces the problem solving and participatory nature of environmental education.

The researcher is a woman, who is employed by the CDNEC in the field of environment education. She was motivated to conduct this study through a personal interest in the attitudes of law enforcement officers towards their duties.

Through observations and discussions with people both within and outside of the CDNEC, she was alerted to a common perception that too much emphasis is placed on law enforcement by this corps, sometimes at the expense of fostering positive relationships with the public. This study represents a partial response to these perceptions.

The researcher's personal philosophy towards the environment encompasses an ethical approach to an environmentally responsible lifestyle. She furthermore believes that environmentally appropriate behaviour cannot be enforced through legislation, but it may be developed and nurtured through education. It is possible that these personal attitudes could have influenced this study, and for this reason much of the analysis and discussion is subjective in nature. This approach is rooted in *new paradigm research*, which is discussed more fully in Chapter 3.

In the following chapter the context of the research is described, and relevant literature is reviewed. Theoretical and practical aspects of the research are described in Chapter 3. Analysis of results are dealt with in Chapters 4, 5, & 6. Chapter 7 provides a concluding synthesis of results and also suggests recommendations arising from the research.

CHAPTER 2

CONTEXT OF RESEARCH AND RELEVANT LITERATURE

The conservation of nature is not just a technical subject. It is about morality, the distinction between right and wrong with room for subtleties in between.
(David W. Orr, *Environmentalist*, 1990 :220)

In this chapter, the context of the research is described and discussed, and relevant literature is reviewed. The following topics which are of consequence to this study are addressed: the historical background to nature conservation in South Africa; environmental issues in South Africa; enforcement of nature conservation legislation; the development of law enforcement in the CDNEC; and the concept of 'attitude'.

2.1. Historical background to nature conservation in South Africa

"African culture is layered with the insistence on viewing human existence as inextricable from its natural habitat."
(Albie Sachs, 1990 :142)

A brief examination of the historical development of conservation in South Africa is considered important in this study for two reasons. It may assist in understanding how the prevailing 'culture' of conservation has developed, and it may help to contextualize the manner in which the conservation of legislation is enforced.

The original inhabitants of pre-colonial southern Africa comprised the Khoi-San, who were hunter-gatherers; and the Khoi-khoi, who were nomadic stock farmers. Research (Saunders 1988) suggests that both these peoples practised relatively frugal lifestyles, and because their numbers were low, had little impact on the environment. The Bantu-speaking people who migrated south were largely settled agriculturalists (Saunders 1988). These people had certain customs and taboos which in effect protected some plants and animals, although their low numbers were possibly the most important reason for their low environmental impact (Pringle 1982, Owen-Smith 1987). Khan (1990, p.11) claims that the pre-colonial land ethic was "one which incorporated a perception of the individual as an integral part of the environment, as well as an attitude based on a non-destructive exploitation of its resources." Although Kahn's interpretation may be somewhat *romantic*, historical records of early European visitors' descriptions of the bountiful game and flora at the Cape testify to the low environmental impact of the indigenous peoples (Saunders 1988).

With the advent of European colonialism in southern Africa, many indigenous practices were disrupted. The European colonists, raised in the tradition of the Judaeo-Christian belief of 'man's dominion over nature' (White 1989), had a far greater impact on the natural environment than the indigenous peoples. The Dutch colonial authorities soon imposed legislation both as a response to the blatant over-exploitation of perceived 'useful' game, and through the desire to eradicate 'harmful' species (Pringle 1982). Kahn (1990) contends that a new attitude towards the environment fashioned by greed and controlled by legislation and rules became manifest. Following Saunders (1988), the irony of this altering of circumstances cannot be overemphasised. The indigenous people who for generations had utilised the environment in a sustainable fashion due to their low numbers, were also affected and even prosecuted by the colonists' rules and regulations.

According to Pringle (1982), the era of the British occupation of the Cape in the nineteenth century was particularly destructive to the environment, and it was not until the latter part of century that the British, like their Dutch predecessors, instituted legislative control over environmental exploitation.

The following quote exemplifies the scale of exploitation which took place under British rule:

"..a vast herd of zebras, and again (by) more gnus, with sassybes (sic), and hartebeests pouring down from every quarter, until the landscape literally presented the appearance of a moving mass of game Their incredible numbers so impeded progress, that I had no difficulty in closing with them, dismounting as opportunity offered, firing both barrels of my rifle into the retreating phalanx and leaving the ground strewn with the slain. " (Cornwallis Harris 1836, as quoted in Pringle 1982, p.38)

On a global scale, the latter part of the nineteenth century and the early twentieth century was a critical period in the crystallisation of environmental protection, as it coincided with the completion of the exploration of wild frontiers and saw a tapering-off of wide-scale expansionism by western colonial powers in north America, India, and parts of Africa (Carruthers 1988). In South Africa the foundations of present-day conservation legislation and law enforcement were laid during this period. The Transvaal Republic took the lead when, in 1870, the first game rangers were appointed, and open and closed seasons for the hunting of game were introduced. The Orange Free State and the colonies followed suite, and after the advent of the Union of South Africa, the South Africa Act of 1909 empowered each province to adapt their ordinances to ensure the protection of game (van der Merwe 1962).

There is evidence (Fuggle and Rabie 1983) to suggest that the protection of the South African environment is largely dependent on legislation and law enforcement. Khan (1990) is of the opinion that, over the last three centuries, this situation has been amplified and may have curtailed the development of an *environmental ethic* as part of what she terms the 'post-colonial culture'. She further claims that it has alienated people, particularly black people, from the cause of conservation because, *inter alia*, it has failed to address their basic material needs. Cock (1991) argues that the foundations of 'post-colonial' environmental attitudes have been shaped by an authoritarian conservation perspective. Furthermore from the advent of European colonialism until virtually the present day, it is common cause that all decision-making pertaining to environment control and conservation has been a white male preserve. Until very recently even white females have been excluded.

In the context of the discussion, the concept of 'conservation' requires some clarification. Quinlan (1990 :18) suggests that conservation has two aspects:

"Firstly it is based on an ambiguous premise, the notion of environmental degradation. Secondly it is a political and economic construct of which the definition is subject to societies' changing material demands for, and means to exploit, natural resources"

It is probably true to say that in recent years conservation authorities in this country have progressed from a preservationist to the more *appropriate* conservationist ethic (Callicott 1990). It is however argued by Owen-Smith (1987) and Koch (1991) that vestiges of an out-dated or *colonial* attitude towards conservation still exists among many professional conservationists, and within many conservation organisations. This *colonial* style of nature conservation has tended to stress the importance of game reserves and species protection, but has been seen as a cause of material hardship by local people (Armstrong 1991, Quinlan 1990, Ntsala 1991).

Hanks (1990, quoted by Carnie) refers to *colonial* conservation as

"an outmoded policy which has created protected enclaves of wildlife at the expense of the peoples living nearby."

This statement perhaps best encapsulates colonial conservation, suggesting an elitist, First World approach, heavily reliant on scientific theory, but often lacking sensitivity to local realities. By contrast, there are increasing arguments (Quinlan 1990) for holistic, non-Cartesian (White 1989) conservation, which is seen to be more appropriate to South Africa.

2.2. Environmental issues in South Africa

South Africa is a microcosm of the environmental challenges facing the planet. (Jacklyn Cock, Environmentalist and sociologist, 1991 :2)

South Africa is faced with a diversity of environmental problems, which range from destruction of the ozone layer, soil erosion, water pollution, habitat destruction, loss of species, invasive exotic vegetation, to illiteracy and poverty. Some of these issues are well documented, as demonstrated by a review of contemporary literature. These include Huntley et al's (1989) correlation between economic growth and environmental health, Macdonald's (1989) concern for biotic diversity, Timberlake's (1985) link between apartheid and environmental degradation, Khan's (1990) analysis of black apathy about environmental issues, Wilson and Ramphela's (1989) examination of the effects of poverty, Clarke's (1991) emphasis on soil erosion, and Cock and Koch's (1991) overview of environmental politics in South Africa.

Much of this literature suggests that South Africa's environmental problems are closely linked to social, economic, and political factors. In particular, poverty and social injustices such as forced removals have been identified as some of the major causes of environmental degradation.

In view of the above discussion, it is the researcher's opinion an **alternative approach** to environmental problems, which intergrates social, economic, political and bio-physical factors, might be a more appropriate strategy for state conservation authorities to adopt. In keeping with the *new environmentalism* (section 1.1), this may require a paradigm shift from a purely scientific analysis towards a more holistic perspective of environmental issues, which recognises that human well-being is dependent on a healthy environment.

Although there is evidence to suggest that *some* professional conservationists in Southern Africa have embraced this paradigm (Koch, 1991), the researcher would question the extent of this development, particularly within the CDNEC. In the context of this research, the attitudes of law enforcement officers towards environmental issues are signifigant, and form a integral part of the study (section 1.3.).

2.3. The enforcement of nature conservation legislation.

Literature referring to the enforcement of nature conservation legislation in South Africa is scarce. For this reason it is considered appropriate to review some available literature from North America.

Following (Giles 1971) many conservationists traditionally believed that the enforcement of laws is a fundamental tool of conservation management. They ironically argued that law enforcement is a neglected aspect in the training of conservation personnel. It was felt that this was a serious problem because in many instances law enforcement officers provide the interface between a conservation authority and the public at large, and they may not be equipped to deal with difficult social situations. Morse (1977) likened the position of law enforcement personnel to that of traffic enforcement officers, as both deal with ordinary citizens, not hardened criminals. He was concerned with the added dimension of maintaining respect in a community and yet often being resented when carrying out duties. As early as 1971 Williamson questioned the practice of spending more money on wildlife research, and relatively little on research into the mores, motivations and needs of the public, although he acknowledged that the latter was receiving increasing attention. This was possibly due to the gradual recognition that an understanding of the social circumstances of communities is crucial to the attainment of environmental awareness within those communities. Both Morse and Williamson believed that education is more likely to achieve environmental awareness than law enforcement.

2.4. The development of Law Enforcement in the CDNEC

In the CDNEC, the term '**law enforcement**' refers to the execution of various actions concerned with the regulation of, utilisation of, and trade in natural resources (Muller 1990). These regulations are listed in the Nature and Environmental Conservation Ordinance (Ordinance No. 19 of 1974).

In terms of an undated CDNEC document entitled '**Guidelines for law enforcement officers**', the **requirements of law enforcement officers** include a comprehensive knowledge of the Ordinance, and regulations and court procedures pertaining to it. They should have a fair knowledge of plant and animal taxonomy, as well as a good understanding of the principles of conservation, and particularly the conservation policy of the CDNEC, in order that they may give correct information to the public. Within the CDNEC, the latter duties are commonly referred to as '**extension**' and are furthermore seen as being quite distinct from the duties of environmental educators.

The execution of law enforcement encompasses what might be describes as '**hard**' and '**soft**' duties (Muller 1991). Soft law enforcement includes the control of wild animals in captivity, hunting and angling licences, and registration of nurseries and hunting farms, as well as extension. Hard law enforcement includes the policing of illegal trade in endangered species and products of endangered species, such as ivory and rhino horn.

In view of the above factors, an examination of the historical influences which shaped present-day law enforcement in the CDNEC provides a useful background to the study. In the Cape Province a Department of Inland Fisheries was established in 1940, and in 1951 it was converted into the Department of Nature Conservation (van der Merwe 1962). To quote W.J.B. Slater, the then Provincial Secretary,

"The main purpose of the establishment of the Provincial Department of Nature Conservation is to provide a channel for the ready combination of official and voluntary effort in order to rouse and educate public opinion on this subject; for the task is largely one of education and guidance" (CDNEC 1952).

The importance of education is explicit in this statement, but an examination of the department's annual reports between 1952 and 1954 would suggest otherwise.

At that early period of the department's history it relied on assistance from the police, provincial revenue inspectors, divisional council wildlife protection officers and honorary nature conservation officers in the enforcement of the Ordinance on Nature Conservation.

By Report 12 (CDNEC, 1955) we find that

"To assist in the more stringent enforcement of our legislation, two full time Inspectors of Fauna and Flora are to be appointed".

These law enforcement officers were to be controlled by the administration section of the department. Many of the first law enforcement officers were ex-policemen or ex-army (including the British army) officers (van Wyk 1991, *pers comm.*), and introduced a strong *colonial* and *regimental* style to this section. They were thus well suited to the rigid and bureaucratic management of the administration section (van Wyk 1991, *pers comm.*). These officers also retained the military-type uniforms of *bona fide* policemen (CDNEC, 1959), which possibly reinforced the perception among the public that they were policemen. It is conceivable too that a philosophy favouring a strong authoritarian approach to law enforcement was adopted from these influences.

In 1962 the Minister of Justice approved the appointment of law enforcement officers as peace officers in so far as contraventions of the ordinance relating to nature conservation were concerned (CDNEC, 1962).

