DEVELOPING AN ENVIRONMENTAL EDUCATION STRATEGY FRAMEWORK:
A CASE STUDY OF THE ENDANGERED WILDLIFE TRUST (EWT)

A half-thesis submitted in fulfilment of the requirements for the degree

of

AD EUNDEM GRADUM (EDUCATION)

ENVIRONMENTAL EDUCATION

of

RHODES UNIVERSITY

by

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December 2003

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ACKNOWLEDGEMENTS

believing that I could do it! I regret the time I lost working for the cranes in the environment, but I can never regret the value within doing such a course.

I cannot forget to thank my family for their advice and ideas, their concern for my welfare during the two years of completing this Masters, and their complete belief in me. Craig Bishop, my partner of nearly two years now, you have bolstered my self-confidence, edited chapters here and there, and continued to love me despite the stress I put you under! Thank you.

DEDICATION

I dedicate this thesis to all species vulnerable to human intervention. And to the grasslands, wetlands, forests and mountains that harbour and sustain them. The cranes, oribi, raptors, vultures, bats, dolphins and blue swallows, to name but a handful, occur in South Africa where intensifying human threats are shrinking their safe havens where they procreate, feed and shelter.

I also dedicate this thesis to all those who work in conservation and environmental education in some way or another: NGOs, environmental activists, environmental journalists, conservation agencies, field staff and private concerns. Relationships are being forged for the sake of the Earth and we can all pledge to leave a little bit of ourselves behind when we go.

Finally, I dedicate this thesis to my parents, Alma and John O'Grady, who provided me with the environmental ethics I have nurtured for 35 years. Thanks to their love for nature and South Africa, I have developed an Earthy soul and I want to ensure that others feel the way I do about the natural environment. Their legacy to me is invaluable.

ABSTRACT

The study focused on the development of an environmental education (EE) strategy framework in the Endangered Wildlife Trust (EWT) of South Africa. Evidence shows that the roles of conservation and biodiversity education could potentially be merged towards producing a practical strategy, beneficial to the organisation and its individual staff members.

Questionnaires, interviews and the individual perceptions of staff members, as well as the analysis of relevant documents, suggested that the potential for the practice of EE towards the development of an EE strategy within the organisation is substantial. EWT staff members can contribute towards a change in the way that South Africans think about conservation and nature. Environmental ethics need to be promoted and understood by all.

Within the EWT, environmental education activities are in place and diverse, yet they lack any form of monitoring and evaluation. The Trust is already practicing a form of EE but the potential to do more and the opportunities for expansion are unlimited.

CHAPTER 1: INTRODUCTION

> Conservation is a state of harmony between men and land. Despite nearly a century of propaganda, conservation still proceeds at a snail's pace; progress still consists largely of letterhead pieties and convention oratory … The usual answer to this dilemma is 'more conservation education.' No one will debate this, but is it certain that only the *volume* of education needs stepping up? Is something lacking in the *content* as well? (Aldo Leopold 1949:207).

1.1. Aims of the study

This chapter introduces the thesis, describing my aims as researcher and my working context. In this study, I aim to evaluate the viability of creating a framework for an environmental education (EE) strategy to support endangered species' conservation within the Endangered Wildlife Trust (EWT), a national conservation organisation. The EWT was established in 1973 in South Africa specifically to "prevent species' extinction, to promote sustainable management of species and link action to conserve species with the conservation of their habitats" (www.ewt.org.za/about.htm 05/02/03). The study looked carefully at the political and social dynamics behind the development of such a framework, as well as the concept of environmental ethics and values and the links with environmental education.

While it is my belief that EE theory and practice should be grounded in the principles of environmental ethics, this study attempted to incorporate knowledge about the causes of the environmental crisis into the foundation for a framework for EE within the EWT. The study analysed the present context of the EWT in relation to organisational management, EE frameworks, strategy and policy, and conservation issues on both national and international levels. Hopefully, the exploration of human value systems, the role of the individual in society and organisations, and the role of EE, provided a deeper understanding of the environmental crisis.

Biodiversity conservation is the foundation for EE within the context of the EWT and I drew on global, regional and national ideas and theories in this realm. I also analysed what has already been done regarding policy and strategy in the conservation and EE fields, in order to ensure the long-term survival of natural resources and endangered species. It was envisaged that a resultant framework for an EE strategy within the EWT

would be an enabling, flexible document that would contribute towards EE practice. My objectives during the study included:

a) Identifying and analysing the past and current educational awareness initiatives of the working groups which constitute the EWT;

b) Ascertaining the education requirements of working groups as perceived by them, and where they require professional assistance;

c) Creating the potential for a strategy within the organisation for sharing EE ideas and activities within a flexible, coordinated and collaborative educational framework for the EWT.

It was also envisaged that a framework for an EE strategy within the context of the EWT would draw on policy-making as a management tool within business organisations, linked to environmental policy-making by governments and business. The South African perspective in this study emphasized the pervasion of political considerations throughout such processes and contexts. It also stressed the importance of mutual support between conservation and EE organisations and individuals, and between government departments, non-governmental organisations (NGO's) and private business.

As researcher looking closely at a well-known conservation organisation in South Africa, I had to ensure that I was working towards the recommendation of a practical, useful and non-controlling framework. I had to ensure my own understanding of the differences between strategy and policy, within an environmental education context, so that I would recommend the approach appropriate to the EWT.

Strategy is "a long-term plan aimed at achieving a specific goal" following Brown (1998:1094) which reinforces **policy**, "a course of action or administration recommended and adopted by a party, government, firm organisation or individual" (Brown 1998:841). The EWT however, lacks strategies or policies to reinforce the implementation of its vision, mission, goals and objectives. This made me, the researcher, sensitive about developing a framework for EE within the organisation, which maintains a particular system of management. In addition, I was sensitive about my context and closeness to the research question: I work for the KwaZulu-Natal Crane Foundation, a non-profit organisation affiliated to the South African Crane Working

Group (SACWG), a working group of the EWT, the organisation upon which my research focuses (see section 3.6.1.)

I feel that it is necessary at this point to place EE into context, as a global process that is being continually reinvented by people from all walks of life. According to Irwin (1990:3), EE moved from being a "surrogate for nature conservation 50 years ago" to becoming "a sophisticated concept embracing ecological knowledge and understanding, total people-environment relationships, ethics, politics, sociology and public participation in decision-making". The IUCN definition for EE is still utilised today in times of concern for the environment as an entity:

> Environmental education is the process of recognising values and clarifying concepts in order to develop skills and attitudes necessary 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 (IUCN 1971:17).

A year later, the UN Environment Programme (UNEP) was born out of the UN Conference on the Human Environment, which led to the declaration of 12 principles of EE at the first Intergovernmental Conference on Environmental Education at Tbilisi in the USSR in 1977. The Tbilisi Principles of Environmental Education still provide a base for EE practice on global, national and regional scales, and one principle that is being followed by dedicated environmental educators is that "we are all learners and educators". Chapter 36 of Agenda 21, which evolved out of the Rio Earth Summit in 1992, urges "inter-disciplinary and multidisciplinary research and education, cross-disciplinary university courses and integrated school curricula that take cognisance of both environmental and social factors" (Barrett & van der Merwe 1992:2).

In South Africa during the 1970s, the wise use of natural resources was expounded by conservation officials and the basic ecology within this "conservation education" is still an important dimension of EE today. Experiential education termed "outdoor education" then became popular and overlapped with conservation education during the 1980s (Irwin 1990:4). More recently, it has been established that there is a need "for processes that enable people to make choices, and to engage critically with ethical dilemma's – in diverse contexts, using 'a new language of possibility'" (Lotz-Sisitka 2002:25). Dialogue around EE theory and technique now includes "education for sustainability" and "education for sustainable development".

1.2. Assumptions upon which the research is based

When I started the research study, I assumed that:

a) The EWT, despite its history, size, scale of operations and credibility in the public arena, was lacking a framework to coordinate the EE initiatives continually being carried out by the working groups and to complement their conservation focuses;

b) A well-planned framework for an EE strategy that supports the conservation of endangered species would encourage collaboration and sharing of EE ideas and activities between the working groups; and

c) Both the target groups of each working group (for example, farmers and school teachers), and the working group staff, would benefit from an enabling, flexible framework for their EE goals.

Unfortunately, the dearth of background information on the EWT forced me to rely quite heavily on the information provided by individuals in questionnaires and interviews during the data collection process (see Appendixes C, E and F.). I also read literature pertaining to organisational management, policy-making and strategic planning, as well as biodiversity issues and EE on a global, regional and national scale.

1.3. Some considerations on the relationship between humans and their environment

Historically, the relationship between people and environment has reflected innate tensions where both human involvement and detachment in nature have had both positive and negative consequences. Elias (1987) explains this in terms of the natural and social sciences. His theory is that it is "the difference in the social level of danger and fear, which, in our age, non-human nature on earth represents for human beings, compared with the social level of danger and fear which prevails in the relations of humans as individuals and societies" (Elias 1987:xxiii). Elias contends that many people have detached themselves from the environmental crisis because of their involvement in it. History shows that the environment has exerted a natural power over humans for millions of years. However, ongoing developments in science, as well as changes in human values, human understanding and perception about the environment, have resulted in increased human control over natural forces. As a result, the nature of our understanding of the environment is increasingly uncertain, complex and dynamic.

In my view, Elias (1987:159) implies that people are constantly searching for meaning in life but very few are prepared to take responsibility for scientific or personal discovery. In addition, he claims that there is a very fine line between the natural and social sciences, and knowledge in both fields is lacking. Particular government and business institutions use scientific discovery towards furthering the process of socialisation, which increases the detachment from nature by most people, especially those in power.

Governments are spending more time and money on social and economic issues and risks. As far as the environment is concerned, governmental legislation is developed as one way of controlling human impacts on natural resources. However, in South Africa, environmental legislation is not being adequately implemented - conservation organisations and NGO's are increasingly contributing to the development of policy and strategy to protect the environment from further human impact.

Beck (1992:22) warns that developers and those in political power are not adequately addressing increasing environmental risks. Corporate business and governments believe that the probability of ecological disaster is taken into consideration with advances being made in the techno-scientific industry. However, the over-development of global society produces unknown and unintended consequences for the environment. The current condition of society reflects

> … the general state of scientific and social thought with regard to environmental problems. These are generally viewed as matters of nature and technology, or as economics and medicine. What is astonishing about that is that the industrial pollution of the environment and the destruction of nature, with their multifarious effects on the health and social life of people, which only arise in highly developed societies, are characterised by a *loss of social thinking* (Beck 1992:25).

The paradox within this notion of risk is that the benefits of technology are generally accepted by most people while at the same time, there is an increasing demand for a decrease in the risks of technology. Dietz *et al*. (2001:272) question whether growing public concern with innate technological problems reflects an increase in the number and severity of such risks. They add that "postmodernity introduces new forms of global interdependence and interdependence grounded in globalised risks. That interdependence, in turn, magnifies the importance of trust" (Dietz *et al*. 2001:285).

In my view, a conservation organisation like the EWT is required to be aware of risks to the environment, similar to those mentioned above. The understanding of intensifying environmental issues, and the global technological progress being made, could determine the survival of the organisation in an evolving, unknowable context. Bauman (1993) argues that modern lifestyles have brought humans into closer contact with one another and further away from nature, which in turn increases mutual human fear and danger. He highlights the present environmental crisis as the result of a "moral uncertainty", emphasising that

> … in such life we need moral knowledge and skills more often, and more poignantly than either knowledge of the 'laws of nature' or technical skills. Yet we do not know where to get them; and when (if) they are offered, we are seldom sure we can trust them unswervingly (Bauman 1993:17).

If this is the case, the EWT is required to address such human flaws because species extinction is primarily caused by human activities. However, Myers (2003:13) takes a more scientific perspective and contends that the present dearth of knowledge about biodiversity and biodiversity loss within the scientific community illustrates the necessity for a broader conservation approach that deals with the causes of problems, as opposed to the effects, on a global scale.

Tsoukas (1994) extends the debate concerning the age of information and knowledge where humans are struggling to make meaning of their worlds. "Alienation, hopelessness, frustration, insecurity, corruption, tyranny and social unrest are only a few of the many symptoms of deeply rooted malfunctioning of societies and their institutions" (Tsoukas 1994:25).

Botkin (1990) takes an ecological perspective and contends that the rapidity of progress is widening the gap between knowledge and understanding of nature, and knowledge and understanding of technology:

> Current knowledge about the biosphere is out of step with current beliefs about nature, which is one of the main impediments to progress on environmental issues. It tends to blind us to the possibilities for constructive action. Our technology places before us a new vista, but our beliefs are forcing us to look backward; the result is that we believe repeatedly that we are mired in a barren conceptual mud (Botkin 1990:8).

The challenge for environmental ethics is to move away from a very theoretical stance towards finding, and assisting with, lifestyles that promote human welfare as well as ecological stability (Gunn 1994:209). In addition, an understanding of sustainability is required, that includes a "shift from electronic literacy to biologic literacy" (Hawken 2001:386), so that humans can live harmoniously within living ecosystems, and amongst one another in different societies.

Golley (1994:17) suggests using an ecosystem concept on which to build a local, environmental ethic. Local problems are easier to deal with on the ground than are global problems on regional or continental scales. If each individual lived according to his/her personal, human ecosystem, this could form the focus of the problem solving. This individual system would include "the built environment, family members, friends, foods, institutions, laws and philosophic ideas" (Golley 1994:16). The more aware that people become about their role in their own ecosystem, the more they will understand the need for self-preservation and this will provide the rationale for ethical behaviour.

1.4. Biodiversity conservation and education

Research in biodiversity conservation and education can play a role in providing the correct facts. For centuries, according to Catton & Dunlap (2001:342), sociologists have regarded the biophysical environment as separate from the social and cultural environments. Instead, they have created a vision of a perfect society based on language, social organisation and technology. "What we do deny is the belief that sociologists can still afford to suppose that the exceptional characteristics of our species *exempt* us from ecological principles and from environmental influences and constraints" (Catton & Dunlap 2001:346).

Botkin (1990) believes that there is a need to deepen human understanding about the state of nature because everything that humans do, impacts on nature. When humans learn more about their impacts on the environment, their new perspective could ensure realisation that they are part of a global, living system.

> If nature in the twenty-first century will be a nature that we make, then the guide to action is our knowledge of living systems and our willingness to observe them for what they are, our commitment to conserve natural areas, to recognise the limits of our actions, and to understand the roles of metaphor and myths in our perceptions of our surroundings (Botkin 1990:200).

This is one role of EE, which "seeks to develop the necessary knowledge, understanding, values, skills and commitment to allow people to be proactive in securing a healthy and properly functioning environment that is sustainable" (SADC/IUCN 1999:6). This would incorporate current views in conservation where it is believed that sustainability in conservation and attaining conservation goals "requires strategies for managing whole landscapes including areas allocated to both production and protection" (Margules & Pressey 2000:243). This objective concept surrounding the contemporary management of natural resources assumes a position between absolute protection (from human influence) and unlimited exploitation (by humans).

Some, such as Hattingh (1999:72), believe that this type of resource conservation is not ideal because it "embraces science and utilitarian cost-benefit analyses to guide us in finding optimum levels of resource utilisation". He refers to an anthropocentrist position in environmental ethics where human faith in their own science and technology allows them to ruthlessly exploit their natural resources in the belief that these are abundant and that human knowledge will solve all problems. During the 1930's and 1940's, through his own experiences as a conservationist, Leopold (1949) also recognised the pitfalls within the scientific management of ecological processes and the corresponding lack of environmental ethics.

However, I believe that such approaches are being intensified. According to Elias (1987:139), humans still perceive that evolution is a mystery because there are gaps in the theory about the beginning of the world. In addition, he claims that humans perceive that as long as they have some control over nature, they will also control their fears for this non-human world.

In my view, environmental education should start from a very young age, and should "relate environmental sensitivity, knowledge, problem-solving skills and values clarification to every age, but with special emphasis on environmental sensitivity to the learner's own community in early years" (UNESCO-UNEP 1978). A deeper awareness of the natural environment is essential for human survival and an ecological sensitivity needs to be nurtured to reinforce the only power that humans have – their ethical integrity. "Our use of media, mobilisations, and actions must appeal to mind and spirit,

not to conditioned reflexes and shock tactics that leave no room for reason and humanity" (Dobson 1991:63).

The influence of societies upon individuals is limitless and if it is true that individuals are the product of the society into which they are born (Macionis &Benokratis 1992:75), then, I believe, there is an increasing urgency for a change in the ethical grounding of all societies, in their relation to nature. In addition, environmental ethics has an increasingly important role to play in EE.

1.5. Layout of the thesis

The first chapter has introduced the aims and objectives of the thesis, its themes and the direction taken by the researcher, incorporating the role and commitment of the EWT. The second part of this chapter provided a foundational description of the ethical causes of the present environment crisis. This, I believe, is particularly relevant in relation to the plight of endangered species in South Africa.

Chapter two provides the context of the study and the related literature: the contextualisation of the EWT and EE within a national and global setting. Biodiversity conservation and education, EE strategy and policy and how these link to conservation and biodiversity policy are essential background concepts to the theme and direction of the thesis. Chapter three describes the methodology used in the study, written from an interpretive perspective. The chapter includes a section on the validity of the research study and a critical evaluation of the research process. Chapters four (perceptual profiles of EWT working groups) and five (EWT working group perceptions about EE) illustrate and illuminate the research findings after data analysis, with analytical discussion to reinforce chapters two and three. They include constant reference to context and related literature as reflected in these chapters.

Finally, chapter six provides the concluding recommendations that have emerged out of the entire research process: the viability for a framework for an EE strategy for the EWT that could also be utilised by other, similar, conservation organisations. Throughout the thesis I have used the acronym EE instead of writing environmental education each time. I have also constantly referred to the term "target groups" which I

use to refer to the groups in society (for example; farmers and farm workers) that the EWT working groups focus on for the education and awareness approaches.

1.6. Conclusion

Chapter one introduced the next five chapters, as they emerged from the research process. The aims of the research study have a close affinity with the assumptions upon which the research was based and when the recommendations are made and the conclusions are reached at the end of the thesis, these assumptions and aims are revisited. The researcher's assumption that there is a discordance between humans and their environment and that this is causing the present environmental crisis was introduced here as a theme that runs through the thesis. The links between biodiversity conservation and education cannot be ignored in this crisis and the role of the organisation under study (the EWT) becomes increasingly complex and important in this regard.

Environmental education is but one response to the crisis, along with scientific conservation endeavours and the EWT is doing both. The ultimate viability of a proposed framework for an EE strategy for the Trust rests upon the outcomes of the research study, and depends on the structure of the organisation, as well as the passion of the individuals who work in each working group and strategic partnership.

CHAPTER 2: CONTEXT AND RELATED LITERATURE

> Ecology is now teaching us to search in animal populations for analogies to our own problems … The ability to perceive these deeper meanings, and to appraise them critically, is the woodcraft of the future. To sum up, wildlife once fed us and shaped our culture. It still yields us pleasure for leisure hours, but we try to reap that pleasure by modern machinery and thus destroy part of its value. Reaping it by modern mentality would yield not only pleasure, but wisdom as well (Aldo Leopold 1949:187).

2.1. Introduction

This chapter relates specific literature to the context of the study: conservation of endangered species in South Africa from the perspective of the Endangered Wildlife Trust (EWT). The chapter moves from the specific to the general to provide an overview of the broader context within which the EWT is situated, and to illustrate the issues with which it has to contend on a daily basis. I firstly provide specific details about the EWT and the work that it does, thereafter moving on to provide information about strategy and policy, organisational management, conservation and EE, and environmental legislation in South Africa and internationally. A number of conservation and EE strategy and policy documents were looked at to provide background information on the concepts. Literature consulted was related to the subject under study.

2.2. The Endangered Wildlife Trust (EWT) - factual profile

The EWT aims to make all southern Africa's peoples responsible for the conservation of endangered species and ecosystems occurring in the region and the simultaneous wise use of the natural resources (EWT 2002). To achieve this, the organisation undertakes

> … initiating and funding research and conservation action programmes; preventing species extinctions and maintaining biodiversity; supporting sustainable natural resource management ; communicating the principles of sustainable living by education and awareness programmes to the broadest possible constituency for the benefit of the people of the region (EWT 2002:41).

Thirty years ago, the red Cheetah spoor logo signified the conception of the Trust, set up as an action group to address the worsening plight of endangered species in South Africa. The founders realised that both governmental and non-governmental organisations were not doing enough towards the long-term survival of their natural heritage and the EWT had grown from a two-man trust in 1973 to an organisation of 13 working groups and six partnerships by 2003.

The working groups are the:

a) *South African Crane Working Group (SACWG)*

Established in the 1980s, the SACWG has evolved into a multi-regional programme to coordinate crane conservation activities around South Africa. Full-time fieldworkers are established in 10 key crane regions to help conserve the Blue, Wattled and Grey-Crowned Cranes.

b) *Carnivore Conservation Group (CCG)*

Promoting research on carnivores such as Wild Dogs, Lions, Cheetahs and Honey Badgers, the CCG strives to ensure that these animals are less persecuted by humans and better managed according to their ecological needs.

c) *Marine Conservation Group (MCG)*

The MCG functions as part of the CCG, focusing on research into the humpback dolphin. Based at Richards Bay, this group is dedicated to finding solutions to the marine threats facing these intelligent creatures.

d) *wildlife Biological Resource Centre (wBRC)*

The wBRC collects biomaterials from wild species and these have to be closely recorded and monitored, eventually being banked in the wBRC Biological Resource Bank. These biomaterials can be used in research involving genetics, reproduction, nutrition and disease.

e) *Raptor Conservation Group (RCG)*

Scientific research and conservation, as well as education by the RCG ensure the survival of both diurnal and nocturnal raptors - predators hunted by humans. A total of 14 projects countrywide have established relationships between landowners and communities where conflict occurs.

f) *Blue Swallow Working Group (BSWG)*

Since 1986, the BSWG has been studying the plight of the South African Blue Swallow, now considered critically endangered. In the North-eastern Mountain Sourveld and KwaZulu-Natal Mist Belt, grassland promotion and protection, relationships with landowners and research are attempting to establish a future for this tiny, rare bird.

g) *Vulture Study Group (VSG)*

The first working group of the EWT, the VSG has been trying for 30 years to save Southern Africa's nine vulture species. The integration of scientific and social

approaches is considered important and vulture restaurants all around South Africa contribute to the conservation of the bird.

h) Bat Conservation Group (BCG)

Established in 2002, the BCG is attempting to bring together bat enthusiasts to change the perceptions about bats and to ensure their conservation. The 74 species of fruit-eating and insect-eating bats in Southern Africa bats can play a role in the environment as the friend of the farmer.

i) Conservation Leadership Group (CLG)

In a bid to address the socio-political changes in South Africa since 1994, the CLG helps to train young black people to become the conservation leaders of the future. Their diverse, innovative programmes are based on the principles of environmental education, empowerment and skills development.

j) Poison Working Group (PWG)

The poisoning of all elements of wildlife has become an environmental issue and the PWG is trying to address conflict between landowners and wildlife. Irresponsible use of agrochemicals kills many species every year, both accidentally and deliberately. A public information programme, research into poisons and relationships with chemical manufacturers assist the group in its work.

k) Law and Policy Working Group (LPWG)

Established in 1998, the LPWG provides legal assistance to the other working groups. In an ad hoc manner, the group reacts when needed, to draw up contracts and memoranda of understanding, as well as providing analyses of governmental policies and legal advice.

l) EWT Biodiversity Monitoring

The EWT has recognised the important role it can play in the conservation of South Africa's biodiversity, as mediator between various groups and institutions that contribute data towards the ongoing monitoring and research of species diversity.

m) Oribi Working Group (OWG)

The newest working group, established in 2002, the OWG uses scientific research to establish the needs of, and threats to, the threatened antelope that relies upon short grasslands for its survival. Started by the Ezemvelo KwaZulu-Natal Wildlife, the programme is still very much a KwaZulu-Natal one with a driving committee.

Strategic partnerships include the:

a) ESKOM – EWT

Bird mortalities as a result of electrocution and collision on the country's electricity network has encouraged Eskom to work with the EWT to lessen these mortalities through improved management and training of their staff. Eskom needs to provide power into rural areas but has agreed to do so with as little impact on species as possible.

b) Airports Company South Africa (ACSA) – EWT

Airport managers are increasingly realising that collisions between birds and aircraft are dangerous and that this issue requires management. Birds and people are at risk and the ACSA-EWT partnership is committed to reducing the number of bird strikes at airports.

c) Conservation Breeding Specialist Group (CBSG) – Southern Africa

For 20 years the CBSG has been a specialist group of the World Conservation Union (IUCN) Species Survival Commission to develop, test and apply scientifically based tools and processes to address critical conservation issues. The partnership's expertise has influenced many EWT working groups towards ongoing species conservation.

d) EWT – International Crane Foundation

This partnership was recently established to incorporate and work with the southern African countries where Wattled Cranes occur. Work ranges across the extensive floodplain systems of southern Africa's large river basins (especially the Kafue, Okavango and Zambezi), as well as the smaller upland wetlands (dambos) throughout the Wattled Crane's range especially in South Africa and Zimbabwe.

e) TRAFFIC East – Southern Africa

For 10 years, this partnership has been monitoring the wildlife trade network in the region, which they consider to be out of control in some areas. Trade in birds, mammals, reptiles, plants and other species is being investigated and partnerships within and between governments established. Legislation needs to be revived in many areas to assist with the aims of the programme.
(EWT 2002:73-91).

Strategic partnerships had been formed with industry where impacts of the industry affected species and where agreement was reached regarding the welfare of those species. The autonomy of each working group under the umbrella of the organisation had proved successful and, according to Ledger (EWT 2002:71), the "resilience of the

working groups lies in their capacity to harness the time and talents of enthusiasts who are employed in other fields".

During this research study, nine working groups and three partnerships participated in the questionnaire. Thereafter, interviews were carried out with 10 working groups and two partnerships, which focus on endangered species and a certain degree of education and awareness activities. Summaries of the participant working groups' visions, missions, goals and objectives have been developed, as provided by working group leaders (see Appendix A).

The Law and Policy Working Group (LPWG) was interviewed towards the end of the data collection process in a much shorter interview. This was done mainly to clarify specific points that arose during general interviews, regarding policy and working group structure in particular. In addition, former director of the Trust who left in 2001, Dr John Ledger, provided a personal perspective of the history of the Trust.

Working groups which did not participate in the research included the:
   a) Carnivore Conservation Group (CCG) – which chose not to participate in anticipation of a possible controlling structure emerging from the research, which could hinder its work;
   b) TRAFFIC East – Southern Africa; and
   c) Conservation Breeding Specialist Group (CBSG).

I omitted the latter two, after questionnaire returns, due to the specific nature of their work, which differs from what other working groups are doing. TRAFFIC monitors wildlife trade in South Africa and the CBSG is a specialist group of the World Conservation Union (IUCN) Species Survival Commission, which develops, tests and applies "scientifically based tools and processes for risk assessment and species conservation decision-making" (EWT 2002:82). I did not include the wildlife Biological Resource Centre (wBRC) which concentrates on the scientific collection of "biomaterials from wildlife" (EWT 2002:81) and the supply of these biomaterials to organisations which use them for research into, and management of, wildlife populations.

2.3. The EWT and organisational management

Diverse organisations and individuals are generally expected to be continually involved with the interpretation of their surroundings. Draft & Weick (1994:71) argue that the organisation must know the environment and that interpretation can assist in distinguishing human organisations from mere institutions. They add that

> … Organisations must make interpretation. Managers must wade into the ocean of events that surround the organisation and actively try to make sense of them. Organisation participants physically act on these events … Interpretation is the process of translating these events, of developing models for understanding, of bringing out meaning, and of assembling the conceptual schemes among key players" (Draft & Weick 1994:73).

Thereafter comes learning in the form of a response or action as a result of the understanding emerging from the interpretation. According to Dobson & Starkey (1993:11), objectives and strategies that back up a mission statement are usually only put into practice "when there is a clear sense of mission informing action".

Dobson & Starkey (1993:3) emphasise that if the internal environment (policies, plans, objectives and commitments) is solid, the organisation will react and respond better to the external environment (the unknown, unpredictable risks). They (1993:23) also note that organisations are now required to be aware of relevant information needed for them to exist in such conditions, with regard to the fact that economic factors affect, and are affected by, technological, socio-cultural and political changes. Steers (1977), however, contends that organisations are effective when strategic goal-setting as a policy is seen as critical in linking the roles of both the organisation as an institution and the employees as quality staff.

