

## CHAPTER 1: INTRODUCING THE RESEARCH PROJECT

*"..., it is not simply the stock of natural resources of South Africa that will determine her competitiveness in tourism, but rather, how these resources are managed and to what extent they are complemented with man-made innovations." (South Africa, 1996:1).*

The research applies two approaches to tourism, namely ecotourism and environmental education. The two approaches are seen as options to manage the very resource on which tourism is dependent, namely the environment. The project focuses on the planning of ecotourism trails as a human innovation operating complementarily to the environment through which a trail passes and the facilitation of environmental education. Ecotourism as an approach is chosen because it is within this specific approach to tourism that the link with environmental education lies. This link is investigated in Chapter two.

### 1.1 What is tourism?

It is necessary to explain what is understood by tourism before investigating the evolvement of the field of tourism into including ecotourism as an approach. Tourism is described by authors as an activity, a system and an industry (Lubbe et al, n.d:1; Hohnholz, 1994:40). Tourism as an activity includes all temporary travel, for whatever purpose, that results in one or more nights being spent away from places of work and home (South Africa, 1996:vi). As an industry, tourism is described as a multi-faceted environment-dependent development industry utilizing the natural and built environments for its particular economic value (Hattingh, 1994b:3; Hughes, 1995:53; Goodall, 1995:29; McIntosh et al, 1995:368). Tourism includes pre-trip expenditure on travel and booking, travel and en-route expenditure, and all spending at the destination (South Africa, 1996:vi).

For many years tourism has been one of the fastest growing economic industries. According to the World Travel and Tourism Council it is estimated

that tourism in 1995 contributed 10,9% to the GDP (Gross Domestic Product) of the world economy, 10,5% to the United States economy, 13,4% to the European economy, 12,3% to the British economy and 31,5 % to the Caribbean economy (South Africa, 1996:2). This tendency of growth places more and more demands on the environments on which tourism is dependent (Prosser, 1994:19). For example visitors to South Africa find aspects such as scenic beauty, wildlife, climate, African cultural experiences, seeing South Africa after political change, value for money and diversity of attractions most appealing (Bennett, 2000:7).

For many countries such as South Africa, tourism is becoming an increasingly attractive source of income and a means of financing other development (Cosgrove & Jackson, 1972:49). In South Africa it is seen as a major job creation force and a source of wealth (Bennett, 2000:7). It is also seen as a useful way in which regional imbalances in a country can be addressed. For South Africa it provides unique opportunities for involving previously neglected groups. It dynamises and rejuvenates other sectors of the economy (South Africa, 1996:6,14). Although this aspect has its own problems such as seasonal unemployment, exploitation of culture and clustering of settlements. It is, however, important to decide whether the tourist potential is worth exploiting from an economic, social and political standpoint, what type of tourism is to be encouraged and who is to provide the investment for the facilities and infrastructure (Cosgrove & Jackson, 1972:50).

If tourism is to ensure its continuation, competitiveness and marketability it will have to conserve the very commodity on which it is dependent, namely the natural, built, social, cultural and political environment (Cater, 1995:22; Goodall, 1995:29). To accomplish this, Hattingh (1994b:3), Khumbane (1995:71), Van der Merwe (1996:7) and Hall (1998:22) are of the opinion that the tourism environment should be developed in a sustainable way so that it will be available for generations to come (Palmer & Neal, 1994:3). Mayor (1998:7 in Jickling 1999:1) emphasises that education and public awareness are critical to achieving sustainability in tourism.



Tourism differs from other economic industries in that it is not a primary export item like coal, copper and iron that adds little value to the product at the export market. Tourism is the final product which means that all final value has to be added in the tourism destination by the supply sector that includes transport, food, accommodation and education (South Africa, 1996:17). Thus the supply sector of the tourism industry is wider than only the environment and forms an important part of the bigger tourism system which also includes the demands of the tourists. International tourism is the only export item of the economic industry that does not leave the economy (Robinson, 1976:xviii; South Africa, 1996:16). Tourism further differs from other industries in that it promotes awareness and understanding among different cultures, helps to save the environment and brings development to rural areas. Tourism, similar to other industries, creates opportunities for small entrepreneurs, creates jobs and develops links with other industries like agriculture, light manufacturing, crafts and service (Robinson, 1976:xxix; South Africa, 1996:4).

The demand for tourism is influenced strongly by fashion while the interest and reasons for travel often change (Prosser, 1994:22). In 1972 Cosgrove & Jackson were already of the opinion that this tendency of change in tourist demands would increase "culture travel", educational trips and active holidays, at the expense of purely tourist travel, which would greatly affect local cultures at tourist destinations (Cosgrove & Jackson, 1972:44). Budowski (Orams, 1995:3) as early as 1976 argued that tourism should be integrated with conservation. It became clear that tourism should be more than just a travel experience in a natural environment (Gunn, 1989:110; Orams, 1995:3), that would be to the financial benefit of tourism developers (Ferrari, 1993:147; Wight, 1993:3) and to the detriment of the environment. Protecting the environment has become an essential part of tourism development (Wearing, 1993:127; Hattingh, 1994a:4; Cater, 1995:22; McIntosh et al, 1995:368; Hall, 1998:23).

## 1.2 Evolvement of tourism

In the late 1980s environmental groups (Hughes, 1995:49) pressured tourism into recognizing and reacting to the negative impacts mass tourism had on natural areas (Jacobson & Robles, 1992:701; Wearing, 1993:127; Hattingh, 1994b:3; Goodall, 1995:29; Orams, 1995:3). Environmental movements expressed their dissatisfaction with the principles and practices of tourism and the industry became sensitive and vulnerable to this type of criticism (Hughes, 1995:49). Such criticism, the development of widespread and growing interest in the natural environment, and the emphasis on the importance of conserving the quality of the environment rather than exploiting it (Wight, 1993:4), challenged the tourism industry. Ecotourism emerged as a more acceptable and marketable approach to tourism (Prosser, 1994:31; Orams, 1995:3). Along with ecotourism other concepts such as nature travel, adventure travel, sustainable tourism, alternative tourism, appropriate tourism, cultural tourism, green tourism, responsible travel and soft tourism emerged (Medlik, 1993:11; Lew, 1998:93; Zeppel, 1998:61).