This authority gave them

"the necessary powers where an offender, for instance, refuses to give his name and address, or is reasonably suspected of having given a false name and address, or hinders or obstructs an officer in the performance of his duties" (CDNEC 1962).

An extract from Annual Report 20 (CDNEC, 1963) gives some indication of the department's official attitude towards law enforcement at that time:

"There are instances where a caution and an explanation can serve the cause of nature conservation more effectively than a court conviction. On the other hand, there are occasions where only firm court action will serve the purpose."

Although this does not appear to be an unreasonable attitude, within the context of the department's broader conservation actions (van Wyk 1991, *pers comm.*) it is possible that its sanction of 'firm court action' did not always serve to foster a positive relationship with the public.

The documents and reports of the 1960's show that law enforcement officers investigated complaints and contraventions of the Ordinance, dealt with illegal snaring of game, and also gave lectures to schools and farmers' associations. In the late 1960's there appears to have been a distinct 'culture' of law enforcement in the CDNEC (van Wyk 1991, *pers comm.*). A chief law enforcement officer was stationed at the head office in Cape Town and was responsible for the training and control of officers in the field. According to Lensing (1991, *pers comm.*), the field officers were primarily concerned with law enforcement, and had little or nothing to do with nature conservation in a broader sense. Lensing further describes a certain 'us and them' attitude between the law enforcement officers and the rest of the department. The official documents do not however reflect this perception, and while mostly listing law enforcement activities, also refer to liaison with farmers' associations and schools.

In the early 1970's, the traditional duties of law enforcement officers began to evolve to *more noticeably* encompass extension as well (CDNEC, 1970/1971). During this time there was a gradual realisation amongst the senior officers that a 'policeman like' attitude towards 'transgressors' was not necessarily effective (van Wyk 1991, *pers comm.*), as exemplified by the following extract "The arrest and prosecution of a large number of *these offenders* does not serve as a deterrent" (CDNEC, 1971/1972, in reference to illegal netting of fish).

The control of law enforcement was transferred from the administration section to a professional officer. In 1978, Rand, the Chief Law Enforcement Officer, wrote in his report:

"Law enforcement officers are indeed diversifying their involvement in the outdoors and today are applying themselves to problems which are far removed from those treated by the simple punitive measures of the past" (CDNEC, 1977/1978).

Despite this statement, an examination of subsequent reports during the latter 1970's and 1980's still indicates more law enforcement than extension activities, although it is possible that these reports are not an accurate reflection of actual events.

At present, the report of an official work-study investigation (Direktoraat Bestuurdienste, 1991) which is still awaiting implementation, recommends that the law enforcement section be renamed the 'district services' section. The proposed section will be almost exclusively involved with extension, and will have limited law enforcement duties. The report further recommends the creation of a 'special task force' which will deal with serious offences such as ivory smuggling or large-scale poaching. Muller's (1991) study supports this notion as he argues that conservation authorities have neither the expertise nor the personnel to effectively deal with such offences. He therefore proposes that the existing special

police unit, which is similar to the narcotics or diamond unit, should take full responsibility for these duties.

The work-study report appears to be an attempt to encourage the would-be 'district service section' to become more involved in extension. The report envisages that the change of name will remove any stigmatic connotations or misconceptions among the public, and suggests that this might result in a more 'friendly' and efficient extension service to local communities.

In view of these recent developments and proposals, the researcher considers that it is particularly important and timeous to investigate whether a true paradigm shift from an authoritarian to a more human-centred approach among this corps has taken place. This could be of critical significance to the CDNEC because these officers, by virtue of their placing, are possibly in closest contact with local communities, and are often the basis on which the public forms its perceptions of the CDNEC.

2.5. *The concept of attitude*

To understand how to encourage environmentally responsible behaviour, one must identify at least some of the factors which influence such behaviour. These factors include locus of control, sense of responsibility, knowledge, and attitude. (Nancy Newhous, Environmental Educator, 199 :26)

A considerable amount of literature pertaining to attitudes, presenting diverse perspectives, is available. It is not surprising that Anderson (1988) states that 'attitude' has been a misunderstood concept. Following Allport (1967), the essential feature of an attitude is that it is a state of mental readiness or preparation, organised through experience and exerting a directive influence upon the individual's response to all objects and situations. More recently, Fishbein and Azjen (1975) identify three essential features of attitude: it is learned; it predisposes action; and such actions are consistently favourable or unfavorable towards the object. In similar vein, Azjen (1988) states that an attitude is a disposition to respond favourably or unfavourably to an object, person, institution or event.

Schuman and Presser (1981) consider attitude to be a generic term which covers all kinds of subjective questions. Within the realm of attitude, Fishbein (1967) and Fishbein and Azjen (1975) see conceptual distinctions or dimensions, which may be defined as **affect** (feelings and evaluations); **cognition** (knowledge, opinions, thoughts, beliefs and belief strengths); **conation** (intended behaviour); and **observed behaviour**. Fishbein argues that as attitude is a multidimensional concept, the attitude of an individual towards an object or concept may fall at different positions on these four dimensions. Fishbein further comments that these dimensions may not always be highly correlated, as exemplified by the phenomena that different people may like the same thing for quite different reasons.

Fishbein and Azjen (1975) and Azjen (1988) suggest however that despite the multidimensional nature of attitude, often only the **affective dimension**, encompassing feelings and evaluation, is measured and treated by researchers as the essence of attitude. This concern is supported by Oskamp (1977) and Anderson (1988) who focus on the affective dimension and relate it to the cognitive and conative dimensions of attitude. In this study the term "attitude" is used to describe **affect** (feelings, evaluations); **cognition** (belief, belief strengths, opinion, awareness, knowledge); **behavioural intentions**; and **observed behaviour**.

Research suggests that there is a **direct relationship** between one's need for knowledge about - and the **strength** of attitude towards - a particular focus. Following Azjen (1988) individuals who form attitudes after carefully examining evidence exhibit stronger attitude-behaviour correlations than those who base attitudes on little evidence.

Attempts to measure attitudes may be problematic, because they may be distorted by, or fluctuate because of factors such as lack of self-awareness, uncertainty, insincerity, and ingratiation (Azjen 1988). Reason's (1981) synthesis of new paradigm research illustrates however an **alternative approach** to attitude research. Prior to this new approach, analytic and positivist methods which attempted to quantify attitudes were prevalent, but more recently the **naturalistic approach**, whereby researchers attempt to **understand, interpret and describe** attitudes has been increasingly employed. There is considerable agreement (Henerson *et al.* 1978; Azjen 1988) that accurate measurement of attitudes is difficult if not impossible, and that attitudes can only be inferred from word or action. These authors emphasise that researchers have to accept the study subject's statements about his or her attitudes as the best indicator of those very attitudes.

Although **personality traits** did not constitute a significant aspect of the research, it was considered important to clarify their position *vis a vis* the concept of attitude. Following Selltitz (1965) personality traits may describe the **tendencies** of individuals to behave in a certain manner, for example a tendency to be honest, or a tendency to be extrovert. They further argue that the responses that reflect tendencies do not focus on an external target as do attitudes, but rather focus on the individual him- or herself. Azjen's (1988) research reveals five general personality characteristics. These are: sociability; agreeableness; conscientiousness, emotional stability; and culturedness. Azjen argues that these personality traits predispose behaviour (and therefore attitude) towards an object under consideration.

Personality traits are embodied in the worldview of individuals (Oppenheim 1966), and for this reason the concept of 'worldview' is important within this study. It is derived from the German expression 'Weltanschauung' and represents a comprehensive view or personal philosophy of human life and the universe (Collins English Dictionary 1986). Bennett and Chorley (1978) refer to worldview as a "belief system involving conceptualized experience, partly personal, largely social". Rowan and Reason (1981) argue that worldview could also be used to describe one's personal ideological position or outlook. Oppenheim (1966) suggests that worldview is closely related to, and is a function of, the cognitive dimension of attitude,

particularly that of belief, which in turn, is often dependent upon one's values. Contextualized within this study, worldview may be influenced by personal experience, by the internal 'culture' of the CDNEC, and by external sociological phenomena.

Following Milbrath (1984), **values** refer to the moral principles and beliefs of an individual. They may be defined as the strongly held positive valences held by individuals, which may be generalized to many situations. Values are distinct from preferences, which typically are held less strongly. Values are fundamental to everything we do, because what people value governs the way they react to their environment.

Attitudes are the main focus of this study. Their relationships to values, personality traits, and worldview are acknowledged and considered important. However, the scope of this study does allow the latter more than a brief comment where appropriate.

In summary, this chapter has examined the historical development of conservation and discussed environmental issues, all within a South African context. Enforcement of nature conservation legislation, and the duties of law enforcement officers, specifically within the CDNEC, have been explored. The concept of 'attitude' has been reviewed and will form an integral aspect of the study. It is envisaged that these various topics will help to contextualise the research project.

CHAPTER 3

RESEARCH METHODS

"...researchers have become increasingly aware that education does not take place in a social vacuum." (T. Husen, Educationist 1988 :20)

3.1. Theoretical underpinnings of the research

As outlined in Chapter 1, the aim of this research was to investigate the role of nature conservation officers within the Law Enforcement section of the CDNEC, as facilitators of Environmental Education.

Two major paradigms may be employed in social and educational research. The first is modelled on the natural sciences and is based on the principle that "the only reliable knowledge of any field of phenomena reduces to knowledge of particular instances of patterns of sensations". (Harre 1981). This paradigm - termed 'logical positivist' - analyses theoretical discourse in order to reveal its logical structure, while the empirical content of the theory is established by identifying the logical consequences of the set of laws which intend to describe observations (Harre 1981).

Logical positivism tends to emphasise observations that are **empirically quantifiable** and that lend themselves to analyses by mathematical methods. The nature of this research paradigm is essentially **reductionist**, and its goal is to establish and explain causal relationships.

The second major research paradigm, sometimes termed the **post-positivist** or **non-positivist paradigm**, is derived from the humanities, and emphasises **holistic** and **qualitative** information and **interpretive** approaches (Miles and Huberman 1984, Husen 1988). It includes research tools such as observational methods and tests, and presents holistic and intuitive attempts at inquiry.

In the logical-positivist paradigm researchers tend to distance themselves from the subject of inquiry and from their own intuitions and situational knowledge while isolating the subjects of inquiry from their particular social context. By contrast, in the analysis of post-positivist research, individuals are not regarded as passive units, but rather as active agents with unique personal knowledge, who are aware of what they are doing. Therefore in this type of research the inquiry subject has a very different role to play in the study than the role played by the individual in the study of phenomena in the positivist paradigm (Keeves 1988), and the research becomes a **co-operative enquiry** where the researcher interacts with the subjects who knowingly contribute towards the study (Heron 1981).

Post-positivist research may encompass *inter alia* hermeneutic and phenomenological approaches. Hermeneutic research seeks to understand the different social and historical contexts in which individuals live and act (Keeves 1988, Odman 1988). It recognises that in order to understand and interpret how and why individuals act it is necessary for the investigator to enter into dialogue with individuals. Phenomenology emphasises the importance of trying to 'get to the roots' of human activity through a holistic approach (Husen 1988). Thus in post-positivist research a strictly deterministic perspective is rejected and there is an attempt to understand human beings as individuals in their own, unique entirety.

However, post-positivist research is often eclectic, and may in some circumstances 'borrow' from the logical positivist approach. Husen (1988 :20) cautions that

"dogmatic evangelism for particular philosophies and ideologies espoused as 'scientific' and not accessible to criticism is detrimental to the spirit of inquiry..."

In fact "...the two main paradigms are not exclusive, but complementary to each other."

In Chapter 1 a widely accepted concept of **environmental education** is described. In concurrence with this, the researcher regards the post-positivist paradigm of research as the most appropriate for environmental education for the following reasons. The **holistic** nature of this form of research enables it to acknowledge the 'humanity' of study subjects within their social contexts, whereas logical positivism tends to 'dehumanize' study subjects. Furthermore, post-positivist research does not distance the researcher from the study objects , and in this way makes provision for the researcher's **subjective** opinion. However, the researcher should strive to be constantly aware of subjectivity and draw attention to it wherever appropriate.

3.2. The Research

3.2.1. The research sample

Gay's (1987) overview of education research provided useful insights regarding sampling methods, while Cates (1985) supplied specific guidelines for non-random volunteer sampling, which was employed in the study.

The **research sample** was drawn from the corps of law enforcement officers of the CDNEC. There are 43 such officers, whose posts are grouped into 4 sub-regions, namely the Western, Southern, Eastern, and Northern Cape. Females and black males were not considered for the study as their

duties comprise only extension work (i.e. they provide information and advice to the public and are not involved in law enforcement). This left a potential study sample of 35 male white or 'coloured' officers. These were drawn from the regions of the Western, Southern, and Eastern Cape. The Northern Cape was not included.

