CHAPTER 1
INTRODUCTION TO AND RATIONALE OF THE THESIS

1.1 Introduction – Research Background

As world tourism numbers continue to grow and pressures on the natural environment intensify (from other sources as well as tourism), new opportunities for maximising the positive benefits of tourism are constantly being sought. There have been continued calls, both academically and in the popular press, for tourism to be more supportive of the environmental base on which it depends. This thesis emerged from a desire to examine mechanisms where tourism and conservation work supportively together.

The potential positive and negative effects of tourism on conservation have been well discussed, often for segments of the industry such as wildlife tourism (Green & Higginbottom, 2001; Higginbottom, Northrope & Green, 2001a) or ecotourism (Honey, 1999; Issacs, 2000). The advantages of using volunteers in natural resource management have been noted (Cuthill, 2000; Darwall & Dulvy, 1996; Schroeder, 2000), but programs where tourists volunteer, and make a financial contribution, are less common and less well known. Because of the difficulties in funding facing natural resource managers it was important to find a new source of funding to support environmental field research. This thesis focuses on one type of volunteer vacation or conservation holiday, where participants pay to work as volunteers helping conduct environmental field research.

The term Participatory Environmental Research Tourism (PERT) was coined during this research to describe this type of volunteer tourism, and the identifying characteristics of this sub-segment are defined as part of this research. Although various types of volunteer vacations have existed for many years, this thesis will examine the influences that have contributed to the growth of PERT-style trips including the increasing segmentation of the tourism industry, changes within volunteering, and the use of volunteers by natural resource organisations. It will be argued that PERT-style trips are a developing market segment and gaining recognition. Trips are viewed by travellers as a
holiday option, and natural resource managers are analysing the potential outcomes of trips as they seek new ways to secure funding and a pool of labour for field work.

Observed trends within volunteering have suggested demand may exceed the supply of volunteers in the future (Lyons & Fabiansson, 1998; Zappala & Burrell, 2002) leading to concerns regarding the ability of projects to attract sufficient volunteers. Episodic volunteering, where people volunteer for one to two weeks per year perhaps, rather than a couple of hours per week, is seen as increasingly attractive to volunteers, yet the implications of this are not well understood. Volunteer management issues concerning recruitment, training and retention between periods of volunteering need to be examined. As interest in environmental volunteering increases, the use of volunteers on field research trips can create appealing episodic volunteering opportunities and these may increase the overall supply of volunteers.

These types of trips can potentially provide further benefits relevant to conservation managers and tourism operators. PERT-style trips often result in the formation of mutually beneficial partnerships between, and among, the different stakeholders that may include government bodies, research institutions, not-for-profit organisations and tourism operators. In addition, the educational nature of these trips is significant. Considerable work has focussed on methods of influencing the behaviours of tourists, both during a visit or trip, and in a continuing manner, after the trip. The volunteer tourists on PERT trips are termed participants in this study and the intensity and duration of volunteer tourism trips, and their educational nature, may contribute to subsequent behaviour of the participants, including local volunteering, but this has not been widely explored. A better understanding of the range of positive outcomes from these types of trips may encourage others to participate.

Most ecotourism definitions consider support for the conservation of the environment on which ecotourism depends as essential (The International Ecotourism Association, 2004)
and more research is needed concerning tourism programs that actively enhance conservation goals. PERT-style trips appear to be a type of volunteer tourism where this could occur. Yet the current understanding and research surrounding PERT-style trips is low. For operators and natural resource managers to consider greater involvement in this area further research is needed allowing more informed management decisions to be made and allowing the further potential of this sub-segment to be better understood.

1.2 Research Aims and Objectives

The fields of tourism, volunteer management and natural resource management contribute substantial research that aids an understanding of the PERT sub-segment. Relevant research in serious leisure, volunteering and niches within tourism such as wildlife tourism exists, but it will be argued that there are considerable knowledge gaps and the PERT sub-segment is still not well understood. Earlier work has generally concentrated on long-term volunteer tourism (Broad, 2001), youth development trips (Wearing, 2001), or focussed on a single trip, or organisation (Weiler & Richins, 1995). While these have provided valuable insights into the area, the range of shorter trips of a typical holiday duration that could be of appeal to a wide segment of the tourism market have not been well examined.