The challenge facing tourism is to create new alternative tourism products that will meet the need for a new form of tourism demand such as ecotourism. Both development and conservation need to be equally and effectively enforced in such tourism products. A fundamental shift from an exploitative approach to a sustainable approach in tourism development has become necessary (Prosser, 1994:31). In South Africa, a responsible approach to tourism is perceived, not as a luxury but as an absolute necessity if the country is to build a successful and sustainable tourism industry (South Africa, 1996:9). Black (1999:1) is of the opinion that if ecotourism seeks to make this shift and promote responsible travel, its foundation should be education. The **White Paper: Development and Promotion of Tourism in South Africa** (South Africa, 1996:9) highlights the absence of adequate education, training and awareness opportunities as the greatest deficiencies of the tourism industry in South Africa.



The emphasis on the educational facet of ecotourism challenges tourism to transform itself from simple experiences of enjoyment and satisfaction to greater understanding and attitude change and finally to more responsible behaviour (Jacobson & Robles, 1992:702; Orams, 1995:3). Bragg (1990:12) suggests that *"ecotourism involves active appreciation, education or interpretation ... strengthens environmental awareness, concern and commitment through an increased understanding and appreciation of nature"*. Tourists experience a need to be informed and enlightened, to become environmentally knowledgeable, literate and active (Palmer & Neal, 1994:8).

Accomplishing this transition implies that attempts should be made to incorporate a number of elements into tourist experiences. These elements include learning in, about and for the environment (Gunn, 1989:110), the facilitation of attitude and behaviour change (Orams, 1995:5,6) and an awareness and concern for poor environmental practices in the host community where the tourism product is functioning (Wight, 1993:3,6). This educational dimension of ecotourism (Botha, 1983:128; Porritt, 1996:17) should not be for the tourist alone but it should also be targeted at the host communities and tourism developers (Tallantire, 1993:55, Lew, 1998:93; Black, 1999:1).

Adopting an ecotourism approach to tourism further implies that ecotourism operations should utilise education-based management strategies to prompt their customers to adopt more environmentally sensitive attitudes and, more importantly, to change to more environmentally sound and responsible behaviour (McIntosh et al, 1995:368; Orams, 1995:3). Managers of ecotourism facilities need to begin to recognise education and interpretation as effective management techniques (Black, 1999:2).

If ecotourism developers seek to accomplish the above and provide opportunities for environmental learning, behaviour and attitude change, highlighting environmental diversity and problems and promoting conservation, developers will have to facilitate an educational approach throughout the planning framework they choose to adopt (McIntosh et al, 1995:373, Black,

1999:2). The suggestion is that environmental education could be an educational approach facilitated throughout ecotourism planning frameworks (Jacobson & Robles, 1992:702). Environmental education is an approach that has moved beyond educating only for protecting or conserving the natural environment from human threats. It has also become an important aspect of informal education and of recreation activity. Environmental education calls for increased participation by host communities in the management and development of their environments (Smyth, 1995:8-10). This would imply that environmental education could be included to a greater extent in development approaches like ecotourism and the combination into one system of the ecological and human dimensions (Smyth, 1995:17), thus recognising the interdependence of environmental and developmental issues (Fien, 1995:22). This approach would mean that economic, educational, environmental, tourism and social issues are no longer separated but are integrated with one another in a compatible way.

Therefore, if ecotourism operating as a developmental approach to the tourism industry, and environmental education operating as an educational approach utilised by the ecotourism industry to ensure its sustainability, were to operate compatibly and complementarily (Wight, 1993:6) in an integrated way in the same environment, it would be necessary to identify similarities and differences between the two approaches. In doing this, principles that ecotourism developments could incorporate into their planning framework, to ensure the facilitation of environmental education, could be established. Such a framework could help ensure that the educational needs of tourists, tourism developer and host community, the conservation of the resources and the economic benefits of ecotourism are provided for and thus promote the sustainable development of ecotourism resources in future.

The above evolvement and understanding of ecotourism as an approach to tourism can be applied to a diverse spectrum of activities like trails, mountaineering, skiing, hotels, cruises and game viewing. (Hattingh, 1994a:5; Cater, 1995:21). The development of each of these activities takes place in



different environments and takes into consideration its own specific set of planning principles. Furthermore ecotourism does not only have one aspect, namely, education but also has other aspects such as policy, standards, carrying capacity (Lew, 1998:105), community involvement (Mosidi, 1996:25), economics (Hattingh, 1994c:3) and conservation (Wearing, 1993:127). To investigate all these aspects of ecotourism and the planning principles that underlie the development of all ecotourism activities would not be feasible within one study. Therefore, in this study the focus will be on the development of one ecotourism activity, namely, trails and one aspect of ecotourism, namely, education. Although trails as a tourism destination can be classified as ecotourism it need not necessarily be so. If the tourist destination, the trail, does not meet the principles pointed out in Chapter two, section 2.3 it fails to be an ecotourism destination that provides an environmental education experience. Therefore, the essence of this study emerges, namely, how ecotourism trails can be planned to facilitate environmental education.

### **1.3 Theoretical framework underpinning the study**

In this study, the traditional research process of putting an epistemology first and deriving from it a methodology was not followed but rather, a certain research methodology was applied and then an epistemology derived. This is the wheel argument or diallelus process termed by Rescher (1977:17 in Bird 1989:225). The implication is that the researcher had to decide on a research method to justify the research problem. The selected research problem guides the research method used.