The limited scope of the study, and the requirement to complete it within a year, as well as logistical and financial constraints, were the major determinants of the size and distribution of the sample. After discussions with the research supervisor, and on the strength of insights gained from the pilot study, it was felt that a sample of 18 out of a possible 35 law enforcement officers employed by the CDNEC would provide sufficient data for rigorous research and meaningful analysis. The ranks of these officers were as follows: three Chief Nature Conservators ; three Principal Nature Conservators; and twelve Nature Conservators. (Refer to Appendix 1 for rank structure)

3.2.2. Biographic data

For reasons of anonymity which was considered crucial to the study, detailed biographic data cannot be displayed. The participants' estimated ages ranged from 22 years to late 50's, with a estimated median age of 35 years. Years of service in the CDNEC ranged from one year to 25 years, with an median of 13 years. Only six participants had been employed elsewhere before, the other 12 having joined the

CDNEC directly after school or technical college. Ten participants held a 3-year diploma in Nature Conservation, while 4 strongly contemplated or were currently completing the diploma by correspondence. Two diplomates were engaged in further studies in public administration at a university.

The participants' reasons for joining the CDNEC were generally related to: a love of nature; an unwillingness to do "office work"; and a desire to work outdoors. Only two participants stated that they had been unable to find any other employment, and for this reason had joined the CDNEC.

3.2.3. Methods

The following methods were used to gather data:

- 1) A semi-structured research interview (Burroughs 1975) with the 18 law enforcement officers comprising the research sample. This was to:
 - * gain insights into their level of awareness and knowledge of environmental issues within the broader social, economic and political context of South Africa.
 - * determine the emphasis which they placed on law enforcement and extension respectively;
 - * explore their feelings about their **dual role** as law enforcers and extension officers;
 - * determine their attitudes towards their local communities, and their perceptions of how those communities view them.

- 2) Informal discussions were held with four senior officers in management and supervisory positions, in order to determine their attitudes towards law enforcement.

- 3) Observational notes (Sanders and Pinhey 1983) were compiled on law enforcement officers in order to provide qualitative information additional to that obtained from the interviews.

- 4) Non-participant observations (Sanders and Pinhey, 1983) of the subjects of the study were made during the period from 11 March 1991 until 31 October 1991. These observations were not planned, but made as opportunities arose. For example, on occasions other than during the research interviews, the researcher was required to visit offices and stations, and when possible would observe officers at work. Aspects relating to this process are discussed in section 3.3.

The research interview has been defined as

"a two-person conversation initiated by the interviewer for the specific purpose of obtaining research-relevant information, and focused by him on content specified by research objectives of systematic description, prediction, or explanation."
(Cohen and Manion 1989 :307).

An interview was considered the most viable way of obtaining information from the study subjects for a number of reasons. Generally people find it easier to express opinions verbally than on paper as for example in a written questionnaire. Interviews are more personal and allow a certain rapport and trust between interviewer and study subject. According to Brenner *et al* (1985), the central value of an interview as a research procedure is that it allows both parties to explore the meaning of questions and answers. Furthermore there is implicit or explicit sharing and negotiation of understanding in the interview, and any misunderstanding on the part of either the respondent or the interviewer can be clarified immediately. An interview may also allow the interviewer to gauge the intensity of opinions given. However it should be kept in mind that because interviews involve an intensive face-to-face situation there is a possibility of bias. Verbal data, by virtue of their quantity and varying degrees of structure are particularly susceptible to error in interpretation.

The purpose of the research interview was to gather data, in a participatory process of dialogue with the study subjects. Three basic types of interviews, in order of increasing rigidity and decreasing broadness, are described as 'unstructured', 'semi-structured', and 'fully structured' by Burroughs (1975); whereas Cohen and Manion (1989) refer to them as 'completely informal', 'less formal' and 'formal'.

The **semi-structured** interview is defined as follows:

"The interviewer has the schedule before him for completion during or immediately after the interview. It represents a guide as to all the information he must have secured by the time the interview is finished, but it leaves him free to decide how best to secure this information." (Burroughs 1975 :104)

The unstructured interview is non-directive and requires extreme competence to be of value to the interviewer, while the structured interview reduces the role of the interviewer to merely a reader of a list of prepared questions (Burroughs 1975).

The researcher was of the opinion that the **semi-structured** interview was the **most suitable** for this study, as it was considered the most likely to provide the type of information sought. In the semi-structured interview the researcher is able to personalize questions, and deal with sensitive questions in an appropriate fashion. It also makes allowances for additional *ad hoc* questions and allows the interviewer to probe specific issues if deemed necessary. The semi-structured interview may be seen as non-threatening, as it allows for a certain informality, rapport and trust between interviewer and study subject.

The interview questions were compiled after a survey of a range of literature on interviews (Brenner et al 1985, Burroughs 1975, Cohen and Manion 1989, Hakim 1987), and a pre-interview analysis of the situation based on discussions with the research supervisor and senior conservation officials (Neethling, pers comm. 1990, van der Merwe, pers comm. 1990, Andrag, pers comm. 1991). A pilot study (section 3.2.4) was conducted with three study subjects, and on the basis of this experience the interview questions were re-organised.

Observational notes were recorded shortly after each interview and before data analysis commenced. According to Sanders and Pinhey (1983 :357) "..some notes are recorded on the basis of observations that may or may not be important to analysis .." Observational notes were considered necessary to the research as they provided supplementary information as well as recording the researcher's personal impressions of the study subjects, and the circumstances in which they worked. They proved to be a particularly useful reference during the analysis of data.

Observational notes were based on the following characteristics of each individual. (It should again be emphasised that some of these notes were the researcher's subjective impressions.)

- * estimated age
- * rank
- * race
- * home language, and level of bilingualism
- * qualifications
- * degree of willingness to co-operate in study
- * apparent rapport with other staff members
- * personality as projected to the researcher (e.g. easy-going, very formal)
- * communication skills
- * other observations (e.g. appearance of office where applicable - neatness / 'friendliness', family details if volunteered)

3.2.4. Collection of data

A pilot study with 3 officers was undertaken during the period 11 - 12 March 1991. The objective of the pilot study was to trial the research interview and identify any linguistic or methodological problems. During the pilot study two Afrikaans-speaking and one English-speaking officer were interviewed. The pilot study alerted the researcher to certain aspects of the structure of the research interview which required modification. For example,

the order of certain questions was adjusted to assist respondents in generating a more logical 'flow' of information, and certain terminology which had presented some difficulty was clarified. The researcher also realized the importance of creating a rapport and empathy with the respondent and yet remaining critically aware, during the interview. The pilot study did not lead to any further changes in methodology, and it was decided to use the information obtained from these three interviewees and include them in the study group.

The main study was conducted during the period 22 March - 8 May 1991. Prior to this, the researcher sent letters to the Senior Regional Officers (refer to appendix 1) of the Western Cape, Southern Cape, and Eastern Cape respectively, in which she informed them of her intention to do research. She stressed that the study had been sanctioned by the Chief Director and Director, and requested their support. Each assured her of his co-operation. The researcher then contacted the Chief Nature Conservators (n=3) in charge of law enforcement in the same regions, who likewise assured her of their co-operation and assistance. These officers agreed to form part of the study group (n=18) and also assisted with lists of subordinate officers. Individual officers were then contacted telephonically and the following information given: the researcher's name, the fact that she had permission from the Chief Director to conduct the research but that participation was entirely voluntary, and that all information would be treated as confidential.

She emphasised that the research formed part of an academic project, that it had not been commissioned by the CDNEC, and could not hold any repercussions for them. She explained that the interview would take approximately an hour, and asked for permission to record the interview. No officer declined to participate, and appointments were made.

Officers were interviewed individually at their places of work. All officers agreed to the interview being recorded, although in one case, the tape recorder malfunctioned and notes were taken. These notes subsequently proved to be inadequate, and in the analysis, these data were sometimes omitted; hence in some instances the sample number is indicated as 17. The researcher was dressed in official uniform during interviews, in an attempt to create a climate of familiarity and trust.

Each interview lasted between 30 minutes and one and a half hours, depending on individual respondents. The interviews were conducted in English or Afrikaans, as the respondents preferred. In some cases information or opinions additional to those required by the interview questions were expressed, often without prompting from the researcher. These were tape recorded, or noted shortly after the interview. Letters of appreciation for participating in the study and being of assistance were sent to each participant.

In addition to the 18 officers, informal discussions were held with 2 Senior Regional Officers, an Assistant Director,

and a Director. The researcher felt that their views of law enforcement could provide important additional information, and give the study a wider perspective.

3.2.5. Analysis of data

When data collection was complete, respondents were coded by **number** for anonymity. In the discussion which follows individuals are referred to by these numbers, and are indicated as respondent "[X]". Transcripts were made of the taped interviews. The transcripts and the observational notes were examined by means of **qualitative data analysis** as described by Miles and Huberman (1984). The procedure was as follows: The interview data were carefully read through, and results arranged in terms of the specific aims of the research. Other themes which the researcher felt might be of significance were listed. (For example some officers commented on diverse topics such as salaries, uniforms, drought, or they joked or told stories about their job.) In some instances these provided additional insight about officers' attitudes to various indicators. Much of the analysis consisted of noting and summarizing regularities, patterns, explanations and propositions. Some of the conclusions were based on **reflection** or *careful consideration* of what things meant, rather than on clear-cut statistical analysis. The researcher was however constantly mindful that following Sanders and Pinhey (1983), **reflection** of data tends to be **subjective** in nature .

3.3. Evaluation of research methods.

In retrospect the decision to use interviews as the research tool rather than questionnaires proved to be justified. The interviews allowed interaction between the researcher and the respondents, and made direct observation and compilation of additional notes possible. The researcher had considered questionnaires, but was concerned that had they been used, they might have been delayed or ignored. It is also possible that the interviews created a greater sense of participation than questionnaires would have. The respondents often appeared to be genuinely flattered to be asked for assistance with the study, which may not have been easily observable had questionnaires been used.

There were several factors which may have influenced the collection of data. The fact that the researcher was an employee of the same organisation had both positive and negative influences. Positive aspects included logistical support in terms of transport, and ease of access to participants.

Negative aspects included the possibility that although the researcher made every effort to keep an open mind during interviews, prior information about certain officers may have caused her to treat them slightly differently. By contrast, the fact that the researcher was known by, and had prior contact with 5 of the participants appeared to have no significant influence on their responses. She was however

concerned that any negative findings may create tensions between the participants and herself, or have repercussions for officers.

As noted earlier, although the researcher had originally intended to include non-participant observations of officers in the course of their duties as part of the research programme, logistical constraints made this impossible. Some non-participant observations were however made opportunistically, which proved useful to the study. For example when the researcher was visiting a regional office, she might have the opportunity to observe law enforcement officers at work, although she was not able to accompany officers when they interacted with the public. In retrospect, this is considered to be an unfortunate shortcoming of the research.

From the participants' perspective, the fact that the researcher was English-speaking, a woman, from 'Head Office', (in some cases) younger and yet in a more senior post, and obviously engaged in higher academic study may have proved slightly threatening. The researcher was conscious of these factors, and made every effort to downplay them and not appear condescending, although it is possible that she was not entirely successful. She was particularly aware of a sense of tension and nervousness with two officers, and deliberately spent more time talking informally and attempting to establish rapport. One officer's comments suggested to the researcher that his lack

of qualification, and her obvious qualification were the cause of some tension. Some respondents were more open and giving with information, and the researcher was aware that she responded more 'warmly' to them than to others who were perhaps less open.

Despite the shortcomings mentioned, the researcher is of the opinion that the **research method** used in this study was an **appropriate one**, as it yielded **rich and useful information**.

CHAPTER 4

ATTITUDES TOWARDS THE ENVIRONMENT

Environmentalism is as much an attitude of mind and a certain code of behaviour as an ideology. (Timothy O'Riordan, Environmentalist 1981 :3)

4.1. Introduction

Following Fishbein (1967) and Fishbein and Azjen (1975), as outlined in section 2.5., this chapter deals with attitudes towards the environment. The cognitive dimensions of attitude, namely belief, opinion and knowledge are mainly of concern, although where appropriate, affect is also investigated. More specifically, this chapter examines and summarises the study group's attitudes towards the concepts of 'nature conservation' and 'environmental conservation'. It also summarises the group's knowledge of environmental issues, and perceptions of these issues within the broader social, economic and political context of South Africa.

These attitudes are elicited by questions relating to:

- * the concepts of 'nature conservation' and 'environmental conservation'
- * the notions of holism and the role of humans in the environment

* the range of environmental issues known about and the interpretation of those issues.