This research aimed to improve the understanding of the short-term holiday break type of volunteer tourism that contributes to environmental field research goals. The first step in this process was to examine the PERT sub-segment within the wider volunteer tourism market and determine the characteristics that identify it, and its size. The type of volunteer attracted to these trips may also be a distinguishing characteristic and as knowledge of the target market is critical for operations, volunteer profiles were also identified.

The second stage of this research examined aspects surrounding the potential for long-term sustainability and growth of the PERT sub-segment. For partnerships to be sustainable, desired outcomes of key stakeholders must be met. PERT-style trips must be able to provide benefits to volunteers to ensure continued demand and hence a
research objective was to determine the reasons why volunteers joined, and the benefits
the volunteers perceived they had gained from participating in the trips. Trips must also
provide benefits to researchers as these people help provide the supply of research trips
in this sub-segment. So, a research objective was to determine why a researcher might
choose to utilise PERT-style volunteer tourism, and the extent their goals were achieved.
Because a wide variety of researchers may utilise results from a field trip, or research
program involving a series of trips, only the researchers directly involved with the
volunteers were considered within the scope of this work and the term ‘members of field
crews’ is used to denote the people who were responsible for the operations of the trip in
the field and participated in the research trip. Organisations that bring volunteers and
researchers together must also consider whether PERT trips contribute to the
achievement of their own goals. Hence, an additional research objective was to identify
why the organisations were involved with the trips, and the extent that they were
achieving their goals. The final research objective was to explore the inter-relationships
between the goals and benefits of the organisation, the members of the field crews, and
the participants.

Although other important stakeholders exist, such as host communities, it was not
possible to include all stakeholders in the scope of this research, nor was it feasible to
explore all aspects of benefits or outcomes. Other areas, such as economic benefits, or
the validity of volunteer data and subsequent value of the scientific output, are valuable
research topics but have already received some attention (Mackney & Spring, 2001;
Newman, Buesching and Macdonald, 2003) and were not examined in detail in this
study. Learning and education are an integral part of PERT trips and the extent to which
PERT-style trips can influence participants is of interest in natural resource management
and tourism. Consequently, this research focussed on determining the perceived benefits
surrounding education and learning.
1.3 Significance of this Research to Tourism, Volunteering and Natural Resource Management Studies

Volunteer tourism is relatively small compared with the size of all tourism or volunteering, but an examination of it contributes significantly to broader issues within the fields of volunteering, tourism and natural resource management.

Volunteering plays a critical role in helping form the social fabric of societies (Kerr & Tedmanson, 2003; Light, 2002; Warburton & Oppenheimer, 2000; Winter, 2000). It also allows tasks to be achieved that may otherwise not be undertaken. The proportion of a population that volunteers, the participation rate, can alter significantly over time and varies between different types of volunteering. Researchers noted a rise in self-interest as a motivator for volunteering (Merrill & Safrit, 2003) and a rise in episodic volunteering as work commitments, amongst other factors, impede regular weekly volunteering commitments for some people (Safrit & Merrill, 2000). Volunteer tourism, and PERT-style trips provide a type of episodic volunteering opportunity and the travel and educational components may fulfil the self-interest aspects. Altered styles of volunteering will change the accrual of benefits to society. For instance, while a range of individual benefits from volunteering are likely to accrue whether the individual volunteers within a home locale or further afield, the extent volunteer tourism contributes to broader benefits attributed to volunteering, such as stronger communities, requires attention.

The examination of both volunteering and tourism research in this study will inform both areas. The characteristics of participants, their reasons for joining trips, post-trip views of the trip, and subsequent behaviour including repeat trip-taking impacts are important topics for both the recruitment of volunteers and consumer demand within tourism.

Within natural resource management there is increasing acceptance of the need to involve members of the public to help achieve tasks, to educate the public about the need for conservation, for land management strategies, and for scientific research and to
enhance participatory decision-making processes. Field research may require additional funding and practical mechanisms through which tourism can support this needs further examination. Analysis of the benefits of PERT-style trips may encourage increased supply of suitable trips by natural resource managers. This research will also have broader application and increase the understanding of the range of issues concerning the use of environmental volunteers and the benefits that can accrue from partnerships.