In the introductory paragraphs it is made clear how the field of tourism has evolved into adopting ecotourism as an approach to tourism developments. It is pointed out that with the implementation of an ecotourism approach comes an educational responsibility that can be provided through environmental education. The question that can be asked now is where the domains of ecotourism and environmental education lie in the theoretical framework of Geography which forms the study field in which the research is conducted.

### 1.3.1 *The research in the context of Geography has a plurality of approaches* (Pemberton, 1993:32).

Relevant to geographers is the debate about environmental values and the use of resources. Geography focuses on the physical (natural) and social (human) landscapes, having a holistic nature and inter- and cross-disciplinary focus (Pemberton, 1989:5; McKeown-Ice, 1994:40, Agnew et al, 1996:6). This very nature of the field of Geography places it in a strong position to exploit the interesting and important themes of conflict between what is ecologically desirable (environmental education) and what is economically advantageous (ecotourism) (Holt-Jensen, 1980:128). Three aspects that ecotourism and environmental education have in common are that both have a strong environmental focus and both share the concern for the environmental crisis and both aim at ensuring a good quality of life for future generations. Geography focuses on a spatial perspective of people-environment interaction with a spatio-temporal dimension (Fairhurst, 1994:1) which gives it a distinctive educative value. The spatial distribution and relationships Geography deals with relate to the movements of ecotourists from place to place. Other similarities with Geography is that ecotourism is an economic industry which is an aspect of Economic Geography (Freysen, 1978:28).

Pemberton (1989:41) identifies four themes that run parallel in Geography and Environmental Education. First is the interrelationship between natural and social systems; second is the unity of humans with nature as agents of landscape change, influencing processes that modify their surroundings. Third is the effect of society's technology and decision-making on the land and people, and fourth the continuation of learning throughout the human cycle.

Keeping the above associations between the two approaches, ecotourism and environmental education, and Geography, in mind; the researcher would want to reason that the problem of this study lies within the study of Geography and more particularly, Human Geography that engages in the dualism between people and environment (Bird, 1989:66) and tries to explain the dynamics of spatial association (Pemberton, 1989:6). Furthermore Human Geography is



multi-paradigmatic (Agnew et al, 1996:37) and has a plurality of approaches (Simmons, 1993:62).

In the process of arguing in which paradigm this research is positioned accepted facts about Human Geography will be related to the research. Human Geography derives an abiding interest in places, looks at the environment, and interprets it as space (Peet, 1998:48, Holt-Jensen, 1980:5). It engages in the study of the notions and experiences of place that can include environmental experience, interpretation and education as well as knowledge about the use of space by industries like tourism (Pickles, n.d.:32). Human Geography studies aspects related to people such as meaning, values, goals and purpose which are inherent to environmental education (Peet, 1998:35). This approach in Human Geography is criticised for being unscientific because the generalisations it postulates are perceived as mere personal opinions. However, this is not true because human geographers in their understanding of place attempt to encompass the wide range and experiential depth of life in places in their research.

The focus of this research is on the use of space by ecotourism developments such as trails which are established in the context of a specific environment. The environment that can be used as a resource may be either natural or built and functions in an economic environment by providing income and job opportunities to local communities and developers. In the process of planning ecotourism trails people are active agents in the specific environment in which they find themselves, whether the individual is a trail user, therefore the ecotourist, ecotourism developer or host community. There is a definite interaction between these different groups of people and the environment.

In the next three sections the basic three philosophies inherent to Human Geography and the applicability of each philosophy to the research will be investigated.

### 1.3.2 Idealism

A philosophy that is part of Human Geography is idealism (Bird, 1989:26,72). Idealism provides the human geographer with a methodology for research, namely, that the historical past, made up of existing theory at the conceptual meso and macro scale in the literature, must be encapsulated within the context of present experiences through empirical investigation at micro-scale using case studies. The research starts with general observations from the theory in the literature on ecotourism and environmental education. From the general observations a framework of principles is constructed at the outset and is contextualised and reviewed during the empirical research using case studies. The researcher chose to compare the generalisations from one primary in-depth case study namely the Tswaing trail with generalizations from other trails at Rustenburg, Northcliff and Windy Brow in Chapter six. The intra-case generalisations at micro-scale build on the existing body of scientific knowledge based on theory, concepts, principles and findings at macro and meso scale, through a process of induction. A new body of scientific knowledge is proposed in the format of an ecotourism trail planning framework that facilitates environmental education and can operate on an inter-case basis (Bird, 1989:27). Thus, the research methodology used in this study follows an agglomerative method of theory construction which is closer to the inductive perspective and to science. The difficulty with this approach is to present the results in a cumulative or hierarchical manner, and also permitting at least a few umbrella generalisations.

In the above choice of methodology, the researcher draws strongly on pragmatism rather than primarily at the level of epistemology and ontology. The reason is that the research focuses on the practical level of what can be achieved by intellectual intervention through the compilation of an ecotourism trail planning framework in an imperfect and unequal world where developments such as ecotourism are competing for space in the environment. An action-oriented philosophy is followed. This approach necessitates the rigorous research and formulation of concepts used in the research work such



as ecotourism, environmental education and trails in order to avoid abstractions and irrelevance (Bird, 1989:228). To achieve this aim an in-depth literature study is required. Such a research method could be termed methodological pragmatism (Rescher, 1977).