These viewpoints were particularly relevant for the EWT, a conservation NGO dealing with major environmental challenges and which did not conform to specific policies or strategies to guide its staff. According to the LPWG (2003), despite the fact that some working groups were "doing groundbreaking stuff" on international and national levels, the available policy had not been standardised in any way. "In the absence of national policy, [working groups] have thus drawn up their own policies … where there is an absence of national policy, there is a need. We need accountability and an open policy development process – the dynamics are different in every case" (LPWG 2003).

However, too much management could be detrimental to enthusiastic achievements by individuals on the ground in different contexts. Greenfield & Ribbens (1993:189) refer to "managerialism" as a controlling concept where technical and rational means are employed to solve human problems. They recommend that "moral problems" (1993:190) within educational organisations are best dealt with in relation to their political, cultural and historical contexts. Too much control over individuals can have negative consequences and a balance needs to be found between the amount of freedom an employee is given and the degree of restriction that is imposed on his/her work.

According to Greenfield & Ribbens (1993), people employed in organisations are important as they have to apply theory into practice: the theory that drives policy is essential for the successful implementation of the policy. "Our concepts of organisations must therefore rest upon the views of people in particular times and places, and any effort to understand them in terms of a single set of ideas, values and laws must be doomed to failure" (Greenfield & Ribbens 1993:5).

Bush (1995:144) is in agreement with this viewpoint, that the structure of an organisation reflects the interaction of the individuals within it "which is valid only as long as it accurately represents those relationships". Bush (1995) notes that rather than consisting of an established framework that inhibits its employees, organisations consist of flexible, dynamic processes and relationships that shape the structure. The autonomous working context of the EWT fitted this description and any framework for EE would be designed with this in mind.

Morgan (1994) refers, however, to the biological term *autopoiesis* to describe living systems as autonomous, circular and self-referring. He suggests that "the aim of such systems is ultimately to produce themselves: their own organisation and identity is their most important product" (1994:135). In the context of the EWT, this theory illuminated the fact that the inherent identity of the organisation was closely linked to the many issues that it was trying to deal with in the environment. As the organisation changes and progresses, it should take into account this self-identity as a prime factor, in relation to the greater environment.

Greenfield & Ribbens (1993:58) note that "organisations are images of what we think of as real in the social order we see around us … The individual is the building block of the organisation, not the building". They also recognise that organisations feel and respond to political, social or cultural changes in the environment. Knowledge of others is as important as one's own experience; human judgement is fallible and, due to context changes, experience can become irrelevant. These comments are important for the debate surrounding monitoring and evaluation (see section 2.4.).

2.4. The EWT working group structures

Of the working groups participant in the research study, the oldest working group was the VSG, established 30 years ago in 1973; the youngest working groups were the MCG (2003), BCG and the OWG (2002). Most working groups were established in the 1990's except for the BSWG, which began in 1986. From the questionnaire it was established that staff had been with the EWT for five to eight years on average (see Appendix C). SACWG had the most full-time paid staff. Most working groups and partnerships operated with one permanent staff member (MCG, BSWG, VSG and BCG). Volunteers also assisted many working groups on an unpaid basis (RCG, BCG, OWG and PWG).

Staff structures appeared to have both positive and negative consequences, considered in relation to the achievement of objectives and with regard to particular constraints. Ledger (2003 pers. comms.) contended that organisational management should revolve around individuals working together within the organisation:

> My idea was that the Trust would be an umbrella to the many working groups and we really have moved on since the VSG early days … How to get people to work together is the biggest challenge. We need interpersonal relations for people to do the work and this is the trick – management of the groups … I set the pattern of the working groups i.e. a scientist at the centre of each who was the thinker, and the support system around that.

At the time of the research study, most EWT working groups were already involved in some form of education and awareness - in the form of formal programmes or informal talks and workshops with specific, and general, target audiences. According to Ledger (2003 pers. comms.) the degree of education and awareness increased since the 1980's when he became director and the Trust recognised the need for a social dimension to their scientific conservation work. At the time of the research, working groups were guided by their own missions, goals and objectives, and sometimes by policies developed to deal specifically with issues within the group. For example, the SACWG

had drawn up a Captive and Trade Policy for cranes. In my view, environmental education and awareness was still a relatively unexplored issue in terms of time spent on improving and evaluating practice according to species and target group needs. As part of their education and awareness goals, working groups focused on groups of society that were directly linked to negative impacts on the particular endangered species. The formation of the CLG in 2000 provided a much-needed social dimension to the organisation that included training trainers and empowering previously disadvantaged people to become conservation leaders.

Ledger (2003 pers. comms.) suggested that environmental education had a role to play in bringing to people the knowledge that others are discovering in conservation and scientific research. EE can also provide an understanding of this knowledge in terms of people's own environmental values so that they can take action at local level. This, in my view, makes EE a vital dimension of any conservation organisation and of any environmental policy or strategy, governmental or non-governmental. (See section 2.6.).

"Even with clear goals, healthy alliances, and projects that promote appropriate incentives, it is difficult to achieve or maintain conservation impact without the support of an effective policy framework" (Margoluis 2000:6). While policy formulation had never been a priority for the Trust, it had also not considered the coordination of working group policies across a national level, in support of mutual conservation goals and objectives. This could be a result of the autonomy of the working groups. The Law and Policy Working Group (LPWG) aimed to inform all working groups about developments in biodiversity policy and legislation and to ensure that policy makers gained insights into the experiences of individuals working within the EWT. This working group did not, however, facilitate the development of EWT policy in any way.

The EWT allowed its staff complete autonomy of practice and the range of objectives and mission statements of the working groups illustrated a wide diversity of action with regard to the protection of particular species (see Appendix A). The research study, however, has revealed that the dearth of a monitoring and evaluation system for any dimension of working group activities made the measurement of these goals difficult and success of progress on the ground was evident but not definite. I believe that

monitoring and evaluation is an essential part of any strategy or policy and would benefit the implementation of a framework for EE within the EWT.

According to West-Burnham (1994:81), organisational planning is based on a clear, long-term mission and vision and involves strategy which feeds into policy. It also includes all staff in the process, and ongoing evaluation, based on the achievement of outcomes measured against aims, and provides the necessary data to make relevant changes. The EWT mission – "to be the leading Southern African organisation conserving threatened wildlife species and their habitats, thereby contributing to the sustainability of life on earth for future generations" (www.ewt.org.za/about.htm 05/02/03) - was the common goal for all working groups. The prevalent ethic was to focus on endangered species and biodiversity, as well as influencing human values towards these issues.

The interviews revealed that working groups were not actively monitoring the achievement of these objectives, however (see Appendix E, Question 4). This is a vital activity considering that the Trust was fighting against the current extinction crisis – the first ever caused by the burgeoning human population and intensifying human activities.

> The 'Sixth Extinction' … refers to the current, ongoing wave of extinction caused by a rise of mankind on planet Earth and which is resulting in the loss of other forms of life at a rate which is perhaps 100 to 1 000 times higher than it might be under normal evolutionary conditions (EWT 2002:56).

Leakey & Lewin (1995) contend that habitat fragmentation and destruction have the worst impact on species extinction, followed by direct exploitation (hunting and collections), and finally, biological changes induced by the introduction of alien species to different ecosystems. However, ecologists are unable to produce the evidence of extinctions already occurring apart from several separate studies in various habitats worldwide. "I believe that the "anecdotal" [sic] accounts of extinctions worldwide that ecologists are currently telling us about are but the merest hint of a catastrophic reality that is unfolding silently and, for the most part, away from our sight" (Leakey & Lewin 1995:245).

They then go on to argue that the scale of the so-called sixth extinction should not cause undue alarm because patterns in history indicate that this concept is due to occur.

Humans evolved within, and as part of, the natural environment yet they have failed to make sense of previous extinctions of species, ascribing these to an evolutionary process. According to Leakey & Lewin (1995:250) "species lives are limited anyway" but if nature is important for the human psyche, then it will be humans who suffer most the increasing loss of biodiversity in the current sixth extinction, in which human blame is central. Despite the global technological revolution, Ledger (2003 pers. comms.) also stressed that humans have very little knowledge about their own kind or other species on Earth.

2.5. Global environmentalist perceptions of environment

Frank (2001:264) illustrates how a conception of nature has evolved to one where humanity is part of, and dependant on, a greater natural environment, as one of many species. Globalisation has contributed to this change in thinking and developments in science have allowed humans to reach space and other once unattainable realms of the earth to discover more about a feasible human future. "Organisationally, the redefinition of nature involved … the rise in a number of international associations that also played a role in generating international discourse and activity around nature" (Frank 2001:257).

While numerous studies have been done on the relationship between environmental awareness and environmental behaviour, not one conclusive answer exists (Kollmuss & Agyeman 2002). It is a much more complex dilemma where it is assumed that a particular awareness emerges from individual values and is moulded by individual character and broader environmental factors. Kollmuss & Agyeman (2002:240) refer to this as the result of "environmental knowledge, values, and attitudes, together with emotional involvement". Taking this further, O'Donoghue & Lotz-Sisitka (2002:265) argue that in some cases, it is "blind social habit" that makes an ordinary individual take environmental action for the environment only because his/her health is threatened. This should not be confused with the intellectual perspectives of educators and sociologists still engaged in a "behaviourist culture".

Sandbach (1980:17) argues that an environmental concern automatically wanes when people experience economic difficulties. People require direct incentives before they make ethical changes. Policy-making depends on a combination of the way key role-

players think, the quality of the institutional environment and the characteristics of the issues being debated.

Environmental economics sets out to place prices on natural resources so that they assume value for people. Dobson (1991:174) contends that the ongoing degradation of the environment stems from the perception that it offers zero value in terms of money. However, as environmental resources near extinction, their economic values increase, and, in order to conserve such resources, they should be highlighted in principle as making a positive and valuable contribution to human welfare.

From a sociological point of view, Giddens (1987) argues that in order for policy to be applicable to an issue, sociologists (in my case, environmental educators) need to detach themselves regularly from the immediacy of the situation under study. They need to be able to concern themselves more critically with what is happening on a global scale within the same subject, to ensure the validity of findings both theoretically and empirically. He recommends an increased reflexivity within social institutions to deal with social change: "the degree … to which society fosters an active and imaginative sociological culture will be a measure of its flexibility and openness" (1987:21). The EWT is not a social institution *per se* but these are useful guidelines for the development of a framework for an EE strategy for the EWT, which increasingly had to focus on the social quality of its work.

2.6. EE as a response to the environmental crisis

In South Africa, the trends of environmental degradation and poverty are not being adequately addressed by governmental policies. A recent report by the Green Trust, of the World-Wide Fund for Nature – South Africa (WWF-SA), recommends that policies be set in place to assist South Africa in taking a more sustainable path regarding environment and development. However, there is no mention of human values and perceptions, or EE, in these recommendations. The report also states that the more biodiversity that is lost globally, the greater will be the impact on poverty since people cannot survive without natural resources. "An estimated 40% of the global economy is based on biological products and processes" (Green Trust 2002:2).

Ecologists are calling for a revolution in "the way we think about, interact with and organise our social and natural environments" (McKay 1995:57). Contemporary EE is based on eco-education or ecology-based education which has always focused on "the harmonious balance of interactions with and between the social and natural environments" (McKay 1995:66). Environmental educators are attempting to raise the consciousness of learners regarding their own dignity and their attitudes towards nature, instilling within the individual a respect for all living things and understanding about the valuable relationship between people and their environment. However, some EE practitioners claim that it is impossible to coerce people to care for their environment, and that it is impossible to force people to learn things based on specific attitudes, standards and values (Boersma 1988:60).

On the other hand, Fien (1993:20) offered the concept of "education *for* the environment" where values education promoted social change, and where natural resources and learning were brought closer to development issues. This concept attempted to integrate a grasp on technological advances with politics, social problems and the meaning of ideology and consumerism (Huckle 1991:56). However, one aspect of education *for* the environment is that EE be "based on a knowledge of major ecological systems, the processes which sustain them, their carrying capacity and vulnerability to human modification" (Huckle 1991:55).

More recently, the *Learning for Sustainability* project in South Africa attempted to encourage teachers to look deeper at the notion of sustainability in relation to EE in the classroom. The project suggested that socially critical EE highlights the "socio-political and economic dimensions of environmental issues … active learning … and value positions [and] … can encourage learners to rethink closely held ideological assumptions" (Janse van Renburg & Lotz-Sisitka 2000:39).

2.6.1. EE and conservation in South Africa

Myers (2003:12) argues that amongst the more natural phenomena causing drastic biodiversity loss worldwide are "landless peasants" or "subsistence farmers". These people have increasingly impacted on protected areas because they ignore the boundaries of game and nature reserves. He predicts a mass extinction event occurring after 2020 owing to the increasing momentum of natural resource depletion caused by

human activities. Conservationists and government officials need to do more than proclaim protected areas as a solution. "A stage is being approached where most biodiversity can be saved only by saving most of the biosphere … conservation of biodiversity should be part of a win-win outcome, with multiplier effects in both directions" (Myers 2003:12).

On a smaller scale, the goals of the South African National Parks (SANParks) today include a social ecology dimension, illustrating its transformation from a primarily biophysical approach to conservation, to one that is more socio-political in its approach. Accordingly, management of the national parks now involves the

> … conservation of natural and associated cultural heritage … alongside social ecology – a contemporary approach to conservation which recognises the importance of positive people-park relationships and the role of conservation in local and regional socio-economic development (SANParks 2002:5).

The SANParks claims to be starting to achieve links between EE, environmental health and policy with the development of their Environmental Interpretation and Education (EIE) Strategy (2002). This EIE Strategy (2002) aims to recognise and guide EIE in SANParks as an important tool for establishing stakeholders who would support conservation and the organisation.

Dobson (1991:60), however, warns that ecology has become trendy and often tends towards a radical environmentalism. He claims that those in power are using ecology as a political tool to dominate and utilise nature for human avarice. "Ecology in my view has always meant social ecology" (Dobson 1991:59), however "ecology is being used against an ecological sensibility, ecological forms of organisation, and ecological practices to 'win' large constituencies, *not to educate them*" (Dobson 1991:62).

It has been argued by conservationists that historically there has been conflict between game reserves and neighbouring communities. They contend that after the establishment of the first national park in 1898, "colonial authorities forcibly moved people to make way for areas where game could be placed under the custodianship of game wardens … many communities lost their land, livelihoods, traditional roles and social status" (SANParks 2002:5). At the turn of the 19th century, traditional knowledge of local communities was believed to have ensured the protection of wildlife and natural

resources but colonisation and hunting game for sport brought about the era of wildlife management by intervention. "The science of ecology seemed to offer value-free and non-political ways of managing the environment. But the effects of ecological managerialism were political in nature, and not always good for nature either" (SANParks 2002:5).

Today, nature conservation agencies, it is argued, have recognised that the long-term survival of national parks depends on the involvement of local people and the mending of any historical rifts. Myers (2003:13) suggests, however, that conservationists need to work on a much larger scale than social ecology allows, to ensure the long-term survival of any protected areas. Billions of US dollars need to be spent on predicting and preventing environmental problems in a massive effort of global political commitment.

Meanwhile, despite the absence of a specific EE policy or strategy, the Ezemvelo KwaZulu-Natal Wildlife (Nature Conservation Services) (E KZNW) partners with conservation NGO's to initiate and ensure that biodiversity education happens at grassroots (www.rhino.org.za May 2003). Together, the E KZNW and some EWT working groups based in KwaZulu-Natal (the SACWG, the BSWG and the OWG) have developed a biodiversity environmental education programme aimed at schools and community groups and based on areas of rich biodiversity, where endangered species occur. They are working towards the criteria recommended by the Convention on Biological Diversity (CBD) in 1992. One of these criteria states that biodiversity education goals should include the emotional, ethical and political aspects of learning about biodiversity. "The purpose of biodiversity education is to develop knowledge and skills and to cultivate attitudes that would enable the society to respond to these requirements and responsibilities" (Kassas 2002:347).

2.6.2. EE, biodiversity and international strategy

In 1992, one of the sixteen NGO Principles that were developed at the Earth Summit in Rio, stated that "education must help develop an ethical awareness of all forms of life with which humans share this planet, respect all life cycles and impose limits on humans' exploitation of other forms of life" (UNESCO 1997:37). A year later, Robottom & Hart (1993:24) advocated a socially critical approach to EE where EE practitioners enquire and are enlightened about "the values informing and justifying

policies, organisational structures and practices that changes in these registers are made possible … ".

At the same time, the publication of the *Global Biodiversity Strategy: Guidelines for Action to Save, Study and Use Earth's Biotic Wealth Sustainably and Equitably* – released in February 1992 at the IV World Parks Congress in Caracas, Venezuela, and the brainchild of the World Resources Institute (WRI), World Conservation Union (IUCN) and the United Nations Environment Programme (UNEP) – attempted to coordinate the prevention of ongoing destruction of global biodiversity. This strategy stated that globally

> … biodiversity is ultimately lost or conserved at local level … Enhanced food security, economic development, and improved medical care are all based on biological productivity and the diversity of genes and species. But to reap these benefits, governments must first develop a sound policy framework (www.wri.org/biodiv/gbs-iv.html 24/04/03).

The 85 specific proposals for action to conserve biodiversity at the national, international, and local levels, initiate basic changes in "how individuals, nations, and organisations, perceive, manage and use the earth's biological wealth" (www.wri.org/biodiv/gbs-iv.html 24/04/03). However, while it provides a policy framework for actions by governments and non-governmental organisations across the globe, it makes no direct reference to EE, vital for the ultimate change in attitudes and values of people and societies.

Botkin (1990) preferred a wider perspective based on ecological or biodiversity education and said that "the changes that must take place in our perspective are twofold: the recognition of the dynamic rather than the static properties of the Earth and its life-support system, and the acceptance of a global view of life on Earth" (Botkin 1990:6). He favoured the intrinsic value of ecology and is adamant that for humans to gain what he calls "a new harmony" (1990:197) between themselves and their environment, they need to improve their knowledge about nature, which in turn would influence specific environmental policy.

The participation of people in biodiversity issues, however, is often based on their knowledge of that issue. According to Kassas (2002:44-45), there are four major gaps in current knowledge about global biodiversity: inadequate information about the number

of species on Earth; inadequate information about micro-organisms; inadequate information surrounding the ecological and taxonomical status of species; and lack of knowledge about whether humans are able to adequately predict and evaluate the extent of the degradation of biodiversity. "If the intention is to conserve habitat diversity, then conservation priority should be given to species … that have roles in the healthy functioning of the ecosystem including its ability to maintain its resilience. Here ecological knowledge is basic" (Kassas 2002:46). This comment confirms the mission of the EWT and the necessity for biodiversity education.

On a global scale, the Global Environmental Facility (GEF) is being guided by a global operational strategy, developed to concentrate on four focal areas: biodiversity, climate change, international waters, and ozone depletion, as well as land degradation as it relates to each focal area. Drawing on the Convention on Biological Diversity (CBD) and the Framework Convention in Climate Change (FCCC), this GEF strategy recognises that the role of biodiversity in the sustainable functioning of the biosphere is not well understood. "The scale of human impacts on biological diversity is increasing exponentially, primarily because of worldwide patterns of consumption, production, and trade; agricultural, industrial, and settlements development; and population growth" (www.gefweb.org/ 8/09/03).

The *IUCN Public Education and Awareness: Implementation of Article 13* policy recommendations call on governments to "promote and encourage understanding of biological diversity and the measures required for its conservation and sustainable use, and to cooperate with other states and international organisations in developing public education and awareness programmes" (www.iucn.org/cec/documents/Article13COP4.pdf 17/04/03). Strategies and policies are increasingly deemed necessary in order to protect countries' natural resources which, for many, are a source of wealth.

In Australia some states have developed strategies for their natural resources, as in South Australia where a wetland strategy "operates as an integrated part of the existing policy, legislative and strategic frameworks for national reserve management and biodiversity conservation" (www.environment.sa.gov.au/biodiversity/pdfs/wetlands/wetlands_strategy.pdf

17/04/03). In the same state, the urban forestry biodiversity programme aims to "enhance the environmental sustainability, amenity and quality of life of metropolitan Adelaide" by establishing and preserving urban forests (www.urbanforest.on.net/pdf/April_97.pdf 17/04/03). Another Australian document for the New South Wales National Parks and Wildlife Services is being utilised by the Ezemvelo KwaZulu-Natal Wildlife in South Africa for its provincial biodiversity planning, *Systematic Conservation Planning*. The document recognises "the realisation of conservation goals requires strategies for managing whole landscapes including areas allocated to both production and protection" (Margules & Pressey 2000:243). Also in South Africa, the city of Cape Town has developed a specific Environmental Education and Training Strategy, identifying the need for an environmentally educated public which will be able to "identify environmental problems, analyse their causes, and contribute to environmental management processes" (IMEP 2003:6). Training will overlap with these processes to produce an environmentally conscious public who are committed to knowing about how to deal with environmental issues.

In southern Africa, within the Southern African Development Community (SADC), Swaziland has recently developed a Biodiversity Strategy and Action Plan (BSAP) to conserve what remains of the country's natural resources. Forming part of the Swaziland Environmental Action Plan (SEAP), this strategy outlines the benefits of natural resources economically and culturally to its people (www.ecs.co.sz/seap/ 8/09/03). Along with conservation goals, the strategy also aims to improve awareness and support for biodiversity conservation amongst the general public.

The SADC has included policy making for sustainable development as a response to regional environmental issues. "In the recent policy making processes there has been an increased emphasis on issues of equity and redress as part of the proposed solution to the environmental crisis" (SADC-ELS 2002:10). In 1993, however, the SADC Regional Environmental Education Programme (REEP) recognised that policy cannot exist if it is not practised and policy formulation should be considered with implementation in mind, in the long-term. A national EE policy and strategy can play a vital role as an umbrella policy for smaller, organisational policies. This emphasises the importance of the inclusion of conservation NGO's, like the EWT, to develop their own policies, linked to or based on, the national EE policy (SADC/IUCN 1999:24).

2.7. The EWT and the need for an EE strategy

During a recent EWT strategy workshop, EWT staff agreed that in order to achieve their mission, they would need to build positive relationships between people and their environments (Dyer 2003:4). Some working groups were already doing this but the workshop suggested they take cognisance of increasing external risks, in relation to the arguments surrounding the so-called sixth extinction. The strategy workshop also identified that decreasing national educational levels and increasing social pressures meant that there was an increased urgency for addressing environmental issues and environmental literacy. Increasing development meant further depletion of natural resources. In addition, severe competition for financial resources and the present South African economy meant less funding for conservation organisations like the EWT, and humanitarian issues were getting more attention from government than environmental issues (Dyer 2003:6).

EWT staff members were aware that human activities in southern Africa were causing intensification of environmental problems including land degradation, poverty, urbanisation, HIV/AIDS, armed conflict, climate change, water scarcity and pollution, and biodiversity loss (SADC-ELS 2002:6). Some responses to this crisis included EE, policy-making, lobbying and advocacy, community-based natural resource management, eco-tourism, sustainable agriculture and eco-efficiency (SADC-ELS 2002:10). Responses would have to be suitable to the context of the EWT, towards the implementation of a framework for an EE strategy within the organisation. The EWT is not an EE organisation. In my view, it would benefit from drawing on organisations and institutions already focusing on EE issues, including governmental departments, other NGOs, community-based organisations (CBO's) and private enterprises to enhance staff training and guidance with the implementation of an EE policy.

Trends emerging from the Southern African Development Community (SADC) regional EE programme (REEP) (SADC/IUCN 1999) indicated that an EE strategy should incorporate definite aims and objectives, under a broader vision and mission. EE principles were important foundational requirements and ongoing monitoring and evaluation was essential to contribute to the credibility of the strategy. Role players

within the strategy formation and target groups would ensure the success or failure of the strategy's implementation, within each context.

> Responsible citizenry includes both the right to influence policy formulation and the responsibility to contribute to wise environmental management and to strive for sustainability … cross-sectoral participation in environmental education policy formation can facilitate a commitment to achieving environmental education goals (SADC/IUCN 1999:22).

The SADC REEP also suggested that the reason for the development of a framework for an EE strategy – in this case within the EWT - needed to be clear and include "an explanation of its values and the needs, the problems, and the questions that it is going to address" (SADC/IUCN 1999:24). This statement of purpose would clarify the scope of the strategy, which should also mention the level of outreach: local, regional, national and international. Objectives, strategies and principles should then be drawn up using a participatory process out of which should emerge the appropriate methodologies and approaches to take the strategy forward. The document would only be used successfully if ongoing communication and networking and the formation of partnerships reinforce the strategy formulation process. Links with formal and informal educational institutions were essential for adoption of the strategy by both government departments and private enterprises.

However, this study was analysing the viability of a framework for an EE strategy within the EWT to support endangered species conservation in South Africa and the process for such an enabling framework is not the same as one for an EE strategy across the southern African states. The SADC REEP could be a useful guide towards the development of a framework for an EWT EE strategy.

2.8. Environmental legislation in South Africa

In 1994, in South Africa, the implementation of democracy supported the incorporation of human rights and basic human needs into the goals of government redevelopment programmes, including land distribution, health care and economic development. Four years later, the National Environmental Management Act (NEMA) (Act 107 of 1998) declared that all South Africans have a right to an environment beneficial to their health and welfare. NEMA environmental principles stated the need for responsible policy where

> … decisions must take into account the interests, needs and values of all interested and affected parties, and this includes recognising all forms of knowledge, including the traditional and ordinary knowledge; community wellbeing and empowerment must be promoted through environmental education, the raising of environmental awareness, the sharing of knowledge and experience and other appropriate means (www.environment.gov.za/ 25/04/03).

The reference to EE and knowledge is significant as it was never a priority for the South African government, even within the Department of Education, prior to 1995 and the promulgation of NEMA in 1998. In 1999, the national department of Environmental Affairs and Tourism (DEAT) also published its State of the Environment (SoE) Report after the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro in 1992. In this report, the new government made legal space for individuals and communities to lobby against developments impacting on the environment, and thus their own welfare. While the report recognises that "macro-economic reform is a response to combat environmental change in all ecosystems" (www.ngo.grida.no/soesa/nsoer/response/general/index.htm 24/04/03), it also concedes the lack of evidence of the inducement of change by reform, explaining that while many of the laws have recently been promulgated, their effectiveness is not yet noticeable.

After 1998, the EWT remained critical of this lack of implementation of governmental policy on the ground, despite the fact that the international programme for sustainable development adopted at UNCED, Agenda 21, cited the need for increased environmental information as a requirement for decision-making. During a recent strategy workshop, members of the Trust discussed the issue that NGO's are increasingly responsible for doing the work that the government used to do. The increasing depletion of natural resources is one cause for increased competition between NGO's for support by private business (Dyer 2003).

Responses, including lobbying government, the implementation of legislation and human rights, as well as EE, are becoming interactive responses to the environmental crisis and to dealing with socio-political issues that impact directly on the environment. Hence the importance for both governmental departments and NGO's to formulate EE policy and to follow it up with implementation. It follows that EE should "promote the value and necessity of local, national and international cooperation in the prevention and solution of environmental problems" (UNESCO-UNEP 1978).

The DEAT has developed a framework to enable NGO's, government departments and private organisations to implement EE strategies in their particular contexts but that remain nationally relevant. The EWT had yet to utilise this document fully, by forging partnerships in education with government. The document emphasises that partnerships in EE can contribute to the wise use of limited natural resources by generating clarifying discussions and raising "key considerations around the role of environmental education in responding to the environmental issues in the country" (DEAT 2001:6) (see section 2.7.).

The UNESCO education mission is to promote education as a fundamental right, to improve the quality of education, to stimulate experimentation, innovation and policy dialogue. EE aims ultimately to "provide every person with opportunities to acquire knowledge, values, attitudes, commitment and skills needed to protect and improve the environment and to create new patterns of behaviour of individuals, groups and society as a whole towards the environment" (UNESCO-UNEP 1978). In order to achieve this, EE will require strategic partnerships between NGO's, government and private organisations. NGO's (like the EWT) are dependent upon the meanings and purposes individuals bring to them: an organisation ails when it fails to adapt to the needs of its individuals, the goals it is striving for, its internal environment and the outer, economic, social and technical environment (Greenfield & Ribbens 1993).