A better understanding of the PERT sub-segment is needed by operating organisations to improve target marketing and identify factors that create successful trips. These aspects are also important for potential operators considering whether to enter the market as trips that contribute significantly to conservation have sometimes been viewed as too utopian or redistributive within tourism research to be viable in the long-term. The PERT sub-segment is also small in size and impact, but it appears to be growing. PERT-style trips contain similar elements to educational and experiential trips, travel to achieve college credits, youth development travel (such as GAP year), hard-core ecotourism and wildlife tourism. Many of these travel niches are growing and research within the PERT sub-segment may be applicable to these wider segments of tourism.

A broader application of this work relates to stakeholder goals of education and learning. Considerable work has been undertaken exploring persuasive communication theory and how interpretation programs in tourism can influence pro-environmental behaviour change (Armstrong & Weiler, 2002; Ham, 1992; Moscardo, 1998; Oramas, 1997). Because of management priorities or methodological issues, researchers have usually examined only a small number of potential behaviour modifications. In addition, measurement of the influence of a trip is complex. PERT-style trips probably attract ‘hard-core’ ecotourists ‘already converted’ to conservation and due to the ‘ceiling effect’ it is difficult to create further change in these people’s pro-environmental views or behaviours (Beaumont, 1999). This research examined how participants and field crews believed they were influenced by the trip, focussing on pro-environmental behaviours and the implications of any identified modifications for other stakeholders. The findings of this research are likely to be beneficial in wider areas where post-trip behaviours are
of interest. For instance, the repeat behaviour of episodic volunteers within volunteer tourism may contribute to the understanding of repeat behaviour in tourism.

1.4 Research Approach

Because of the overlapping nature of volunteering, tourism, and natural resource management, a multi-disciplinary approach was adopted. It drew principally from tourism and volunteering theories and research. A number of potential approaches were analysed to determine the most suitable direction for this research, not only in terms of creating an appropriate field of study for a PhD but also to determine an approach of relevance to industry. Despite the value of options such as analysis of the validity of volunteer data (Bleich, 1998; Mackney & Spring, 2001), analysis of values associated with environmental behaviour (Karp, 1996), causality research on environmental behaviour (Hwang, Kim & Jeng, 2000), trip choice analysis including animal preferences (Woods, 2000) or an economic analysis (Tisdell & Wilson, 2001), these approaches were rejected as the focus was considered too narrow in a sub-segment that had received little direct research attention.

The research was exploratory in nature and a two-staged iterative approach was developed. The first stage aimed to provide a global understanding of the sub-segment. A market segmentation approach was used to determine the key characteristics of the PERT sub-segment that separate this area from other types of volunteering or tourism, allowing identification and analysis of the sub-segment. Once this was established, a more detailed examination of operations within Australia was undertaken.

The second stage of the research was developed from the results of the first stage. A collective case study approach with qualitative and quantitative components was used. The perceived benefits were examined for three key stakeholders: the organisation, members of the field research crews, and participants. From the detailed examination of the PERT sub-segment within Australia, three case studies were selected. These were Naturewise, Landscope Expeditions and Earthwatch Australia. Landscope Expeditions is based in Western Australia, and is a Government-run program. It is operated by the
Department of Conservation and Land Management (CALM) in conjunction with the UWA Extension, a department of the University of Western Australia. Since 1992 trips within the state have been run, mostly using researchers within CALM. Naturewise operates within the PERT sub-segment and is a part of Conservation Volunteers Australia (CVA), Australia's largest provider of conservation volunteers, and a not-for-profit organisation. Naturewise was established in 2002. Earthwatch Australia is a regional office of the global not-for-profit organisation Earthwatch Institute and manages Australian operations.

1.5 Thesis Outline
This chapter provided a background to the research, discussing the rationale for this thesis and the approach used.