### *1.3.3 Existentialism*

Another philosophy inherent to Human Geography, that supplies an ontology, is existentialism (Bird, 1989:73-74; Peet, 1998:35). This philosophy states that in order for people to confirm their own existence they must enter a relationship with space, the environment. Similarly, trails, ecotourism and environmental education deal with people like the trail user, developer and host community in the trail environment and allow people to enter into a relationship with the environment. These groups of people can increase their knowledge of the environment through their interaction with it. This philosophy is related to the interpretivism approach also present in environmental education. According to the interpretivism approach, the provision of a meaningful experience, as on a trail, should include opportunities to hear, smell, taste, touch and see. Humans can respond to the environment in different ways from visual and aesthetic appreciation to bodily contact with the most intense experiences emanating from the element of surprise. Lasting appreciation comes when there is a combination of human incidents, such as making contact with host communities, satisfying scientific curiosity, and experiencing discontinuities in the trail environment like change in the environment characteristics. This creation of a surprise element awakens interest and stimulates enquiry in the trailist (Peet, 1998:52).

Existentialism does warn that care needs to be taken not to forget the community in which people live, much like the structuralists. Relph (1976:34 in Peet, 1998:50) reminds us that there is a powerful relationship between community and place, in which each reinforces the identity of the other. This is an aspect inherent to ecotourism that places the role of the host community as a priority in its development process and explores the potential of the host

community. Ratzel, the founder of Human Geography, in 1891 already pointed out this relationship between community and place and stresses the significance of the historical development and cultural background of populations and their indigenous knowledge. Host communities form an integral part of ecotourism developments and should form part of the planning framework applied to resource developments like trails.

The existentialism philosophy in Geography further emphasises inner experience, knowledge by participation rather than observation and places more emphasis on subjectivity than objectivity (Peet, 1998:36,37). For people to understand the environment in which they function when participating in an ecotourism activity such as a trail, they need to participate in a hands-on manner (Holt-Jensen, 1980:22). Environmental Education is an educational approach that emphasises participation and could be adopted by ecotourism to accomplish this. Such a practical, action-orientated approach that enlightens, and thereby, catalyses social and political change is also inherent in the critical theory that strives to improve the quality of people's lives. It emphasises the inner experience and enrichment through active participation rather than observation. Thus, the emphasis of this research is on using an active mode of interaction with the environment such as trails to explore the possibilities of unlocking the environment to humans. The environment (trail) is the place (structure) which provides the setting for human action (agency) in the form of environmental education which is true to the realism approach in Geography.

#### *1.3.4 Realism*

In the above analyses of where this research project lies within Geography and its underpinning philosophies it becomes clear that it would be difficult to place the research within one philosophy inherent to Human Geography. This is true to the multi-paradigmatic nature of Human Geography. However, the presence of three domains, namely the actual, real and empirical, and the pragmatic nature of the research places it in a more holistic philosophy, namely, realism (Johnston, 1989:57). The reason being that the research incorporates



ecotourism and environmental education into its problem statement that stretches over this three-tiered ontology. The tourist (agent) who uses the ecotourism trail is placed in the actual domain. During the trail event the tourist experiences the outcomes of the event whether educational, recreational or physiological as part of the real domain. This event, the trail, in which the individual is engaged, is structured according to certain trail planning principles. These principles are changeable theoretical statements based on the theory from the literature research and observations during the case studies. This forms part of the empirical domain. For clarity in further discussions in the study, this three-tiered ontology can be summarised as follows:

**TABLE 1.1 THREE-TIERED ONTOLOGY OF REALISM APPLIED TO THE RESEARCH**

<b>REAL DOMAIN</b>	<b>ACTUAL DOMAIN</b>	<b>EMPIRICAL DOMAIN</b>
The event which is the trail	The agents which are the trail user (tourist), developer (trail owner, trail planner), authority and host community	Environmental education and ecotourism

Furthermore, planning an ecotourism trail to facilitate environmental education implies that an environmental decision has to be taken that impacts on the total environment, namely, the economic, natural and human environment. In adopting such a wider concept of habitat; meaning the total physical milieu in which people live, including buildings and other human artifacts, as well as vegetation and other environmental features (Holt-Jensen, 1980:8), the research takes on a socio-natural interpretation of space which is central to realism (Peet, 1998:175).

By adopting realism as the broad philosophy in which to place the research, implications for the methodology of the study arise. All empirical work from the case studies that is done through observation must be integrated with the

theory from the literature study to provide an explanation of the ecotourism trail planning framework. From the phenomenology of Human Geography, it might appear as if such a result is not possible in the ecotourism trail planning framework proposed because it is at the periphery of planning policy implications. It is important to realise that the proposed framework is not a system but rather a means to problem-solving, because as the researcher constructs the framework, recognition is given to the interconnectedness between the phenomena in question namely, ecotourism, environmental education and trails. Subjective judgement is inherent to the construct of such a framework (Bird, 1989:156). The research could therefore not be positivistic because it is not characterised by testable observations but rather subjective observations.

The study tries to create an ecotourism and environmental awareness aimed at developing the environment in which people live in a responsible and sustainable manner by facilitating environmental education through applying a specific planning framework that would help to ensure this. In this way, true to Human Geography, the researcher attempts to raise the level of consciousness of society (Peet, 1998:52). Appleton (1975) in Holt-Jensen, (1980:32) emphasises that an educated perception of the landscape is important if its attractions are to be preserved. The result of this research is aimed at preserving the environment by using a theoretical planning framework for ecotourism trails that will facilitate environmental education and thus educate people to transform conditions that will emancipate and empower them.

The research approach adopted could create the perception that the research is based on the structuralist philosophy (Bird, 1989:45) more than realism. Although, like the structuralist approach, the individual developers and host communities are simultaneously part of the development of the proposed planning framework and affect one another, the researcher does not attempt to provide a complete ready-made system (blueprint) with which to confront all empirical cases (Bird, 1989:110). The decision was taken not to compile a model or system but rather a planning framework that implies flexibility,



openness and interrelatedness that can be applied in any specific context and environment. The research results are presented as an ecotourism trail planning framework of principles postulated in a human scientific approach within Geography.