As mentioned in section 2.5., belief about an object or concept is considered to be related to the 'worldview' or ideological position of an individual (Rowan and Reason, 1981). Although the scope of the study does not allow the worldview of individuals to be explored in any depth, aspects of this concept may be of significance in as far as they influence the beliefs of individuals. For this reason they are referred to in this chapter.

In keeping with the approach of new paradigm research (Keeves 1988), the intention was to illuminate and understand, rather than quantitatively measure attitudes. However an overall ranking of officers on the basis of relative attitude positions was constructed at the end of this section.

As discussed in section 1.4., the researcher embraces a widely held philosophy (Gough 1987) which views the environment as an holistic concept, encompassing nature and humans as interdependent components. This philosophy is used as a 'benchmark' when evaluating officers' attitudes towards the environment.

4.2. Beliefs and opinions about 'Nature conservation' and 'Environmental conservation'.

In this section, beliefs and opinions regarding nature conservation and environmental conservation are analysed and discussed. Responses were used to construct indicators which gave some insight into individual's interpretations of the concepts of 'nature conservation' and 'environmental conservation' and their opinions of the differences between the two concepts, as well as their views of holism and related concepts. These responses are presented in section 4.4.

Respondents were questioned about what they understood by the terms 'nature conservation' and 'environmental conservation'. A fairly common response (n=6) to 'nature conservation' dogmatically emphasised the conservation of 'flora and fauna'. It could be argued that the conservation of flora and fauna is aligned to 'species conservation' rather than 'habitat conservation'. The former is regarded by more progressive conservationists as an outdated and reductionist viewpoint (Owen-Smith 1987). Belief in the importance of the Ordinance which governs officers' duties was also apparent (refer to section 2.4.). One respondent [1] even referred to the Ordinance as the 'Bible' of nature conservation. The researcher found little evidence of any individualism in those responses, and concluded two possible explanations for this phenomena. Either these officers were particularly respectful of official policy, or they lacked

imagination and were thus unable to offer a more personal interpretation.

Four respondents saw 'nature conservation' in terms of 'nature reserves or parks', while two respondents [4,8] specified that nature conservation implied 'the conservation of natural resources'. The latter notion, together with a single reference [15] to holism were considered to be relatively more sophisticated for two reasons. In the context of the question they suggest a greater knowledge and awareness, and in a wider context they suggest a more enlightened view than the concept of 'preservation of species' referred to section 2.1.

By contrast, the concept 'environmental conservation' was widely believed (n=13) to be a larger, broader concept which included aspects such as the conservation of soil, air and water, and the role of humans. It was also defined by one respondent [6] as being 'what the Ordinance does not cover'. The researcher was alert to any mention of the role of humans as she felt that this could suggest a more modern environmental stance (refer section 2.1.). Responses relating to the role of humans in the environment are discussed in more detail later in this section.

An attempt was made to validate responses by asking respondents if they thought there was a difference between 'nature conservation' and 'environmental conservation'. Five of the eighteen respondents did not distinguish between the

two. They believed that nature and the environment were the same, as typified by the following statement [12]: "no difference nature is the environment".

An element of confusion about the two concepts was expressed by three other respondents. This appeared to be caused in part by the *title* of the organisation (Chief Directorate Nature and Environmental Conservation). These respondents stated that they had not really thought about the concepts, but they supposed that there **had** to be a difference because the title inferred a difference. Another four respondents stated that "the environment includes everything" but would then qualify this by adding that nature included animals and (in some responses) plants, while the environment was air, soil, water and (in some responses) plants. The lack of clarity suggested that these officers had not questioned these concepts before.

The researcher was of the opinion that one particular respondent [5] presented an extremely weak or illogical response. She initially thought that the questions were misunderstood, but the responses were validated by further questioning which yielded similar results. For example the respondent stated that nature conservation referred to the conservation of flora and fauna, while environmental conservation implied the conservation of indigenous plants. The researcher felt that as an occupational conservationist, these weak responses suggested a lack of basic knowledge as

well as professionalism. It is her opinion that in-service training could be of benefit in this instance.

4.2.1. Qualified responses about 'nature conservation' and 'environmental conservation'.

Most of the respondents qualified their responses about nature conservation or environmental conservation with a more detailed opinion. The researcher was particularly interested in these responses as it was felt that they might provide additional information about the respondents' attitudes to environmental issues, which are discussed in some detail in section 4.3.

A religious orientation was suggested by two respondents [12,14]. One felt that nature is created by God, whereas the environment is created by man. This respondent's references to 'man-made' environment were inferred by the researcher to mean the built environment. She felt that in a sense this respondent saw humankind as apart from nature. This Cartesian-like interpretation of the environment is considered inappropriate by many modern environmentalists (Callicot 1990), who regard humans and nature as integral to each other.

The second respondent [14] believed that the earth was created by God for the enjoyment of humans, but humans have not cared for the earth sufficiently. The researcher

carefully considered this idea within the context of the respondent's other answers, for example

"this generation doesn't know what veld used to look like .. people always think that nature recuperates itself .. but it's got to the stage where that's not true - if we don't look after it it's not going to come back..."

and concluded that this respondent's beliefs could be aligned with the notion of **stewardship** (Exeter and Mayur 1988).

Concern for the protection of the environment for the sake of **future generations** may be considered an indication of the level of ethical and moral development of a society (Sachs 1990), and has been stressed by many modern environmentalists (Milbrath 1984). In the study, this concern was expressed by only one respondent [8] - which the researcher found surprising as one of the fundamental aims of conservation as stated by the IUCN, UNEP & WWF (1991), and subscribed to by the CDNEC, is 'sustainable development'. This might indicate a lack of awareness of this concept on the part of the other 17 respondents. In the case of this particular respondent, this attitude was validated by a subsequent question, in which the respondent referred to the environment as being broad, and including aspects such as agriculture. The researcher considered that this respondent's views were aligned with a **non-Cartesian** (White 1989) philosophy as he apparently did not regard nature and humans as separate entities.

A romantic view of nature was explicitly expressed by a single respondent [14] who believed that nature was a beautiful place "when I think of nature I think of a beautiful park, trees and animals". The researcher felt that considering that this respondent had a diploma in nature conservation, his ideas were somewhat naïve and simplistic. This view of nature was not uncommon however, and was expressed elsewhere - when respondents were asked why they had joined the CDNEC - many gave a romantic childhood dream of 'nature' as their *raison d'être* (refer section 3.2.2.).

Holism is a basic principle of modern environmentalism (Huckle, 1986), and is regarded as being the antithesis of the reductionist paradigm of modern natural sciences (Bennett and Chorley 1978, Harre 1981). In the study, the concept of holism was considered an important indication of the breadth and sophistication of 'world view' of the respondent.

The researcher found it difficult at times to establish clarity as only one of the respondents [15] used the term 'holistic'. This respondent appeared confused in his conceptualization, as suggested by his statement:

"nature is holistic...nature and the environment are the same...from the smallest to the biggest elephant and including man...I suppose the environment excludes animals...its the environment you live in...air, plants, soil".

Some officers (n=7) 'alluded' to holism. For example a single respondent included the "home environment and the whole world", while another said that the environment included "everything". Despite the confusion about these terms, the researcher decided that these respondents displayed a relatively broader and more enlightened 'worldview', although more data would be necessary to substantiate this.

The role of humans as part of the environment was only explicitly expressed by two respondents [11, 15], who interestingly had also referred to or alluded to holism. This phenomena may suggest that a 'colonial culture' (refer section 2.1.) is pervasive to a greater or lesser degree within the study group, although a number of CDNEC senior officials (Hamman 1991, pers comm. van Wyk 1991, pers comm.) have clearly stated that what they term a 'colonial' approach to conservation is not appropriate.

In summarising sections 4.2., the overall impressions gained by the researcher were that many respondents initially appeared confused and hesitant when questioned about nature conservation and environmental conservation; and there was a general tendency to reconsider their answers as they attempted to respond. A range of responses emerged, which presented the researcher with some insight of their environmental stance. A fairly common response was that environmental conservation was a broader concept than nature conservation, and while the Ordinance made provision for

nature conservation, it did not cover many aspects of environmental conservation. These observations suggested that perhaps officers had not previously questioned and clarified these concepts. The researcher was not able to establish any clear patterns or trends which related the responses to particular ranks or to the qualifications of officers.

4.3. Knowledge and belief of environmental issues

In this section, officers' knowledge and beliefs about environmental issues are analysed and discussed. In this analysis, knowledge refers to respondents' awareness of environmental issues, and has been qualitatively interpreted by the researcher in terms of the range of issues within a holistic southern African context. The researcher was aware that this is essentially a subjective interpretation, but felt that it was acceptable within the framework of 'new-paradigm research' (Miles and Huberman 1984).

It was speculated that the relationship between one's need for knowledge about - and the strength of attitude towards - a particular focus, as discussed in section 2.5., might be of consequence in the study, and the researcher was anxious to explore cognitive attitudes to environmental issues for this reason.

The researcher was also particularly interested to discover any relationships between beliefs about the environment, and

more basic personal **values systems** of individual officers. According to Oppenheim (1966) there is a hierarchical relationship between deep values or 'basic attitudes', and more superficial beliefs, which are often manifested as opinion or knowledge. Although the scope of the study did not allow much clarification of this relationship, the researcher felt that this might have lead to a better understanding of attitudes. The extent to which this relationship was explored presented a more intimate aspect of individual officers.

Knowledge about **perceived environmental problems** was elicited by asking respondents what the specific nature conservation and environmental conservation problems in their respective areas were, and what the reasons for these problems were (refer questions 21, 22, 23 & 24 in Appendices 2 and 3). As respondents had general difficulty in differentiating between the concepts 'nature' and 'environment', the researcher decided to analyse and interpret responses together in this case. However an interesting phenomenon was observed in this respect. Where previously five officers had not differentiated between the concepts 'nature conservation' and environmental conservation' (section 4.2.), four of these appeared to contradict themselves when they defined problem areas related to these two concepts. It is possible that these officers found it easier to conceptualize when referring to concrete problems. For example an officer [13] in the Eastern Cape who had previously stated that as far as he was

concerned 'nature' and 'environment' were one and the same, felt that in this context cycads were a major conservation problem, whereas deforestation and overgrazing were serious environmental problems

The researcher in some instances found it difficult to distinguish between responses to environmental issues which were reported to be important in terms of work load or work time, and those which respondents felt strongly about regardless of whether they were addressed during the course of their duties. In the case of the former, the respondents may have merely reacted to pressure from superior officers or official requirements or directives. In retrospect the researcher feels that a question pertaining to South Africa as a whole might have yielded important additional information.

Although the researcher considers 'local communities' to be a component of 'environment', it became evident that respondents generally had a reductionist view of humans and nature, and therefore for the sake of clarity these attitudes are discussed in section 6.3.1

ISSUES	WESTERN CAPE	SOUTHERN CAPE	EASTERN CAPE
Illegal hunting	3		3
Illegal netting	3	2	1
Urbanisation	5		
Lack of education	2		1
Illegal trade in flora (cycads) & fauna			4
Threats to rivers, wetlands, damming	3		2
Pollution (air, noise, marine)	3	1	2
Farming / overgrazing/ veld mismanagement	2		2
Population growth	1	1	1
Deforestation, burning natural veld	1		2
Lack of reserves		1	1
Threats to fynbos, flower picking	2		
Coastal / township development	2		
Alien / Invasive plants	2		
Marron breeding	2		
Education for blacks		1	
Squatting		1	
Pressure on recreation amenities		1	
Problem animals	1		
Illegal mining	1		
Soil conservation			1

TABLE 4.1. THE RELATIVE SIGNIFICANCE OF ENVIRONMENTAL ISSUES AS PERCEIVED BY OFFICERS IN THE DIFFERENT REGIONS

Table 4.1. (page 61) describes perceived environmental issues, in order of frequency mentioned by officers. Some of these issues were relatively area-specific; for example almost all respondents in the eastern Cape mentioned threats to **cycads** as a major environmental problem, while two respondents in the western Cape considered that the **despoiling of fynbos** was an important environmental problem.

Of particular interest was the high ranking given to **illegal hunting and illegal netting of fish**, both of which were regarded as serious problems regardless of respondents' geographic setting. This may be indicative of a prevalent 'policeman' mindset, which perceives environmental problems in terms of how they might be addressed by the Ordinance (see 5.2.). Despite this, there was some concern for social issues of **overpopulation and lack of public education** - issues which are not addressed by the Ordinance. This may suggest a tension between having to carry out duties which require punitive action, and (some) officers' own realisation that social issues may also be environmental problems. When questioned more deeply about public education, many officers felt that white people were in fact educated, but "just couldn't care less", while black people needed education. However only one officer [2] independently saw the latter as an issue.

Urbanisation was considered a serious problem, and was generally associated with the loss of natural habitats. Respondents did not relate urbanisation to increased demands

on natural resources, for example water. Instead urbanisation was seen as a threat to plants and animals. The researcher feels that this suggests a limited ability to integrate environmental issues in a holistic way.