The background literature is reviewed in Chapter 2, examining earlier relevant research and theories from the fields of tourism, particularly ecotourism and wildlife tourism, volunteering and natural resource management. Factors contributing to the growth of the volunteer tourism sector, and specifically to PERT-style trips, are outlined. Potential benefits that may be relevant within the PERT sub-segment are also discussed. The current body of knowledge on volunteer tourism is then summarised. Because of the emphasis on learning and education, concepts and theories relating to behaviour modification, particularly pro-environmental behaviour modifications are then examined. The key research objectives outlined in Section 1.2 are re-examined in the light of the known literature to refine the research process.

Chapter 3 outlines the methodology used in this thesis. An exploratory approach was taken that was iterative in design. There were two major stages, with the first stage adopting a global scale and examining different types of operations. A market segmentation approach was used to define the PERT sub-segment and identify its characteristics. The second stage was informed by the data obtained in the first stage. The information sources available and factors influencing the design of the research are described, and these led to a mixed method, collective case study approach. Three case
studies in Australia were used to examine in detail the benefits perceived by participants, members of the field research crew and organisations. The methods used for data collection are described. The analysis of alternative information sources, and differing perspectives gained from a multi-method approach, added depth and breadth to the results. The critical analysis of different approaches and information sources at the design stage also added rigour and understanding to the final approach used.

The first stage of the research defined and examined the global development of the PERT sub-segment. By exploring existing activities within the sub-segment, the size of the sub-segment, similarities and differences between operators, and operations within the sub-segment, the identifying characteristics of the sub-segment could be determined. This stage is described in Chapter 4. A more detailed descriptive analysis of organisations operating in the sub-segment in Australia is contained in Chapter 5, allowing a more detailed insight into issues and a further clarification of the sub-segment characteristics. The Australian organisation information allowed the appropriate selection of three case studies: Landscape Expeditions, Earthwatch Australia, and Naturewise, for the second stage of analysis.

The second stage of analysis built on the knowledge gained in the first stage. It involved a detailed examination of each organisation (Chapter 6), members of the field crews (Chapter 7), and participants (Chapter 8). For each group their views on the benefits of being involved with PERT-style trips were analysed. For each case study, a suitable sample frame was negotiated with the organisation and each trip within the negotiated time period was included. All participants (volunteers) and all members of the field crews on a trip within that time period were interviewed. The reasons individuals became involved with the trip and the benefits they perceived they had accrued were examined. Volunteers were surveyed twice, once soon after the trip and again eight to nine months later to determine longer term benefits.
Chapter 9 examines the inter-relationships between the benefits listed by each of the three key stakeholders, the organisation, the members of the field crews, and the participants. Policy, methodological and other issues raised in the analysis are also discussed as well as broader implications resulting from the findings, limitations of the research and the need for further research. The key findings of the research are summarised in Chapter 10 in the context of the original research aims and objectives outlined in this chapter.
CHAPTER 2
THE DEVELOPMENT OF THE PERT SUB-SEGMENT – INFLUENCES AND BACKGROUND

2.1 Introduction
This thesis focuses on short-term volunteer tourism in environmental field research and is a part of the wider volunteer tourism segment. The current body of knowledge relevant to the research conducted in this thesis is summarised in this chapter. The chapter is divided into several sections. PERT appears to be a relatively new sub-segment of the tourism and volunteering market. To help understand its size and the potential influences shaping its development, relevant areas from the tourism sector (Section 2.2), the volunteering sector (Section 2.3) and the fields of science and natural resource management (Section 2.4) are each examined. Prior work within the field of volunteer tourism is also reviewed (Section 2.5) so this research could be designed to extend existing knowledge and to place the results of this research in a broader framework. Analysis of the range of benefits flowing from volunteer tourism showed education, learning and behaviour modification of participants are important to each of the key stakeholders and so related theory and measurement issues are discussed in Section 2.6. Section 2.7 examines areas of theoretical and empirical weakness and justifies the need for additional research as well as identifying current research trends.

Overlaps among the research within tourism, volunteering and natural resource management were identified. Section 2.8 amalgamates the knowledge to identify areas of potential further research and Section 2.9 summarises the chapter.