#### 1.4 The research problem

Until recently, trails in South Africa were mainly planned by people residing in the trail area. Trail planning principles have been based on the trail planners' local knowledge of the area. Trails are mainly planned for recreational enjoyment and not within the broader conceptual context of ecotourism. From the introduction to this chapter it can be postulated that ecotourism trails have a responsibility to the total environment, namely, to include environmental education in the planning framework that trail planners would use.

The **main problem** therefore is to critically review current ecotourism trail planning frameworks, in the literature and in practice, against the theoretical principles underlying the two approaches, ecotourism and environmental education, and formulate an ecotourism trail planning framework of principles to facilitate environmental education.

To resolve this problem it would be necessary to answer questions such as:

- In what ways are the two approaches: ecotourism and environmental education linked?
- Do trails have the potential to facilitate environmental education?
- What do current trail planning frameworks look like and how would they need to be adapted to facilitate environmental education?
- What planning principles will have to be incorporated into an ecotourism trail planning framework to create the potential to facilitate environmental education?
- Who are the role players or agents in ecotourism and trail

planning and how will they contribute to facilitating environmental education?

- How practical is it for ecotourism trails to facilitate environmental education?

## 1.5 Aims of the study

To be able to answer the main problem and subsequent questions related to it, certain aims have been formulated for the study.

### 1.5.1 Primary aim

The primary aim is to establish an ecotourism trail planning framework that would succeed in arousing sensitivity towards the environment, provide opportunities for enjoyable aesthetic experiences along existing or new ecotourism trails and lead to a further appreciation of, and an interest in, the environment by engaging in environmental education experiences on the trail.

### 1.5.2 Secondary aims

To realise the above primary aim, the following secondary aims have been set:

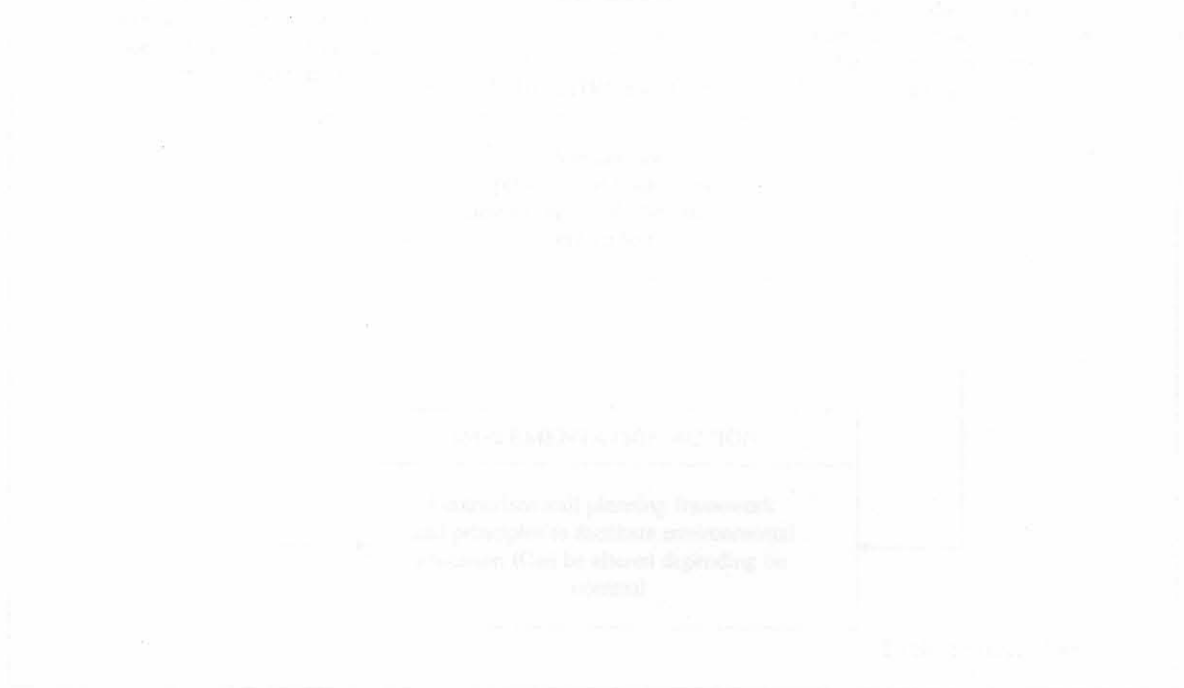
- 1.5.2.1 to examine environmental education and ecotourism and determine the conceptual links between the two approaches (Chapter two);
- 1.5.2.2 to examine trails as an ecotourism activity and their utilisation possibilities for environmental education (Chapter three);
- 1.5.2.3 to identify environmental education principles that should be incorporated in a planning framework for ecotourism trails to facilitate environmental education (Chapter three);
- 1.5.2.4 to identify possible environmental education needs of the different agents (role players) that are part of the ecotourism trail environment namely the target audiences (trail users); host community, developer (owner and trail planner), authority and trail environment that a



- planning framework should consider (Chapter four);
- 1.5.2.5 to review existing trail planning methods against the theory exposed in Chapters two and three (Chapter five);
  - 1.5.2.6 to participate in planning ecotourism trails for environmental educational purposes and review the practical applicability of the theory obtained from the literature study (Chapter six); and
  - 1.5.2.7 to compile an ecotourism trail planning framework to facilitate environmental education that can be used to design new or upgrade existing trails to facilitate environmental education (Chapter seven), which is also the primary aim of the study.