The low ranking given to 'squatting' may suggest that officers generally do not see a correlation between poverty and environmental problems. This aspect is explored in more depth in section 5.3. Likewise, soil erosion, considered by many environmentalists (Clark 1991) to be the major physical environmental problem in South Africa, was mentioned by only one respondent [13].

4.4. Overall ranking on the basis of attitudes towards nature conservation, environmental conservation, and environmental issues.

In view of the diverse aspects dealt with in this chapter, it was felt that an overall ranking of respondents on the basis of their attitudes to various indicators would provide a useful profile of individual officers' environmental stance. Most of the attitudes discussed in this chapter are related to knowledge, beliefs and opinions (Fishbein and Azjen 1975, Azjen 1988), and are cognitive rather than evaluative (refer section 2.5.). This makes ranking of attitudes on a positive - negative scale problematic, and therefore in Table 4.2. (page 65) it was decided to display attitudes on the basis of their 'broadness'. Possible values

ranged from 0 to 4. For example a respondent who had a clear idea of concepts of nature conservation or environmental conservation, and who had knowledge and opinion of a wide range of environmental issues, would rank relatively higher than a respondent who did not. These rankings represent the researcher's subjective evaluation of responses. The numerical values are merely an indication of the relative positions of individuals, and should not therefore be interpreted as absolute values.

It is not easy to determine subtle trends from this table - partly because respondents are coded for anonymity. The six highest scoring respondents [3, 8, 11, 14, 15, 17] were two white English-speakers, four white Afrikaans-speakers and an Afrikaans 'coloured' officer. Their qualifications ranged from matric, to a diploma, to engaging in a part-time university degree. No overt trends relating to rank, age, qualification or language orientation were apparent. It is noteworthy that the researcher did not consider any responses to be worthy of a value of 4. The lowest ranking respondents [5, 13] were awarded poor scores for different reasons. In the case of [5], the researcher felt that his knowledge and opinion of environmental issues was extremely limited. By contrast, despite encouragement from the researcher, respondent [13] made little attempt to provide information, and the researcher was unable to award higher scores. Table 4.2 may not therefore be an accurate reflection of the environmental attitudes of this respondent.

RESPONDENT	NATURE CONSERVATION	ENVIRONMENTAL CONSERVATION	OPINION	HOLISM	HUMANS	ENVIRONMENTAL ISSUES	SOCIO- POLITICAL	TOTAL
1	1	1	2	0	0	2	1	7
2	1	1	2	0	0	2	1	7
3	1	2	2	0	2	3	1	11
4	1	1	1	2	2	1	0	8
5	1	0	0	0	0	1	0	2
6	1	1	2	0	0	2	0	6
7	1	1	2	2	0	2	1	8
8	2	2	2	2	2	2	1	13
9	1	2	2	0	0	1	0	6
10	1	1	2	1	0	1	0	6
11	3	3	3	2	3	2	1	17
12	1	2	1	0	1	1	0	6
13	0	0	1	0	0	1	0	2
14	1	2	2	2	1	2	1	11
15	3	3	2	3	2	3	1	17
16	1	1	1	1	1	2	1	8
17	2	2	2	0	2	2	2	12
TOTAL	21	25	29	15	16	30	11	-

TABLE 4.2 SUBJECTIVE VALUES ALLOCATED TO INDIVIDUALS ON THE BASIS OF THEIR RESPONSES TO VARIOUS ISSUES.

In conclusion, certain general observations may be made for the group. The officers' overall belief in the importance of the Ordinance was evident. These observations further suggest that generally officers are relatively poorly informed about environmental issues which do not immediately concern them, and have limited understanding of the relationship between social issues and environmental problems.

The results of this chapter provide a useful background for Chapter 5 in which the relative importance of 'law enforcement' and 'extension' are explored, and officers' attitudes in this respect are explored.

CHAPTER 5

ATTITUDES TOWARDS LAW ENFORCEMENT AND EXTENSION, AND THEIR IMPLEMENTATION.

"Its nice to know if a guy is taking you... to get on top of him. Law enforcement is basically like a chess game - you don't want to lose" (Law enforcement officer)

5.1. Introduction

The aim of this section is to determine the emphasis placed on law enforcement and extension respectively, and to explore attitudes pertaining to these. More specifically, the officers' interpretations of the concepts of 'law enforcement' and 'extension' are examined, and compared with attitudes towards perceived transgressors. Respondents are ranked on the basis of their relative attitudes towards law enforcement and extension. Attitudes to extension are further discussed in section 6.3.3., in the context of 'attitudes towards the public'.

Law enforcement officers have a dualistic assignment of enforcing legislation as prescribed in the Ordinance, and engaging in positive, informative encounters with the public, as noted in section 2.4. It is conceivable that there is a tension between these assignments, as enforcement might be considered a negative approach and extension a positive approach towards achieving public response to

conservation regulations. It was speculated that respondents' personal interpretations and evaluations of these two apparently conflicting aspects of their duties could prove useful to the study. With these factors in mind, it was intended to investigate both the **cognitive** and the **affective** (or evaluative) dimensions of 'attitude' towards duties.

Behavioural intention is determined to a large degree by affective attitudes (Azjen 1988), and this relationship might explain behavioural tendencies, inclinations, intentions, commitments, and actions, relating to how and why duties were implemented. In this way it was hoped that some insights might be gained into the conative dimension of attitude, or '**intended behaviour**' (Fishbein and Azjen 1975).

Personality traits (section 2.5.) such as extroversion, introversion, agreeableness, abrasiveness, tolerance, and intolerance (Azjen 1988) were observed and noted by the researcher, and were of some assistance in the analysis.

5. 2. Attitudes towards the duties of 'law enforcement' and 'extension'

The researcher had been alerted to a prevailing perception among many employees of the CDNEC that there were law enforcement officers with a 'bad attitude'. Furthermore, in the course of her research, officers within the study group would allude to others who were perceived to be 'bad'. As

noted in section 3.2.1. due to logistical constraints and the limited scope of the study, she was not able to observe behaviours and reactions in natural settings, and therefore she could only attempt to infer these 'bad attitudes' from verbal responses and indirect references.

A broad spectrum of responses ranging from what might be considered rather **harsh** to more **enlightened** points of view emerged. Within this range, **three broad areas of belief** could be deduced, which showed some degree of commonality. There was however a variation in the **strength** of attitudes expressed within these themes. In some cases individual officers would identify more than one of these themes within their responses. These are discussed in some detail below.

The first area of belief was presented by only one officer [13] who demonstrated what the researcher felt was an extremely harsh, intolerant and punitive attitude towards law enforcement, as was revealed in the following response

"Wrongdoers should be punished ...I will not go to all the rigmarole to take statements.....normally if someone has done wrong you go for him....it's the perfect way to educate the public".

This respondent clearly believed that his approach was correct and appropriate, and yet acknowledged that he differed from other officers, who generally adopted a more lenient and sensitive attitude towards transgressors. This suggests a contrast between the attitude of this officer and the attitudes of his more lenient colleagues. This particular officer is acknowledged (Lensing 1991, pers

comm.) to hold extremely strong law enforcement preferences and presents an interesting 'case study' as his specific attitudes to law enforcement appear to contrast sharply with his seemingly more sensitive approach when actually prosecuting people. This was exemplified by his statement

"If I see a father committing an offence, I'll never go to him in front of his kids...I don't want to embarrass him in front of his family".

It is speculated that this attitude may however be indicative of *authoritarianism* because this officer would not like to see a father (i.e. a person in authority) being challenged, as he believed that fathers should be above reproach in the eyes of their children. In retrospect the researcher realizes that she should have investigated behavioural attitudes to other wrong doers, for example women or black people, as she suspected that this officer's views were *ethnocentric* in character. This respondent was awarded a low score in Table 4.2., presenting an interesting correlation between his attitude towards environmental issues and his attitude to law enforcement.

The **second prevalent theme** relating to law enforcement drew an analogy between it and **police work**. The five officers [3, 7, 8, 9, 12] who identified this theme offered a range of interpretations. Definitions such as "police work", or similar to a "traffic cop" were common. None of them however offered any further opinion about their interpretations. When however the study group (n=17) was later specifically asked whether law enforcement overlapped with police work

and could become a function of the South African Police (SAP), nine officers believed that the SAP could do a good job enforcing the Ordinance (n=9) as typified by the following statement [16]

"law enforcement is basically police work, police do some of our work already, so law enforcement could be taken over by the SAP".

By contrast five officers felt that the SAP could not do a good job enforcing the Ordinance, as [17] stated:

"police could not take over...the conservation of plants and animals differs from the protection of people and property.....we protect something that doesn't necessarily have monetary value".

The former nine officers did however express concern that the police didn't really care about nature, and possibly didn't have sufficient knowledge.

The remaining three officers were ambivalent about working with the police. More opinions regarding law enforcement and the role of police were elicited here. The researcher was not able to necessarily relate positive attitudes regarding working with the police with a less enlightened view towards law enforcement, as she had anticipated. Generally all these (n=16) appeared to take a **softer stance** towards law enforcement than the first respondent [13].

The **third major attitudinal theme** relating to law enforcement correlated it closely with extension, and also presented what the researcher considered to be the softest

stance. When ten respondents [1; 2; 4; 5; 6; 10; 11; 14; 15; 17] referred to law enforcement - without any prompting from the researcher - they mentioned, or referred indirectly to extension. Of these only 6 respondents [4; 6; 10; 11; 14; 15] validated their answers. When they were asked to define 'extension', they stated that law enforcement and extension went hand in hand. The general rationale given for this viewpoint was that people should be educated about nature conservation, and particularly about legislation pertaining to nature conservation. If however, after having being made aware of this legislation, they still transgressed the law, it was justifiable that they should be punished. The researcher gained the impression that these officers felt a certain empathy with people who unknowingly broke the law, and would only prosecute as a last resort. These officers expressed a dislike of prosecuting transgressors, but felt that, in the interests of conservation, it was a necessary, if rather unpleasant, part of their job. This attitude towards law enforcement was exemplified by statements such as

"people can't be expected to know all the legislation" [4];

"we explain and educate people about the ordinance" [6]; and

"in law enforcement the officer must know the background to laws and be about to explain them...it is hand in hand with extension" [14].

The attitudes of these officers might be said to show conflicting cognitive and affective dimensions, as they knew

that they had to enforce legislation, but did not always like it.

It was difficult to rank the latter two themes in order of harder or softer attitudes towards law enforcement. Some of these officers (n=10) had an ambivalent attitude towards their duties, and did not express strong evaluations about either aspect. They believed that extension was more important and more effective, but felt that law enforcement was necessary in cases where people knowingly transgressed the law, or did not respond to warnings. Four officers [6; 14; 15; 17] however expressed strong attitudes towards extension, and were adamant that extension was the best way to promote conservation. Attitudes towards extension are discussed more fully in section 6.3.3.

5.3. Attitudes towards perceived transgressors

The 'hardness' or 'softness' of attitudes towards perceived transgressors might serve as a useful pointer in assessing whether law enforcement officers could facilitate environmental education. As outlined in section 1.2., environmental education adopts a holistic, problem-solving approach, which implies understanding and seeking solutions for problems, rather than employing punitive measures.

All the officers interviewed (n=17) believed that according to the seriousness of the offence, transgressors should be

punished. However, in some circumstances, they expressed varying opinions about transgressors and punitive actions.

Most officers (n=10) believed that their own attitude towards the public was an important factor when carrying out law enforcement duties. As mentioned above, the researcher had been alerted to the possibility of officers with 'bad attitudes' to law enforcement, and she was anxious to see if any of the respondents would reveal their 'bad attitudes'. The difficulty of this task was supported by research, which suggests that it is natural for people to give as good an impression of themselves as possible (Burns 1979). (Refer to section 2.5. and section 3.4.)

The study group was unanimous in its attitude towards people who knowingly broke laws - they believed that these transgressors should be punished. A number of officers (n=5) believed that white people had little or no excuse for transgressing laws because generally they were better educated and had recourse to the media, whereas black people were often ignorant of nature conservation legislation. In this regard most officers were fairly perceptive to social or cultural factors which might be reasons for black people to 'commit' certain offences. For example ten officers were aware of traditional black herbalists, and said that they usually adopted a sympathetic stance towards them, despite the fact that the herbalists collect rare plants and bark. These officers believed that educational programmes for herbalists should be initiated, as legislation would not

solve this problem. In Natal a similar situation, which brought herbalists and conservationists into conflict, is currently being addressed by the alternative management strategies proposed by Cunningham (1990).