2.2 Tourism
2.2.1 Introduction
Initially, terminology regarding tourism is clarified and the implications and difficulties that arise from definitional issues discussed. Organisations such as the World Tourism Organisation have documented the growth in tourism, and researchers have noted the diversity that has developed within the industry and subsequent segmentation. Tourism
experienced rapid growth in the 1950s and 1960s, largely as a result of air travel becoming more widespread, demographic and social changes (such as dual income households and the growing proportion of single adults), relaxation of immigration restrictions, increased paid leave, more flexible working time, improved education, increased awareness of travel options, and technological improvements (Buckley, 1995; Ceballos-Lascurain, 1996). It is not the purpose of this thesis to describe the growth of tourism in detail, but factors relevant to the emergence of the PERT sub-segment are examined, particularly from ecotourism, wildlife tourism and special interest tourism and the process of segmentation is described. Relevant benefits that accrue from tourism are then discussed in Section 2.2.3.

2.2.2 The growth of tourism and segmentation
Tourism cuts across conventional sectors in the economy, requires inputs of a social, cultural and environmental nature and can be described as multi-faceted (Lickorish & Jenkins, 1997). Its multi-faceted nature creates problems in both measuring and deciding its overall scope (Theobald, 1998). Although the concept of tourism can be viewed differently (Leiper, 1990; Smith, 1989; Tribe, 1997), this research utilised the standard definitions used by the World Tourism Organisation, and widely used within the industry for comparative reasons. Tourism relates to the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes (Moscardo, Woods & Greenwood, 2001b:5). For the purposes of this research, a tourist is considered to be an overnight visitor staying at least one night in collective or private accommodation in the place visited (Moscardo et al., 2001b:5), rather than using a broader definition of tourist that included day-trippers.

While these definitions initially appear straightforward, they pose many difficulties in terms of measurement. Because tourism depends on the status of the consumer, definitional issues emerge even at the very broad scale of research such as in the Australian Tourism Satellite Account (Australian Bureau of Statistics, 2004). Data have been collected using different definitions and concepts and so an accurate understanding
of all tourism across, and within, various countries has not been possible to develop (Masberg, 1998). For instance, the above definitions correspond with the United Nations definition of tourism that is visitor-centered, rather than leisure-centered, so business travellers are also tourists according to the World Tourism Organisation. Hence, visiting international scientists are classified as tourists by the Costa Rica Tourist Institute even though most would not classify themselves as such (Laarman & Perdue, 1989). However, the term ‘tourist’ is regularly used to mean ‘domestic or international travel for leisure or recreation’ (Roe, Leader-Williams & Dalal-Clayton, 1997:3). Work and tourism can be considered ‘two separated and even contradicting fields of human activity’ (Uriely, 2001:1). Because of this view, business travel is often excluded from tourism discussions.

Cohen (1973:91) introduced the term ‘working holidays’ to describe international short-term travel by youths, mostly during summer vacations. Uriely (2001:4) described ‘working holiday tourists’ as:

the participants are usually engaged in work that differs sharply from what they normally do in their daily life back home. This aspect of their working holiday makes the difference between an employment-oriented and a leisure-oriented or tourist-related experience. Their working holiday usually consists of manual labour and requires little previous knowledge or skills.

The work is part of the recreational or tourist experience, may be optional, unpaid, or people may even pay to take part in a work activity. Uriely considered it is often done by middle class young adults, but also gave examples of elderly travelling volunteers and noted ‘that most of the references made in the existing literature regarding the demographic profile of travellers who combine work with tourism are based mainly on the scholar’s impressions rather than on a consistent empirical research’ (Uriely, 2001:7).

The term ‘tourist’ is also blurred in its use by conservation activist groups who generally use a selective, and mistaken, definition of tourism that assumes a commercial, private sector involvement (McKercher, 1991). In their view, similar non-commercial activities or infrastructure constitutes recreation. Distinctions between recreation and tourism are often artificial as both are part of the leisure phenomena and recreation is defined as a ‘type of human experience based on intrinsically rewarding engagements in non-
obligated time' (Driver et al., 1987:203). Particularly in national parks, tourists and recreationists have the same range of activities, impacts and often use the same facilities, so for management purposes no distinction is usually made. Charitable organisations are increasingly involved in tourism, particularly in the area of volunteer tourism (Honey, 1999; Turner, Miller & Gilbert, 2001). The involvement has not always been clear, however, as some organisations actively avoid using the term ‘tourist’ which denotes a holiday aspect of the trip, and instead use terms such as ‘team member’ (such as Earthwatch Institute) to refer to participants. The term ‘tourist’ is sometimes avoided as participants volunteering for charitable organisations can tax deduct the cost of a service trip in, for instance, the United States (McCormally & Blum, 1990; Weaver, 1990) but not a tourist trip. The lack of clarity surrounding the terms ‘tourism’ and ‘tourist’ will impact at times on the separation between local volunteer and volunteer tourism.