Neither an organisation nor its individuals, however, can achieve goals without integration with the environment. This was recognised in 1992 when the Treaty on environmental education for sustainable societies was adopted at the Rio Summit in 1992, emphasising the need for all humans to understand the "systemic nature of the crises that threaten the world's future, and … that root causes of environmental issues such as poverty are closely linked to the dominant socio-economic system" (Lotz-Sisitka 2001:5). The ultimate challenge for NGO's, in accordance with Lotz-Sisitka (2001:3), with reference to Bauman, is to develop a greater reflexivity through deeper understanding of environmental education processes as complex processes of social transformation, and of the circumstances affecting the way we practice EE.

More recently the launch of a National Environmental Education Programme (NEEP) aims to "enhance intergovernmental cooperation … and to provide a coherent and coordinating framework through which various environmental bodies can work with schools" (DEAT 2001:16). Documents including the 1995 South African White Paper on Education and Training, White Paper on Conservation and Sustainable Use of South Africa's Biological Diversity (1997), and the Environmental Impact Assessment (EIA) Regulations Paper (1997) all articulate the importance of EE or carry clear implications for EE processes and strategies. These policies also draw on the South African Constitution (Bill of Rights) of 1996 and the United Nations Commission on Environment and Development (UNCED) of which South Africa is a signatory. According to chapter 36:63 of Agenda 21,

> There is a need to increase people's sensitivity to, and involvement in, finding solutions for environment and development problems. Education can give people the environmental and ethical awareness, values and attitudes, skills and behaviour needed for sustainable development (DEAT 2001:17).

Other South African governmental policies deal with specific environmental issues: the National Water Act (Act 36 of 1998); the White Paper on Development and Promotion of Tourism in South Africa (June 1996); and the National Waste Management Strategy (1999) (DEAT 2001:10). In addition the government is currently ratifying the National Biodiversity Bill and the National Protected Areas Bill, towards the protection of the country's natural resources (www.environment.gov.za 24/04/03).

2.9. Conclusion

Chapter two contextualised the research study with an introduction to the Endangered Wildlife Trust (EWT), the organisation under study, and the use of environmental education (EE) as a response to the present environmental crisis. The background of the EWT is important for the discussion during data analysis in chapters four and five, where the perceptions of the individuals leading specific working groups and strategic partnerships play a major role in deciding the research outcomes. This factual profile laid the foundations for what is revealed later: the EWT works according to a unique structure with unusual individuals who provide the Trust with its present, well-recognised conservation reputation.

The chapter included a section on general environmental perceptions as both a cause and an effect of the present environmental crisis, and one on the way that EE can be integrated with conservation and biodiversity goals, in the form of strategy and/or policy, to deal with, and even change, such perceptions. Evidence suggests that South Africa has some of the best environmental legislation in the world and NGO's like the EWT are trying to enforce these laws to protect endangered species. Environmental education can play a much more relevant role both within and for the EWT, and in other organisations, including governmental departments. The chapter paves the way, with positive reasons, for a viable framework for an EE strategy within the EWT to work parallel to its conservation and biodiversity focus.

CHAPTER 3: METHODOLOGY

Science knows little about home range: how big it is at various seasons, what food and cover it must include, when and how it is defended against trespass, and whether ownership is an individual, family, or group affair. These are the fundamentals of animal economics, or ecology. Every farm is a textbook on animal ecology; woodmanship is the translation of the book (Aldo Leopold 1949:81).

3.1. Introduction

This chapter describes the methods selected for the study to ensure an accurate foundation for the findings and recommendations: questionnaire schedules, interview schedules and document analysis. The critical evaluation, part of the research process, is a necessary justification of the research question and aims of the study. These personal reflections of the researcher during the study run parallel to the entire research process (see sections 3.7 and 6.7.). The section on validity describes and justifies the ethical reasoning that substantiates the reliability of the findings.

According to Terre Blanche & Kelly (1999:126), qualitative research aims to achieve the "development of methodologies for understanding human phenomena 'in context'". While collecting data in my context, as an interpretive researcher, I wanted to "make sense of feelings, experiences, social situations or phenomena as they occur in the real world" (Terre Blanche & Kelly 1999:127), my 'real world' being that of the Endangered Wildlife Trust (EWT).

My qualitative research study focused on a conservation organisation and its individual role players, within a certain society. I discussed the EWT's use of, and involvement in, environmental education (EE), and explored the viability, and possible need, for a framework for an EE strategy within the EWT. In addition, this study looked at the individual staff members' perceptions about EE and their EE requirements within the organisation. Greenfield & Ribbens (1993:1) argue that organisations exist because of the people who work within them: "Organisations are definitions of social reality … Organisations are mechanisms for transforming our desire into social realities. But the transforming mechanism lies within individuals" (Greenfield & Ribbens 1993:17).

Jackson (1995) states that qualitative research on a macro level attempts to study whole organisations while on the micro level, the focus is on individual behaviours - mine was

a combination of both. Historically, social scientists have concentrated on micro, face-to-face studies, keeping them separate from the fact that most individuals belong to a societal group and work for an institution or organisation. Mouzelis (1995:16) contends that the macro-society/micro-individual distinction can be illustrated by the contrast between institutional or social structures on the one hand (the macro level of analysis), and interactions or encounters on the other (micro level of analysis). This relates to the EWT as an organisation consisting of individuals who ensure its credibility and who need to remain aware of the impact of the internal and external environments on both their own functioning and that of the Trust.

Another issue in my research context was that as an indirect employee of the EWT, I was very aware of the degree of my subjectivity (see section 1.1.). Elias (1987) suggests that the degree of involvement that social scientists allow their subjects could facilitate a re-analysis of society and human lifestyles from their perspective because no one in authority is yet doing this:

> To look at humanity from outside … that is in the manner in which it might be perceived by an external observer, requires a high level of detachment, a more than usual ability in self-distancing … Sociologists can draw attention to, and perhaps help to clarify the relationship between the standard of involvement and detachment that prevail among humans, and the danger to which they are exposed at the level of humanity (Elias 1987:lxx-lxxii).

Research studies are immediate and inevitably a combination of subjectivity and objectivity, from the viewpoint of the social scientist. Within the EWT, the taking of a closer look at EE practices within different working groups, and their impact on the various target groups, could draw attention to successes and failures being experienced on a daily basis, and the reasons for this.

3.2. Research design decisions

By taking both an individual and an organisational perspective, I had to move consciously between positions of involvement and detachment. Elias (1987) argues that those researching others are actually researching themselves at the same time and that this battle between involvement and detachment deepens:

> The greater the strains and stresses to which they or their groups are exposed, the more difficult it is for them to perform the mental operation, underlying all scientific pursuits, of detaching themselves from their role as immediate participants from the limited vista it offers (Elias 1987:12).

I used an interpretive approach, selecting methods and techniques accordingly, in an attempt to describe and understand "how the participants experience and explain their own world" (Jackson 1995:17). I aimed, through my observations and interpretations of other individuals' experiences to gain insights into the meanings being made in EE and that emerge from the particular methods used. Interpretivists believe that by understanding the behaviour of others, they create their own meaning which enables them to understand those individuals "simply in their own terms" (Fay 1996:113). However, this is not enough as people make meaning within different contexts, both social and institutional, which need to be related to the external environment. This was true in my case with my analysis of a conservation organisation, constantly working within different local environments, in relation to their EE practice.

> The problem confronting those who study one or the other aspects of human groups is how to keep their roles as participant and as inquirer clearly and consistently apart and, as a professional group, to establish in their work the undisputed dominance of the latter (Elias 1987:16).

Elias (1987) acknowledges that social scientists are caught between the objective requirements of the science and the subjective side of the social. In order to understand the issues they are researching, they need to participate and be involved yet they need to think rationally as scientists. This dilemma of involvement and detachment also affected my contextuality, which was significant to my research: I was not an outsider to the research topic or the organisation and its participant employees.

As researcher doing interpretive research, I had to engage in empathetic understanding with the research participants because their importance as the sources of my findings contributed to the emergent recommendations for a framework for an EE strategy within their organisation. I was able to build my story using the fragments of their conversations with me, allowing the theory to build itself in an inductive process.

According to Kelly (1999:406), "theory which is not grounded, and description which is not theorised, stand in danger of being alienated from the advantages of the opposite perspective". The opposite of inductive or grounded theory is deductive theory, which involves general reasoning to reach conclusions. The subjective perceptions of the participants in my research constructed the reality for me of a conservation organisation and how it operated, especially with regard to EE. Interpretation on this level also

involved some reading between the lines and taking note of the underlying assumptions to enhance the story and evaluate the viability of a framework for EE within the organisation.

I set out to interpret my findings about how staff, within a conservation organisation, understand and practise EE. I wanted to be able to eventually communicate my understanding of their needs in the form of a recommended framework for an EE strategy. I attempted to understand social relationships within the EWT, especially in relation to EE and its implementation. At the same time, I grappled with ways of drawing up a proposed framework for an EE strategy that would encourage positive ideas, and even changes, regarding EE practice by working groups. The research was two-fold:

a) The description of a research process and what emerged (my interpretation of my data), including an analysis of the viability of a framework for an EE strategy for the Trust; and

b) The development of guidelines that assisted me to achieve my research goals (see section 1.1.) and take the research one step further (formally communicating my findings).

I acknowledge the political dimension to the research because historically, policy development is a political process and people working within organisations do have personal agendas. However, my aim was to influence current EE policy or strategy by ensuring that the EWT, and similar organisations, utilise my research outcome.

3.3. Site and method

My particular research focus was a national one: the EWT working groups operated in specific regions in South Africa according to the location of the particular species and habitat they were attempting to protect, and the issues or threats affecting these. Most working group leaders were based in Gauteng at the Johannesburg Zoo and this was the venue for my semi-structured interviews, during one week in April, 2003. Other interviews took place in KwaZulu-Natal and over the telephone. Questionnaires were sent out via e-mail and document analysis was undertaken at my home in KwaZulu-Natal and at Rhodes University in Grahamstown.

3.4. Collection of data

3.4.1. Document analysis

The dearth of background information about the EWT (see section 1.2.) also revealed a dearth of policy or strategy documents, as well as standard operating manuals or written procedures. If management policy is meant to focus on managing the entire organisation "with particular emphasis on the formulation of strategies" (McCarthy *et al.* 1979:28), then the EWT was lacking perspective regarding the external environment within which they were situated politically, economically and socially, and their internal environment which related to individual participation and interaction (see section 2.3.). When I requested background information regarding the history of the EWT, its management policies and style, I was referred to the annual *Vision*, considered a record of the EWT over the years. I did not get access to meeting minutes or directors' reports.

As a result, I had to rely on the Trust's annual publication, *Vision*, since 1994, to recover historical information. However, most of this information proved to be very conservation-oriented and revealed little mention of EE. I was able to gain some understanding of the way forward for the EWT from the minutes of the recent strategy workshop with all staff (Dyer 2003). I also had access to working group prospectuses and action plans. Broader information was gathered from theories regarding organisational management, policy-making and strategic planning. Other important influences in conservation, biodiversity and EE policy-making on a global, national and regional scale provided background information to the research question.

3.4.2. Questionnaire

The questionnaire was designed by the end of February 2003 and distributed in early March. Returns were in by mid-March and my first attempts at data analysis started with the breaking down of each question into units. I was then able to select my interview respondents with a focus on those working groups already doing education and awareness and involved with the conservation of a particular endangered species. My decision to use a questionnaire was based on the need to select specific participants with whom to work further, from an initial group of individuals, not all of whom were relevant to this particular research study (see section 2.2.). The questionnaire contained qualitative material within the questionnaire format, being both analytical and descriptive in nature (see Appendix C).

Bulmer (1984:54) states that the use of a descriptive survey enables the researcher to "portray accurately the characteristics of particular individuals, situations or groups (in terms of behaviour, attitudes and dispositions to act)". The intention of analytical surveys is to test and compare the relationships between variables to "understand and explain a particular social phenomenon". My questionnaire consisted of some open-ended questions and some closed-ended questions. The primary theme was to find out more about the perceptions of a group of people working for the same organisation. This would allow me to gain insights into the operation of the Trust, especially regarding EE, its strengths and weaknesses, at the time. While I attempted to evaluate perceptions towards environmental and work issues using graphs and tables (see Appendix C), I did so in order to interpret the *status quo* of an organisation in its approach to EE. The tables were a quick way of gaining information and allowed easier data analysis.

Weber, who spent much time trying to understand human subjectivity, considered sociology to be a science because both scientists and sociologists, regardless of their context of research, used logical or rational thinking to allow their explanations to emerge as valid and relevant (Eldridge 1972:9). I was aware of my subjectivity, which was unavoidable according to my initial choice of research question, my selection of methods suitable to the study, within a specific methodological paradigm, and my interpretation of the data I gathered for analysis. Ellis & Flaherty (1992:3) argue that sociologists have historically neglected the influence of the greater context including cultural and political forces – research efforts usually focus on the immediate, micro-context and individual emotions. As an environmental educator, I was trying not to fall into this trap.

My actual interpretation of the survey data, "far from being a purely mechanical or technical activity, required the exercise of the sociological imagination" (Bulmer 1984:58). I used the questionnaire to assist me to rationalise about the emerging data more clearly and accurately within a theoretical context. The questionnaire was used to scan a reasonably wide field of issues and programmes in order to describe any generalised features (Cohen *et al*. 2000:171). The use of this technique appealed to me for its time saving and focusing qualities, both in the design and in the data collection and it also allowed me to feel confident about the particular set of findings. While I did

aim for a certain "aggregated response" (Cohen *et al*. 2000:172), I allowed for a degree of individuality in the way I phrased the less structured questions.

The questionnaire allowed me to gather information that was representative of that total population under study and the interview representation thereafter allowed me to expand on the issues under analysis with more of a focus on endangered species and environmental education.

3.4.3. Semi-structured interviews

I spent the first week of April 2003 in Gauteng at the EWT offices, interviewing seven of the 12 respondents. After questionnaire returns, these working groups were selected for the interviews because they were species specific and already practising a degree of EE (Eskom-EWT Partnership, Vulture Study Group, Marine Conservation Group, Bat Conservation Group, Conservation Leadership Group, and the EWT-International Crane Foundation Partnership). Dr John Ledger, former director of the Trust was also interviewed because of his knowledge about the history of the Trust (see Appendixes E and F.).

The remaining interviews took place in KwaZulu-Natal (Blue Swallow Working Group, Oribi Working Group and Poison Working Group) and some over the telephone (South African Crane Working Group, Raptor Conservation Group and Law and Policy Working Group). I wrote up the interviews electronically during early April 2003 then separated the questions into units, as done previously with the questionnaire returns. Data analysis began early in July 2003.

During my interviews, I focused on specific subjects within the particular organisation and I asked questions that would reveal respondents' beliefs and perceptions concerning particular, related subjects. I used the interviews to reinforce the meaning emerging from my questionnaire returns, keeping in mind that people's actions are not necessarily linked with what they might impart verbally about what they believe or feel or think (Arksey & Knight 1999:3). People react differently at different times to different contexts and circumstances, and perceptions change accordingly.

The dearth of historical and situational background information about the EWT led me to attempt to study the status quo of the organisation through the interviews without the support of prior theory, therefore aiming for it to emerge from my findings. The use of semi-structured interview schedules allowed me to start with key questions, to draw recommendations, from most of the respondents, for improvement regarding the organisation's EE practices. For each individual interviewed, I began with general questions about their work within the context of their particular working groups.

I later moved on to more specific questions that I hoped would illuminate to me more about my research goals, a method Arksey & Knight (1999:18) refer to as "progressive focusing". This was not the same as a structured interview schedule which would have contained set questions from which I would not have been diverted. The interviews were conversations based on a broad selection of questions which I could adapt according the individual and the working group represented. It is more difficult to develop general theories about the nature of particular phenomena, which requires large amounts of data (Taylor & Bogdan 1998).

3.5. Data analysis

The amount of raw data that I had to analyse required a systematic approach of sorting and categorising before I could make any sense of it, in terms of the research question. The fact that I was actually evaluating the viability for a framework for an EE strategy within the EWT allowed me to recognise that my intended outcomes would become very much part of the data analysis process. I believe that the erosion of social values is a major cause of environmental damage. Environmental education should, therefore, be constructed to offer "real and precise information around the problem [and offer] a conscience which enables the individual to counter-approach the limits of language from an environmental position-conception" (Del Pilar Jimenez Silva 1993:246). This belief would influence my interpretation of EE being done by the EWT during the data analysis.

However, data analysis involves developing insights that are grounded in the data, and using description and theory to help understand the participants in their own contexts and from their perspectives (Taylor & Bogdan 1998:140).

> … data analysis is an intuitive and inductive process … a dynamic and creative process. Throughout analysis, researchers attempt to gain a deeper understanding of what they have studied and to continually refine their interpretations. Researchers also draw on their firsthand experience with settings, informants, or documents to interpret their data (Taylor & Bogdan 1998:141).

Bulmer (1984:250) reiterates that analytic induction infers that the researcher remains loyal to the data while summarising and sorting concepts and phrases from a reasonable sample size. My research was exploratory in that I did not have prior knowledge about the EWT working groups' EE practices, which I only attained after the questionnaires and interviews were completed. The large amount of raw data acquired had to be sorted into tangible theoretical categories, freshly selected. The process of re-reading and re-arranging categories and theories enabled me, as researcher, to manipulate the data into manageable classes and then to make inductions there from.

I was not consciously generating theory during this process but it did occur without my having to force it to do so. Bulmer (1984:260) talks about the "interplay of data and conceptualisation, the 'flip-flop' between ideas and research experience". I did try to use direct quotations from the research participants to substantiate my findings and also to refer back to literature already cited in the study in chapter two.

I started my data analysis by reading and re-reading my data and my personal journal, my correspondence (mainly e-mails) and some extra literature on data analysis itself. With pen in hand, I made comments as I read, critically finding themes and patterns in the data. "During the familiarization stage, the analyst is not only gaining an overview of the richness, depth and diversity of the data, but also beginning the process of abstraction and conceptualisation" (Ritchie & Spencer 1994:179). This happened naturally according to the questionnaire and interview questions which were designed around preconceived themes already. Later, these themes were clarified or renewed by the data itself, as new patterns and intuitions emerged.

I found it difficult to easily interpret the information given to me by research participants but the way the instruments were designed assisted the outcomes. "How you interpret your data depends on your theoretical assumptions. It is important to expose yourself to theoretical frameworks during the intensive analysis stage of the research" (Taylor & Bogdan 1998:146). My interpretive, qualitative study therefore

allowed me to make meaning from the words of the participants themselves, within their own contexts.

After coding and categorising the data, merging questionnaire returns with interview returns, I had sufficient raw data to start to develop a comprehensive picture and discuss the findings in a meaningful way. I had to compare different sections of the data with others to ensure that my categories were suitable and this resulted in further editing and changes to the sorting process. The findings were based on individuals' perceptions of issues within the same organisation, and, as a result, the recommendations had to be sensitive, flexible and empathetic.

In accordance with Taylor & Bogdan (1998:157) I had to keep in mind that I was never passive during the research process. I could have solicited "data that may not have emerged on their own" through the type of questions I asked, and the way I followed up on certain topics. I recognise that this did happen in the personal contexts of the interviews, and relative to my previous knowledge of certain interviewees. I would term the ex-director of the EWT, Dr John Ledger, my key informant as he provided me with "critical insights" (Taylor & Bogdan 1998:159) which I was aware, were his subjective views.

The writing up of the data analysis process allowed for explanation and understanding, and completion of the emergent intuitive and theoretical findings. Relevant literature and direct quotations from the research participants were referred to, to substantiate claims made.

3.6. Validity issues

According to Janse van Rensburg (2001:6), reliability of a research study refers to "the quality of the indicators or instruments … which could be used to measure variables" or, more simply, the trustworthiness of the study. In interpretivist approaches to research, the researcher presents his/her interpretation of the many understandings being made by the respondents of their realities. In my opinion, I gathered sufficient data, using the questionnaire and semi-structured interviews as techniques, to find invaluable information directly from the 13 participants involved in the research. My instruments were semi-structured and while the questionnaire was ordered more around specific

questions, the interviews tended towards being open-ended and conversational. Participants verified the data transcriptions via e-mail.

In addition, the Endangered Wildlife Trust (EWT) is a credible conservation organisation based in South Africa, with links in southern Africa and continentally. Conservation on a global scale has no boundaries and the EWT did work similar to international organisations, which were increasingly sharing ideas and supporting one another. Considering the time frame for the data collection and the expenses involved, the number of respondents gave me enough quality data, which was reinforced with their own documents.

The data collected was as factually correct as possible – despite not using a tape recorder during the interviews, my note-taking was comprehensive: transcriptions were sent to individual participants and validated by them on e-mail. The descriptive validity of this study was therefore contained within the factual accuracy of the data in its presentation, which was checked and verified by the research participants. In chapters four and five, the data was described as it was collected, and then the meaning was discussed. Maxwell (1992:286) refers to two types of descriptive validity: primary descriptive validity - "the descriptive validity of what the researcher reports having seen or heard – and secondary descriptive validity – "the description of accounts of things that could in principle be observed, but that were inferred from other data".

The layout of the thesis shows a coherent, logical argument, justified continually by the evidence gathered from the research participants themselves, as well as from documents, books and other literature sources relevant to the subject. I read wider than the subject at hand to reinforce my personal views about the environment crisis, to which the EWT is responding.

I made it evident that the useful information given me by research participants was laden with multiple meanings of their realities. The interpretive validity (my interpretation of these meanings) was justified with the use of other information pertinent to the data recorded from written and verbal communications. According to Maxwell (1992:288), interpretive validity involves the perceptions of the participants or what "objects, events, and behaviours *mean* to the people engaged in and with them". I

ensured that I received consensus from the individual working group participants about the accuracy of my interpretations. During face-to-face interviews, I interpreted their words within their contexts. Afterwards, however, during the transcriptions of these conversations, I interpreted meanings as an objective outsider, away from their working contexts. Janse van Rensburg (2001:2) contends that "how we understand the world – culturally and personally – influences how we approach our scientific investigations of the world, and what criteria we apply to judge those investigations".

Chapters four and five are real renditions of exactly what was said to me during data collection. Along with explanations, which were also discussed, the findings are supported by relevant literature and quotations, regarding how they relate to the study and the greater environmental context of the study. Theories already available in literature could substantiate the stories, and the stories themselves initiated theories. "Accounts of participants' meanings are never a matter of direct access, but are always construed by the researcher(s) on the basis of the participants' accounts and other evidence" (Maxwell 1992:290).

I feel that the research findings cannot be extended to other organisations beyond the EWT due to their contextual nature, and specificity to the working groups. The EWT is a unique organisation with unique ways of doing things. However, the ultimate framework proposed for an EE strategy within the Trust could be extended to, and adapted for, similar organisations. The framework could be generalised beyond the context of the EWT so that this "transferential validity" (Kelly 1999:430) enables the research account to be transferred to other contexts and to assist with providing answers in other research studies.

3.6.1. Possible threats to the validity

As researcher, I remained frank regarding my subjectivity within the research study: as an indirect employee of the EWT, I worked for the SACWG, one of the working groups which participated in the research (see section 1.1.). Sometimes, however, I was forced to make comments in lieu of the SACWG leader when she elected me to make comments in her place. I also found myself biased towards the SACWG during the discussion of some findings. I knew some of the other research participants through the work that they were doing and interacted with some of them on an irregular basis. This,

I realised, could influence the research outcomes and required my very careful and empathetic analysis of a situation wherein personalities and perspectives created an emotional arena for the research outcomes. In addition, I did not ask all the working groups leaders the same questions in the same format or in the same way, due to the very different interview contexts.

> Unless the researcher leaves a trail and describes in detail what is done, the reader is left at the mercy of the researcher's ability to smooth over the cracks … leaving an 'audit trail' involves writing in such a way as not only to make a statement, but at the same time to reveal the statement's perspectivity (Kelly 1999:427).

There was a possible threat that participants could have disagreed with my interpretation of their verbal data. However, I dealt with this issue when I sent the interview transcriptions back to the participants via e-mail and only received a few returns where individuals were concerned about certain emotional comments that they had made during the interview contexts. In my view, if the recommendations and the proposed framework for an EE strategy within the organisation are not taken up timeously, there is the danger of the data aging, or becoming irrelevant to the context of the organisation in environmentally changing times.

I was conscious of validity issues throughout the research, in particular during data collection and analysis. I had to continually refer back to the research question and my aims and to validate all references to verbal interpretations from the research participants. The outcome of this exercise was that the research did change and evolve with the findings emerging from the data.

The research was designed to assess the viability for change within the EWT and while "catalytic validity" (Janse van Rensburg 2001:11) was not evident within the research study itself, the research findings would hopefully lead into the development of a framework for an EE strategy for the EWT. I feel that the research process initiated deeper thought around EE issues and EE requirements by individual working group leaders. In addition, internal evaluation of working group EE practices by the research participants had begun as a result of this. My reflexivity as a researcher close to her research material was an essential part of the validating of the data and the methodology showed evidence: a journal kept during the entire two-year process bore testimony to this.

3.7. Critical evaluation

My aim was to promote an easier way of doing things, to ease the constraints and to learn more through cooperative EE. I feel that the data collection phase was too rudimentary and that I did not have sufficient contact with EWT staffers during the research process. I felt uncomfortable about my "interference" in their work because I perceived some of their discomfort about my research. I also felt intimidated by some of their professionalism and qualifications but I did not show this during the data collection process.

Interpreting perceptions is a difficult task and one that can never be 100 percent correct, especially where much interpretation rests with the subjectivity of the researcher. People feel differently on different days and at different times, which makes the interpretation of feelings and emotions unstable and open-ended.

An exemplification of this fact were comments made by the Oribi Working Group (OWG). During the questionnaire returns (see Appendix F, Question 1), the OWG referred to the choice of threats to endangered species (depicted in a table by the researcher to be evaluated) and noted that industry and development were two separate issues but they appeared together as a cause of habitat loss. The OWG believed that urban development, including low cost housing, was more of a threat to Oribi than industry. The group was concerned that where they ticked particular boxes, it could imply that they gave equal weighting to both criteria, which they did not. This would affect my interpretations as researcher, and hence my conclusions. The OWG also queried poaching for food as a category:

> If all your participants tick this block your conclusion has to be that poaching is only by hungry people (which in the case of Oribi , and rhino and many others, I don't believe it is) which is very misleading, resulting possibly in misdirected efforts (and even misuse by politicians and decision makers) (OWG 2003).

The OWG also referred to the differences between hunting and illegal hunting, and poverty and unemployment as possibly the same thing, iterating that poisoning is only of vast consequence for some species, for example vultures. This could influence the researcher's conclusion that poison is not a threat when it actually is.

3.8. Conclusion

Chapter three allowed me to describe and explain the research methods and methodology, according to a chosen theoretical paradigm. Interpretive research is never complete and this particular study was designed to create opportunities for the EWT working groups to take action for EE, not to foreclose further development. Working so closely with familiar subject material made me, the researcher, especially careful regarding the validity of the research process and the findings. I was looking closely at an organisation and its individual staffers and the way that they practice and think about EE.

Data collection methods and data analysis were kept as simple as possible amidst large amounts of document analysis around the main topic. This chapter leads the reader into the next two chapters where the data analysis process revealed several categories of findings and information about the EWT and its employees and their perceptions about EE and its practice.

CHAPTER 4: RESULTS AND DISCUSION – PERCEPTUAL PROFILES OF EWT WORKING GROUPS AND PARTNERSHIPS

> We all strive for safety, prosperity, comfort, long life, and dullness. The deer strives with his supple legs, the cowman with trap and poison, the statesman with pen, the most of us with machines, votes, and dollars, but it all comes to the same thing: peace in our time … Perhaps this is behind Thoreau's dictum: In wilderness is the salvation of the world. Perhaps this is the hidden meaning in the howl of the wolf, long known among mountains, but seldom perceived among men (Aldo Leopold 1949:133).

4.1. Introduction

This chapter is the first in two consecutive chapters dealing with research results and the emergent discussion around such findings. Having established that the internal context of the Endangered Wildlife Trust (EWT) is related to the external context of the greater environment, the work of the EWT is conservation of endangered species and most of the impacts on these species are caused by human activities in the greater environment.