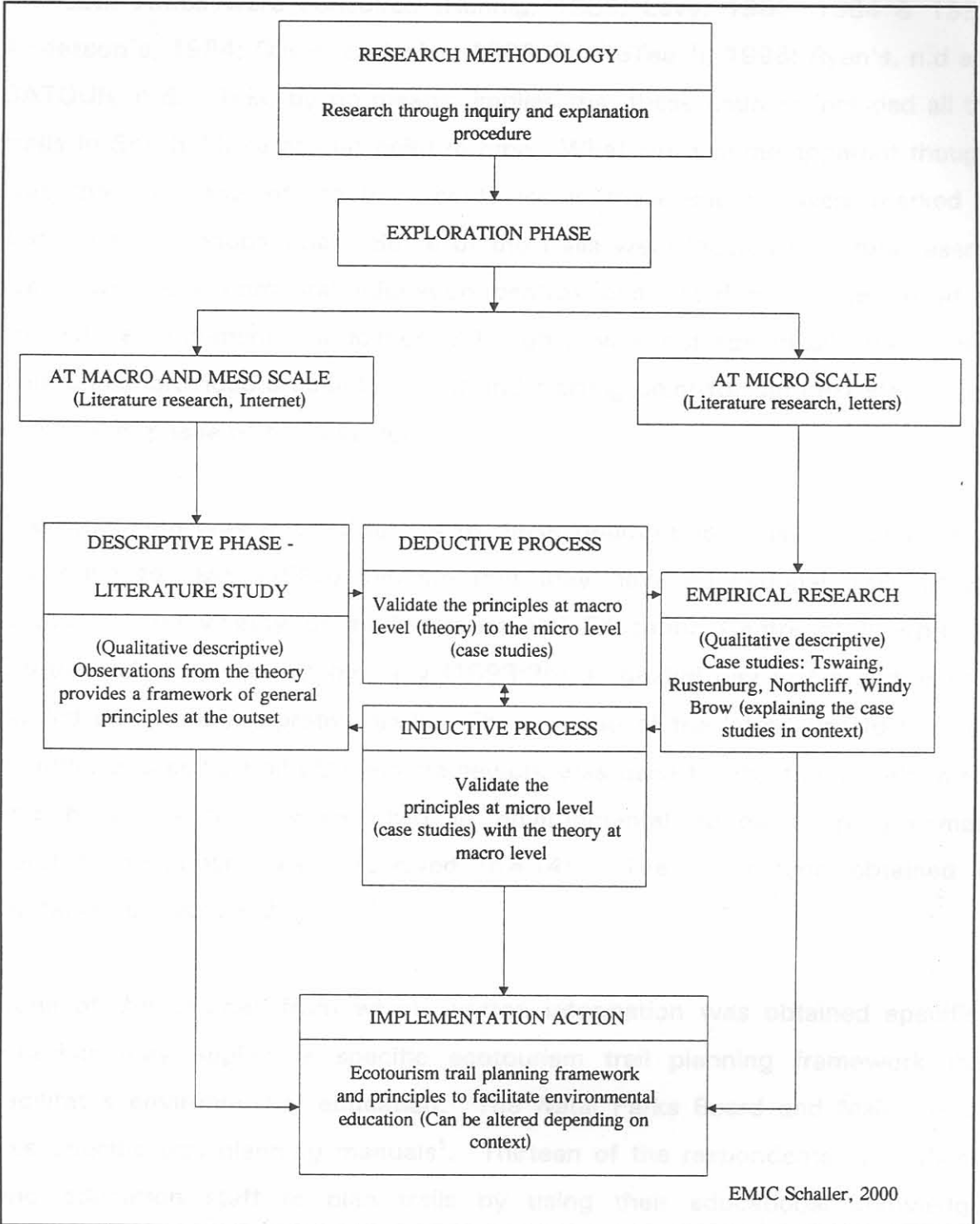
## 1.6 Research methodology

The domain of Human Geography, within which the problem of the study lies, underpins the research methodology followed in this study. Figure 1.1 illustrates that a number of research phases were adopted.



Geography is a field that is still a vast continent of unexplored territory. In this phase of the research an attempt is made to establish whether there are existing ecotourism trails in South Africa that have been

FIGURE 1.1 RESEARCH METHODOLOGY



Geography is a field that obtains a vast amount of information through exploration. In this phase of the research an attempt is made to establish whether there are existing ecotourism trails in South Africa that have been



developed to facilitate environmental education and to determine what planning principles the developers used. To determine this a number of books on trails in South Africa were consulted (Hennig, 1983; Levy, 1983, 1984 & 1993; Anderson's, 1984; Olivier & Olivier, 1988; EnviroTeach, 1996; Ryan's, n.d and SATOUR, n.d). This, by no means, implies that these sources included all the trails in South Africa at that point in time. What did become apparent though, was that very few of the trails contained in these sources were marked as ecotourism or educational. Some of the trails were located in nature reserve areas with environmental education centres and could have been used to facilitate environmental education although it was not specifically mentioned. This phase provided a useful contact and starting point for the next step in this **exploration phase** of the research.

The next step was to send letters to those twenty-two trails or facilities that according to Levy (1993) indicate that they have educational trails or are located in the vicinity of an Environmental Education Centre or Interpretive Centre and were marked by Levy (1993:36) as guided day walks and/or self-guided day walk/interpretive trails. The purpose of the letter was to find out whether a specific trail planning framework was used for the trail development and how the trails were used in environmental education programmes. Fourteen responses were received (n=14). The information obtained is contained in Table 1.2.