Although officers were generally poorly able to relate local social problems to wider environmental issues (section 4.3.), most officers said that they did not like to prosecute poor or hungry people. Four officers said they would turn a blind eye to minor offences, and the researcher was struck by the sensitivity shown in this regard, as exemplified by the following statement [17]:

"How do you explain to someone setting a snare to catch a buck to feed his family - how do you punish someone like that? Poverty isn't an excuse not to prosecute - we can't ignore a person who deliberately breaks the law - we look at the merits of the offence - we can bring the fine down.....you have your conscience bothering you....that person had a need...it's a dilemma".

An interesting feature of this aspect of the research interview was the frequency with which officers used 'poaching' as an example to illustrate their responses. This observation was noted in section 4.3., where illegal hunting was frequently mentioned as a significant environmental problem. In contrast to the relatively sympathetic attitude towards blacks who hunt for the pot, most officers (n=11) adopted a stern attitude towards white poachers, as they believed that this poaching was purely for sport, and thus unacceptable.

Two officers [11; 16] suggested that offenders should be punished by providing a service, for example having to work on a reserve, as they believed that fines or gaol services would not necessarily lead to changes in behaviour. This was found to be a surprisingly enlightened attitude, as it considered an alternative and possibly more constructive measure.

5.4. Implementation of law enforcement duties

In this section the relationship between what officers believed and felt about their duties and what behavioural inclinations they displayed, is explored. It should be stressed that the researcher could only infer conative responses from verbal expressions, as for reasons discussed in section 3.4., she was not able to directly observe officers in the course of their duties.

An area of potential conflict of attitude was expressed by two officers of the same rank and from the same office. It appeared that one officer was predisposed to finding people who had transgressed, as exemplified by the statement "I go on patrol and look for people who do wrong, like picking flowers or setting snares". His colleague, by contrast stated that he did not intentionally go out looking for offenders. These fundamentally different approaches could lead to problems during implementation of duties, and serve to highlight the tension on attitudes towards law

enforcement. Alternatively, these officers' attitudes might complement each other and result in a balanced approach to duties.

An interesting observation was made with regard to how officers responded to questions about the implementation of, and relative time spent doing, law enforcement, although the response obviously depended on their understanding of the term 'law enforcement'. The majority of officers (n=16) stated that they spent more time doing extension than law enforcement. Two officers differed, the first being the officer [13] referred to in section 5.2. above, a stance which the researcher expected. The second was a chief nature conservator [16], who stated that more time was spent on law enforcement than extension, although he felt that this was an unsatisfactory situation, and he would prefer it otherwise. This presented an area of possible misunderstanding or even conflict with his subordinates, all of whom (n=8) stated that they spend more time on extension. Regional and seasonal factors played an important determining role in the implementation of duties. For example some officers (n=4) who were stationed near coastal resorts reported that in the summer holiday season relatively more time was spent doing 'preventative' rather than 'punitive' law enforcement*

* In this context preventative law enforcement might refer to explanations and warnings about *inter alia* fishing regulations of which holiday-makers might be ignorant.

In the eastern Cape the 'cycad issue' appeared to occupy a disproportionate amount of time and caused a certain amount of frustration among officers, who expressed the view that they could spend their time more constructively if they were not obliged to enforce laws pertaining to cycad protection. The researcher tended to sympathize with this view as research (Bruton and Gess 1988) suggests that overgrazing and veld deterioration rather than poaching of cycads are major environmental problems in the Eastern Cape.

Officers generally had difficulty in categorising what appeared to be an important aspect of their duties, namely 'inspections'*

This problem was evident in the discussions of the implementation of duties. Some officers felt that inspections fell within the realm of law enforcement, whereas others believed that inspections were a combination of law enforcement and extension. The researcher was concerned that this should be clarified, and discussion with a senior official (Lensing 1991, *pers comm.*) suggested that inspections are administration of the law, and therefore more aligned with law enforcement rather than with extension.

* In this context preventative law enforcement might refer to explanations and warnings about *inter alia* fishing regulations of which holiday makers might be ignorant.

RESPONDENT	LAW ENFORCEMENT	EXTENSION	RELATIVE TIME SPENT	ATTITUDE TO CASES	ATTITUDE TO TRANSGRESSORS	TOTAL	
1	+1	+1	0	0	+1	+3	
2	+1	+1	+2	0	+1	+5	
3	+1	+1	+1	+1	+1	+5	
4	+1	+1	+1	+1	+1	+5	
5	+1	+1	+1	+1	0	+4	
6	+1	+2	+2	+1	+1	+7	
7	0	+1	+1	+1	+1	+4	
8	+1	0	+2	0	-1	+2	
9	0	+1	+2	0	0	+3	
10	+1	+1	+1	-1	-1	+1	
11	+1	+1	+1	0	+1	+5	
12	0	+1	+2	+2	+1	+6	
13	-2	0	-2	0	-1	-4	
14	+1	+2	+2	0	+2	+7	
15	+1	+2	+2	+1	+1	+7	
16	+1	+1	-1	+1	+1	+3	
17	+2	+2	0	0	+2	+6	
18	+1	+1	+1	0	+1	+4	

TABLE 5.1. OFFICERS' ATTITUDES TOWARDS LAW ENFORCEMENT AND EXTENSION

In Table 5.1. (page 79) an attempt is made to summarize attitudes towards law enforcement. Officers were allocated a score on a range from -2 to +2 according to their attitudes towards the following indicators:

- * Law enforcement (i.e. if strongly in favour of law enforcement scored -2)
- * Extension (i.e. if strongly in favour of extension scored +2)
- * Relative time spent doing law enforcement or extension (i.e. if much more time spent doing law enforcement scores -2; if much more time spent doing extension scores +2)
- * Number of charges and attitude towards charges (i.e. if satisfied with high number of charges scores -2; if satisfied with low number of charges scores +2)
- * Attitude towards offenders (i.e. soft attitude scores +2, harsh attitude scores -2)

These values again represent the researcher's subjective evaluation of responses, and should not be seen as absolute values, but rather as relative positions with regard to law enforcement.

It is interesting to note the relative positions of individuals in this table. As suggested in section 5.2., officers can be loosely grouped into three categories according to their attitudes towards law enforcement and

extension. The most severe attitude, as shown by a score of -4, is represented by one officer [13].

A large middle group [1; 2; 3; 4; 5; 7; 8; 9; 10; 11; 12; 16] were shown to be more lenient, and were relatively more in favour of extension.

The last group had scores of equal or greater to 6. These four officers [6; 14; 15; 17] emerged as being most strongly in favour of extension. Interestingly, three of these four officers were among the highest scorers in Table 4.2. The researcher is of the opinion that this phenomena is no coincidence, and suggests a relatively more enlightened approach on the part of the highest scorers in Table 4.2. [3; 8; 11; 14; 15; 17], with [14; 15; 17] perhaps holding the most enlightened views.

In summary, the researcher realized that her own perceptions of law enforcement were not true to the situation. Officers were generally far more lenient than she had been led to believe through discussion with other CDNEC officials. They were concerned that each 'case' should be assessed individually, and that its relative merits weighed up before resorting to punitive measures. Officers generally held the opinion that extension should occupy more time, as they felt that it was more effective than law enforcement (see also 6.3.).

The impression gained was that they believed that law enforcement was not always the solution to problems, but they felt bound to enforce the Ordinance. This notion will be pursued in Chapter 6.

CHAPTER 6

OFFICERS ' PERCEPTIONS OF THEMSELVES, AND THEIR ATTITUDES TOWARDS OTHERS

"I don't believe everyone is cut out for this job....it takes a special kind of person to do it" (Law enforcement officer)

6.1 Introduction

This chapter addresses two interrelated aspects of the study: officers' perceptions of self, and their attitudes towards the public. The latter also includes a discussion of officers' attitudes towards extension and their perceptions of their possible roles as communicators of environmental awareness, as mentioned in section 1.3.

Some insight into the 'self concept' was provided by Burns (1979), who recognises four different perspectives. Two, namely 'basic self concept' and 'social self concept' are particularly relevant to the study. 'Basic self concept' may be defined as individuals' perception of their abilities, status, and roles in the outside world; whereas 'social self concept' is the self as individuals believe others see and evaluate them.

The premise that law enforcement officers are potential facilitators of environmental education, holds important

implications for the CDNEC, which were discussed in section 1.2. These officers, by virtue of the manner in which the law enforcement section is organised and managed, are stationed where they are in close contact with local communities, and in fact provide an **interface** between the organisation and the public. In addition, the nature of their duties requires them to deal frequently with people. Thus it might be assumed that they should be highly sensitive to moods and feelings within communities where they work. In view of these factors, the researcher hypothesises that at present they are perhaps the section of the CDNEC most ideally *placed* to facilitate environmental education. As environmental education, by its very philosophy implies a sensitivity and compassion towards people (Gough 1987), the researcher considers that it is important to understand how officers feel about their duties, and specifically to explore their attitudes towards extension.

In this chapter much of the discussion is based upon critical **reflection** of data and the observations made. Although the researcher was constantly reminded of the need to be what Keeves (1988) refers to as '**objectively subjective**', it is certain that some **subjective speculation** has occurred.

6.2. Perceptions of self

In this section, officers' perceptions of themselves in their roles as law enforcement officers are investigated. Individuals' attitudes towards themselves can be defined in the same way as attitudes directed at any other person or object, as a relatively enduring organisation of affective and evaluative beliefs about oneself, predisposing one to respond with greater probability in one way rather than in another (Burns 1979).

Research suggests that **beliefs** are the basic determinants of behaviour, and that behavioural change is brought about by changes in beliefs (Ajzen and Fishbein, 1980). Beliefs about the consequences of performing a certain behaviour may lead to **change in the attitude** towards that behaviour. In the study, perceptions of **changes in one's own attitude** were considered an important indicator of the flexibility of individual's attitudes, and of the possibility for further changes. This phenomenon was observed in the study group where a number of older officers (n=4) recalled that their own attitudes had changed over the years. They felt that as young, inexperienced officers, they had been more aggressive, and had believed firmly that strict law enforcement was advantageous to conservation. They recalled that their behaviour had reflected this, as they had more actively searched for, and prosecuted transgressors. These officers' beliefs about the efficiency of aggressive law

enforcement had changed, and they had adopted a more 'friendly' attitude towards people, which they felt was evident in their behavioural actions. The following admission articulates this change in attitude:

" In the past I would throw them in gaol for some offence - now I rather listen to the other side - am prepared to bend....I think about what I am trying to achieve and ask myself 'are you doing things better'...I believe I am doing things better". [2]

This particular officer felt that although his attitude had changed gradually, it was a significant change. Two senior officers (Lensing 1991, *pers comm.*, van Wyk 1991, *pers comm.*), verified that they had observed a general change in attitude among the law enforcement corps.

A different perspective was presented by a chief law enforcement officer [11]. He observed that his young officers started their careers as idealists and often became emotionally involved in cases, but with experience their attitudes changed, and they learned to become more detached from cases. The 'young' officers referred to in this instance generally had favourable attitudes towards extension.

Perceptions of **status** within the CDNEC were an important aspect of 'self concept'. During the course of the research interviews, and through non-participant observations, the researcher was alerted to the belief among some (n=6) law enforcement officers that other staff-members had less

favourable attitudes toward them. These officers all believed that other units within the CDNEC viewed them as inferior. They felt that what they perceived as unfair budget allocations to the law enforcement section confirmed this belief. Two of these officers admitted that they had initially been hesitant about working within the law enforcement unit, because at the time they had believed that law enforcement work was inferior. Another officer stated that the law enforcement unit got the 'rejects' from other units. A common reason given for this perceived discrimination was that the rest of the department did not understand what law enforcement was all about, and thought that law enforcement officers were akin to 'traffic cops'. This situation is in part exacerbated by the *isolationist* type of management of the CDNEC, which does not adequately integrate law enforcement with other units, thereby creating a sense of isolation among this corps (section 2.4).

Officers reacted to this perception of discrimination in various ways. Some felt resentment towards the rest of the CDNEC; others felt ostracized, and were demotivated as a result of this perceived prejudice. Others were sufficiently self-confident to be untroubled by derogatory attitudes from other sections of the CDNEC, and believed that they were fulfilling an important role. The researcher finds objective comment difficult in this respect, because in conversation with a range of other CDNEC officials she also detected traces of prejudice towards law enforcement officers. This might in part be due to historic circumstances (section

2.4), but whatever the reason, it is not conducive to good professional relationships within the organisation.

Drawing on information from observational notes and non-participant observation, some deductions regarding officers' attitudes towards authority were made. Eight officers of the rank of 'nature conservator' and even the relatively senior rank of 'principal nature conservator' were observed to be overtly conscious of rank and seniority, and would address, or refer to their senior officers as 'Mr X'. This formality appears to be unique to the law enforcement corps, as the researcher had not observed it elsewhere in the CDNEC, where regardless of rank, people were on first-name terms. Only Afrikaans-speaking officers were however observed to display this behaviour, suggesting that this is perhaps a language related phenomena. This observation reinforced the researcher's opinion that this corps still has vestiges of a regimental and military influence.