Tourism has undergone significant changes, not only due to the rapid growth in travel, but as it reflects changes in socio-economic levels, fashion and societal values amongst many other factors, and therefore new areas within tourism are constantly emerging (Roe et al., 1997). Suppliers, faced with increased competition, have sought to define their markets more narrowly, to ensure a match between their product and the market that utilises their advantages over that of their competitors and so have segmented the market (Conlin et al., 1995). This growth and continued segmentation have influenced the emergence of the PERT sub-segment.

Segmentation can result in arbitrary product market boundaries (Day, Shocker & Srivastava, 1979) and rarely are homogeneous groups clearly separated from other groups by this process (Dolnicar, 2005), but despite the limitations of segmentation, product markets are an important unit of analysis within marketing literature. Product markets are widely used in tourism to indicate who travels where, why, and what they prefer (Lang, O'Leary & Morrison, 1996), allowing target marketing and assisting in new product development (Moscardo, 1996). Product markets have also been used to help answer a number of critical questions, such as how markets function and evolve, whether market boundaries are distinct and stable, or shifting and overlapping, and how
new products diffuse into new markets (Rosa, Porac, Runser-Spanjol & Saxon, 1999). As consumers and producers make sense of each other's behaviours, a new product market develops and becomes an established segment (Rosa et al., 1999). During this process, new product markets are considered unstable and incomplete, but all markets are considered to be constantly changing (Dolnicar, 2005).

There are many different segmentation techniques, but most methods used in tourism use either predetermined criteria, (a prior) or are the result of a factor clustering process (a posteriori) according to responses given by visitors (Mazanec, 1992; Smith, 1989). Segmentation (McKercher, 1998:113-114) can be based on geography, demographic profile of key user groups (such as age, gender, nationality, life stage), psychographic profile of consumer (such as values, beliefs, attitudes or hobbies), usage rates, perceived benefits, and buyer readiness. Muloin (1998:203) recommends segmenting by grouping people according to the benefits they seek from products or 'the nature of the interest they are pursuing' (Hall & Weiler, 1992:5) so 'searching for the relevant behaviour, finding the basic dimensions of the relevant behaviour, segmenting tourists along those dimensions and describing segments with antecedent or consequent variables' is a recommended method (Lang et al., 1996:no page). A staged or nested approach initially using psychological and behavioural variables and then demographic and geographic segmentation can be used (Moscardo, Pearce & Morrison, 2001a:32-33). Not all researchers agree with this and Dolnicar (2005) noted in segmentation that the usefulness of different criteria depends entirely on the purpose of the study.

An effective market segment should be large and stable enough to warrant separate marketing or product attention to make a specialist approach profitable, and consumers within the segment should be reasonably homogeneous, suited to the product and respond in a similar manner (Moscardo et al., 2001a). It must also be possible and practical to reach consumers within the segment in an effective way (Conlin et al., 1995). While market segmentation in tourism is required both by the industry and by researchers, the most appropriate statistical approaches and bases to use are still contentious (Moscardo et al., 2001a). Weaver (2001:595) argued market segmentation
research is still under-utilised in tourism and although, for instance, validity issues exist within ecotourism, further segmentation of ecotourism is needed to aid understanding (Blamey, 1995). The PERT sub-segment is considered to be a new niche and can be conceptualised as a new product market. The characteristics that define it are developed in Chapters 4 and 5, but it was beyond the scope of this research to prove this.