Accordingly, this chapter looked closely at the geographic and social scopes in which working groups and partnerships operated; the directions that working groups and partnerships were taking both generally and regarding EE; working group and partnership perceptions about the threats to endangered species and their responses to such threats, including EE; and working group and partnership perceptions regarding their own general strengths and weaknesses and how these related to constraints suffered; and how they felt about the management of the Trust.

In order to make the reading of chapters four and five easier, I will refer to working groups and partnerships as **working groups**. This does in no way mean that the input from working groups is better than that of the partnerships: there were merely more working groups in comparison to partnerships involved in the data collection. Throughout chapters four and five, I have referred to working groups by their acronyms and not by the names of individuals who participated in questionnaires and/or interviews (see section 2.2.). This has been done to protect the identities of the individuals working professionally for the Endangered Wildlife Trust.

4.2. Working group and partnership ranges of activities

4.2.1. EE activities and target groups in relation to effectivity

The ranges for social activities for the different working groups extended from local level to national then international levels – five of the respondents were nationally based and focused. At least three of the respondents were working in southern Africa as well and another three were internationally involved. Most working groups were working where the species and habitat occurred, and the problems affecting both. Geographical and social scopes were vast which created problems for those working groups with only one permanent staff member. The BSWG and SACWG were aiming to reach the most target groups where the Blue Swallows and Cranes occur, while the PWG and Eskom-EWT partnership were nationally oriented with very particular focuses. The CLG was a specialist group initiating specific tasks for specific target groups in a focused area. The BCG and OWG were still very new and solving foundational issues.

The MCG was probably the most restricted group in terms of scope and EE activities but this was relevant to the species being researched, the humpback dolphin, where it occurred and the issues affecting it. The MCG is based in Richards Bay, KwaZulu-Natal and "the biggest threat to the humpback dolphin is here i.e. four out of eight every year die here due to shark nets" (MCG 2003).

Some of the other working groups appeared to be spreading themselves very thinly which questioned their effectiveness and not one had started to evaluate their work yet. In my experience as a fieldworker for the SACWG, I have found that work on the ground in the form of talks and workshops can be superficial and stressed because time is often short, and adequate resources are not available. This can affect the quality of the EE practice planned and practised. In my view, the big question was whether the message was getting across adequately to encourage target groups to take action for the environment in their contexts. Most work being done was education and awareness of conservation issues, the species concerned, its habitat and the threats to the long-term sustainability of these.

Table 4.1. Working groups and EE activities

WORKING GROUP	EE ACTIVITIES
Poison Working Group	About 25 to 30 farmer workshops a year. Sit on the Chemical industry's Safety, Health and Environment committee Communicate internationally to reduce poison abuse The Oxpecker projects Interface with other EWT groups Liaison with Game Rangers Association of Africa and with the International Ranger Federation
SA Crane Working Group	The SACWG Farm Worker Awareness Programme for farm workers and schools and teachers, wetland and grassland awareness, awareness with municipalities, farmers and cranes and land management, media articles every month in local publications nationally
Eskom-EWT Partnership	Articles in printed media Radio interviews Training courses for Eskom employees
Marine Conservation Group	Slide shows for schools in our area and at Twinstreams Environmental Education Centre (for kids from further afield than Richards Bay). Sometimes have a stand at shows with education material. Have a website that is visited reasonably frequently (www.dolphins.org.za) though it's more 'newsy' than educational. The local newspaper runs frequent articles about our project.
Blue Swallow Working Group	Landowner Awareness programme Schools / teachers - BEEP General public - Media Government lobbying Informal settlements - only in areas where black tour guides have been trained LSM development - a teacher's pack was developed last year and sent to the coordinators of each programme
Oribi Working Group	Pamphlets for farmers, poster for teachers and their pupils, farmers days, articles in various newspapers and magazines
Vulture Study Group	Educating the farmer, as well as making the farmer aware as to how these birds can benefit them and how they can help these birds. Works in close collaboration with the Poison Working Group and together education on the misuse of poisons and the detrimental effect poisons have on vultures. Involved with giving talks to schools, organisations and interest clubs.
Bat Conservation Group	The BCG works closely with the three regional interest groups in SA who constantly give talks at schools, to general members of the public and relevant companies/industries. A training course is currently being given to SANParks regarding the use of poisons in camps to eliminate bats. Resource materials are currently being developed for

	distribution to members of the public.
Conservation Leadership Group	Training Conservation Students Creating Environmental Awareness in schools Teacher Training In Environmental Education Community upliftment through enrolling youth in a conservation diploma and offering additional training and mentorship
Raptor Conservation Group	Volunteer field officers visit farmers who experience problems with raptors, give talks at farmer group meetings (and other related groups), talks and handouts to school children, write articles for local newspapers and magazines, and some give rewards to those people that discover and care for raptor nests.

Environmental education activities were general and suitable to each working group and often involved talks, presentations, workshops and media articles. Taken directly from the questionnaires (see Appendix C, Question 6), Table 4.1 illustrates that the working groups in general appeared to be spreading awareness about species and their necessary conservation. The encouragement of people to take conservation action for the species and their habitat, with the working group as partners or mentors had not yet been considered. This is my interpretation of information gathered from the documents drawn up by working groups (prospectuses, action plans, discussion documents and strategy plans) and given to me as part of the data analysis (see also Appendix A). The greatest challenge for the EWT was species extinction caused by human activities (see section 2.4.). For me, this relates to how people think and feel about the environment in a world where economics and social problems dominate human behaviour (see section 2.5.). The role of environmental ethics in environmental education is vital if conservation organisations are to contend with human impacts on the Earth (see section 2.6.).

According to Table 4.1, the PWG, SACWG, Eskom-EWT and CLG were working groups with more direction in their EE approaches, having developed specific programmes for specific target groups to achieve specific outcomes. The interviews with these respondents reinforced this viewpoint (see Appendix E, Question 3). These working groups, however, had not yet implemented monitoring and evaluation systems or programmes with which to assess their EE successes and failures (see section 2.4.). Not one working group had implemented this concept at the time of the research.

Table 4.2. Working group target groups

Target Groups	PWG	SAC	Eskom	MCG	BS	OWG	VSG	BCG	CLG	RCG
Farmers	X	X	X		X	X	X	X		X
Business	X	X	X		X		X	X		X
Farm workers	X	X				X	X	X		X
Public	X	X	X	X	X	X	X	X		X
Pupils		X		X	X	X	X	X	X	X
Teachers		X			X	X		X	X	X
Govt.	X	X			X	X	X	X		X
Academia		X	X		X			Research	X	X
Other	Wildlife managers	X	Eskom employees		Tour guides					

Only four working groups had very specific target groups for their EE activities and in most cases this was reflected by stronger focuses in accordance with constraints. It is evident from Table 4.2 that the PWG concentrated on industry, farmers, farm workers and wildlife managers; the Eskom-EWT trained Eskom employees and also worked closely with business. The CLG was focused on pupils, teachers and academia as part of their empowerment programme and the MCG only did EE with pupils and teachers. Table 4.2 also illustrates that the more species-specific working groups (SACWG, BSWG, OWG, VSG, BCG and RCG) were trying hard to reach a broad range of target groups, including additional, special groups; for example, the tour guides and operators in the case of the BSWG.

Six working groups were very farmer oriented due to the nature of the work and the distribution of the species (VSG, RCG, SACWG, BSWG, OWG, PWG). Nine working groups were focusing on schools as part of their general education and awareness work but most (MCG, OWG, BSWG, SACWG, CLG, VSG, RCG, BCG, OWG) were only giving talks or workshops to pupils (see Table 4.1.).

Each working group had specific, and general, target groups that they were attempting to reach in relation to their constraints (see section 4.9.). Several working groups (PWG, RCG, OWG and Eskom-EWT) interviewed felt that school teachers and pupils should

be part of the national Department of Education and Culture's EE curriculum. This would then free them to concentrate on targeting grassroots conservation audiences such as farmers, farm workers and other pertinent individuals who were having impacts on the land. The RCG was content to stay with the focus on farmers as they had been doing for years but the VSG hinted that it would like to target new groups to broaden their farmer focus. This contradicted VSG comments that they did not see the need for change and that they were content with their work focus and content (see section 4.3.).

The target groups chosen for EE were often dependent upon the type of EE being done on the ground and the location of the species. This also related to the goals and objectives of the working groups (see Appendix A). For example, the VSG aimed to "Present awareness talks to landowners, farm workers, bird clubs, wildlife clubs, social clubs and learner groups" (www.ewt.org.za) which required a certain standard of EE and involved target groups interested in vultures and living in regions where vultures occurred. The least targeted group of society was academia, followed by school teachers, farm workers, business, school pupils and government departments.

In my opinion, in future, the selection of target groups should emerge from the findings of a monitoring and evaluation programme, in relation to constraints and needs of the species, the working group needs and those of their target groups. Working groups that were attempting to reach as many target groups as possible could possibly find a focus for their EE which would have less impact on constraints already being experienced, such as lack of money and time.

It was difficult for working groups to evaluate whether their EE was effective or not and only three working groups responded to this subject (see Appendix F, Question 4). The BCG was still too new at the time of the research to be able to judge the effectiveness of their EE practice but the group was aiming to heighten the general interest in bats amongst the South African public. The BSWG felt that they were not being effective as they were not saving the species on a grand scale:

We try to cover all these people but we are not covering everyone. The landowner programme is our most effective at the moment as opposed to schools, government, etc, and to a degree it is ineffective: we are not saving the Blue Swallow and there are not enough people doing it (BSWG 2003).

From my experience with the SACWG as a fieldworker, I feel that the ultimate saving of particular species is a difficult outcome to assess and would emerge from an evaluation of the particular programmes or methods being used, both scientifically and socially. For example, how does a working group fieldworker prove that an awareness programme of workshops and talks lessens the human threats to a specific species in the wild, and that population numbers increase because workshops with specific target groups are successful? The PWG felt that the EWT working group staff members required EE training if they wanted to practice more EE in future and the BCG reiterated that working groups should all establish an EE plan which could then be managed by one individual.

SACWG believed that they could not tell how effective their education and awareness programme was which was partly due to the lack of a monitoring and evaluation programme or system. This, for me, summed up the causes, emerging from the research, of most of the issues being experienced at the time of the research, by the participant working groups.

The issue of utilising the media as an EE method came up several times during the interviews and it was evident that not enough working groups were using the media to spread information about all dimensions of their work. According to the PWG (2003), "the educational component through media exposure is important and one can get support by doing that". The CLG recognised that they did not use the media enough although it would be beneficial. They also felt that their work was not sensational enough for the media, as it did not involve dramatic issues where endangered species were concerned. The BSWG felt that while the media was regarded as a tool with which to reach the public when circumstances required it, it did not have a direct influence on the changing of perceptions about species and their plight. This is a personal opinion, in my view, which could be challenged by monitoring and evaluation of the value of the media to the work being done by EWT working groups on the ground.

4.2.2. Visions, missions, goals and objectives
The EWT aims to conserve the diversity of plant and animal species in southern Africa by conducting a programme of research, awareness and conservation action (see section 2.2). This mission provided an overarching direction for working groups, all of which

worked closely according to their own missions. Many working groups, in either their vision and mission or goals and objectives, mentioned the desire to carry out an awareness and education directive, some more than others (see Appendix A). The CLG claimed to be wholly focused on EE: their social objectives involved more general conservation principles rather than particular species conservation goals because they looked at the greater environment and trained people as conservation leaders. Their programme involved much skills development and empowerment of individuals to understand their rights as humans in South Africa. This, for me, goes beyond the principles of EE and the CLG was therefore not practicing 100% EE in the contemporary sense of the term (see section 5.2.1.):

> It would be viable not just for the students, but for the broader community too, if these students' training incorporated aspects such as business management related to eco-tourism, managerial skills, people skills, English training and conservation specific topics, also allowing for outreach programmes in the respective communities. This would all play a part in mobilising these conservation entrepreneurs, in the field, and in establishing their own micro-enterprises with in the industry (CLG 2003).

The Eskom-EWT partnership focused on training of Eskom staff in particular while other working groups mentioned "education" and/or "awareness" in their visions and missions, goals and objectives.

It appeared that the OWG and BSWG were attempting to develop EE programmes in the same way that the SACWG was, but all were hindered by their constraints. Only the MCG lacked constructive goals which was considered a weakness by some of the other working groups. This also goes against the principles of organisational management where strategic goal setting is seen as beneficial to merging the roles of organisations (such as the Trust) with the employed individuals within (see section 2.3.). The EWT website was outdated and required updating as the source for the international general public to be able to refer to various working groups and their visions, missions, goals and objectives.

4.2.3. Perceived roles of working group leaders

Most working group leaders referred to themselves as managers or coordinators and/or researchers. They did not hold official titles despite their overseeing what the working group staff were achieving in the field and providing support for this work. Most EWT working group individuals interviewed had very different backgrounds and were

attempting to manage their working groups as best they could, and according to the inherent autonomy and outlook of the organisation. Committees, volunteers and full-time paid staff formed part of their decision-making in their roles as leaders.

According to the leader of one of the newest working groups, the BCG, she was "acting coordinator, manager. Titles are irrelevant. TRAFFIC is my full-time job and I do bats and vultures part-time" (BCG 2003). The BCG operated where bats existed and where people were: the group wanted to establish a smaller group in the Golden Gate area but there it did not materialise and there were not enough interested people to make it work.

> I would love to see many more groups but if there's not enough people, what's the point? We do need to look at strategies of making materials and strategies of education available for use. Some bat groups are expanding but the interest needs to be generated first and one of our objectives is to expand our number of groups (BCG 2003).

It appeared that each working group leader had too much to do: administrative work in the office including budgets and fundraising; fieldwork and supporting volunteers; and attempting to overcome constraints. For example, the VSG working group leader was managing the group "as an entity" as well as doing fundraising, administrative work and budgeting, "as well as continuous communication with the representatives and on an international basis too" (VSG 2003). This prevented them, in my opinion, from getting involved in work at grassroots, where the environmental issues were.

Working group leaders appeared to consider themselves as part of a team, rather than as leaders, but the RCG did mention that often it was the type of manager who determined the quality of work that would be done: "Every Working Group works differently depending on their manager at the time so that will define the strengths and weaknesses ... the downside to that is that it is difficult for continuation i.e. if one manager leaves, it is difficult to continue in the same vein" (RCG 2003). Greenfield (1993) said that individuals employed by organisations are important, as they have to apply ideas into actions (see section 2.3.).

4.3. Perceived progress made since establishment of working groups
General progress being made by working groups was perceived to be positive by most working group leaders. Many cited similar constraints that continued to hinder their success rate (see section 4.9.). The most obvious progress being made, in my view, was

by the CLG, which appeared, from the information given in the interview, to be progressing steadily as a national leader in EE. The interview revealed that the group is involved with seven projects, all based on training people in conservation and EE issues. For example, in the Eco Warrior Programme, final year students in conservation, being supported practically and financially by the CLG could become Eco Warriors in order to feed back their newfound expertise into urban communities:

> In 2002 we developed the Eco Warriors curriculum for school pupils in grades five and six on four subjects: water, energy, waste and pollution, as well as environmental responsibility. The concept is that we have a pool of well-trained conservationists in the field and a market supply. We are trying to provide a younger generation of black conservation role models and the Eco Warriors is based on this. We use them to take information to the schools – we use our curriculum and work with grades five and six (CLG 2003).

The strength of this particular working group, I believe, lies in their ability to incorporate basic human requirements into their goals, moving beyond the scope of EE (see section 4.2.2.). The BSWG and SACWG were doing their best to work towards the outcomes of action plan workshops held to initiate further direction and progress in their particular contexts, and in accordance with the ongoing decline of Blue Swallows and Cranes. The BSWG Prospectus revealed education and awareness goals as including the:

> … [raising of] the level of awareness of all stakeholders about the Blue Swallow, its habitat and other related conservation issues; [promoting] the Blue Swallow as a flagship species for the conservation of montane grassland and wetland biodiversity; and [providing] stakeholders with the necessary knowledge, skills and competence to play an active role in the conservation of the Blue Swallow and its habitat (BSWG 2002:8).

While such goals were taking shape at the time of the research, the SACWG was also working towards goals as drawn up in a discussion document after a recent strategy workshop. The working group leaders looked critically at the SACWG's future operation and decided that they would need to employ specifically skilled fieldworkers in each province to coordinate the larger areas designated them:

> The person employed will need primarily to have good people skills, research skills and a coordination / support capacity … The capacity of the current field officers / project coordinators will be developed to enable them to support these roles, and for future employments, the skills required would be looked for (SACWG 2003:2).

The SACWG perceived that this goal was being achieved with the employment of new fieldworkers and EE officers in three of the regions.

While the Eskom-EWT was advancing with the formalisation of training courses for Eskom employees, there was no real change within the PWG, OWG, VSG and RCG. Both the VSG and RCG concentrated on working with farmers and admitted to remaining static in their practices, despite the updating of documents such as prospectuses (VSG & RCG 2003). The lack of change within the VSG was interesting for me – the fact that the oldest working group remained static in its approach could have revealed that the VSG was doing a very good job or that it was set in its ways and impervious to change. "As far as I am aware, the same methods have been used for many years. I do not believe there is a need to change or improve – perhaps expand – but so far our approach seems to be working" (VSG 2003).

The OWG was the newest working group at the time of the research and had not changed much as a result of this. The MCG revealed change in a broader perspective, although this was not planned by the working group leader, and could, in my opinion, stem from the dearth of constructive goals and objectives. Despite this apparent gap, however, the MCG had been able to expand into EE because the working group leader was interested in EE. "The MCG started as a research project as its focus in 1998, its first year. Now it is full-time and we've moved into education with broader goals. The education just slipped in" (MCG 2003). However, the same working group leader did not believe that the MCG was achieving its goals due to the sole staff member who was researcher first and foremost. "We are working against 50 years of indoctrination against sharks as terrible creatures. People don't get to see wild dogs but everyone goes to the ocean and swims and they have a fear of sharks" (MCG 2003).

While the PWG had not changed or improved any of its objectives, it was one of the older working groups and, in my opinion, was managed by an older, confident individual. The PWG was achieving its objectives due to its solid focus and field methods, as well as links with other working groups, such as the SACWG, RCG and VSG, when species were poisoned. "We are still achieving our objectives, but it may not be at the pace we'd like to: staff and time … EE involves training farmers to be responsible, to train farmers in responsible problem animal management and cell phone hotline awareness" (PWG 2003). It appeared, in my view, that the character and personality of the working group leader often influenced the achievements of particular working groups. These individuals were involved in the constant interpretation of their

surroundings, and then having to respond in particular ways to specific environmental issues (see section 4.2.3.).

4.4. Perceptions of improvements made in EE since establishment

Nine of the 10 respondents were of the opinion that their EE practice had improved since their working groups were established. Only the VSG claimed to be static and the BCG and OWG were too new to be able to ascertain their progress. The BSWG and the SACWG felt that they were working towards goals as identified in action plan workshops. Only the Eskom-EWT was formalising training programmes for Eskom employees while the CLG had a very broad focus that allowed it sufficient expansion in the workplace. In KwaZulu-Natal, the Biodiversity Environmental Education Programme (BEEP) was a new partnership, since 2002, between the Ezemvelo KwaZulu-Natal Wildlife, the SACWG, OWG and BSWG.

The lack of perceived EE progress by the VSG, the oldest working group within the EWT, revealed to me, as researcher at the time, that either their methods were still suitable for their working context and producing positive results, or that the lack of evaluation component was evident, as change was not occurring (see section 4.3.). The VSG leader had only been working for the EWT for eight months when I interviewed her and it was possible that she had not perceived the need for any change in such an established working group. However, most working groups felt that they were not doing enough EE in accordance with their goals and objectives but that this was partly due to constraints experienced in the workplace (see section 4.9.).

4.5. Perceived future plans

4.5.1. General

Most working groups that participated in the research study had future plans or goals, which aimed to extend or broaden their work for increased benefits to endangered species' conservation. Some working groups were acting according to outcomes from action plan workshops (BSWG and SACWG) while others were attempting to alleviate constraints in the workplace that would allow them to move forward.

Table 4.3. Working group perceived future plans

WORKING GROUP	PERCEIVED FUTURE PLANS
Eskom/EWT Partnership	Survival
Vulture Study Group	Employment equity; fundraising
Marine Conservation Group	Research assistance; education
Bat Conservation Group	Get up and running and well-known
Blue Swallow Working Group	Raise funds; new staff & volunteers
Oribi Working Group	Find a coordinator; more extension
Poison Working Group	Employ staff in field
South African Crane Working Group	Partnerships, M.O.U's; links
Raptor Conservation Group	Focus on other community groups

As can be seen by Table 4.3, four working groups aimed to employ additional staff, which was one way of addressing a major, common constraint (see section 4.9.). The CLG did not take part in this subject but during the interview it was evident that this particular working group was already working towards alleviating this constraint by employing two more staff members (see Appendix E, Question 8). Their work itself was dedicated to placing previously disadvantaged people in conservation leadership positions. In the context of South Africa, this was perceived to be relevant and valuable, in a socio-political sense (see section 2.6.1.).

According to Table 4.3, the SACWG already had sufficient staff which made their next step the formation of new, and strengthening of existing, partnerships. As the newest groups, the BCG and OWG aimed to start afresh and publicise their existences. The goals of both SACWG and BSWG were directly linked to the outcomes of action plan workshops held by the groups to establish better direction: "Our action plan will be out soon with the top five to six priorities. We need to raise funds to implement or maintain existing projects for addressing that" (BSWG 2003).

Each future plan of each working group was different and illustrative of the context of the leaders in that specific working group. For example, one individual managed the Eskom/EWT, with strong business links and diverse challenges on the ground. In my opinion, most comments revealed dreams and hopes and common requirements had direct links with the alleviating of constraints. It also revealed that working group leaders do influence the way that a working group is directed into the future. This

would be important for the Trust as a conservation organisation and the perceptions of the public about it. This is in accordance with the notion that staff relationships and dynamics within organisations do reflect the organisation as a whole (see section 2.3.).

4.5.2. Environmental Education (EE)

Most working groups admitted that they would like to be doing more EE but that lack of skills and other constraints hindered this goal (see Appendix E, Question 10).

Table 4.4. Working group perceived EE plans

WORKING GROUP	PERCEIVED EE PLANS
Vulture Study Group	Each province should do extensive EE
Blue Swallow Working Group	EE was one of the top five in action plan
Poison Working Group	EE links with other working groups
South African Crane Working Group	EE is always being planned

Table 4.4 illustrates that environmental education plans for the four working groups which responded to this topic were to continue to practice as they were, with no specific developments planned. At the time of the research, the SACWG was in the process of employing young, black EE officers in three crane regions and the PWG was linking with groups like the RCG and VSG at farmers' talks and presentations, when raptors or vultures were poisoned.

The CLG, with its 100% EE focus, was making ongoing progress, in tune with constraints: "Developing partnerships ensures we fit into the bigger picture and are not working alone in our own little bubble ... We have leeway to focus on qualitative, not quantitative, work and to grow our target audience" (CLG 2003). According to the PWG, the working group leader was not "adequately qualified" and lacked the time "to do more than I do – I have a huge area thus skills and expertise need to be directed correctly" (PWG 2003). The BSWG added to this by denoting constraints such as "[lack of] funding, expertise, manpower, skills and know-how" (BSWG 2003).

Meanwhile the CLG was growing too fast for its infrastructure in that the important office work was keeping the few staff from doing fieldwork and practicing EE, their job. I deduced that most working groups could benefit positively from guidance in EE

to enable expansion or improvement in the achievement of EE goals. The sharing of ideas would also ultimately benefit the participation of target groups in conservation efforts.

4.6. Perceived differences and similarities between working groups

Table 4.5 illustrates that different working groups experienced similar differences and similarities, according to the perceptions of the leaders interviewed for the research study. Despite the fact that only four working groups participated in this issue (see Appendix E, Question 27), their responses were similar.

Table 4.5. Working group perceived differences and similarities

WORKING GROUP	DIFFERENCES	SIMILARITIES
Marine Conservation Group	Circumstances	Endangered animals with conservation problems
Poison Working Group	Levels of skills to achieve goals and objectives	Dedication to what they are doing
SA Crane Working Group	Staff structures; reactive, not proactive, work	Passion to overcome constraints
Raptor Conservation Group	Staff structures; scientific approaches; target groups	Passion and freedom to do the job

The common denominator in Table 4.5, in my view, was working group structures and individual resilience to the work. Individual passion and dedication to the cause was common to the working groups which responded to this issue. In my view, it was evident that the autonomy of the working groups allowed them to forge careers in positive directions as teams working for endangered species.

> We really have developed and grown and autonomy allows this. The EWT controls each group's legality, and finances and funding are centrally organised so the groups are not really fully autonomous … this can be a restriction against freedom and also a benefit (Ledger 2003 pers. comms.).

Each working group consisted of varying levels of staff skills, be it scientific educational, professional or other skills –this had an influence on the achievement of goals. It appeared that staff structures affected the achievement of goals – the MCG had only one staff member who felt that she could not achieve her objectives alone. On the other hand, however, the PWG and Eskom-EWT were also managed by single

employees who focused on specific targets as part of their aims and objectives. Eskom-EWT objectives were:

> … Very specific: an information drive/campaign that is basically education and training. Our objective is to set up formalised training sessions with Eskom employees and general public awareness/publicity to create awareness through media channels (TV and printed) … Our specific objective is "sensitisation" and education of stakeholders of the problem, of negative reactions to wildlife and structures … (Eskom-EWT 2003).

My interpretation of interview responses with working group leaders was that they perceived that working groups benefited from working alone unless a crisis dictated that they required assistance from another working group. For example, when a species was poisoned, the PWG would step in to provide professional assistance to the working group concerned. The presence of part-time volunteers also appeared to be beneficial to the work achieved on the ground but according to the RCG (2003), the management of such volunteers proved difficult. In my view, working groups had never experimented with working in conjunction with their colleagues from other working groups. They could not speak from experience regarding this concept.

4.7. Perceptions about threats to endangered species

In Table 4.6, working groups rated the worst threats to endangered species, as they perceived them and based on their own experiences as individuals working for particular species, as well as members of the Trust.

Table 4.6. Ranking of working group perceptions about threats to species

Threat	PWG	SAC	Eskom	MCG	BS	OWG	VSG	BCG	CLG	RCG
Habitat loss 1	1	1	1	1	1	1	4	5	1	1
Habitat loss 2	2	7	2	2	2	9	1	1	7	2
Human	6	2	3	3	3	6	1	3	2	3
Poaching	8	9		11	7	3	8	7	9	11
Hunting	9	10		9	8	10	3	6	11	7
Trade	5	6		8	11	5	1	11	3	6
Poison	3	8		10	9	4	1	4	5	5
No EE	4	3		4	4	2	1	2	4	4
AIDS	10	11		7	10	11	8	8	10	10
Unemployment	6	4		6	5	7	8	10	9	9
Poverty	7	5		5	6	8	8	9	6	8

"Human activities – everything we do – affect the environment. The world population now stands at more than six billion people with a shortage of natural resources. That is where extinctions come in" (Ledger 2003 pers. comms.). As can be seen in Table 4.6, ten of the 11 working groups agreed that habitat loss (1) due to agriculture and afforestation had the most impact on endangered species. Lack of education and awareness was rated first only once, being perceived to be of medium threat to endangered species – the other listed threats had more direct, negative impacts. This related to the history of the EWT, which, as a conservation organisation, had not considered EE as a priority until the 1980s when Dr John Ledger became the director.

> EE has never been a focus and at times we even walked away from EE because it's not our business of the EWT: our business is conservation science … When I became director in 1985 … we introduced the concept of biodiversity which reminded everyone that the little things are important too. Education has a role to play alongside science – science needs to be explained (Ledger 2003 pers. comms.).

It appeared that as working groups deepened their understanding of EE, so they were more interested in attempting its practice. In my view, most working group individuals had intellectual perspectives regarding conservation or education and the impact of humans on the environment (see section 2.5.). Ordinary individuals in other jobs would probably react differently from the EWT staffers to the environmental crisis.

4.8. Working group responses to the above threats

Table 4.7 is directly linked to Table 4.6 in that working groups ranked their responses to the perceived threats already ranked above. This would reveal whether working groups had developed their visions and missions according to real threats in the greater environment, and whether these were attainable in relation to the appropriate selected responses. One response in Table 4.7 is EE and relates to the threat in Table 4.6 above, "lack of education and awareness" or "no EE".