6.3. Attitudes towards the public

This section of the study sought to explore officers' 'social self', and had three interrelated aims. The first was to explore officers' attitudes towards the communities in which they worked. The second was to examine officers' beliefs of how they were perceived by members of the public, and what their own attitudes in this respect were. The third aim was to investigate how officers saw their potential roles as communicators of environmental awareness. These

three aspects were considered to be inter-dependent, with the emphasis on 'officer - person interaction'. For this reason there is a certain degree of integration in the following sections.

6.3.1. Attitudes towards local communities

Only seven officers [1; 3; 6; 11; 14; 15; 17] gave the impression of having a wide knowledge and understanding of local people. These officers could describe different communities in some detail. Other officers appeared to be familiar only with categories of people with whom they dealt, for example farmers. Their attitudes towards these communities varied. Some officers had a more positive attitude towards rural people, because they believed that they were more hospitable than urban people. Five officers who dealt extensively with farmers had fairly strong opinions about farmers. They felt that farmers liked to test their knowledge, and were concerned that farmers should respect them. These officers believed that farmers were not always conservation-minded. A recent study by Janse van Rensburg (1991) on the attitudes of farmers towards perceived problem animals supports this belief

Although the researcher strongly rejects racism, and would prefer not to categorise respondents and responses along racial lines, this was unavoidable due to the types of responses expressed. The overwhelming impression gained was that most white law enforcement officers have very little

knowledge of black communities. Two white officers were an exception in this regard. By contrast, all 'coloured' officers were aware of black communities, although they too admitted to having very little actual contact with black people. All the coloured officers expressed concern about the poor living conditions of black people.

Two main reasons for a lack of contact with black people were given by white officers. The first was motivated by fear, as typified by the following statement:

"I wouldn't go in there...I value my life...I don't know....I've never been there....I don't think any of our guys have been in there.." [10]

The researcher considered this negative attitude to be unfounded, as this particular officer said that he had made no effort to contact local black people. The researcher felt that if this officer had at least *attempted* to contact black people he would have felt less fearful. Another officer had similar beliefs, as expressed by the following opinion:

"We don't do enough with black communities....I'm scared to go in there...they would probably kill me...but I think we should do much more.."[8]

The researcher feels that this attitude is an inherent fault of the CDNEC, which has not made any significant attempts to either employ, or engage in dialogue with black people. She further feels that this attitude typifies *colonial* conservatism (refer section 1.1. and 2.1.).

The second reason was a problem of language. Some (n=4) officers expressed frustration at being unable to communicate, and yet only one officer articulated a desire to learn Xhosa. The researcher is of the opinion that as a group, the law enforcement officers' attitudes towards and misconceptions about black people are not conducive to environmental education.

6.3.2. Attitudes towards perceived public opinion

With regard to public opinion, one officer [16] offered a frank and self-critical insight into why he felt the public was not supportive of the CDNEC:

"they weren't allowed to visit all our reserves...if only we had hiking trails and huts so people could stay, and get involved ...but if they see a padlocked gate they feel anti...this is wrong...they are taxpayers...they don't know what to do...they are still scared because we always kept them out.."

This expression, apart from its intrinsic truth, demonstrates a sensitivity towards public opinion, and also highlights a significant issue which is currently facing the CDNEC - that of making conservation areas accessible to the public, while maintaining the ecological integrity of those areas.

Officers were generally concerned that the public should like and respect them. There is a subtle irony here, because

the law enforcement corps are frequently accused by others within the CDNEC of damaging the public image of the CDNEC by their unprofessional handling of issues (van Wyk 1991, *pers comm.*) At the time of writing a **topical example** (as perceived by the public) was the indiscriminate shooting of an entire troop of baboons near the Cape Point Nature Reserve by law enforcement officers, while only one animal had been identified as a problem. This attracted considerable media attention and public outrage, and was instrumental in creating a negative public attitude towards the CDNEC. Apparently the officer responsible for the shooting was acting against his will, but under orders from his superior. This underpins the sense of **authoritarianism** prevalent within the law enforcement corps. This example also illustrates the **tensions** within law enforcement: Although there is an **intent** of being sensitive to public opinion, this intention may be misdirected; and it does not preclude actions which with hindsight may have negative consequences. The 'baboon saga' also highlights the fact that one poorly judged action may ruin any favourable impressions which the public may hold about the CDNEC and which may have been built up over a considerable period of time. In addition the somewhat dogmatic approach employed in this particular situation is evidence of lack of imagination and foresight. If some attempt had been made to find alternative solutions which were acceptable to the public, this unfortunate situation might have been avoided.

6.3.3. Attitudes towards extension, and an examination of the role of law enforcement officers as facilitators of environmental education.

Interpretations about the concept of extension did not show much variation. Officers generally believed that extension entailed explaining CDNEC policy, particularly the Ordinance, and generally promoting the image of the CDNEC. Research (Azjen 1988) suggests that behavioural intention is influenced by beliefs. This in part supports the researcher's speculation that within the context of this study, broader and perhaps more serious environmental issues, as well as moral and ethic concerns, are unlikely to be addressed through extension activities. This speculation is further supported by the findings of section 4.3., which indicated a poor awareness of environmental issues. The researcher views this situation as a shortcoming in terms of facilitation of environmental education.

In contrast to the above, only one officer [15] stated that it was more important to promote the general concept of conservation, rather than the specific image of the CDNEC. The researcher felt that this respondent displayed a more sophisticated worldview and higher level of awareness, which was also evident in his earlier mention of 'holism' (section 4.2. and 4.2.1.). This attitude possibly suggests a greater interest in, and commitment to the 'cause of environmentalism' than loyalty to the 'job', although

perhaps more evidence would be necessary to draw such a conclusion (refer Table 4.2).

The relationship between **beliefs** and **action** towards extension was explored more closely. All officers, with one exception [13], stated that they met frequently with local people during the course of their duties (refer Table 4.2). They were always willing to offer advice or assist in any way possible, and strived to maintain a positive relationship with the public. Their statements contradict some of the findings of section 6.3.1., particularly with reference to black people. Ten officers believed that their own attitude towards the public was an important factor in determining public perceptions of themselves. Four officers were anxious that the public should respect them. They were concerned that they had insufficient knowledge to answer questions from members of the public. There appeared to be an element of tension between a desire to be accepted, liked, and respected by the public, and yet being able to maintain a strong 'law enforcement' image. Officers working in smaller communities expressed this dilemma more frequently, as they believed that in small rural communities "everybody knows you". They felt that it was more difficult to enforce legislation among people whom they knew, and with whom they had to deal on a day-to-day basis.

The overall impression gained by the researcher was that officers had a **positive attitude** towards assisting the public with enquiries and advice. This impression was

supported through non-participant observations. On several occasions the researcher would observe, or be informed of, officers' willingness to assist the public.

Generally, officers admitted that they would **seldom** of their **own initiative** engage in positive encounters with the public - they usually reacted to requests. These were often from specialist groups such as a bird club or a farmers' association, and usually involved an informal talk or slide-show. The researcher viewed this tendency to be a shortcoming in terms of environmental education, for a number of reasons. Environmental education is widely accepted as a problem solving, collaborative approach (Irwin 1991), which requires people to engage with other. The researcher felt that although talks are important they do not fulfil these criteria. In addition, the topics addressed may be restricted by the specialist group's requests, which may preclude the opportunity to address other perhaps more urgent issues. Furthermore, while it is conceded that addressing specialist groups is important, this may be a case of 'preaching to the converted', and may prevent or restrict engagement with 'non-interest' groups who may have little awareness of environmental issues.

Only two officers [12;15] indicated that they had 'invited themselves' to meetings, with the intention of being able to positively influence the group concerned. This suggested a more assertive *modus operandi* than those officers who only reacted to requests. These two officers were considered by

the researcher to be **confident** and **outgoing**, which could explain their attitudes in this regard. Six officers reported that they served on advisory boards, or were involved with committees which address matters of mutual concern. Much of this required after-hours work, for which officers are not financially compensated.

Two officers [1;17] expressed frustration at having insufficient time to visit schools, which they felt was an important aspect of their duties. The researcher was encouraged because she felt that although these officers were not achieving their goals, their sentiments displayed a positive attitude towards extension (refer to Table 5.1.), which could predispose them towards more environmental education if their work situation permitted.

There was a common perception that giving lectures or talks was an integral aspect of extension duties. However, five officers said that they felt insecure and anxious when asked to give lectures or talks, as they were uncomfortable addressing groups of people. They stated that they were less intimidated by informal conversations with small groups or individuals. This 'fear' was by no means confined to those officers whom the researcher considered to be less extrovert. The researcher felt that these officers should be reassured that this was not a shortcoming, and possibly be given training to equip them with expertise and confidence. They should also be alerted to alternative ways of engaging with the public (for example working together to solve a

local environmental problem) which are quite acceptable within the framework of environmental education.

In summary of section 6.3., the researcher feels that the analysis in this chapter is possibly more subjective than data expressed in Chapters 4 and 5. For this reason it was decided against attempting to summarize this data in tabular form.

Although some patterns are evident, they are tenuous and provisional because officers projected themselves as highly complex individuals. Four officers [11, 14, 15, 17] projected personalities and attitudes which suggested a relatively enlightened approach to their duties. These officers were generally self-confident, projecting caring personalities and could be considered as potentially more receptive to facilitating environmental education. It would, however, be grossly unfair to speculate that officers (n=14) who perhaps projected a more ambivalent attitude towards extension would be less able to facilitate environmental education. This is because these officers may have been perceived by the researcher to be less self-confident, or less articulate, or to hold less strong opinions, than the four mentioned above. This dilemma highlights the difficulties of researching attitudes.

CHAPTER 7

CONCLUSIONS

We must live simply, that others may simply live (Schumacher)

7.1. Evaluation of the research project

The approach of the post-positivist or new research paradigm seems to have been an appropriate one for this study. This was largely due to this paradigm's holistic, qualitative and intuitive methods. Specifically, the use of semi-structured interviews was generally found to be a good research method, which combined well with the research paradigm. (See also section 3.3.) This allowed the researcher to enter into engagement through a process of dialogue with the study group. In addition the spirit of co-operation which the researcher tried to engender (usually with success), created a sense of mutual trust and respect.

However, because the research paradigm emphasized qualitative, rather than quantitative data, much of the analysis was based on reflection on data and observations which in turn implied a good deal of speculation. The researcher was constantly confronted with the issue of subjectivity, and at times it was difficult to decide how much should be allowed. In some instances prior knowledge or information about certain officers or issues made

subjectivity more likely, and it was necessary to constantly strive for an open and objective mind. In this respect Keeves' (1988) use of the term 'objective subjectivity' perhaps best describes how one might approach this research.

Although the study shared its problem-solving aim with the approach of 'action research', it cannot be considered 'true' action research. An action research approach would have necessitated designing a research programme in collaboration with the study subjects, and working towards mutually acceptable solutions. Had this approach been employed, it might have ensured that research results were of a more practical nature and might in turn have made them more readily available to the study group. Although the researcher sought to be honest about the intentions of the research, she was not always able to be entirely open with all respondents because of prior or confidential information. This factor also precluded an action research approach.

The small size of the study group (n=18), and the fact that the researcher was employed by the same organisation as the study group, were two other factors which influenced the study. As mentioned, in some cases the researcher knew or had prior knowledge of respondents, and vice versa. Just as she made every attempt to keep an open and objective mind, the question arises as to how honest officers were. This is not to imply that they told untruths, but it is possible that they presented information in an ingratiatory manner.

As confidentiality had been assured, the presentation of data was problematic, and certain subtle trends and patterns which were of significance could not be clearly illustrated. Furthermore, the researcher had to take decisions as to whether certain information should be discussed, as although it was of value to the study it could compromise respondents. In the officers' professional interests, and also to maintain good relationships with the study group, some data was not included. The absence of this data does not alter results, but it would have provided richer analysis. In retrospect, although the researcher considers this study to have been worthwhile, she would caution against research amongst colleagues as it is obviously not without its complications.

The results of this study are of a fairly theoretical nature, but they do provide useful insights about attitudes of law enforcement officers, and they have highlighted some problem areas which are discussed in section 7.2. and 7.3. These results could in turn enable both these officers and the CDNEC at large, to take affirmative action towards resolving problems. In retrospect, if the study had been more akin to action research, more tangible results which were directly available to the study subjects, might have been accomplished. It is proposed that this research could be considered a **pilot study**, and the insights gained be used towards a follow-up action research programme, in which it is attempted to resolve problems identified in this study. This could prove to be a useful exercise for the CDNEC.