None of the sources from which written information was obtained specified whether they applied a specific ecotourism trail planning framework that facilitates environmental education. The Natal Parks Board and Malolotja do use specific trail planning manuals<sup>1</sup>. Thirteen of the respondents use officers and education staff to plan trails by using their educational knowledge, experience and familiarity with the terrain. Three of the respondents specifically indicated that the trails were designed by educationists for use with

---

<sup>1</sup>. Scott, D.F. 1993. **The Drakensberg path manual - a practical guide to all aspects of path work**. CSIR: Division of Forest Science and Technology: Jonkershoek Forest Research Centre.  
Ham, S.H. 1992. **Environmental Interpretation: A Practical Guide for People with Big Ideas and Small Budgets**. Golden, Colorado, USA: North American Press.

formal education groups, mainly school children. Fifteen of the respondents indicated that the purpose of the trails is educational, informative, interpretive or environmental education. It appears that these terms are used interchangeably by the different respondents as indicated in Table 1.2. Ten of the respondents indicated that their trails are guided, nine self-guided and five both guided and self-guided.

From the information in Table 1.2, it became clear that trails currently used for education in Southern Africa were planned without a specific trail planning framework to facilitate environmental education. This observation supports the stated research problem of this study. However, to ensure that this was not a local phenomenon, a search on the Internet and in the libraries was done to establish whether an ecotourism trail planning framework to facilitate environmental education existed outside South Africa. It did become clear that trails were used more extensively for educational purposes in overseas countries like Britain (Spray, 1975:210) and Australia<sup>2</sup>. A trail planning model containing principles to facilitate environmental education could not be found in this literature search and investigation.

<sup>2</sup>

This perception was confirmed by a personal visit to Australia in 1996 and documentation obtained from Peter Keene from England in 1997.



**TABLE 1.2 INFORMATION OBTAINED FROM EXPLORATIVE RESEARCH IN SOUTHERN AFRICA (1996)**

Respondent	Type of trail*	Centre at trail	Received a response to the letter	Has an ecotourism trail planning framework	Users of trails	Purpose of trails	Who plans the trails?
Kirstenbosch National Botanical Garden, Cape Town	GDW, SDW	Nature study school	Y	N	School groups, students	EE, interpretive	Education staff
De Hoop Nature Reserve, Bredarsdorp	SDW	EE	N	-	All	Interpretive	-
Rhebok Hiking Trail, Golden Gate	SDW, GDW, 2-day trail	EE	Y	-	All	-	-
Old Furrow Trail, Estcourt	SDW	Education	N	-	-	Interpretive	-
Cedara Forest Trail, Hilton	SDW	-	N	-	All	Educational	-
Idube Trail, Pietermaritzburg (Natal Parks Board)	SDW	Education Resource centre	N	-	-	Educational	-
Lorna Doone Forest Hostel Trails, Harding	SDW	-	N	-	All	Educational, informative	-
Game Park Trails, St Lucia	SDW	Interpretive centre	Y	N	All	Informative, interpretive, educational	Natal Parks Board officers, private individuals
Hluhluwe Game Reserve	GDW	-	Y	-	All	Interpretive	Natal Parks Board officers
Mkuzi Game Reserve (Natal Parks Board)	GDW, SDW	-	N	-	All	Informative	Natal Parks Board officers

Respondent	Type of trail*	Centre at trail	Received a response to the letter	Has an ecotourism trail planning framework	Users of trails	Purpose of trails	Who plans the trails?
Milwane Wildlife Sanctuary	SDW, GDW	Interpretive, National EE programme	N	-	All	Informative, interpretive	-
Malolotja Nature Reserve	SDW	EE	Y	N Uses Ham (1992)	All and school groups	EE	EE officers
Abe Bailey Nature Reserve, Oberholzer	SDW, GDW	Interpretive, EE	Y	N	All and school groups	Interpretive	Staff
Michiru Mountain Conservation Area, Blantyre, Malawi	GDW	EE project	Y	N	All and school groups	Interpretive	Officers
Zomba Plateaus, Malawi	SDW	-	Y	N	All	Informative	Wildlife Society of Malawi
Boelani School Tours, Boordfontein	GDW		Y	N	School groups	Knowledge of nature conservation	Game rangers, environmental lecturers
Tamboti Botanical Trails, Hoedspruit	GDW		Y	N	All groups	Study natural vegetation of the escarpment	Owner
Witwatersrand National Botanical Gardens, Roodepoort	GDW	Interpretive	N	-	All	-	-
Hiking Federation of South Africa	GDW	-	Y	N	Only provided a list of trails in South Africa		

Respondent	Type of trail*	Centre at trail	Received a response to the letter	Has an ecotourism trail planning framework	Users of trails	Purpose of trails	Who plans the trails?
Natal Parks Board	Wilderness, GDW, SDW, Auto, hiking GDW	-	Y	N uses Scott (1993)	All	Informal EE	Field managers, regional managers and regional ecologists
Pretoria City Council	SDW	-	Y	N	All groups	Informative	Council and private persons
Umgeni Valley Project, Howick	GDW		Y	N	School groups	Interpretive	EE officers

Information obtained in 1996 from letters and Levy's book (1993)

\* According to Levy (1993:36): GDW = Guided day walk and SDW = Self-guided day walk/interpretive trail

EE = environmental education

Y = Yes

N = No



The above exploration phase (Figure 1.1) was sufficient to prompt the continuation of the research and led to the **descriptive phase** of the research, namely, a comprehensive **literature study**. This phase was necessary to verify the perceptions and observations in the exploration phase of the research. Facts and information on the phenomena trails and the two approaches, ecotourism and environmental education as part of the empirical domain of the research problem of this study, were obtained.

The theory obtained in this descriptive phase formed the premises for the empirical phase of the study. In the descriptive phase, a deductive research process is followed where the general theory of ecotourism and environmental education, is surveyed and analysed at macro and meso scale. Through this process, the links between the two approaches are identified in Chapter two. Definitions, approaches and principles from both ecotourism and environmental education are surveyed, organised, classified and analysed, which is very much a deductive process resembling the deterministic explanatory model. This theory is used to arrive at new scientific knowledge in the form of an ecotourism trail planning framework to facilitate environmental education (Table 5.1). The framework provides the structure into which the planning principles can be placed. According to Gunn (n.d:4), a need exists for research in tourism that leads toward principles.