Table 4.7.Ranking of working group responses to environmental threats

RESPONSE	PWG	SAC	Eskom	MCG	BS	OWG	VSG	BCG	CLG	RGG
Species preservation	2	2	1	3	2	2	1	2	4	1
Habitat conservation	1	3	5	2	1	1	1	1	3	2
Breeding	8	6	N/A	8	8	7	4	8	6	6
Research & monitoring	7	4	2	1	4	5	1	2	2	5
Legislation	5	7	6	6	5	8	5	1	8	7
Lobbying government	6	8	N/A	7	6	6	5	1	7	8
Education & awareness	3	1	3	4	3	3	1	1	1	3
Media & marketing	4	5	4	5	7	4	2	6	5	4

Habitat conservation was understood to be the main response to the threats to endangered species in section 4.6. It was interesting to note that education and awareness rated second in importance, according to Table 4.7, while legislation, lobbying government and media and marketing followed further behind. Habitat conservation and species preservation are direct, scientific responses to the plight of endangered species. Environmental education is a social response and more indirect, yet it was still perceived as important by most working groups.

> Fundamentally EE is being done in the working groups i.e. fieldwork deals with people. It's enormous but we are not trained to do EE. You can't separate science and EE but don't need to reinvent the wheel. We have Wessa and Share-Net and we need to mesh more and utilise them and understand one another. We need better training, networking and linking (EWT-ICF 2003).

Research within a scientific conservation organisation was considered important to increase understanding about particular species and it was also evident that social practice was increasingly important in South Africa where social issues impact on the environment (see section 2.6.1.). Working groups were concentrating on immediate, tangible issues where individuals could make a difference. Legislation and lobbying government were considered difficult to achieve due to the lack of implementation of laws protecting the environment on the ground.

While habitat loss to agriculture, afforestation, industry and urban development, as well as human encroachment and disturbance, scored highest as threats to endangered species, these criteria are human-induced (see section 2.4.). In my opinion, they relate to EE as a response, in the dealing with social impacts on the environment – learners could start taking action for their environment by actively fighting such threats and lobbying governments and legislation. While the EWT is not an EE organisation, its strong scientific background in conservation is the foundation for effective EE (see section 2.7.).

According to Gough (1997:97), a contemporary approach to EE is that learners and teachers work together to act and reflect on environmental problems. He also said that knowledge is produced by people interacting in societies and that learning should take place in natural settings where problems are posed to learners, who then solve them interactively and actively. This relates to the need for more scientific information about the Earth and the plight of endangered species – information that EE practitioners could take to ordinary people (see section 2.6.).

4.9. Perceived constraints in the workplace

Table 4.8 illustrates that the common and dominant constraints for all participant working groups in the research were shortages of money and staff and time, and too much to do already.

Table 4.8. Working group perceived constraints in the workplace

Constraint	PWG	SAC	Eskom	MCG	BS	OWG	VSG	BCG	CLG	RCG
Time	3	3	1	1	3	1	2	3	2	3
Money	9	6	4	5	1	2	1	1	5	2
Vehicles/Fuel	8	4		7	5	5	1	9	3	4
Staff	1	2	2	3	2	4	4	4	1	1
Education resources	6	8		4	6	6	6	8	6	5
Office resources	5	7		8	7	9	6	5	7	7
Communication	4	4		6	8	7	8	6	8	6
Inspiration	7	5		9	9	8	1	7	9	8
Too much to do	2	1	3	2	4	3			4	9

The constraints listed in Table 4.8 hindered the working groups from fully realising their goals and objectives. As long as money was short, constraints would always be imposing. Not one working group was yet monitoring or evaluating its progress in any sphere. In my opinion, it was possible that work appraisal could reveal that new approaches were necessary which could initiate positive change. This would question the role of autonomy and the species-oriented approach adopted by the EWT. The alleviation of constraints appeared to be crucial to the achievement of EE and other goals and objectives and this could be enhanced by the consideration of alternative methods.

During a recent strategy workshop, the EWT identified some weaknesses of the organisational structure: "too much autonomy for working group leaders" and "lack of project management skills, don't produce enough measurable outputs" (Dyer 2003:4). However, identified strengths included "working groups' autonomy" and "flagship species focus" (Dyer 2003:4-5). In my view, there appeared to be contradictions in these findings but what was evident was that the autonomy of working groups and their leaders was a controversial topic. The dearth of any evaluation component was also recognised to be a weakness of the organisation by the working groups participating in the research study.

4.10. Perceived working group strengths and weaknesses

In Table 4.9 below, strengths and weaknesses as perceived by working groups revealed that strengths were often due to individual commitment of EWT staff, as well as the forging of partnerships with other individuals and institutions. Weaknesses related strongly to constraints (see section 4.9.).

> Credibility – we possess enormous expertise; we have a wealth of talent which is our core competence … It's a constant battle to find money to do the work. People are worried about funding and involved in raising their own funds yet this is a feature of the EWT … The problem is one of growth – the EWT started small and started growing which meant more staff which costs more money" (Ledger 2003 pers. comms.).

Table 4.9. Working group perceived strengths and weaknesses

WORKING GROUP	STRENGTHS	WEAKNESSES
Poison Working Group	Funding & professionalism	Not enough people/skills on ground
SA Crane Working Group	Individual commitment	Finances
Eskom-EWT	Client relationship (Eskom)	Staff capacity – reactive
Marine Conservation	Dolphin research	Not enough people on the ground
Blue Swallow	Diversity of stakeholders	Money & lack of rural people involved
Oribi Working Group	Partnerships with NGOs	No coordinator and too much work
Vulture Study Group	Communication with farmers	Internal politics & only one permanent staffer
Bat Conservation Group	Dedicated people involved	Funding & staff capacity
Conservation Leadership	Unique approach & focus	Lack of manpower
Raptor Conservation	Passion of people involved	Lack of control over volunteers

Interviews revealed that the strengths of the working groups involved people – individual staffers and partnerships with other role players contributed to the success of each working group. Without the dedication and passion of its employees, the EWT would not be the credible conservation organisation it was at the time of the research. This is in accordance with the theory that individuals within organisations create the driving force through the integration of their different ideas and values (see section 2.3.).

Only the PWG had sufficient funding at the time of the research, according to Table 4.9, whereas most other working groups were short of money which hindered the achievement of goals and objectives. Weaknesses were linked to constraints (see section 4.9) and it was evident that working groups could not operate to their full potential without staff and money. This, I believe, pointed strongly towards the need for an evaluation process to establish confidence and to re-direct working groups if the need arose. The implementation of any EE strategy requires such a dimension whereby the work can be "measured" (see section 2.4.).

When working groups were questioned about their priorities, most of them responded that they would have to alleviate their various constraints before they could prioritise. For the VSG, this meant "management of the group as an entity … as well as continuous communication with all the representatives and on an international basis

too" (VSG 2003). For the SACWG, the main priority was to ensure a dedicated staff base and to assist individual staffers to follow careers: "We need to work as a team, not as individuals" (SACWG 2003).

It appeared that while the Eskom-EWT was proactive in its work, the MCG was reactive. The Eskom-EWT aimed to continue improving the training programme for Eskom employees and the MCG was waiting for people to invite them to do talks and presentations. On the other hand, the Eskom-EWT often responded reactively to work that was critical for the survival of the relationship between the NGO and the corporate: "Eskom problems include quality of supply problems (which often have no impact on the birds themselves) but it allows for better cooperation" (Eskom-EWT 2003). Two working groups perceived that priorities for the EWT, as the umbrella organisation, included change and increased awareness which related to politics and addressing the outcomes of the EWT strategy workshop.

4.11. Working group perceptions about EWT superiors and EE

Only six working groups responded to this subject, due to my own perception as researcher at the time that it was a sensitive one. EWT working group leaders observed their superiors (individuals in management positions) to have little awareness of the intricacies of fieldwork, of its trials and tribulations. They appeared distanced from the management of the groups due to the inherent autonomy of the working groups but they placed much emphasis on business partnerships.

> Without being critical of the EWT management, some have gone through the mill and started and worked through to where they are now and understand the trials and tribulations through their experience in the field. Some EWT staffers have zero perception of the frustrations of field people. The EWT is a young organisation (30 years) but there are no standard operating manuals, procedures, etc. Brief guidelines, without imposing huge bureaucracy on the system would be fine – retain freedom and give accountability (PWG 2003).

Working group perceptions of EWT superiors revealed that they [the managers] appeared to be unaware of what EE, as a response to the environmental crisis, entailed. They appeared to perceive it to involve the presentation of talks, distribution of brochures and pamphlets, and articles in the media: they were more scientifically and professionally oriented than educationally or sociologically so. "Many people in the EWT feel that as long as working groups are doing their visits to farmers, workshops

and training of 'target groups', lectures, etc that is sufficient. I think there's more to EE than that" (BCG 2003). I agree that there is more to EE than that and that EE involves a necessary change in the way that humans think about, and interact with, their environments (see section 2.6.).

The CLG observed their EWT superiors to be more concerned about scientific, conservation and political management of the EWT and that they were ill-informed about EE in South Africa and internationally, and about the CLG.

> They don't understand or know how current trends are playing out in EE and how EE is supposed to be happening. They seem to know more about other working groups e.g. all the birds and what they do for EE. We need more education trends, how to do EE and what's involved. It's sociology" (CLG 2003).

Individual preferences and characters within organisations, in my view, often result in disagreement with their superiors on specific subjects. Leaders cannot always be what the followers want and expect. While it is necessary for some degree of organisational management, too much management can be detrimental to what individuals are achieving through their own, passionate, initiative (see section 2.3). During the research, most working group respondents were wary of critically commenting on their EWT superiors and worded their answers very carefully and respectfully. "Organisation management depends on the individuals. Conflict resolution is so important … science and people are important skills and need to work together" (Ledger 2003 pers. comms.). It must be remembered that the EWT is a very credible conservation organisation, both nationally and internationally.

The relationship between organisation managers, or superiors, and other employees is, in my opinion, vital for the successful functioning of that organisation, the achievement of goals and objectives and the image or reputation in the public eye.

4.12. Conclusion

Individuals with passion and dedication manage EWT working groups and each working group responds to environmental issues according to a) the perceived needs of the particular species; b) the perceived threats to these species and how to respond to such threats; c) the constraints experienced by working groups; d) the work done by working group staffers be they part-time or permanent; e) the way that the working

groups are managed. It is vital that working group visions, missions, aims and objectives correspond to these factors.

I believe that the relationship between the organisation (EWT) and the staff members (EWT working group individuals) is a dynamic one, which probably required further evaluation. In addition, the work that was being done by each working group and its individual staff members required evaluation on an ongoing basis. The issue of autonomy needed to be resolved as a positive or a negative influence on the work that the Trust was doing as an umbrella body, and the work that individual working groups were doing for particular species. This would influence the directions being taken by the working groups, for the species. This would also benefit the alleviation of constraints in the workplace and make way for new aims and objectives and future plans.

Environmental education activities were in place and diverse, yet they too required monitoring and evaluation, in order to measure their impact on the target groups and the species' futures. The EWT was already practicing EE with many successes, but the potential to do more and the opportunities for expansion were substantial.

CHAPTER 5: RESULTS AND DISCUSSION – WORKING GROUP AND PARTNERSHIP PERCEPTIONS ABOUT EE

The outstanding characteristic of perception is that it entails no consumption and no dilution of any resource. The swoop of a hawk, for example, is perceived by one as the drama of evolution. To another it is a threat to the full frying-pan. The drama may thrill a hundred successive witnesses; the threat only one – for he responds with a shotgun. To promote perception is the only truly creative part of recreational engineering (Aldo Leopold 1949:173).

5.1. Introduction

This chapter overlaps with chapter four which formed its foundations and both chapters contribute to the recommendations emergent in chapter six. The discussion now turns to EE and the current, perceived status quo of EE within the working groups which participated in the research. I look at the perceptions surrounding:

- Present EE knowledge;
- Present EE methods and requirements;
- Present gaps in EE;
- Knowledge that working groups have of their colleagues' work;
- Perceived importance of corporate business;
- Potential for improvement;
- The importance of the proposed framework for an EE strategy; and
- The importance of a national monitoring and evaluation system for EE.

Some categories revealed a number of sub-categories pertaining to EE theory and practice as managed by each participant working group.

5.2. Perceptions about the concept of EE

5.2.1. Definitions of the EE concept

According to the Tbilisi Principles for Environmental Education (UNESCO-UNEP 1987), EE should "view the environment in its totality (natural, built, technological and social)"; "be a continuous lifelong process"; "be interdisciplinary in its approach" and "promote the value of co-operative prevention and solutions of problems" (Lotz-Sisitka 2001:4). The IUCN, 16 years later, defined *Education for Sustainability* as:

> Education for sustainable living develops human capacity and creativity to participate in determining the future, encourage technical progress as well as fostering the cultural conditions favouring social and economic change to improve the quality of life and more

equitable economic growth while living within the carrying capacity of supporting ecosystems to maintain life indefinitely (IUCN 1993 cited in Lotz-Sisitka 2001:6).

These concepts regarding EE are summed up by Lotz-Sisitka (2001:1) when she says that the role of EE is "arguably a key dimension of enabling people in the region to respond (both locally, regionally and globally) to major environmental issues such as poverty, deforestation, biodiversity loss, global warming, climate change … social justice … amongst others".

In this research study, the questionnaire required each of the 12 research participants to define "environmental education" as they understood it, in no more than 50 words (see Appendix C). These are shown in Table 5.1.

Table 5.1. Working group EE definitions

WORKING GROUP	EE DEFINITION
Poison Working Group	Making people not only aware, but conscious of their environment and creating a sense of responsibility towards the outcome.
SA Crane Working Group	It is the creation of awareness of the environment such that both a habitat and behavioural change should result.
Eskom-EWT Partnership	Making people aware of our impact on the environment and how we can reduce it.
Marine Conservation Group	Creating awareness amongst the public about the requirements and the state of our environment and its biodiversity and about our effect on these things. Hopefully it's also about solutions.
Oribi Working Group	It is education and awareness directed at target audiences to empower them by providing environmental knowledge to them so that they can make informed decisions
Vulture Study Group	I understand it as the education of our environment, not just species but fauna and flora. It is educating the public as to the reasons and the importance of our environment and the effects of the lack of conservation on our environment and what will possibly happen to it. It is educating people and making them aware this it is their responsibility to protect and conserve our environment.
Bat Conservation Group	The provision of learning opportunities to relevant individuals and/or groups to enable them to gain increased awareness, implement appropriate action and make a positive contribution to the effective functioning of the environment through enhanced capacity. The outcomes of these programmes must be

	measurable.
Conservation Leadership Group	The focus area of EE will be determined by the target audience. One fundamental principle though is to keep the issue local, "Think global, act local". The participants need to identify with the issue, especially in disadvantaged areas where they do not have the luxury of for example aesthetic concern. EE should be about creating an environmental awareness and sensitivity, while keeping the needs of the community in mind, i.e. meeting sustainable limits while enhancing the quality of life of the people. This therefore requires EE to be participatory and action based. The people need to be sensitised about the environment, as well as empowered to meet their own needs while keeping the environment in mind.
Raptor Conservation Group	Educating people about the importance of the natural environment regarding the wholistic nature of it, and therefore including ecosystem functioning, and the importance of every part of the ecosystem.
Blue Swallow Working Group	EE is a participatory educational process promoting all aspects of our environment - political, economical, social and biophysical, specifically their inter-relatedness with each other - the purpose of which is to encourage action for the environment and improved quality of life for all people through the sustainable use of resources for generations to come.

Nine of the 10 definitions contained the words "aware" and/or "awareness". The international definitions cited earlier, however, do not once mention these words. I believe that the meaning of EE, the theory behind it and the practice driving it, has evolved during the past 30 years and it is now aimed more at social empowerment so that people can take action for their environments, understand why they are doing it and benefit in some way from these actions. Considering the fact that human activities are causing extinctions of species (see section 2.4), EE, in my view, requires a fresh focus on human values and ethics, in coordination with the nurturing of a real love for all living things (see section 2.6.). Awareness may be the first step but the EWT working groups still perceived their work to be primarily a function of sensitising people about endangered species and their plights.

I also feel that the dearth of a monitoring and evaluation system in place within the EWT for EE and other dimensions of the Trust's work was pertinent here: it was also later revealed that EWT working groups lacked general knowledge about EE initiatives on a regional and global basis – this could affect their perceptions of the meaning of EE and how it has evolved (see section 5.2.2).

In my opinion, three pertinent definitions came from the CLG, BSWG and BCG. It appeared that the leaders of these particular working groups were more aware of EE, and its importance for conservation. The CLG claimed to practice EE 100% of their time and to have done much fieldwork with people involving environmental issues. In my view, this could be a misperception as the group is actually training and empowering people in improved living standards, which falls beyond the principles of EE (see section 4.2.2). The BSWG leader had completed an EE course (the Rhodes/Goldfields Certificate in EE) and her opinions about the environment and the role of EE, in my view, had broadened.

Most working groups revealed an understanding of what EE entails – that it is about increasing awareness about environmental issues and conservation, and involves the need for people in different contexts to reduce their impact on the environment. To sum up, Ledger (2003 pers. comms.) noted that EE:

> … is enormously broad: it's about imparting environmental literacy to children and adults … it also involves the formal education sector and tertiary education and business; sustainable living needs sustainable education. EE is teaching, making available information towards sustainable living.

I feel that there is unlimited potential for definitions of EE and that these will evolve as people's perceptions of the concept evolve, and as their practices in different contexts evolve in response to intensifying environmental issues.

5.2.2. Relation to wider EE initiatives

During interviews, it emerged that many working groups did not have much general knowledge about what was happening regarding EE within other NGOs or private organisations, within South Africa and abroad (see Appendix E, Question 17 & 19). Most working groups interviewed referred to the Wildlife and Environment Society of South Africa (WESSA) as an organisation that they knew practiced substantial EE on a national scale. The WESSA is more than 70 years old and has received plenty of publicity over the years, especially concerning the committed individuals who serviced its principles. The inherent identity of WESSA, I believe, was always closely linked to its changing environment, especially the social issues, and the members put the organisation's mission into practice (see section 2.3.).

Surprisingly, to me as researcher, the CLG, OWG and VSG admitted to knowing very little about EE initiatives on regional, national or global scales. Each one of these working groups had committed themselves to an education and awareness dimension in their goals and objectives (see Appendix A) yet they remained ignorant about what was happening around them in this field. The CLG, for example, with a committed outlook regarding EE, only worked with the National Environmental Education Project (NEEP) in Gauteng but had no idea what its colleagues within the EWT were doing. The RCG, meanwhile, had very strong views:

> I feel that the EWT and WESSA should not compete but keep their niches and keep their focus i.e. the EWT and conservation, and the WESSA [concentrating on] kids [in an] urban focus. Funding is difficult and we should specialise as opposed to diversifying and being like someone else. We need to look at our strengths in conservation and go forward instead of fighting for the little pie (RCG 2003).

This comment, I feel, returns to the issue of autonomy (see section 4.6.) and whether too much freedom in the workplace is beneficial to, or has negative effects on, endangered species' conservation. The success of any strategy, especially EE, depends on the partnerships formed, which then reinforce that strategy (see section 2.3.). The Eskom-EWT was candid that the partnership had no time to network with other organisations and that the achievement of specific goals and objectives of that particular project dominated the time of the leader. This comment, I feel, referred strongly to the issue of constraints: staff and time shortages.

The MCG had an interest in EE which allowed the working group to forge links with Wessa and Birdlife Zululand. This did help with "ideas and approaches that other people have prompted us to think about things. I wish the humpback dolphin as a flagship species could get into the curriculum" (MCG 2003). The BSWG had forged partnerships with multiple stakeholders but admitted that despite this range of influence, "we don't know what exactly [the type of] EE they are doing or how we can tie in with them e.g. our national education and OBE knowledge is scatty [*sic*]" (BSWG 2003).

In general, it was evident that the linking with other organisations which could assist with EE practice in the field was an unexplored avenue: some working groups preferred to work totally alone while others were aware of initiatives in their immediate regions. Some working groups were totally oblivious to this concept of sharing responsibilities with other individuals with the relevant expertise.

Most working groups interviewed felt that global EE knowledge and links with other organisations were useful to assist with ideas in their contexts, EE approaches and knowledge of broader issues (see Appendix E, Question 17 & 19). Other people's experiences, successes, and failures could also provide examples with which to compare their achievements and from which to learn. Some, however, were cautious: the BCG complained that trying to keep abreast of global EE trends was a time-consuming activity that could detract from the specific EWT working group focuses.

The CLG was too focused on its own work and the PWG (2003) saw two sides to the issue: working groups need to "interface internationally as it is a big plus and we all learn" but without losing focus on the pertinent issues at hand within their particular contexts. The CLG reinforced this comment by stating that their lack of global interaction was a result of their trying to "get a grip on what's happening here" (CLG 2003). According to the Eskom-EWT (2003),

> … We are so isolated from the real world as we are all so involved in our own little jobs. We've all realised (strategy meeting/workshop in January 2003) that we know nothing about economics, trends in the world, etc. Or where SA is going. We are uninformed and only know about conservation. It is not articulated well but each working group is doing education in some way. We need to have a message and know how to get it across. Some groups do not have clear goals and objectives and this is a weakness.

It was evident to me from these perceptions that EWT working groups were generally not well-informed about global trends in EE yet no one was taking action to reduce this assumed weakness. On the other hand, it appeared to me that their total involvement in their own work was beneficial to the species they were working with and the EWT as a whole.

Being well informed about such issues, in my opinion, could be a strength for the EWT as a conservation organisation as it could assist with training of staff members and general awareness. Keeping up with international trends could form part of an evaluation component, something that had never been fully considered within the EWT working groups. All over the world, countries appear to be increasingly acknowledging that environmental conservation and management is essential for their survival (see section 2.6.2.). However, it could also be a weakness in that it could force working groups to look more broadly than the crisis at hand and to lose focus on immediate

problem solving and issues at hand. In the contemporary changing world, I believe that it is essential for employees to maintain an understanding of how their organisation relates to the greater environment, in terms of threats and opportunities (see section 1.3.).

According to the EWT-ICF (2003), " 'capacity building' and education are the in thing for funding now. We need to be sociologists, not scientists, as all our work has a community focus". According to Elias (1987), however, sociologists know little about human issues and have failed to link these with environmental issues (see section 1.3.). In addition, it is evident from my personal working context that conservationists are working alone to lessen human impacts on the environment, while social scientists are also working alone, focusing on people and their problems.

Environmental education, in my view, could provide a platform to merge the two approaches but this requires a balanced, well-informed response. I feel that it is necessary for environmental educators to be aware of different perceptions about the environment in order to better be able to respond to environmental issues. People react differently to environmental problems, in relation to their own socio-economic circumstances (see section 2.5.).

Despite this apparent acknowledgement by EWT working groups that there were gaps in their practice (EE and conservation), some groups remained unsure about how far partnerships with outside organisations should go. The PWG (2003), for example, feared that the constraints of other South African or international organisations, groups or individuals could undermine what the working groups were trying to achieve. And the Eskom-EWT (2003) felt that "the worst thing is duplication of effort. We are all so under-resourced that it would make enormous sense to form alliances … You establish a need and you do it!"

The VSG (2003) was the only respondent which was totally opposed to linking with other initiatives because it felt that the EWT was a species-specific organisation and they were not sure if such links would work. This related, I feel, to the fact that the VSG was also sceptical about changing its focus on farmers and the methods it had been using for years (see section 4.3.). It could also relate to the type of person leading the

VSG at the time (see section 4.2.3.). The CLG (2003), having admitted a total lack of awareness about local, national and regional EE and conservation initiatives, suggested that there was a need within the EWT for "developing partnerships and complementing each others' work and linking with other groups doing similar work…"

In my opinion, working groups were admitting to their lack of communication with other, similar organisations and yet not one individual was taking the initiative to remedy this situation. Once again, this raised the issue of constraints such as lack of time and staff as hindrances to progress, and the issue of autonomy of practice and structure: was a very specific and focused approach better than a more diverse outlook? A monitoring and evaluation system, I feel, could reveal the importance of local, regional, national and international communication around EE theory and methods as well as increase individual confidence in EE by recommending training.

5.2.3. The importance of indigenous knowledge

Training in EE in a South African context could incorporate indigenous knowledge. According to O'Donoghue & Neluvhalani (2002:2) indigenous knowledge is knowledge stored by particular people in particular socio-ecological contexts, and that is based on a common sense about living. During the colonisation of Africa, however, colonial authorities decided to educate indigenous people about western ideas. Unfortunately,

> … they seldom appear to have had respect for and certainly overlooked much of knowledge that indigenous peoples had in common-sense ways of doing things in their everyday lives … With the advent of the modern state, much of an earlier and local capital of knowing was assigned to the margins as myth and superstition (O'Donoghue & Neluvhalani 2002:4).

This attempt to disregard indigenous people led to the present interest and debate around indigenous knowledge, a major issue in southern Africa. The EWT, however, has never fully considered the pertinence of the subject to their work in conservation. It appeared that the working groups interviewed were hesitant about including this concept into their work as they were uninformed about it and felt that it would require much effort. Nationally, however, the concept of indigenous knowledge is still very new and this hesitancy is being experienced by other national and provincial organisations, which anticipate the difficulties and potential problems surrounding exploration into indigenous knowledge systems.

During my research study, only four working groups responded to this issue of indigenous knowledge (MCG, BCG, VSG and CLG). I realised in retrospect, however, that it was an issue that required more input in respect of its value towards EE methods and practice, especially in rural South Africa. "I don't think [indigenous knowledge] is being overplayed but who is collating it, writing it down? What's being done on the ground? It's an important element" (EWT-ICF 2003).

I was surprised that the CLG, the one working group that was working with communities full-time and empowering individuals to become conservation leaders, was not incorporating indigenous knowledge into their EE practice. The CLG (2003) claimed that they did try "with the Makuleke to get it going but they aren't keen – they are losing it. Those with the valuable information are dying of old age". This is a very particular view of what indigenous knowledge entails.

While the MCG did not perceive indigenous knowledge to be pertinent to sharks and shark nets, the BCG (2003) recognised that there were important links between EE practice and folklores around endangered species: "Cultures and attitudes need to be understood and assist with the target approach to conserve a species". This, in my view, is another particular view about what indigenous knowledge entails. The value of recording cultural stories regarding endangered species has yet to be further explored and understood by people doing work in conservation.

The VSG had admitted that as a working group it needed to expand into community areas where vultures occurred and later agreed that indigenous knowledge was important in such areas. O'Donoghue & Nelvhulani (2002:8) contend that "African indigenous knowing, far from being static and unchanging, has high levels of local variation in a land of high biological diversity". These facts, in my view, make indigenous knowledge important for the conservation of natural resources, including endangered species. The EWT working groups could gather indigenous knowledge stories from their target groups and understand social beliefs and customs better, thus be better equipped to deal with social pressures on biodiversity and to rekindle environmental ethics.

5.2.4. EE as a potential response to threats to endangered species

Education, in my view, is a continuous and lifelong process. In the context of the EWT, working groups focus either on a particular endangered species as the focus of their education and awareness efforts, or they focus on the habitat upon which these species depend for their survival. Contemporary EE practice, in my opinion, would take an integrated approach to the environment and look for ways of linking the rights of species to life on earth, to the rights of humans to life on earth, via the principles of natural resource conservation.

After the questionnaire returns had been analysed I was able to ask deeper questions during interviews to clarify specific responses to the questionnaire (see Appendix E & F). Questions one and two of the questionnaire (see Appendix C) required further exploration and, during interviews, I was better able to understand working group perceptions about EE, in relation to threats to endangered species.

> Habitat conservation is the primary focus for conservation: species can't survive without adequate habitat. As far as EE goes, it doesn't help to educate if the cranes, for example, are gone. Education takes higher priority than the big stick – we need to cooperate and help achieve our goals (from those we are educating) instead of prosecuting <u>after</u> the cranes have been killed (PWG 2003).

The PWG considered EE to be less important than the priority of conserving habitat, yet more important than the use of legislation. This working group, however, was also concerned about work constraints and the fact that each working group had to prioritise different aspects of their work according to their aims and objectives.