7.2. Synthesis of results: towards a holistic perspective

Much of the analysis was based on reflection on data. Due to the small size of the sample, factors such as race, language, geographic locations were not regarded as variables. The aims of the study given in section 1.3. were all addressed and are synthesised below. However a general observation is as follows: Although some patterns relating to individuals were evident, much of the analysis suggests general trends, rather than specific traits.

Attitudes to environmental issues varied from officer to officer, but generally officers' perceptions were limited, and in most cases they tended to have a reductionist view of the environment. Their ability to integrate or relate environmental problems to social, economic or political circumstances was limited. Some had little knowledge or awareness of environmental issues which were not directly related to their work situation. In view of environmental education's holistic approach, with its strong humanistic tendencies, the above observations were gauged to be a significant short-coming.

The stereotyped image of aggressive law enforcement officers was also shown to be inaccurate and unfounded. Officers were highly complex individuals, and projected a range of personalities, from 'harsh' to 'soft-hearted'. These personality projections correlated to some extent with their

attitudes towards law enforcement and perceived transgressors, although far more data would be necessary to draw any conclusions from this pattern. Despite 'kinder' personalities, the tendency in attitude towards law enforcement was to respect and enforce the Ordinance, sometimes at the expense of their own desire to be lenient towards transgressors. Some officers gave the impression of being disempowered: they had to enforce the Ordinance, and felt helpless or lacked confidence to do otherwise.

The study group was overtly conscious of their position and status as law enforcement officers. They were sensitive to opinion both within and outside of the CDNEC. Some officers appeared to cope more adequately with perceived prejudice from other sections within the CDNEC, than others who were less self-confident. As a group they were also concerned about public opinion, and sought respect from the communities in which they worked. Despite the latter, the occasional mishandling of situations by the law enforcement corps was found to be damaging to public opinion.

Officers generally had a favourable attitude towards assisting the public. However they tended to react to requests or crisis situations, rather than take initiative and arrange positive engagements with the public. There was also little evidence of attempts to contact black communities, and in fact some officers stated that they were too frightened to establish such contacts. These factors were viewed as a shortcoming in terms of environmental

education, as they restricted opportunities to address relevant environmental issues.

The above observations seem to emphasise a general lack of confidence on the part of most officers. The researcher is of the opinion that officers should be given skills to feel confident with alternatives to their present rigid law enforcement and limited extension activities. Although the researcher accepts that both law enforcement and extension are potentially useful for conservation, she believes that an effort should be found to adopt a more flexible, open-minded approach to duties. If this could be achieved, the potential for environmental education would be improved.

Analysing the entire situation, a somewhat critical conclusion is drawn. Given environmental education's holistic framework, and considering the results of Chapters 4, 5 and 6 the researcher would suggest that although there are some individuals who appear relatively more inclined towards extension, as a group they lack basic philosophical beliefs which underpin environmental education. This does not preclude the possibility of some individuals facilitating environmental education in the future. It does however suggest that prevailing tensions within the law enforcement corps are in part preventing, or at least retarding, a general paradigm shift towards a more enlightened approach to their jobs.

In summary, this study has highlighted the importance to conservationists of social research. More specifically, it has suggested that the study of attitude has profound implications for environmental education. On the basis of the above mentioned research findings, the researcher strongly recommends that conservation authorities engage in further social research. This is supported by the work of Newhouse (1990). Bearing in mind O'Riordan's (1981 :3) statement that "environmentalism is as much an attitude of mind and a certain code of behaviour as an ideology", it would seem shortsighted not to apply social research to environmental issues.

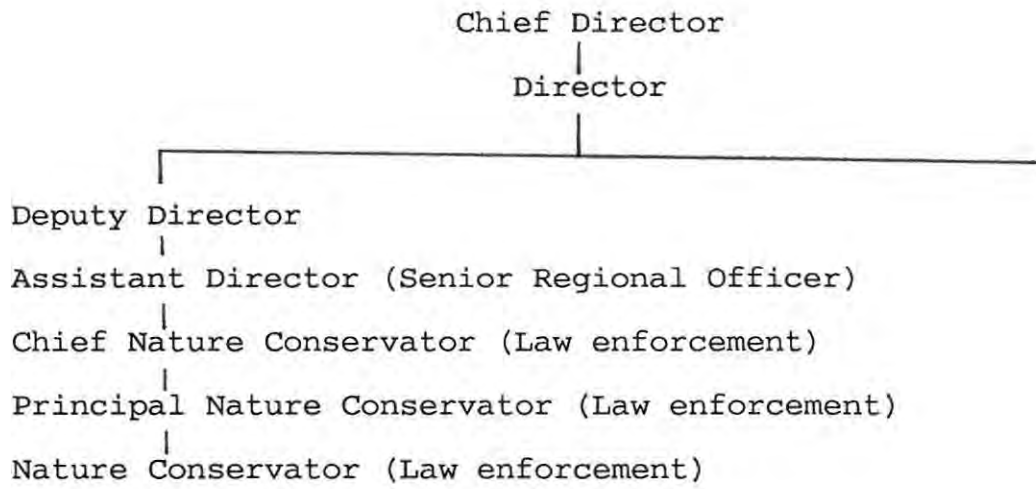
Reflecting on analysis of data, the following observations are considered relevant. There does appear to be a sense of a 'culture' associated with the law enforcement corps, which is possibly a legacy of historical circumstances within the CDNEC. Elements or factors which reinforce this identity include the (unintentional?) isolationist image projected towards other sections of the CDNEC; and occasional, but highly visible mishandling of significant cases. In spite of, or maybe as a result of these factors, the law enforcement corps appears to be in a phase of transition between a past characterised by limited worldview and strong reliance on punitive measures, and a new and more enlightened paradigm. As in any process of social change, there are retarding and accelerating forces, with a middle sector who would seek to retain the status quo. The study suggests that a small number of individuals (of no

particular rank) have already in part embraced the new paradigm, and are struggling with the current complex situation in which they find themselves. This struggle towards a new stance *vis a vis* people and the environment could be significant to the future image of the CDNEC in a changing South Africa, which is likely to view conservation largely in terms of benefits to people. In addition, the researcher is of the opinion that those officials who show interest should be encouraged and assisted to adopt the problem-solving, participatory and human-centred approach of environmental education, as most existing extension activities do not meet these criteria. From a functional point of view, this diversity of ideologies is not without its problems, and in the short term, the tensions created may not be in the best interests of conservation.

At the time of writing, an official work-study investigation (Direktoraat Bestuurdienste 1991) is proposing a restructuring and renaming of the law enforcement corps. If implemented, this will result in this corps being solely responsible for extension, and they will be known as 'district services'. This development holds promise of an improved service with the emphasis on education and community involvement, but in view of the research findings, a number of points are pertinent. The present study has inferred that as a group, the law enforcement corps has a limited ability for holistic analysis of environmental problems. The study has also suggested that a strong sense of authoritarianism prevails within this corps. In view of

these factors, questions arise as to the future role of this corps as facilitators of environmental education. It is suggested that unless this corps as a group embraces an alternative philosophy, which has a broader vision than merely issues related to the Ordinance, and which seeks to address relevant environmental problems, they are unlikely to contribute to meaningful conservation. Given the opportunity for change created by the work-study recommendations, plus current developments which will result in the CDNEC becoming a statutory board, it is critical that an ideological shift is encouraged. In addition the social and political changes taking place in South Africa suggest that unless conservation is seen to care about people's needs, it is unlikely to gain popular support (Ntsala 1991). These factors would conclude that unless the proposed 'district services' corps indeed provides relevant services to a broad spectrum of communities, it will be largely unsuited to environmental education.

APPENDIX 1

RANK STRUCTURE OF THE CDNEC

*APPENDIX 2**INTERVIEW SCHEDULE (ENGLISH)*

1. What motivated you to join the department
2. What did you do before you worked for the department
3. How long have you worked for the department
4. Can you describe an average week to me
5. What do you understand by 'law enforcement'
6. What do you understand by 'extension'
7. Do you see an overlap between law enforcement and extension
8. Do you see an overlap between law enforcement and specific police work
9. Do you think the SAP could take over the LE function
10. Can you give an indication of how much time you spend doing law enforcement
11. On average how many charges/warnings do you deal with per month
12. Can you give an indication of how much time you spend doing extension
13. Do you experience problems from the public when carrying out law enforcement
14. Do you experience problems from the public when carrying out extension work
15. Given a choice between law enforcement and extension, which would you prefer to do
16. Which do you feel is the best way of promoting conservation?
17. Do you think that there is a difference between nature conservation and environmental conservation
18. Can you tell me a little about what you understand by nature conservation
19. Can you tell me a little about what you understand by environmental conservation
20. Can you tell me a little about the local communities in your area

21. What are the specific conservation problems in your area
22. Why do you think these conservation problems have arisen
23. What are the specific environmental problems in your area
24. Why do you think these environmental problems have arisen
25. Who do you think the 'culprits' are
26. Do you think that any of these problems are caused because people don't know better
27. Do you think that any of these problems are caused by poverty and hunger
28. Do you think that any of these problems are caused by tradition or cultural reasons
29. Do you think any of these problems are caused by people looking for fun / recreation
30. How do you think these problems can be solved
31. Do you think that people who are very poor should be punished for breaking nature conservation laws
32. Do you ever meet with local people to discuss problems
33. Do you ever meet with local people to discuss complaints
34. Do you ever meet with local people to discuss conservation
35. Do you ever meet with local people to discuss conservation laws
36. Do members of the community ever approach you for information
37. Do members of the community ever approach you for advice
38. Do members of the community ever approach you for lectures or visits to schools
39. If so how have you reacted
40. Do you think the department as a whole does too much or not enough extension and education with communities to inform them about conservation problems
41. Why do you say this
42. How do you think this could be improved

APPENDIX 3
INTERVIEW SCHEDULE (AFRIKAANS)

1. Wat het jou laat besluit om by die departement aan te sluit
2. Wat het jy gedoen voordat jy by die departement begin werk het
3. Hoe lank werk jy reeds by die departement
4. Kan jy 'n normale week vir my beskryf
5. Wat verstaan jy onder 'wetstoepassing'
6. Wat verstaan jy onder 'voorligting'
7. Merk jy 'n oorvleueling tussen wetstoepassing en voorligting
8. Merk jy 'n oorvleueling tussen wetstoepassing en spesifieke polisiewerk
9. Dink jy die wetstoepassing aspek kan oorgeneem word deur die SAP
10. Kan jy 'n aanduiding gee van hoeveel tyd jy aan wetstoepassing bestee
11. Kan jy 'n aanduiding gee van hoeveel aanklae/warskuwing jy per maand betrokke by is
12. Kan jy 'n aanduiding gee van hoeveel tyd jy aan voorligting bestee
13. Ondervind jy probleme van die publiek in die uitvoering van jou wetstoepassingswerk
14. Ondervind jy probleme van die publiek in die uitvoering van jou voorligtingswerk
15. As jy 'n keuse het, sou jy verkies om eerder wetstoepassing of voorligting te doen
16. Watter een reken jy is die beste manier om bewaring te bevorder
17. Dink jy daar is 'n verskil tussen natuurbewaring en omgewingsewaring
18. Kan jy my iets vertel van wat jy onder natuurbewaring verstaan
19. Kan jy my iets vertel van wat jy onder natuurbewaring verstaan

20. Kan jy my iets vertel van die plaaslike gemeenskappe in jou gebied
21. Wat is die spesifieke bewaringprobleme in jou gebied
22. Waarom dink jy het hierdie bewaringsprobleme ontstaan
23. Wat is die spesifieke omgewingsprobleme in jou gebied
24. Waarom dink jy het hierdie omgewingsprobleme ontstaan
25. Wie dink jy is die 'skuldiges'
26. Dink jy enige van hierdie probleme word veroorsaak deur onkunde
27. Dink jy enige van hierdie probleme word veroorsaak deur armoede en honger
28. Dink jy enige van hierdie probleme word veroorsaak deur tradisie of kultuele redes
29. Dink jy enige van hierdie probleme word veroorsaak deur mense wat plesier en ontspanning soek
30. Hoe dink jy kan hierdie probleme opgelos word
31. Dink jy mense wat baie arm is moet gestraf word vir oortredings van natuurbewaringswette
32. Bespreek jy ooit probleme met plaaslike mense
33. Bespreek jy ooit klagtes met plaaslike mense
34. Bespreek jy ooit bewaring met plaaslike mense
35. Bespreek jy ooit bewaringswette met plaaslike mense
36. Nader lede van die gemeenskap jou ooit vir inligting
37. Nader lede van die gemeenskap jou ooit vir advies
38. Nader lede van die gemeenskap jou ooit vir lesings of besoeke aan skole
39. Indien wel, hoe het jy gereageer
40. Dink jy die departement in sy geheel doen te veel of te min voorligting en opvoeding onder gemeenskappe om hulle oor bewaringsprobleme in te lig
41. Waarom dink jy so
42. Hoe dink jy kan dit verbeter word

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