The planning principles that are identified, are an articulated system of ideas and statements held as addressing the problem. A framework as proposed does not show how the trail environment is actually organised, but rather how it should be organised if it were to adopt the ecotourism and environmental education approaches into its planning framework (Holt-Jensen, 1980:66-67).

Ecotourism projects take place in an environment of interrelated human systems and involve many role players, namely the host community, developer and visitor. It is thus necessary to determine how these role players fit into the proposed planning framework. The literature survey examines and describes the characteristics and environmental education needs of these role players.

Consequently, Chapters three and four of the study are devoted to do this survey.

Although the deductive research process is commonly used in Geography, it is often criticised for being too simplistic and quasi-scientific. While the deductive research process, literature survey, was in progress the researcher started with the inductive phase of the research, namely, the **empirical research** in the form of case studies and fieldwork to prevent the research from being judged as being too simplistic and quasi-scientific. The aim is to judge whether there is empirical support via the case studies for the general theories deduced from the literature (Holt-Jensen, 1980:19). This implies structuring reality to support or not support the generalisations from the theory. The process presented the researcher with a vast inflow of information that had to be ordered and shaped in a way that made it manipulatable and comprehensible (Harvey, 1969:298). It is important to remember that in this method, the process of ordering and structuring the planning principles is not independent from the theory which is ultimately constructed.

The researcher became actively involved in the planning of particular ecotourism trails that were specifically planned to facilitate environmental education. Taking this inductive research approach would enable the researcher to process and codify the observations made in the reality and articulate and verify the general theoretical planning principles deduced from the literature survey. The original theoretical set of seven principles was then reviewed. Allowance had to be made for where the proposed theoretical principles did not correlate with what was observed in practice and changes were made to the set of seven principles which was expanded into a set of nine principles.

It was decided to start with one primary in-depth case study, Tswaing. To eliminate the possibility that the results of the one case study could be seen as too temporal, spatial and simplistic, three other trails were used as secondary case studies, namely, Northcliff, Windy Brow and Rustenburg. The four



different trail types were used as case studies to explain and verify whether the seven theoretical ecotourism trail planning principles deduced from the literature were transferable and applicable to all trails set in different environments, natural and human. Therefore, the first trail at Tswaing is in a rural area and is a short three-hour trail broken up into sections. The second, is a longer two-day trail at Rustenburg in a nature reserve with overnight facilities. The third is a short one-hour trail in an urban area at Northcliff, Johannesburg and the fourth, Windy Brow, is a nature trail consisting of three separate day trails in a rural area adjacent to Cullinan. The four case studies are discussed in Chapter six.

The proposed trail planning framework in Table 5.1 attempts to unify the general ecotourism planning principles from the literature study and the empirical observation during the case studies, into a framework of ecotourism trail planning principles that facilitates environmental education. These principles are classified into the four main trail planning phases in Figure 5.1, namely, planning overview (aims and objectives, role players, target audience, trail focus), construction (building of trail and compiling brochures, maps and worksheets, information boards), implementation, and evaluation/maintenance.

Because the three domains, namely, trails, ecotourism and environmental education are situated in the environment and a mass of complex actions, reactions and interactions are present, the explanation of the results takes on an ecological format (Harvey, 1969:409). This means that the results will be explained as an open and flexible interrelated framework of phases connecting people and the environment and not as a one-way closed system. The research is qualitative and descriptive of nature and uses the inductive and deductive research processes together. The research results are formulated within a particular banded geographical space, namely, ecotourism trails rather than the spatial variations between different types of trails in different regions.

An ecotourism trail planning framework such as proposed, is an attempt to enlighten current trail designs to incorporate approaches such as ecotourism



and environmental education. In this way ecotourism trails can be developed to be sustainable and be utilised in the following educational ways:

- By the formal education sector such as schools where curriculum programmes can be accommodated into the ecotourism trail to accomplish direct environmental education activities,
- By the informal education sector which includes adults using self-guided and interpretative trails as direct environmental education activities, and
- By the non-formal education sector which includes the government, the private sector and non-governmental organisations who provide indirect environmental education activities and services.

## 1.7 Chapter divisions

The theoretical framework underpinning this research, realism and its three tiered ontology and the research strategy resulting from this philosophy, provides the framework for logically unlocking the research problem and for documenting the research.

Chapter one contains an introduction to the study, an orientation to the problem of the study, the research procedure and contextualises the study in a theoretical framework. Terms are not defined in this chapter but are defined in the applicable chapters.

In Chapter two ecotourism and environmental education which form the empirical domain of the research, are conceptualised. Through a deductive process theoretical planning principles that ecotourism should apply to facilitate environmental education are formulated at the end of the chapter.

In Chapter three the second leg of the ontology, the real domain, namely, the trail environment, is discussed. The chapter concludes with planning principles

that should be incorporated in an ecotourism trail planning framework facilitating environmental education.

In Chapter four the agents that are the actual domain, namely, the trailist, developer (trail planner, trail owner), authority and host community who operate in the real domain of the trail, are discussed. In this chapter the roles the agents play in the ecotourism trail planning process that aims at fulfilling an environmental education responsibility are discussed.

In Chapter five existing trail planning methods are critically reviewed and compared against the theory in Chapters two, three and four. The general theory from the literature is used at the end of the chapter to postulate a trail planning framework for ecotourism trails that facilitate environmental education.

In Chapter six the proposed framework postulated in Chapter five is reviewed against the primary case study of the research, Tswaing and other secondary case studies.

In Chapter seven conclusions regarding the proposed planning framework are given, proposals are made for improving it and further research options in the field of this particular research area are pointed out.