On the other hand, the Eskom-EWT considered that it was necessary for EE and legislation to work together to combat the desecration of human values and socio-economic forces: "You need the carrot and the stick now. It's human nature, procrastination. It takes generations to instil values and socio-economics play a major role too" (Eskom-EWT 2003). I agree with the last statement - environmental educators could get frustrated with the length of time it takes for positive change to occur in people, regarding their attitudes and behaviour. The context in which people grow up has enormous impacts on their characters and beliefs. While environmental education usually offers alternatives towards improved lifestyles, it requires hard work and rarely offers job opportunities or increased income for people (see section 2.6.).

Environmental legislation provides the authority that ensures that people do change, and could play a role in the practice of EE.

The MCG observed EE as an alternative or an indirect benefit to species conservation: "Education won't stop population growth. Education can offer alternatives, though, so it is important. But there are no real alternatives to habitat loss" (MCG 2003). I feel that this is a common perception amongst South Africans involved in work in conservation. Once humans have irreversibly degraded the land, no amount of education will bring it back to a healthy state (see section 1.4.). While ongoing EE has the potential to re-instil in the youth a love for the environment, and the ability to take action to ensure its sustainability for generations to come, the numbers of humans on Earth are presently unsustainable (see section 2.4.).

The BSWG, however, perceived EE as a concept necessary to change behaviour and that it should happen simultaneously with habitat conservation and involving diverse stakeholders. Behaviour change is a controversial issue within EE practice, as people often require direct incentives before they consider changing their behaviour (see section 2.6.). Behaviour change is also difficult to evaluate and economic or political or social power is a common human need in return for environmental ethics (see section 2.5.).

However, the CLG and OWG considered EE as an all-encompassing concept and this was reflected in their focuses on EE in relation to constraints. "EE is part of environmental justice and respect for the environment and also includes alleviating poverty, etc" (CLG 2003). This was reinforced by the OWG: "Education has a role to play in just about everything we do" (OWG 2003).

The content of EE being practiced by working groups appeared to be relevant to working group perceptions about EE as a concept, and their present constraints. Table 5.2 illustrates that perceptions regarding the degree of EE being practiced by working groups could be linked to these perceptions about EE as a concept. The CLG, for example, with its proclaimed 100% EE is actually extending its goals beyond EE principles, in my view (see section 5.2.1.).

Table 5.2. Working groups and degree of EE

WORKING GROUPS	DEGREE OF EE
Poison Working Group	50%
SA Crane Working Group	75%
Eskom-EWT Partnership	25%
Marine Conservation Group	25%
Blue Swallow Working Group	50%
Oribi Working Group	50%
Vulture Study Group	N/A
Bat Conservation Group	50%
Conservation Leadership Group	100%
Raptor Conservation Group	75%

For the CLG alone, the degree of EE being performed was never an issue as EE was their business and had to be professionally practiced (see Table 5.1.). Most working groups felt that they could be doing more EE, except the PWG which made a pertinent point about EE qualifications and skills: "I don't believe I am adequately qualified or have the time to do more than I do – I have a huge area thus skills and expertise need to be directed accordingly" (PWG 2003).

The Eskom-EWT spent a lot of time being reactive to other, unrelated problems concerning powerlines in the working environment. The MCG, alone in Richards Bay, KwaZulu-Natal, had chosen to concentrate on research according to the needs of the species (humpback dolphins). The OWG relied on its founding organisation, the Ezemvelo KwaZulu-Natal Wildlife, to do the EE work as part of its Biodiversity Environmental Education Programme (BEEP). The VSG concentrated on farmers, which it had been doing since its inception and which it felt comfortable with but it had realised the opportunities for expansion into townships in vulture breeding and foraging areas. This expansion had yet to materialise at the time of the research. The spreading of awareness amongst farmers is still considered to be EE because it is aimed at educating a group of people about environmental issues in their contexts. It is also about enabling them to take alternative action to solve problems between agricultural activities and conservation.

It appeared that constraints could force the focus of the work to change, from being proactive to reactive. Working groups had to select priorities important to the species and often EE was of secondary importance perceptually to habitat conservation and research.

It was evident from the interviews that most working groups were working where the selected species were and where the problems occurred and had realised the necessity to be selective about their focuses in relation to their various constraints. They were often forced to be reactive and would rather see the EE component of their work being managed by an individual or a separate group, to allow them to respond to the more immediate issues, directly affecting the species.

> Winning the hearts and minds of the people out there is very important but if it's a case of deploying people to do EE or habitat conservation, habitat comes first and education second, and while both are important, you need individual focus as opposed to going off on a tangent (PWG 2003).

According to the BSWG (2003), being an NGO in South Africa was a constraint in itself in that the government did not consider conservation or environmental issues as the country's priorities. This made it increasingly difficult for NGOs to raise money to do their work. For this reason, NGOs had to link with other NGOs and private organisations which had the necessary funds. In KwaZulu-Natal, for example, conservation NGOs had partnered with Ezemvelo KZN Wildlife to be more effective in their EE practice as a team (see section 2.6.1.).

Some working groups had resorted to drawing up specific policy documents, pertinent to the issues that affected their work and the particular species being protected. For example, I was very aware at the time of the research that the SACWG had developed a Captive and Trade Policy for cranes and that the working group's aim was to get it endorsed by government. The SACWG and other working groups, however, appeared to be disillusioned about the implementation of legislation by government departments. "There is only so much you can do to get the right legislation in place but it is rarely enforced. It is important but I have no faith at the moment and we have so many other priorities where we can try to make a difference" (SACWG 2003). The RCG believed that their main target group, farmers, would eventually be lobbying government for the EWT. The EWT, however, has recognised the need for NGOs to initiate the

development and implementation of legislation instead of governmental departments, in an era where the South African government is not adequately implementing environmental legislation on the ground (see section 2.7.).

Perceptions about EE varied and, in my view, what emerged quite strongly was that EE on its own was not a panacea for environmental issues in South Africa, especially those impacting on endangered species. A mass extinction of species has been predicted (see section 1.3.). Conservationists have to work on much larger, global scales than the implementation of local, social programmes if biodiversity is to be conserved into prosperity (see section 2.6.1). In addition, EE was hard work and would require a separate individual or group to ensure that goals were achieved in this social sphere. According to the EWT-ICF (2003) the EWT lacked EE people and the Trust concentrated on "research and science at grassroots level with a conservation point of view".

5.3. Perceived EE requirements of working groups

The working groups with more specific EE focuses appeared to need less to assist them with EE practice. On the other hand, the working groups that were attempting to reach the most target groups needed most of the EE requirements (the SACWG, OWG, BSWG and BCG).

It is interesting to note that the EWT working groups were not drawing on other NGOs to assist them with educational resources for their education and awareness efforts. The Wildlife and Environment Society of South Africa (Wessa) has a printing and publication division called Share-Net which produces copyright-free publications for people involved in EE processes in southern Africa. Biodiversity is a theme that runs through these EE publications which offer theoretical insights and practical activities for environmental educators to enable "learning experiences for encounter, dialogue and reflection in a context of action taking" (Lotz-Sisitka 2001:9).

More recent learning support materials (LSM) that have emerged include the Eco-Schools Toolkit which provides for educators opportunities to improve their school environments, build the confidence of learners and their sense of citizenship through participation, increase environmental awareness and involving local communities. The

biodiversity theme is the underlying foundation of the concept. The Hadeda Island pack is another creative LSM that was designed to guide school-based learning about democratic processes and environmental responsibility and the theme revolves around endangered birds on an imaginary island that is a metaphor for South Africa and its current democratic and environmental processes. Meanwhile, governmental departments and other NGOs are increasingly producing EE resources for use in classrooms and with links to special environmental days of the year. These could be utilised or adapted by the EWT.

Table 5.3. Perceived EE requirements of working groups

NEED	PWG	SAC	Eskom	MCG	BS	OWG	VSG	BCG	CLG	RCG
Staff training		X	X		X	X		X	X	X
Learning support materials		X	X		X		X	X	X	X
Field resources		X	X	X	X	X	X	X	X	X
Additional information		X			X	X		X		
Fresh techniques		X	X		X	X		X		X
Cultural knowledge		X		X	X	X	X	X		X
Networking		X			X	X	X	X	X	X
Evaluation		X			X	X		X		

Table 5.3 illustrates that the PWG did not respond to this issue. Instead, the group had only one comment to make: "None of these are as important as the need to get more people out on the ground. Inter group communication and collaboration, with limited specialists and many generalists" (PWG 2003). This personal viewpoint was pertinent to most working groups which suffered similar constraints to the PWG. Most of the participant working groups required all or most of the variables. Of particular interest was that the CLG only required staff training, learning support materials, field resources and networking in their more focused EE approach. The MCG only required field resources and cultural knowledge in its more limited approach. In my opinion, this

could suggest that either working groups were coping effectively with very little EE requirements, or that they were being effective with the use of as many EE requirements as possible. This could be clarified with the use of a constant monitoring and evaluation system, which would reveal the reasons for working group constraints with regard to their pertinent requirements.

5.3.1. Perceived gaps in EE practice

Only three working groups responded to this question concerning gaps in their EE practice and all three agreed that there were deficiencies (the SACWG, PWG and RCG). The PWG was not attending to crucial projects that required immediate resolution: "There are gaps because I don't believe we are getting through to problem areas - districts or regions where there is poison abuse. We are not addressing our labour component as we are still trying to break through our farm manager/owner component" (PWG 2003).

The SACWG was not evaluating their education programme but agreed that this was a difficult concept to implement. "It can always be improved, but … regarding our capabilities we are doing enough. Each region has an EE person – we are getting there. We need to keep improving our techniques" (SACWG 2003). No one can ever do enough, in my view, and the fact that there was an EE person in each region did not mean that that person was adequately qualified to practice EE. At the time of the research, the SACWG was taking very small steps towards the politically correct employment of young, black EE officers to take the crane conservation message into their own communities.

I feel that these perceptions, regarding perceived omissions in working group EE practice, can be weighed up against the positive achievements of the working groups. Most working groups had strong relationships with farmers (and other target groups) and were fully aware of their general shortcomings, where these were evident. It was evident from the data collection that working groups were working hard to resolve immediate priorities (see section 4.3. and 4.9.) and were very aware of where they were failing and why. However, often constraints did not allow them to address certain imbalances (see section 4.8.) and lack of monitoring and evaluation was a contributing factor.

It appeared to me that environmental education (in the contemporary sense of the words) was not taking place as extensively or as professionally as it could be. Working groups were failing to question or assess the impact or quality of what they were doing, despite the fact that much of their work was successful. One of the guiding principles for effective EE is that learners and educators should "utilise diverse learning environments and a broad array of educational approaches to teaching/learning about and from the environment with due stress on practical activities and first-hand experience" (UNESCO-UNEP 1978). Within the EWT, work was more reactive than proactive. According to the EWT-ICF (2003), EE "'happens', especially in the crane group and others. There could be more theory. We need a formalised focus, to employ someone who has done their masters in EE".

5.4. The perceived importance of corporate business

The EWT is able to operate primarily because it is funded by private organisations, many of which have corporate business backgrounds, and many of which have previously had major impacts on the environment. This was a risk that the EWT had to take in order to survive, while corporate business was taking other, major, environmental risks (see section 1.3.). Working groups had varying perceptions about how EE should focus on corporate business (see Appendix F, Question 16). Many felt that the very fact that corporates were funding working groups included some spreading of awareness of environmental issues and the aims of the working groups. It was their perception that the fact that corporates were funding species' conservation was indicative of their commitment to the cause. Others referred to it as "guilt money" (PWG 2003) or the "trapping of corporates" (OWG 2003) to be environmentally conscious. The Eskom-EWT remained cynical about the role of corporates in conservation despite the fact that they had formed a partnership with Eskom, a major South African corporate: "I seriously question the effectiveness of what we are doing. What do you tell the rural poor, who are trying to make a living? Corporates pay lip service to the environment. They have nice corporate jobs and status that comes with it" (Eskom-EWT 2003).

The PWG by contrast was involved in a corporate relationship with the chemical industry and remained positive that corporates were committed to the PWG cause.

> The PWG interface and exposure with the chemical industry is an awareness and appreciation of the role and functioning of the PWG and a way of addressing issues. It is not accusational but scientific and professional and thus we won their support. We made the transition between guilt money and environmental responsibility (PWG 2003).

The SACWG, funded by a variety of corporates, was concerned about the dilemmas that working groups faced when corporates started to demand that the conservation organisation answer to their expectations, such as the politically correct image of equitable employment. This was a social issue that the CLG was starting to resolve (see Appendix A). The MCG noted that corporates were not impacting on the environment as individuals but as institutions and that people on the ground were the ones that mattered most in the EE dimension of the conservation of endangered species. The RCG, meanwhile, was grateful for any money that corporate business sponsored them as it kept them working and employed.

According to the EWT-ICF (2003), corporates were becoming increasingly difficult about funding NGO's. "We need many more black environmental managers ... the environment is no longer separate from EE, health, housing, etc. There is a massive pool of international funding not yet being tapped into and we need to find more sources".

Ledger (2003 pers. comms.) referred to this as the "corporate conundrum" where the prime goal of most corporates was to make money and to encourage people to invest in it. He referred to the puzzling relationship between the corporate world and conservation organisations – those who had the largest impact on the environment were holding the purse strings for the survival of the EWT. It was an ethical dilemma and although species were becoming extinct because of ongoing development, a lot of it initiated by corporate business, the EWT was forced to take their money to survive (see section 1.3.). The EWT concentrated on educating poor, disadvantaged people about species and habitats but it was possible that an evaluation of this focus could redirect them into spreading more directed awareness in the corporate world. Each working group operated from a different context and for some, corporate targeting was not applicable, whereas for others, rural community targeting was not applicable.

> NGO opportunities to persuade corporates they have good organisation and understanding thus are important to a beneficial company ... Education is a powerful buzzword now and by linking education to the environment we have extra credibility. On the EWT working group side, we need to find the right balance … generating prime

information which needs to get out to a second wave of educators who then get it out that way to the public (Ledger 2003 pers. comms.).

5.5. Working groups perceived knowledge of colleagues' EE practice

5.5.1. Perceived awareness of colleagues' EE activities

Most working groups were not fully aware of what their colleagues were doing in EE but most knew more about those that they dealt with more often (see Appendix F, Question 8). The PWG, for example, worked with the bird groups – the SACWG, RCG and VSG – as these species suffered deliberate and unintentional poisonings by humans. The OWG knew only about the two KwaZulu-Natal based working groups with which it closely worked – the SACWG and BSWG. The CLG knew only about the work of the SACWG and PWG while the MCG knew nothing. This was in accordance with a comment by the Eskom-EWT (2003), that "We are locked into our fields … I'd say one percent of the organisation reads each others' reports. It's human nature – if it doesn't affect you, don't worry about it. How are you going to sustain that interest?"

In my opinion, there appeared to be a hesitancy or slight embarrassment at the obvious lack of knowledge between colleagues about their work, especially EE. Individuals seemed to mention those longer established working groups more, and those that did similar work to them or had similar goals to them. When asked whether they knew what the CLG did, the RCG (2003) replied, "The CLG – umm, not exactly, but I don't know what any other working group is doing and they don't know what we are doing!" On the other hand, working groups were interested only in those that could assist them, which also became time-consuming. Individual, autonomous focuses were very narrow which had positive and negative consequences.

According to Ledger (2003 pers. comms.), there was no excuse for the fact that some working groups did not know what the others were doing.

> There are monthly meetings and if these aren't working, it needs to be identified as a bottleneck … Usually what is dramatic, dominates the meetings. There are no cross-cutting themes: there needs to be structuring along main themes like education, policy and government and to bring out certain points".

Six of the participant working groups agreed strongly that working groups were generally ignorant about the work that their colleagues were doing. They all agreed that it was an issue and blamed it on time constraints and being too focused on immediate

contextual issues relevant to their work with species. This focus, in my view, should also be regarded positively as it was beneficial to the mission of the EWT and the particular species.

5.5.2. Perceived knowledge about the CLG, an EE-oriented working group

The CLG was the only working group within the EWT that claimed to practice EE 100% of their time. While this could be a misperception (see section 5.2.1) it made the CLG a relevant participant in the research study and towards the proposed EE strategy framework. The SACWG, however, was the only working group that claimed to have any knowledge about the work of the CLG. Most working groups appeared to be very unaware, or vaguely informed, about the CLG while others had a confused idea of what the CLG actually did (see Appendix F, Question 5 & 6). The EE focus of the CLG went largely unnoticed by their colleagues. Some individuals were starting to show an interest in the CLG to gain the working group's assistance in alleviating some of their EE constraints or problems. But no one had really asked the CLG about EE, whether they had the time, resources or inclination to do this.

My experience of the CLG was that they were very busy, very successful and very topical politically and socially. Some of their EE programmes included the Makuleke Programme where students from that community were trained in a national conservation diploma and assisted with tuition fees; the Conservation training programme in Johannesburg involved 10 students being trained through Technikon SA for their national conservation diplomas; the Eco Warrior Programme where final year students became Eco Warriors so they were giving back to the community. "In 2002 we developed the Eco Warriors curriculum for school pupils in grades five and six on four subjects: water, energy, waste and pollution and environmental responsibility" (CLG 2003). In addition, the CLG had The Bigger Picture – Valued Citizens Programme, a link to the other projects already mentioned involving 60 schools in Gauteng with plans to expand into KwaZulu-Natal. In this programme, grades five and six could establish their citizenship as South Africans, as opposed to their alienation in apartheid days. Teacher training involved a partnership with Museum Parks in Pretoria and the CLG provided classes on teacher training, linked to the other projects mentioned above. I feel that it seemed that the CLG was forming partnerships and achieving their goals in a tangible manner (see Appendix A).

I believe that the fact that the CLG's own colleagues, some working only metres away from them in a large office, did not know much about them, is significant. According to the RCG (2003) the monthly EWT meeting had become a report-back session, instead of a time to learn about what others were doing in their work.

> We are supposed to read the groups' monthly reports but there are so many to read and I don't think they are being read. I only read the one's that I am interested in. It is important to understand what each is doing and it is important to help one another but some people expect you'll be doing a lot of work for them and we are all very busy trying to achieve our own objectives so we need to be careful that we do so in such a way that we don't detract from our own issues (RCG 2003).

For me, it could be a reflection of the pros and cons of the EWT working groups' autonomy and the management style of the Trust.

Most working groups thought that linking with the CLG to do EE was a good idea but that time and other constraints were a problem. The CLG itself only suggested an education component to the monthly meetings. It was already trying to break away from the quantity of office work it had to deal with that removed it from important work in the field. The VSG felt that the CLG could get overloaded this way while the MCG perceived links with the CLG as positive and providing fresh perspectives and ideas to other working groups. Only the PWG and SACWG were sceptical that the CLG could assist them:

> Their 100% [EE] is training the trainers so I don't know. Their Eco Warriors is at grassroots but it is putting people into reserves … but is very isolated as opposed to going out to communities. It's not grassroots EE of the people who are actually impacting on our wildlife. It's a different audience which is great but the one gap they could help us fill is in evaluation ...(SACWG 2003).

The PWG suggested that another more general EE unit within the EWT could provide general EE assistance across working groups instead. In my view, there were two issues: on the one hand, some working groups felt that links with the CLG could provide valuable EE assistance on the ground and encourage sharing of ideas. On the other hand, other working groups felt that the CLG was too busy and specialised for this and that another EE unit or individual should deal with cross-cutting issues across working groups. Regarding the future of the CLG, Ledger (2003 pers.comms.) recommended the setting up of another CLG unit:

> I would like to see [the CLG] get their resources quadrupled and to extend the energy of their staff intake by ten-fold … So much of the interpretation of science and getting it out

means out to black people who are predominantly environmentally illiterate. It needs an understanding form of message and one is young black people telling other black people.

5.6. Working group perceptions towards the proposed framework for an EE strategy

5.6.1. The perceived importance of policy

None of the participant working groups was aware of any over-arching EWT policies that might guide their individual practice, because there were none (see Appendix E, Question 15). Working groups drew up policies relevant to issues in their contexts when there was a need or a crisis (see section 5.2.4.). When necessary, they worked with other working groups to cross boundaries in the environment. When a crane, raptor or vulture was poisoned, for example, the PWG was called in to assist the SACWG, RCG or VSG with educating people about such issues.

> In the absence of national policy, [working groups] have drawn up their own policies …
> So, where there is an absence of national policy, there is a need. We need accountability
> and an open policy development process – the dynamics are different in every case … the
> different groups do what is necessary for them … (LPWG 2003).

The PWG appeared to prefer the present situation of the dearth of any guiding policies so as to avoid "bureaucratic bungling" (PWG 2003). Others appeared to have never really noticed or been concerned about this proposed gap in the workplace – possibly due to their autonomous practice. For some it was a deficiency and for others it was a positive factor that fuelled better progress. In my view, this had both positive and negative consequences for the EWT as an organisation, the working groups as separate entities within the Trust, and the different endangered species which were the focus of the working groups. The individuals employed by the EWT were those who fitted well into the looseness of structure and who would probably be wary of any imposing regulations (see section 2.3.).

In business organisations, a policy or strategy is a reflection of that organisation's reputation, direction and guidance or management of staff (see section 2.4.). According to the EWT-ICF (2003), the EWT did "need a conservation strategy with our mission, goals and objectives". In my opinion, a conservation strategy and an EE strategy could work hand-in-hand to achieve results for conservation of endangered species, where scientific and social approaches could complement one another. Many people have a basic conception about nature that is different from their understanding of the biosphere.

In that respect, many people do not realise that the impact of their activities on the biosphere have major implications for species' (and ultimately their own) survival (see section 1.4.).

It is wise to take note that policy does mean management and a more structural working environment (see section 1.1.). Often, too much management forced people to rebel or to be overwhelmed with bureaucracy so that they lost their independence within an organisation, and with it, the energy that drives them (see section 2.3.). The need for policy was difficult to ascertain with the EWT working groups interviewed because, as mentioned, some had already developed relevant policy for their contexts. However, these types of policies had yet to be ratified by government and were merely documents for theoretical referral.

5.6.2. The perceived importance of a framework for an EE strategy

Six of the 10 participant respondents agreed to the proposal for a framework for EE within the Trust, four strongly and one remaining neutral. Two respondents (MCG and BCG) had conditions for their responses: a) it would have to be a regional framework; and b) it should not be too restrictive to individuals. All working groups agreed to the idea of a national framework for an EE strategy for endangered species conservation (see Appendix E, Question 13). This was a positive response, in my opinion, and required further exploration.

> I think it will be worthwhile. All working groups are doing EE to some extent at certain levels … We never utilise the CLG guys and they are a fantastic resource – we need to investigate how to utilise them … EE happens at very different levels; our conservation and research should be getting into the communities. None of us are educators yet we are doing EE … We need evaluation and measurement and assessment (EWT-ICF 2003).

Eight out of 10 respondents agreed that a national framework for EE would be desirable but some stipulated that it would need a group or individual to manage it. It could be a useful guideline but would need to be flexible, and contain a monitoring and evaluation component.

In my view, there appeared to a wariness of the proposed framework being too formulated or restrictive and working groups were wary of taking on yet another task. There was a desire for information about what others in the EE field were doing for

other organisations yet not one working group had initiated the linking with such organisations.

The RCG was concerned that the design of the proposed framework for EE would also depend upon how it was managed by each individual and what exactly it would achieve. Ledger (2003 pers. comms.) was only concerned that working groups had an obligation to get their conservation messages out using EE methods, sharing their information and knowledge (see section 2.4.).

When working groups were asked whether it was necessary for each working group to develop a separate EE strategy that would be managed under the umbrella of a national, EWT framework for an EE strategy, only the SACWG agreed (see Appendix E, Question 22). Others felt that an overarching framework could generalise the EE message and the CLG could continue with specialised work. It appeared that working groups had not yet thought about developing their own EE strategies but that they understood the benefits of having an overarching national framework on which they could draw for assistance. "An educational unit would better serve the EWT with the ability to work across boundaries. It would generalise about the EE message instead of going in specific: e.g. general stories across the EWT working group spectrum" (PWG 2003).

This particular framework for EE, according to the OWG and BSWG (2003), would need to get approval from the national Department of Education and Culture (DoE). This would ensure that it was formalised and accepted by government, and also by other NGO's. In my experience, it could become a redundant document if not accepted by both the regional and national DoE.

5.6.3. The perceived importance of a national monitoring and evaluation system for EE

All six respondents to this particular issue agreed that a national monitoring and evaluation system was important for the organisation (see Appendix E, Question 14). Most also added that they would like to be able to measure the success of their efforts, in line with their constraints and a changing environment. "Of course you have to evaluate – we don't know how effective we are being. How could it work? It would

have to be flexible for each working group as opposed to being universal" (BSWG 2003).

I agree that it would have to be a flexible framework to challenge, and contribute to, the diversity of each working group. I did not want to impose structural ideas upon an organisation so used to autonomy of practice and so used to working successfully without any kind of policy to guide the work of the individuals. The main reason for a monitoring and evaluation system, incorporated into the proposed framework for an EE strategy within the EWT, would be to assist working groups in the assessment of their work, both EE and conservation. The outcomes could then redirect individual efforts, if needed, towards renewed, or more pertinent, goals and objectives.

While all working groups agreed that a national monitoring and evaluation system was beneficial to their EE practice, many were vague as to what it would entail. "We have thought about it but aren't sure how to approach it" (OWG 2003). I feel that some working groups were cautious about the perceived implications for such a system, that it would be unbearable and a drain on money, time and staff resources. One suggestion was that it would require one person or group to manage it due to the workloads of working groups and their dearth of skills concerning monitoring and evaluation.

The concept of an EE framework was deemed very necessary, however, as working groups could be in the process of spreading an inappropriate message to the public. This could be a message that is not based on the environmental crisis affecting species' survival, or the needs of the people impacting on the species. According to the PWG (2003), "there is no formal monitoring of the work as such but we do have a database in place and we can measure our success regarding reductions, or increases in poisons for a specific region – if we see no change, we can still see whether it is a success or not" (see section 4.2.1.). Ledger (2003 pers. comms) also admitted that evaluation of programmes was difficult and hard to measure, especially whether groups were having an impact after their many years of work.

Not one working group had yet set up a monitoring and evaluation system for any dimension of their work. Only three working groups claimed to be thinking about it or attempting to put it into practice according to what they knew about the concept or

believed to be best for the working group (CLG, SACWG and RCG). They were mainly concentrating on appraisals, however, and the collection of scientific data, not the evaluation of EE programmes or practice. This was an issue, in my opinion: individuals appeared to be working in their own ways (autonomously) to achieve objectives but no one could assess how well they were doing, or not doing. I feel that such a system could enable working groups to redirect their focuses and EE practices. Constraints could also be evaluated and addressed.

A monitoring and evaluation system could also help improve standards, support credibility with sponsors and other supporters, help to assess shortfalls in achieving objectives, assess trends in the status quo of species, and more.

5.7.Conclusion

Environmental education was perceived by EWT working groups to be an important response to the plight of endangered species in South Africa, but not as important as habitat conservation and species preservation (see section 5.2.4.). Legislation and lobbying government were of medium importance but were more difficult to address. Working groups were so focused on what their particular goals and objectives were, and dealing with constraints, that they had not taken the time to learn about what was happening on a broader regional or global scale regarding EE. Their perception of EE as an instrument of awareness was not incorrect, but might be slightly outdated in relation to the evolution and intensification of the threats to biodiversity.

Working groups had many EE requirements to assist them with their EE practice and they also recognised where there were gaps in their EE practice. These had to be dealt with in line with other constraints, which meant that they were often not treated as priorities. The fact that most working groups knew very little about what their colleagues are doing, both regarding EE and other work aspects, was very revealing. They appeared to be extremely vague about the CLG, the only working group practicing EE most of their time. The CLG, meanwhile, also knew little about its colleagues' work on the ground. The EWT was sponsored by large corporate businesses and these stakeholders received less EE attention than poor, rural people. Despite this fact, the potential importance of indigenous knowledge as one dimension of EE had been neglected.

Working groups were achieving basic EE successes but the dearth of a monitoring and evaluation component to their programmes was prominent and putting one in place could redirect many efforts to become increasingly beneficial to the species and the target groups.

CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS – TOWARDS A POSSIBLE FRAMEWORK FOR AN EE STRATEGY WITHIN THE EWT

> Conservation is paved with good intentions which prove to be futile, or even dangerous, because they are devoid of critical understanding either of the land, or of economic land-use. I think it is a truism that as the ethical frontier advances from the individual to the community, its intellectual content increases … By and large our present problem is one of attitudes and implements…(Aldo Leopold 1949:225).

6.1. Introduction

During the research study I discovered that environmental education (EE) activities in the Endangered Wildlife Trust (EWT) were in place and diverse, yet not always recognised as such. The EWT is already practicing a form of EE but there exists the potential to do more and there appear to be opportunities for expansion. Working groups are achieving basic EE successes but there is evidence of the dearth of a monitoring and evaluation component to their programmes. It is hoped that such a component would redirect many efforts, so that they become increasingly beneficial to the species concerned, and the selected target groups.

Environmental education was perceived by most of the EWT working groups to be an important response to the plight of endangered species in South Africa, but not as important as habitat conservation and species preservation (see section 5.2.4.). Working groups were very focused on what their particular goals and objectives were, and dealing with constraints. As a result, their general knowledge concerning EE initiatives on a broader regional or global scale was not as extensive as it could be. Their perception of EE as an instrument of awareness was not incorrect, in my opinion, but might be slightly outdated in relation to the evolution and intensification of the threats to biodiversity.

6.2. Reflections on relevance of aims

The aims of the research study had a close affinity with the assumptions upon which the research was based and now these assumptions and aims are revisited. My assumption that there is discordance between humans and their environment and that this is causing the present environmental crisis was introduced in chapter one as a theme that runs through the thesis. I included sections 1.3 and 1.4 to provide a foundation for the development of a framework for an EE strategy and to guide the EE methods selected

by diverse working groups. While I believe that it is true that not all South Africans are deliberately degrading their natural environment, it is evident in South Africa that some sectors of society have limited environmental ethics. In addition, the links between biodiversity conservation and education could not be ignored in this crisis and the role of the organisation under study (the EWT) became increasingly complex and important in this regard.

I believe that my first assumption was correct: that the EWT, despite its history, size, scale of operations and credibility in the public arena, was lacking a framework to coordinate the EE initiatives continually being carried out by the working groups and to complement their conservation focuses (see section 1.2.). I also assumed that a well-planned framework for an EE strategy that supports the conservation of endangered species would encourage collaboration and sharing of EE ideas and activities between the working groups. This supposition, however, will only be proven should the concept of a proposed framework be adopted by the Trust. My last assumption - that both the target groups of each working group (for example, farmers and school teachers), and the working group staff, would benefit from an enabling, flexible framework for their EE goals - will also only be realised if the concept of the proposed framework is adopted by the Trust in the medium-term.

I feel that my aims have been achieved in that I have a) identified and analysed the past and current educational awareness initiatives of some of the working groups which constitute the EWT; b) ascertained the education requirements of working groups as perceived by them, and where they required professional assistance; and c) created the potential for a strategy within the organisation for sharing EE ideas and activities within a flexible, coordinated and collaborative educational framework for the EWT (see section 1.1.). The last criterion is still in the process of being achieved and will be a medium-term objective, in conjunction with EWT working groups.

6.3. Research results
6.3.1. The structure of the EWT
According to information attained from interviews, EWT authorities (individuals in management positions) did not fully understand what different fieldwork entailed and also seemed to be unaware of the extent of constraints in the workplace (see section

4.11.). These constraints were the responsibility of the working group leaders and staff members. It emerged from the research that some working groups perceived that the EWT as an organisation needed to change and develop increased awareness according to the environmental crisis in a South African context.

Individuals with passion and dedication managed EWT working groups. Each working group responded to environmental issues according to a) the perceived needs of the particular species; b) the perceived threats to these species and how to respond to such threats; c) the constraints experienced by working groups; d) the work done by working group staffers be they part-time or permanent; and e) the way that the working groups were managed. In my view, it was vital that working group visions, missions, aims and objectives corresponded to these factors.

Working group leaders had strong personalities and were dedicated to the cause, the mission of the EWT (see section 4.2.3.). In my view, most working group individuals had intellectual perspectives regarding conservation or education and the impact of humans on the environment (see section 2.5.). Ordinary individuals in other jobs would probably react differently from the EWT staff members to the environmental crisis.

Due to the autonomous structure of the Trust, working group leaders assumed responsibility for their staff members, the issues affecting the selected species and weaknesses affecting their groups. The amount of work that they had to contend with often meant that some aspects of the job were neglected. These personalities, however, often decided which route working groups had to take and this was reflected in the positive reputation of the Trust as an umbrella organisation. Public perceptions about conservation organisations could affect their success in terms of financial and physical support. Staff relationships and dynamics within organisations do reflect the organisation as a whole (see section 2.3.).

The issue of autonomy recurred throughout the data analysis. Working groups were accustomed to working alone, in my opinion, and had developed territories over which they presided, both internally and externally to the EWT context. It was usually only when a crisis arose; for example, when a species was poisoned or hunted by humans, that working groups removed these imaginary barriers to gain the required assistance

from their colleagues. In my opinion, there appeared to be a sense of underlying concern regarding the obvious lack of knowledge between colleagues about their work, especially EE. Individuals seemed to know a little more about those longer established working groups and those that did similar work to them or had similar goals to them (see section 5.5.). The issue of autonomy of practice and structure forced me to question whether a very specific and focused approach was better than a more diverse outlook. Individual, autonomous focuses had both positive and negative consequences.

The CLG had an EE focus yet the fact that their EWT colleagues, some working only metres away from them in a large office, did not know much about them, is significant. For me, it could be a reflection of the strengths and weaknesses of the EWT working groups' autonomy and the management style of the Trust. Some individuals were starting to show an interest in the CLG, to gain this working group's assistance in alleviating some of their EE constraints or problems. No one, however, was asking the CLG about their concept of EE, nor were they questioning whether this working group had the time, resources or inclination to assist them.

6.3.2. Constraints experienced by working groups

Imbalances in the workplace between work on the ground and work in the office were the source of frustration for some working groups. In my view, environmental issues usually occur at grassroots but many working groups were based in Johannesburg and relied upon volunteers to do the groundwork in different provinces where the problems occurred. Constraints affected the achievement of objectives concerned with the selected species and target groups within various contexts.

It was evident that most working groups needed to deal with, and do away with, common constraints in the workplace. Lack of staff members, lack of money and time and too much to do already were hindering the achievement of goals and objectives in most cases (see section 4.9.). As long as money was short, constraints would always be imposing. Some working groups implied that the MCG revealed a weakness with its dearth of any constructive, structured goals to guide its achievement of outcomes. This also goes against the principles of organisational management where strategic goal setting is seen as beneficial to merging the roles of organisations (such as the Trust)

with the employed individuals within (see section 2.3.). However, the MCG was achieving EE successes in a positive manner.

Some working groups were carrying out proactive work concerning problems between species and humans, while others were being reactive. This was often as a result of the constraints being experienced and working groups were also forced to prioritise their resources in terms of direct benefits to the species. In this way, habitat conservation became more important than EE.

It was difficult for NGOs to raise money to do their work and some working groups considered being an NGO a constraint. In South Africa, it was believed that the present government did not consider conservation or environmental issues as more important than education, health or job creation (see section 2.6.).

The development of action plans, which reinforced the desired achievement of specific goals and objectives, appeared to be a useful concept to alleviate these dilemmas. Some working groups were acting according to outcomes from action plan workshops (BSWG and SACWG) while others were attempting to alleviate constraints in the workplace that would allow them to move forward. Often plans for the future involved the alleviation of constraints to allow the working groups to extend their work for increased benefits to endangered species.

6.3.3. The role of environmental education within the EWT

Most working groups appeared to have an understanding of the concept of EE, which usually related to the issues that they were dealing with in their different contexts. Most working groups, however, were spreading awareness about endangered species and their habitats, and the threats to both (see section 5.2.). This was positive. Human threats to the environment are intensifying and the EE response needs to intensify in accordance with this reality, in my opinion. Most working groups felt that they could be doing more EE but some made the point that they required skills development in EE before they could do justice to the concept as environmental educators (see section 4.5.2.).

While working groups were utilising standard methods to get their EE message across to certain target groups, many had neglected to make use of the media to spread their

messages on a broader basis. Some working groups were wary that the media had ulterior motives and others perceived that the media could spread awareness but would never be able to contribute to attitude or behaviour change in the general public (see section 4.2.1.). In addition, I believe that the EWT website was outdated and required updating as the source for the international general public to be able to refer to various working groups and their visions, missions, goals and objectives.

Interviews revealed that knowledge about other work being done in EE outside of the EWT, both nationally and internationally, was limited (see Appendix E, Question 17). The oldest working group, the newest working group and the working group that contended to practice mostly EE all knew very little about EE initiatives on a broader scale (see section 5.2.2.). Time and staff shortages were often the reason for this, as well as intensive internal focuses of working groups on their own issues. Some working groups preferred to work totally alone while others were aware of initiatives in their immediate regions.

Being well-informed about international EE issues, in my opinion, could be a strength for the EWT as a conservation organisation, as it could assist with training of staff members and general awareness. Keeping up with international trends could form part of an evaluation component, something that had never been fully considered within the EWT working groups. However, it could also be a weakness in that it could force working groups to look more broadly than the crisis at hand and to lose focus on immediate problem solving and issues at hand.

Most working groups were concentrating on issues that directly affected the species and considered scientific research a priority. This work was well recognised for its contributions to conservation. It was evident that working groups perceived EE to be of assistance in the attainment of their goals, but that it was not the only remedy for environmental issues in the country. Perceptions about EE varied and, in my view, what emerged quite strongly, and quite correctly, was that EE on its own was not a panacea for environmental issues in South Africa, especially those impacting on endangered species. Working groups perceived that a qualified individual or group would be required to manage the EE concept within the Trust.

Working groups appeared to require specific resources to be able to practice EE. Some managed with very little while others required a wide variety of assistance (see section 5.3.). In my opinion, this could suggest that either working groups were coping effectively with very little EE requirements, or that they were being effective with the use of as many EE requirements as possible. Some working groups recognised the need to design and develop educational materials and strategies that could be available for use both inside and outside of the EWT. Members of the general public with an interest in the environment also needed to be increasingly brought on board to support the working groups' goals and objectives. Increased numbers of species support groups and volunteers could allow for better management of the vast ranges (geographical and social) within which working groups were working.

It is necessary to take note of the positive achievements of each working group regarding EE, and to weigh these up against constraints and perceived weaknesses. Most working groups had strong relationships with farmers (and other target groups) and were fully aware of their general shortcomings, where these were evident. It was evident from the data collection that working groups were working hard to resolve immediate priorities (see section 4.3. and 4.9.) and were very aware of where they were failing and why.

Working group education and awareness efforts appeared to be focused on poor, disadvantaged people. Meanwhile the EWT was being funded by corporate businesses, many of which were having the greatest negative impact on the environment. This was an ethical dilemma for the staff members of the Trust, which would not be able to survive without this financial support (see section 5.4.).

The concept of indigenous knowledge was briefly discussed (see section 5.2.3.). Only some working groups had been able to consider and include the concept in their work in conservation. It appeared that the working groups interviewed were hesitant about including this concept into their work, as they did not know enough about it. They appeared, quite rightly, to feel that it would require additional time and effort. Nationally, however, the concept of indigenous knowledge is still very new and this hesitancy is being experienced by other national and provincial organisations, which anticipate the difficulties and potential problems surrounding exploration into

indigenous knowledge systems. I feel that indigenous knowledge has an important role to play in the conservation of natural resources, including endangered species. The EWT working groups could gather indigenous knowledge stories from their target groups and understand social beliefs and customs better. This could better equip them to deal with social pressures on biodiversity and to rekindle environmental ethics. Some working groups are already starting to achieve this.

It appeared to me, however, that environmental education (in the contemporary sense of the term) was not taking place as extensively as it could be. Working groups had not started to formally assess the impact or quality of what they were doing, or whether they were actually achieving positive outcomes. I believe that many of the outcomes achieved were successful and that a monitoring and evaluation system would help to highlight such positives.

Environmental education, in my view, could provide a platform to merge the conservation focus with the education and awareness focus of the EWT. This, however, requires a balanced, well-informed and consensual response. I feel that it is necessary for environmental educators to be aware of different perceptions about the environment in order to better be able to respond to environmental issues. People react differently to environmental problems, in relation to their own socio-economic circumstances. Individual expertise in EE within the Trust working groups already existed and required only coordination and guidance.

I deduced that most working groups could benefit positively from flexible, non-authoritative guidance in EE. This could enable expansion or improvement in the achievement of EE goals, and the sharing of EE ideas could also ultimately benefit the participation of target groups in conservation efforts. In general, it was evident that the linking with other organisations already involved with EE practice in the field could be explored more fully.

6.4. A case for a monitoring and evaluation system within the EWT

The question of evaluation of EE work being done by the working groups, which participated in the study recurred throughout the data analysis phase of the research. Chapters four and five showed evidence that the dearth of monitoring and evaluation

within the EWT in general could have an impact on the type of EE being practiced. Working groups could not fully assess whether their methods were effective or not. Some were trying to reach a wide number of target groups over vast areas and most were struggling with constraints in the workplace.

The quality of the message being put across to selected target groups (groups in society, for example, farmers) would need to be evaluated, in relation to the type of people being focused on. This could redirect working groups into spreading more directed awareness in the corporate world. Each working group operated from a different context and for some, a corporate focus was not applicable, whereas for others, a rural community focus was not applicable. In future, the selection of target groups should emerge from the findings of a monitoring and evaluation programme, in relation to constraints and needs of the species, the working group needs and those of their target groups. It is possible that working groups that were attempting to reach numerous target groups could find a focus for their EE, which would have less impact on constraints already being experienced, such as lack of money and time.

It appeared that those working groups which understood the concept of EE better than others had developed specific programmes for specific target groups to achieve specific outcomes, instead of trying to reach too many groups of society. It appeared that as working groups deepened their understanding of EE, so they were more interested in attempting its practice. These working groups, however, had not attempted to measure the extent of their successes and failures in any way (see section 2.4.).

A monitoring and evaluation system, I feel, could reveal the importance of local, regional, national and international communication around EE theory and methods as well as increase individual confidence in EE by recommending training. In my view, it was evident that the autonomy of the working groups allowed them to forge careers in positive directions as teams working for endangered species. It was possible, however, that work appraisal could reveal that new approaches were necessary which could initiate positive change. This would question the role of the autonomy of the working groups and the species-oriented approach adopted by the EWT. This central focus of the Trust (ever since its inception in 1973) is nationally and internationally recognised as an enormous strength. Every contribution to the conservation of endangered species and

their habitats is increasingly perceived to be of crucial importance to the future of humanity (see section 2.6.1.).

6.5. A case for a framework for an EE strategy within the EWT

Most working groups understood the benefits of an overarching EE framework for the EWT, on which they could draw for guidance. While working groups had not formulated EE strategies *per se*, they were supportive of the concept on a broader level. There appeared, however, to be a wariness of the proposed framework being too formulated or restrictive and working groups were wary of taking on yet another task.

Despite the fact that working group individuals appeared to be working in their own ways (autonomously) to achieve objectives, no one could fully assess how well they were doing, or not doing. I feel that a framework for an EE strategy within the EWT should include a monitoring and evaluation system, to enable working groups to redirect their focuses and EE practices. In this way, the adoption of the EE framework could contribute to the alleviation of constraints. In addition, the extent of work on the ground could be managed, organisational credibility supported and the assessment of shortfalls in achieving objectives could contribute to the ongoing survival of endangered species.

In my opinion, a conservation strategy and an EE strategy could work hand-in-hand to achieve results for conservation of endangered species, where scientific and social approaches could complement one another. This is already occurring on a small scale in the Trust. All working groups agreed to the idea of a national framework for an EE strategy for endangered species conservation. This was a positive response and required further exploration.

6.6. Recommendations

6.6.1. A tentative framework for an EE strategy within the EWT

This could be a useful guideline but would need to be flexible, and contain a monitoring and evaluation component. Working group participants in the research suggested some ideas that they would like to see included in the framework:

a) A need for useful recommendations;

b) Accounts of others' experiences and successes and failures;

c) Useful contacts in the EE field; and

d) That it be a functional document.

I agree that it would also have to be a flexible framework to challenge, and contribute to, the diversity of each working group. I did not want to impose structural ideas upon a credible organisation so used to autonomy of practice and so used to working successfully without any kind of policy to guide the work of the individuals. The main reason for a monitoring and evaluation system, incorporated into the proposed framework for an EE strategy within the EWT, would be to assist working groups in the assessment of their work, both EE and conservation. The outcomes could then redirect individual efforts, if need be, towards renewed, or more pertinent, goals and objectives.

The alleviation of constraints appeared to be crucial to the achievement of EE and other goals and objectives and this could be enhanced by the consideration of alternative methods. It was evident that most working groups needed to deal with, and do away with, common constraints in the workplace. Lack of staff members, lack of money and time and too much to do already were hindering the achievement of goals and objectives in most cases.

I have proposed a number of ideas towards the development of a flexible, enabling framework for EE, within the Trust, for working groups to utilise in their own time:

1. The concept of EE:

The framework could begin with international definitions of EE to create an initial understanding of the concept. These could be followed by the definitions as provided by the research participants, all of which were pertinent (see section 5.2.1.).

a) General knowledge about EE being practiced by other organisations, nationally and internationally:

The provision of contacts in the field of EE would be beneficial to the EWT to create links with national and international organisations. This could promote collaboration and sharing of ideas, to prevent duplication of effort and to ensure that EWT EE practice was constantly being refreshed. Southern African organisations with international relationships include the SADC-REEP (see section 2.6.2.) and the Environmental Education Association of Southern Africa (EEASA).

b) General knowledge of working groups about colleagues' EE work within the EWT:

The proposed framework for an EE strategy could promote the collaboration, coordination and sharing of ideas and activities in order to alleviate some of the constraints in the workplace. The CLG could play a pivotal role in the provision of EE assistance to other working groups, providing that it could manage its time and resources to do this. In my opinion, EWT working groups could draw on one another much more in order to direct and improve their EE objectives.

        c) Resources required for EE practice:

The need for adequate and commonly available resources to enhance EE practice in the field could be explored by working groups. These could then be developed by working groups in a participatory process, and utilised by all working groups in their different contexts.

        d) Achievement of EE visions, missions, aims and objectives:

An overarching framework for EE would ensure that each working group strove for specific and appropriate goals. These would be monitored and evaluated to ensure their suitability to each working group, and sharing and collaboration of EE ideas could contribute to the achievement of goals.

        e) Securing a professional relationship with the national Department of Education and Culture (DoE):

This would ensure that schools and school teachers automatically participated in the goals of a proposed framework for EE. Their establishment as partners in an EE approach could also allow the EWT working groups to concentrate more on other, harder to reach, groups of society (for example, farm workers).

    2. The choice of target groups in relation to threats to the particular species:

In accordance with the above, target groups selected to benefit from EE practice should be relevant to the threats to the specific species, and the aims and objectives of the working groups. Most working groups are already achieving this and further focus could also enable working groups to be proactive as opposed to being reactive.

        a) The use of the media as a tool:

The media (print, radio, television and film) could be utilised as a tool to promote the EE activities of working groups. During the research, it was evident that the media was an under-utilised resource within the EWT and could contribute to increased awareness amongst the general public (see section 4.2.1.). In addition, the EWT website could be updated with EE activities and events as they occurred, as well as specific EE

achievements by working groups at grassroots. There could be links to other EE organisations.

      b)   The role of corporate business:

EWT working groups could establish a common goal regarding corporate business and ensure that they all follow suit. Suitable EE skills and methods should be designated to this target group in order to spread awareness about the links between species' extinction and economic progress.

      c)   The role of indigenous knowledge:

Rural communities are a common target group for the EE practice of working groups. This focus, however, could be coordinated. A focus on the value of indigenous knowledge systems could revive the importance of natural resources and endangered species to all people (see section 5.2.3.).

   3.   Staff structure and autonomous approach to work:

The analysis of the autonomy of working groups could reveal positives and negatives, which could be enhanced and remedied. In this way, EE practices could benefit from a possible fresh outlook regarding goals, objectives and methods.

      a)   Roles of working groups leaders and the quality of work being achieved:

Strong personalities and passion ensured that working groups worked towards achieving goals in the workplace. This energy could be harnessed through an evaluation of the autonomous roles they were holding and could enlighten working groups to interesting (and possibly different) ways of operating.

      b)   The role of EWT authorities in the practice of EE:

It was deemed necessary by some working groups during the research that their authorities could benefit from broadening their awareness about EE. This would possibly induce minor changes in the perceptions of EE, which could be beneficial to all working group staff members.

      c)   Constraints in the workplace in relation to future plans:

The alleviation of constraints would allow working groups to better direct their EE aims and objectives. A monitoring and evaluation component could contribute towards this goal.

4. The need for a monitoring and evaluation system for EE practice.

a) Establishment of one individual or one group to manage the EE component of the EWT:

This subject created much debate during the research process. I feel that a logical approach would be to broaden the scope of the CLG with added human and financial resources. The CLG could then incorporate an EE unit specifically devoted to training and assisting its colleagues within the Trust. The internal objectives of this unit could provide links with the external objectives of the CLG, creating opportunities from and for other working groups within the CLG EE programmes (see appendix A).

b) Linking the social practice of EE and the scientific practice of conservation:

There are many benefits to the harmonious practice of both conservation and EE, ensuring a practical and real focus for target groups (see section 2.6.2.). The EE component within the EWT would serve to publicise the conservation efforts of the working groups. Guidance in the practice of EE could contribute to this concept.

c) Using strengths to bolster weaknesses:

Working groups could concentrate on their strengths, which they are practicing already, towards eventually alleviating weaknesses. Collaboration and sharing of ideas could contribute to this process. A simple action plan for EE, for each working group, to highlight future practice, could feed into the larger proposed framework for an EE strategy in the Trust.

This reason for the proposed framework for an EE strategy in the EWT would have to clarify the scope of the strategy. This would include the extent of range: local, regional, national and international. It is important that all EWT staff members and management participate in the drawing up of objectives, strategies and principles. Hopefully, suitable approaches would emerge that would provide the direction for the EE strategy. Good and constant communication and networking, both within and without the Trust, could ensure the successful utilisation of the document. The formation of partnerships in EE could reinforce the development and utilisation of the EE strategy. It is also very important that links are created and maintained with national and regional education departments so that the strategy is adopted by both government departments and private EE enterprises.

6.7. Critical evaluation of the research process

The background of the EWT in chapter two was important for the discussion during data analysis in chapters four and five, where the perceptions of the individuals leading specific working groups and strategic partnerships played a major role in deciding the research outcomes. The EWT worked according to a unique structure with extraordinary individuals who provided the Trust with its present, well-recognised conservation reputation.

Interpretive research is never complete and this particular study was designed to create opportunities for the EWT working groups to take action for EE. Working so closely with familiar subject material made me, the researcher, especially careful regarding the validity of the research process and the findings (see section 3.6.). I was looking closely at an organisation and its individual staffers and the way that they practice and think about EE.

The relationship between EE and conservation required further exploration within the EWT context. The relationship between the individual EWT staff member and the organisation was another dynamic influencing the work being done on the ground. Permeating these concepts was the fact that human activities are impacting on the natural environment. In addition, it is important that I considered the founding of environmental ethics and values to be an important response to the present environmental crisis.

I had to remain aware that the EWT is a scientifically based organisation, which relies upon scientific research to reinforce its vision. As a result, I perceived that there had been an apparent dearth of focus on the sociological issues, until recently. However, I realised that while EWT working groups were practicing education and awareness to varying degrees, not one had developed specific monitoring and evaluation systems to analyse progress being made on the ground. Strengths and weaknesses emerged from the research, interpreted by me in my closeness to the subject material.

I had to realise that this study was working towards enabling the EWT to further its efforts in EE – which were admirable considering the different circumstances and

constraints of each working group. This research topic could have been a deeper evaluation of an organisation's EE practice but, instead, I chose to take a look at what is happening, and what is not happening. I attempted to assess the strengths and weaknesses of participant working groups regarding EE, and then to evaluate the viability of a framework for EE within the Trust to enable networking and sharing in EE practice. I have evaluated the research process in section 3.7 which revealed the complexities within interpretive research.

The completion of a research study within one year (10 months) is a task dependent upon available time and resources. I only allowed myself about 10 days in which to meet with and interview most of the participant working groups. I also had to accept three telephone interviews and much email correspondence. I feel that more contact with research participants would have enabled deeper data collection and analysis, which would have benefited the outcomes of the research study. My previous knowledge of the organisation, although not comprehensive, affected my attitude towards the research topic: I felt comfortable with the study, which could possibly have affected the extent of the data collection and analysis.

6.8. Conclusion

I believe that the relationship between the organisation (EWT) and the staff members (EWT working group individuals) is a dynamic one which probably requires further evaluation. In addition, the work being done by each working group and its individual staffers requires evaluation on an ongoing basis. The issue of autonomy needs to be resolved as a positive or a negative influence on the work that the Trust is doing as an umbrella body, and the work that individual working groups are doing for particular species. This would influence the directions being taken by the working groups, for the species. This would also benefit the alleviation of constraints in the workplace and make way for new aims and objectives and future plans. The first step towards the establishment of a framework for an EE strategy within the Trust would be to evaluate the EE within every working group and partnership. This could then be looked at as a whole EE entity within the umbrella of the Trust.

The background to an EE strategy would describe the efforts being made by each working group and with their successes and failures being experienced in the field. This

could be compared to what is being achieved in EE by other similar organisations, and their successes and failures, on local, national and global scales. The South African perspective surrounding EE and the role of the Department of Education and Culture is vital to understand towards the linking of goals and objectives between NGOs and government departments.

The definition of environmental education would need to be clarified by EWT working groups role players, in relation to those definitions known and utilised nationally and globally. The choice of role players and possible partnerships is an important issue and relates also to the recent strategy workshop held by the EWT to establish the way forward for the organisation (Dyer 2003). The role of monitoring and evaluation, and the formulation and implementation of policy and strategy would form the foundation of the document.

It is my belief that EE theory and practice should be grounded in the principles of environmental ethics. The causes of the environmental crisis should be known and understood by all role players using the proposed framework for EE within the EWT (see section 1.1.). The present state of the environment is the foundation for the Trust's choice of organisational management, strategies and policies, and responses to conservation issues. Human value systems and the role of EE are inseparable, in my view, and an EE unit could provide a deeper understanding of the environmental crisis. In addition, it is wise to remember that biodiversity conservation is the foundation for EE within the context of the EWT.

LIST OF REFERENCES

Arksey, H., & Knight, P. 1999. *Interviewing for social scientists.* Sage Publications Ltd: London.

Bak, N. 1995. Ecology and education. In McKay, V. (Ed.), *A sociology of educating:* 57-75. Lexicon Publishers: Isando.

Barrett, K., & van der Merwe, C. 1992. *Inside the Earth Summit: environment and development education.* Frontline Communications: Johannesburg.

Bauman, Z. 1993. *Postmodern ethics.* Blackwell: London.

Beck, U. 1992. *Risk society: toward a new modernity.* Sage: London.

Boersman, K. 1988. The educational side of environmental education. In Briceno, S., & Pitt, D.C. (Eds.), *New ideas in environmental education*: 55-78. IUCN. Croom Helm Ltd: Beckenham.

Botkin, D.B. 1990. *Discordant harmonies: a new ecology for the twenty-first century.* Oxford University Press: Oxford.

Brown, L. 1998. *The Cassell paperback dictionary.* Cassell: London.

Bryman, A., & Burgess, R.G. 1994. *Analysing qualitative data.* Routledge: London.

Bulmer, M. (Ed). 1984. *Sociological research methods: an introduction.* MacMillan Publishers Ltd. London.

Bush, T. 1995. *Theories of educational management.* Paul Chapman Publications Ltd: London.

Catton, W.R., & Dunlap, R.E. 2001. A new ecological paradigm for post-exuberant sociology. In Scott Frey, R. (Ed.), *The Environment and Society Reader:* 340-360. Allyn & Bacon: Needham Heights.

Cohen,L., Manion, L., & Morrison, K. 2000. Surveys, longitudinal, cross-sectional and trend studies. *Research methods in education,* 169-180. RoutledgeFalmer: London.

Del Pilar Jiminez Silva, M. 1993. A psychological and ethical approach to environmental education. In Mrazek, R. (Ed.), *Alternative paradigms in environmental education research*: 239-247. The North American Association of Environmental Education: Troy, Ohio.

Dietz, T., Scott Frey, R., & Rosa, E. 2001. Risk assessment and management. In Scott Frey, R. (Ed.), *The Environment and Society Reader:* 272-299. Allyn & Bacon: Needham Heights.

Dobson, A (Ed.). 1991. *The green reader*. Andre Deutsch Limited: London.

Dobson, P., & Starkey, K. 1993. *The strategic management blueprint.* Blackwell Publishers: Oxford.

Draft, R. L., & Weick, K. E. 1994. Towards a model of organisations as interpretation systems. In Tsoukas, H. (Ed.), *New thinking in organisational behaviour:* 70-89. Butterworth-Heinemann Ltd: Oxford.

Dyer, D Consulting. 2003. *Endangered Wildlife Trust strategy workshop: minutes.*

Elderidge, J. (Ed.). 1972. *Max Weber: the interpretation of social reality*. Thomas Nelson and Sons Ltd: London.

Elias, N. 1987. *Involvement and detachment*. Basil Blackwell Ltd: Oxford.

Ellis, C., & Flaherty, M.G. (Eds.). 1992. An agenda for the interpretation of lived experience. *Investigating subjectivity: research on lived experience:* 1-11. Sage Publications, Inc.: London.

Endangered Wildlife Trust. 2002. *A vision: business, ecotourism and the environment*. Colorpress (Pty) Ltd: Johannesburg.

Fay, B. 1996. *Contemporary Philosophy of Social Science*. Blackwell Publishing Ltd: Oxford.

Fien, J. 1993. *Education for the environment: critical curriculum theorising and environmental education.* Deakin University.

Frank, D.J. 2001. Science, nature and the globalization of the environment. In Scott Frey, R. (Ed.), *The Environment and Society Reader:* 249-270. Allyn & Bacon: Needham Heights.

Giddens, A. 1987. *Social theory and modern sociology.* Polity press in association with Basil Blackwell: Cambridge and Oxford.

Golley, F. B. 1994. Grounding environmental ethics in ecological science. In Ferre, F., & Hartel, P. (Eds.). *Ethics and environmental policy: theory meets practice:* 9-19. University of Georgia Press: Athens, Georgia.

Gough, A. 1997. Environmental education in a climate of educational change. *Education and the environment:* 64-98. Australian Council for Educational Research: Victoria.

Greenfield, T., & Ribbens, P. (Eds.). 1993. *Greenfield on educational administration: towards a human science*. Routledge: London.

Green Trust, WWF-SA & EWT. 2002. *The biodiversity of South Africa 2002: indicators, trends and human impacts*. Struik Publishers: Cape Town.

Gunn, S. G. 1994. Cane environmental ethics save the world? In Ferre, F., & Hartel, P. (Eds.). *Ethics and environmental policy: theory meets practice:* 195-215. University of Georgia Press: Athens, Georgia.

Hattingh, J. 1999. Finding creativity in the diversity of environmental ethics. *Southern African Journal of Environmental Education,* 19, 68-84.

Hawken, P. 2001. A declaration of sustainability. In Scott Frey, R. (Ed.), *The Environment and Society Reader:* 379-388. Allyn & Bacon: Needham Heights.

Huckle, J. 1991. Education for sustainability: assessing pathways to the future. *Australian Journal of Environmental Education,* 7, 43-62. Bedford College of Higher Education: England.

Irwin, P. 1990. The concept of environmental education and the development of environmental education in South Africa. *Southern African Journal of Environmental Education*, 11, 3-6.

IUCN, 1971. Education and the environment. *Papers of the Nevada Conference of 1970 and the Zurich Conference of December 1971*. IUCN Publication New Series, Morges. Jackson, W. 1995. *Doing social research: methods*. Prentice-Hall Inc.: Canada.

Janse van Rensburg, E. 2001. (An orientation to research: orientating reading 2). M. Ed lecture notes, Environmental Education Unit Research Methods Short Course, Rhodes University: Grahamstown.

Janse van Rensburg, E. 2001. ("They say size doesn't matter" … Criteria or judging the validity of knowledge claims in research). M. Ed lecture notes, Environmental Education Unit Research Methods Course, Rhodes University: Grahamstown.

Janse van Rensburg, E., & Lotz-Sisitka, H. (Eds.). 2000. 'Sustainability from constructivist & socially critical angles. *Monograph: Learning for Sustainability Project*. Johannesburg.

Kassas, M. 2002. Biodiversity: gaps in knowledge. *The Environmentalist*. <u>22</u> (1), 43-49.

Kassas, M. 2002. Environmental education: biodiversity. *The Environmentalist*. <u>22</u> (4), 345-351.

Kelly, K. 1999. Calling it a day: reaching conclusions in qualitative research. In Terre Blanche, M., & Durrheim, K. (Eds.), *Research in practice: applied methods for the social sciences:* 421-435. University of Cape Town (Pty) Ltd: Cape Town.

Kelly, K. 1999. Hermeneutics in action: empathy and interpretation in qualitative research. In Terre Blanche, M., & Durrheim, K. (Eds.), *Research in practice: applied methods for the social sciences*: 398-417.

Kollmuss, A., & Agyeman, J. 2002. Mind the Gap: why do people act environmentally and what are the barriers to pro-environmental behavior? *Environmental Education Research.* <u>8</u> (3), 239-260.

Leakey, R., & Lewin, R. 1995. *The sixth extinction: biodiversity and its survival.* London: Phoenix.

Leopold, A. 1949. *A Sand County Almanac: and sketches here and there*. Oxford University Press: London.

Lotz-Sisitka, H. 2001. *Environmental Education processes: some initial thoughts on where we stand on the eve of the World Summit on Sustainable Development*. Draft paper. Rhodes University: Grahamstown.

Lotz-Sisitka, H. 2002. *Interpreting environments: ethical perspectives & ethical dilemmas*. M.Ed (Environmental Education) course notes 2002-2003.

Macionis, J.J., & Benokraitis, N.V. (Eds). 1992. *Seeing Ourselves: Classic, contemporary, and cross-cultural readings in sociology*. Prentice-Hall Inc. Englewood Cliffs, New Jersey.

Margoluis, C. 2000. *Lessons from the field: what does it take to make conservation work?* Lessons from the field series. Biodiversity Support Programme: Washington DC.

Margules, C.R., & Pressey, R.L. 2000. Systematic Conservation Planning. *Nature,* 405, 243-253.

Maxwell, J.A. 1992. Understanding and validity in qualitative research. *Harvard Educational Review,* 62 (3), 279-300.

McCarthy, D.J., Minichiello, R.J., & Curran, J.R. 1979. *Business policy and strategy: concepts and readings*. Richard D. Irwin, Inc.: Homewood.

Morgan, G. 1994. Organisation as flux and transformation. In Tsoukas, H. (Ed.), *New thinking in organisational behaviour:* 135-146. Butterworth-Heinemann Ltd: Oxford.

Mouzelis, N. 1995. *Sociological theory: what went wrong? Diagnosis and remedies*. Routledge: London & New York.

Myers, N. 2003. Conservation of biodiversity: How are we doing? *The Environmentalist,* 23 (1), 9-15.

Mrazek, R. (Ed.). 1993. Through which looking glass? Defining environmental education research. *Alternative paradigms in environmental education research,* 9-17. The North American Association of Environmental Education: Troy, Ohio.

O'Donoghue, R., & Lotz-Sisitka, H. 2002. Some Insights on the Gap. *Environmental Education Research*, 8 (3), 261-270.

O'Donoghue, R., & Neluvhalani, E. 2002. *Indigenous knowledge: some methods and methodological perspectives for school curriculum contexts.* Final draft. Rhodes University Environmental Education Unit: Grahamstown.

Ritchie, J., & Spencer, L. 1994. Qualitative data analysis for applied policy research. In Bryman, A., & Burgess, R.G. (Eds.), *Analysing qualitative data*: 173-193. Routledge: London.

Robottom, I., & Hart, P. 1993. Paradigms and the ideology of environmental education research. *Research in EE: Engaging the Debate*. Deakin University Press: Australia.

SADC-ELS, WESSA. 2002. *SADC Regional Environmental Education Programme: Programme Document*. SADC-REEP: Howick.

SADC/ IUCN. 1999. *Enabling EE...: guidelines for environmental education policy and strategy processes in the SADC states*. Sharenet: Howick.

Sandbach, F. 1980. *Environment, Ideology and Policy*. Basil Blackwell Publisher: Oxford.

South Africa (Republic). 2001. Department of Environmental Affairs and Tourism. *A strategic framework for environmental education in South Africa*. Department of Environmental Affairs and Tourism: Pretoria.

South African National Parks. 2002. *Our practice in the context of conservation and development: strand 2*. SANParks Environmental Interpretation and Education Course, Rhodes University: Grahamstown

South African National Parks. 2002. *Environmental Interpretation and Education Strategy: second draft*. SANParks Environmental Interpretation and Education Course, South African National Parks: Groenkloof, Pretoria

Steers, R.M. 1977. *Organizational Effectiveness: a behavioural view*. Goodyear Publishing Co.: Santa Monica.

Taylor, S.J., & Bogdan, R. 1998. *Introduction to qualitative research methods: a guidebook and resource*. John Wiley & Sons, Inc. Canada.

Terre Blanch, M., & Kelly, K. 1999. Interpretive methods. In Terre Blanch, M., & Durrheim, K. (Eds.), *Research in practice: applied methods for the social sciences*: 123-145. University of Cape Town (Pty) Ltd: Cape Town.

Tsoukas, H. (Ed.). 1994. *New thinking in organisational behaviour.* Butterworth-Heinemann Ltd: Oxford.

UNESCO. 1997. *Educating for a Sustainable Future: a transdisciplinary vision for concerted action.*

UNESCO-UNEP. 1977. Intergovernmental Conference on Environmental Education. *Tbilisi Principles of Environmental Education.*

West-Burnham, J. 1994. Strategy, policy and planning. In Bush, T., & West-Burnham, J. (Eds.). *The principles of educational management,* 79-98. Longman Group: Harlow, Essex.

Personal communications: 2003
Bat Conservation Group (BCG): Endangered Wildlife Trust (EWT), Johannesburg. 011-4861102

Blue Swallow Working Group (BSWG): EWT, Ixopo. 039-8342206

Conservation Leadership Group (CLG): EWT, Johannesburg. 011-4861102

Eskom-EWT Partnership: EWT, Johannesburg. 011-4861102

Ledger, J. SADC Environmental Solutions, Johannesburg. 011-6801553

Marine Conservation Group (MCG): EWT, Johannesburg. 011-4861102

Oribi Working Group (OWG): Ezemvelo KZN Wildlife, Pietermaritzburg. 033-2391513

Poison Working Group (PWG): EWT, Nottingham Road. 082 463 4104

Raptor Conservation Group (RCG): EWT, Johannesburg. 011-4861102

EWT-ICF Partnership: EWT, Johannesburg. 011-4861102

South African Crane Working Group (SACWG): EWT, Johannesburg. 011-4861102

Vulture Study Group (VSG): EWT, Johannesburg. 011-4861102

World Wide Web

www.capetown.gov.za/imep/ 8/09/03

www.ecs.co.sz/seap/ 8/09/03

www.environment.gov.za/ 25/04/03

www.environment.sa.gov.au/biodiversity/pdfs/wetlands/wetlands_strategy.pdf 17/04/03

www.ewt.org.za/about.htm 05/02/03

www.gefweb.org/ 8/09/03

www.iucn.org/cec/documents/Article13COP4.pdf 17/04/03

www.ngo.grida.no/soesa/nsoer/response/general/index.htm 24/04/03

www.rhino.org.za May 2003

www.urbanforest.on.net/pdf/April_97.pdf 17/04/03

www.wri.org/biodiv/gbs-iv.html 24/04/03

APPENDIX A – EWT WORKING GROUPS AND PARTNERSHIPS TAKING PART IN THE RESEARCH STUDY

1. *South African Crane Working Group (SACWG)*

Mission: The harmonious coexistence of cranes and people on the same land.

Vision: The South African Crane Working Group aims to ensure the long term survival of South Africa's three crane species and their habitats through active participation of all communities, and to cooperate with other institutions and like minded people, for the benefit of cranes and all people.

Objectives:

a) Networking;

b) **Education and awareness**;

c) Habitat conservation programmes;

d) Population management;

e) Research and monitoring;

f) Community;

g) Fundraising.

2. *Marine Conservation Group (MCG)*

Aims:

a) Research on humpback dolphins which are classified as vulnerable; and

b) Conservation of the area, linked with sharknets, in Richards Bay, KZN

3. *Raptor Conservation Group (RCG)*

Vision: Soaring into the future

Mission: The Raptor Conservation Group is committed to the conservation of the natural populations of diurnal and nocturnal raptors in southern Africa by the initiation and support of research, conservation and **education programmes** based on scientific and sound conservation principles

Goal: To ensure an environment in which healthy populations of raptors will be able to live in harmony with mankind in a sustainable manner

Aims:

a) Promote and maintain a raptor friendly environment in Southern Africa by creating harmony between raptors and people in South Africa

b) Conserve existing raptor populations in Southern Africa

c) Facilitate the repopulation of areas in Southern Africa where raptors previously lived by sound habitat management

Objectives:

a) Establish and implement **awareness programmes**

b) Establish and implement conflict resolution programmes

c) Establish and implement rehabilitation programmes

d) Establish and implement applied research programmes

e) Build alliances with appropriate local and international organizations

f) Lobby authorities and organizations when required to achieve the objectives of the Raptor Conservation Group

g) Establish and implement capacity building programmes to empower the associates of the Raptor Conservation Group in the sound conservation management of raptors

4. *Blue Swallow Working Group (BSWG)*

Vision: Ensuring they will always return

Mission: To conserve and increase the Blue Swallow population by promoting the sustainable utilization of its montane grassland and wetland habitats, for the benefit of all people, throughout its ten-country sub-Saharan African distribution range

Objectives:

a) **Education and Awareness**;

b) People;

c) Habitat;

d) Monitoring;

e) Research;

f) Networking

g) Fundraising.

5. *Vulture Study Group (VSG)*

Mission: The VSG has been in existence since 1973 as an international organisation devoted to Accipitrid and Cathartid vulture research, conservation and **education**. The group consists of people from all walks of life who have an interest in vultures.

Activities:

a) Conducting population surveys of the different species of vultures in southern Africa.

b) Conducting population censuses on an annual basis of Cape Griffon Vultures, African Whitebacked Vultures and Lappetfaced Vultures in the southern African countries under the banner of the SASOL Vulture Monitoring Project.

c) Rehabilitating injured and poisoned vultures.

d) Presenting **awareness talks** to landowners, farm workers, bird clubs, wildlife clubs, social clubs and learner groups.

e) Assisting landowners and land managers with the setting up and management of vulture restaurants.

f) Ringing of vulture nestlings during the breeding season.

g) Doing basic research on all species of vultures in southern Africa.

h) Managing data bases on ringed vultures in southern Africa, vulture sites in southern Africa, international vulture bibliography local articles and publicity on vultures and vulture restaurants.

i) Publishing one of the longest running journals in South Africa, Vulture News, as the journal of the Vulture Study Group twice per annum.

j) Publishing the Gyps Snips newsletter three times a year.

6. *Bat Conservation Group (BCG)*

Mission: To achieve increased public participation in bat conservation through **education**, communication and support for bat research and conservation projects.

Vision: We recognise the importance of bats in biodiversity and a sustainable environment. We aim to conserve bats by creating awareness of and commitment to the protection of bats and their habitats for the benefit of all.

7. *Conservation Leadership Group (CLG)*

Goal: To build capacity in and mobilise aspiring conservationists, enabling them to represent themselves, their communities and the EWT in whichever walk of conservation they choose.

Aims and Objectives:
  a) The Endangered Wildlife Trust and its working groups offer these conservationists the opportunity to experience hands on conservation and exposure from a leading NGO.
  b) It would be viable not just for the students, but for the broader community too, if these **students' training** incorporated aspects such as business management related to eco-tourism, managerial skills, people skills, English training and conservation specific topics, also allowing for outreach programmes in the respective communities. This would all play a part in mobilising these conservation entrepreneurs, in the field, and in establishing their own micro-enterprises with in the industry.
  c) To help these previously disadvantaged conservationists to conceptualise conservation in its broader sense, and their place in the industry.

8. *Poison Working Group (PWG)*

Mission: The Poison Working Group is aimed at promoting the sensible and responsible use of pesticides, chemicals and poisons, thereby preventing the unnecessary destruction of the environment and wildlife in South Africa.

9. *Law and Policy Working Group (LPWG)*

Vision: Enhanced conservation related legal knowledge within the Endangered Wildlife Trust, and recognition by policy and lawmakers of the expert capacity within the Trust to assist with policy and legislation development.

Mission: To assist the other working groups of the Endangered Wildlife Trust with legal aspects of their work and to **create greater awareness** of, and involvement in, conservation related legislative and policy developments.

10 Oribi Working Group (OWG)

TBA

I interviewed two partnerships which offered very useful insights into the research topic:

1. The Eskom – EWT

Mission: The establishment of an integrated management system to monitor and manage the effects of interactions between wildlife and electricity structures, in order to minimize their impact on the electricity supply and on wildlife populations.

2. The EWT – International Crane Foundation

Aims: The International Crane Foundation and Endangered Wildlife Trust collaborate with individuals and organizations throughout southern Africa, including the South African Crane Working Group (SACWG). Their aim is to direct a comprehensive regional program to monitor the status and distribution of Wattled Cranes, empower local ecologists to develop pro-active conservation programs with local communities, and promote the wise management of wetland systems for the benefit of people and wildlife. The program focuses on research, conservation planning, and capacity building in each country that supports Wattled Cranes.

The partnership is undertaking a comprehensive research program of aerial surveys, ground surveys, questionnaires, and interviews across the entire range of Wattled Cranes.

Research objectives include to:

- Assess the status and distribution of Wattled Cranes through their range in south-central Africa;
- Identify the main threats to Wattled Cranes and their critical habitats;
- Investigate different factors affecting Wattled Crane distribution and abundance at specific case-study sites, including the Zambezi Delta in Mozambique, Kafue Flats in Zambia, and Okavango Delta in Botswana; and
- Evaluate how conservation efforts targeting the Wattled Crane as a flagship species can promote overall biodiversity conservation in south-central Africa, especially for endangered but lesser-known species.

APPENDIX B

LETTER OF INTRODUCTION TO RESEARCH AND QUESTIONNAIRE

11 March 2003

Dear _____

I would really appreciate it if you could answer the attached questionnaire **by Friday 14th this week** regarding your work with the CLG and education and/or awareness.

My half- thesis title is "Develop an environmental education awareness framework for endangered species conservation in South Africa."

This is the first step in my half-thesis data collection and once I have had all the questionnaires back (which I am sending to all the EWT working groups) I will be able to sift out the groups doing education and/or awareness to some degree and dealing more directly with endangered species conservation. Then I aim to interview the representatives of these groups one-to-one for more detailed information to inform my proposed environmental framework for endangered species conservation.

My **primary assumption** is that the EWT, despite its size and the scale of its operation, is lacking a coordinated EE strategy that would work parallel to its conservation management plan (www.ewt.org.za/about.htm 5/02/03). This research would fill a gap within the organisation, promoting better achievement of its goals. It would also improve the impact of programmes such as the FWAP, on target audiences.

My **second assumption** is that a well-planned EE framework that supports the conservation of endangered species would encourage coordination, collaboration and sharing between the working groups. The CLG could assist and draw from this framework, enriching these educational processes.

A **third assumption** is that the target audiences of each working group such as farm workers and teachers) would benefit from an organised educational programme. So too would the working group staff learn from one another and enhance their work on the ground.

This is a small (80-100-page) half-thesis and I hope that the framework that emerges will be an enabling document for the EWT working groups to use, add to, improve and make comments on. I am also hoping that it will be useful for the Biodiversity Environmental Education Programme (BEEP) for schools in KZN.
It is a flexible document that I am hoping will assist the working groups to share ideas and to collaborate around education and awareness activities and ideas so that we all make progress.

The bottom line is that the endangered species out there do benefit.

Yours sincerely,
Janis

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QUESTIONNAIRE – ENDANGERED WILDLIFE TRUST WORKING GROUPS

Introduction:

1. Name: _____

2. Working   Group:
   _____

3. Date   when   you   started   working   for   the   EWT:
   _____

4. Date   when   this   particular   working   group   was   established:
   _____

5. Number   of   staff   working   for   this   working   group:
   _____

Questions:

1. Please rank the following variables in order of importance to your working group: (1-8, 1=most important; 8=least important)

   - species preservation
   - habitat conservation
   - breeding
   - research and monitoring
   - legislation
   - lobbying government
   - education and/or awareness
   - media and marketing

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-

2. In terms of the threats to endangered species, what, in your opinion, has most impact on endangered species in SA? Please rank the variables in order of importance: (1-11, 1=most important; 11=least important)

   - habitat loss (agriculture and afforestation)
   - habitat loss (industry and urban develop)
   - human encroachment & disturbance
   - poaching for food
   - hunting
   - illegal trade
   - poisoning
   - lack of education and/or awareness
   - HIV/AIDS
   - Unemployment
   - Poverty

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3. What is/are the "target audience(s)" of your working group? (please tick as many as appropriate).

- farmers: ____
- business: ____
- farm workers: ____
- general public: ____
- school pupils: ____
- teachers: ____
- government departs: ____
- academia: ____
- other (specify):   _____

4. What percentage of your time is spent on education and/or awareness per annum? (Mark it on the scale).

/_____\
0   25   50   75   100

5. Are you aware of what other working groups are involved in regarding education and/or awareness? Please specify which working groups these are and what they are doing towards education and/or awareness.

_____
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6. What are the current education and/or awareness activities of your working group?

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7a. Do you think that your working group is achieving its goals in this sphere?
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7b. Why or why not?
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_____

8. Please rank the following constraints in order of importance to your working group:
(1=most important; 9=least important)

- time	-
- money	-
- vehicles and/or fuel	-
- staff on the ground	-
- educational resources	-
- office resources	-
- communication	-
- inspiration	-
- too much to do already	-

9a. In your opinion, has the education and/or awareness dimension of this working group improved since it was established?
_____
_____
_____
_____

9b. Why and how?
_____
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10. What kind of educational requirements does your working group find to be useful? (please tick as required)

- staff training	-
- learning support materials	-
- field resources (visuals, models)	-
- additional information	-
- fresh field methods and/or techniques	-
- knowledge about cultures & beliefs	-
- sharing with others/networking	-
- evaluation	-

11. Do you agree/disagree with this statement: "A national environmental education framework for the EWT would benefit the conservation of endangered species".

- strongly agree: ____
- agree: ____
- neutral: ____
- disagree: ____
- strongly disagree: ____

12. Please define "environmental education" as you understand it in no more than 50 words.

_____
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APPENDIX D

INVITATION TO PARTICIPATE IN THE SEMI-STRUCTURED INTERVIEWS

April 29, 2003

Dear _____

Motivation of intention to interview some working groups of the EWT for Masters

I am well into the second year of my Masters in Environmental Education (M.Ed) 2002-2003. This is the "research" year and I am tackling the following research title for my half-thesis (100 pages maximum):

"The development of an environmental education awareness framework to support endangered species conservation in South Africa."

The first step in my half-thesis data collection has been a questionnaire to EWT working groups which you have received and returned. The second step was to "sift" through the returns to find the groups doing education and/or awareness to some degree and who are dealing more directly with endangered species conservation.

You are one of the representatives selected for a one-to-one (semi-structured) interview during which I hope to discover more detailed information to inform my research.

The final step in the data collection process will hopefully be an informal workshop of all of the working groups who participated in both the questionnaire and the interviews. This workshop should also ideally take place when I am in Johannesburg.

As I have already mentioned, this is a small (80-100-page) half-thesis and I hope that the framework that emerges will be an enabling document for the EWT working groups to use, add to, improve and to comment on.

I would like to assure every participant in the research process that your information that you feed to me will be strictly confidential. I will ensure a transparent process. I will send data analysis back to you for checking and validity.

If there are any queries or discrepancies along the way, I will be happy to discuss them openly with you so that we come to an agreement.

The bottom line is that the endangered species in South Africa benefit in some small way.

The results of this research will not be used or published for five years as this is Endangered Wildlife Policy.

Yours sincerely

Janis O'Grady
KZN Crane Foundation

APPENDIX E

INTERVIEW SCHEDULE - GENERAL

1. What are the a) vision, b) mission, c) goals and d) objectives of this working group? (COPY FOR ME)

2. Has anything changed, been renewed/updated since the year that the group began?

3. Do you feel that this working group is achieving those objectives?

4. Do you have a monitoring and evaluation system in place for any dimension of your work?

5. Does/would this assist you in your work, do you think?

6. What, in your opinion, are the strengths of your working group?

7. What, in your opinion, are the weaknesses of your working group?

8. What are your perceived priorities for a) this working group and b) the EWT?

9. Does this include EE?

10. Do you feel happy about the degree of EE that you are doing?

11. Where are the gaps in the EE that you are doing?

12. How has this changed from the time that the group began?

13. Do you feel that a national EE coordinator or programme within the EWT would enable better sharing, linking, collaboration and coordination of ideas? Provide better opportunities for funding, achievements, PRO?

14. Do you feel that a national monitoring and evaluation system for EE would enable more effective EE practice on the ground?

15. I am working on setting up a national EE framework for endangered species conservation – do you know of any other EWT strategies/policies that assist working groups with their work on the ground?

16. What do you think are your a) EE responsibilities, b) your EE capabilities, and c) the EE accountability in your working group?

17. What do you know about national and/or regional EE initiatives in both government and NGO circles?

18. Should the EWT working groups be linking with these?

19. Knowledge of global trends in EE and conservation can enable us to do our work better – do you agree? What do you know about global EE happenings?

20. What, then, is the preferred role for EE within a) the EWT, b) your working group and c) conservation in general?

21. Do you think there is a need for greater/better communication – concerning EE – within the EWT and externally to the media/other NGOs?

22. Do you think it would be strategic to ensure that each working group had its own EE plan, based on this proposed greater framework?

23. Who should be responsible to implement/coordinate such plans?

24. How will we implement such a programme (funding, legislation, action plans, programmes?)

25. How should we evaluate an EE plan within a broad framework?

26. Do EWT managers understand and desire an EE dimension?

27. What are the major a) differences and b) commonalities between EWT working groups?

28. How should information flow between EWT working groups, regarding EE?

APPENDIX F

INTERVIEW SCHEDULE – SPECIFIC

EXAMPLE: POISON WORKING GROUP - of the Endangered Wildlife Trust (EWT)

1. In the questionnaire, no. 1, you rate EE as 3 and habitat conservation as 1. Surely we should direct EE at govt (lobbying) to enforce legislation better?

2. Habitat loss, human encroachment and illegal trade (to name but a few) are main threats to endangered species' survival in SA today. Do you feel that EE has a role to play in dealing with these? Surely it is also about attitudes and behaviour?

3. You spend 50% of your time on EE: do you feel you would like to increase this – is there a need?

4. I see that you do not 'target' schools or teachers or academia – why is this? Are you being effective enough if you do not target rural children whose fathers and mothers are often farm workers?

5. Do you know what the CLG does?

6. Do you see links between their 100% EE and your gaps?

7. Do you feel that the CLG could assist/play a role in EE in other working groups? Ideas, strategies, materials?

8. It seems to me that most working groups are very unaware of what the others are doing in EE – is this true? Why?

9. How could this "lack of communication" be alleviated? How could people work together better and share ideas considering the constraints each groups is suffering?

10. Your constraints are time, lack of staff and too much to do already: could better inter-group communication alleviate these? I see money is no problem – why?

11. What is your role exactly?

12. Do you think people out there would benefit from environmental management training?

13. What is the scope of your group? Where does KZN fit in? How do you justify this scope and do you ever think of expanding into other provinces?

14. Do you ever think about monitoring and evaluation of your project?

15. How would you envisage my EE framework using the EWT as a focus? Practical?

16. We all seem to be "targeting" poor, rural people in EE. What of the wealthy corporates who pour money into their 'green conscious' projects yet do more damage than anyone? Should we be influencing them?

17. Tell me about future plans.