The PERT sub-segment appears to have commonalities with other segments within tourism, such as special interest tourism, nature-based tourism, ecotourism, REAL tourism (rewarding, enriching, adventuresome and learning travel) (Hall & Weiler, 1992) and alternative tourism. Issues and factors influencing the growth of these areas may also impact PERT. Substantial literature exists, particularly for ecotourism (Blamey, 1995; Fennell, 1999; Page & Dowling, 2002; Wearing & Neil, 1997), and there is a generally held view that ecotourism is increasing in size (Orams, 1996b; Rodger & Moore, 2004) as well as possibly attracting a larger market share of overall tourism (Roe et al., 1997). But the growth rates vary between different sub-sectors, and within sub-sectors (Higginbottom, Rann, Moscardo, Davis & Muloin, 2001b:28) and measurement is problematic (Moscardo et al., 2001b:12-15). It is beyond the scope of this thesis to examine each of these related product markets in detail. Instead relevant material, largely from the substantial body of work on ecotourism and wildlife tourism, will be examined, and the growth and further segmentation of the area discussed.

*The growth and nature of ecotourism*

The International Ecotourism Society (USA) defined ecotourism as 'responsible travel to natural areas that conserves the environment and improves the well-being of local people' (The International Ecotourism Society, 2004:no page). There are many ecotourism definitions (Sirakaya, Sasidharan & Sonmez, 1999) and most contain similar characteristics such as a nature-based component, sustainability and education (Blamey, 1995). Definitions often describe the benefits the ecotourism product, or industry, should be able to provide (Honey, 1999) and are normative in style. Ecotourism can also be viewed from an ethics-based perspective (Wight, 1993) and rather than being the definition for one type of small-scale nature tourism, the term was sometimes used as a
set of principles applicable to any nature-based tourism. The extent ecotourism operations act in a more ethical manner, both environmentally and socially, compared with other types of tourism is still not well studied, although there is some evidence suggesting ecotourism operations are more ethically-based than other sectors in the tourism industry (Fennell, 1999:268).

Wight argued that the motivations of ecotourists overlap with those of other tourists and often, it is the tour operator or product deliverer that determines whether an experience is one of ecotourism (Wight, 1996a:1-2) rather than the visitor. Other researchers such as Lang, O'Leary and Morrison (1996) considered ecotourists to have a unique set of motivators that influenced travel choices, and specific desires about what they wished to experience on a trip. Most researchers agree that because tourism, including ecotourism, is multi-motivated, some reasons for taking a trip such as ‘to see beautiful scenery’ are common to general travellers as well as ecotourists (Wight, 1996b:8). Wight argued while it was possible to segment based on benefits a participant sought, not all benefits sought were helpful for product differentiation and other trip attributes may need to be used in the market place. The ethical nature of the trips appears to be a point of differentiation. Relevant to this research, for some ecotourists, the trips may also be part of ‘serious leisure’ (discussed further in Section 2.3), where significant fulfilment comes from pursuing long-term leisure activities.

Ecotourist profiles have been shown to vary from those of conventional tourists. Appendix 1 summarises the socio-demographic profiles of a number of ecotourism studies. Results can vary substantially between studies, such as average age and gender, possibly due to the characteristics of the trip studied. Most studies have indicated ecotourist profiles generally are higher than average in terms of income levels, tertiary education, environmental concern and awareness and there is a preference for small group sizes (Wearing & Neil, 1997:145). Experienced ecotourists are also often older. However, Honey (1999) argued there has been a gradual trend for ecotourists to be less intellectual, curious, socially responsible, environmentally concerned and politically
aware than in the past. She concluded that ecotourism has become more mainstream and ‘real ecotourism’ is shifting to become ‘lite ecotourism’.

The growth of ecotourism and mainstreaming of certain aspects of ecotourism, led to a broadening of the market (Lew, 1998) and further product market segmentation. Researchers have acknowledged distinctions between types of ecotourists (Butler, 1990; Weiler & Richins, 1995). The distinction has often been related to length of the trip, but more often to levels of ecotourism activities undertaken, the extent to which an interest in science was specialised, or focussed, or on the basis of physical difficulty, challenge and/or discomforts (Lang et al., 1996).

PERT-style trips are considered hard-core (Turner et al., 2001), and Weiler and Richins (1995:30) regarded Earthwatch participants as extreme ecotourists using three criteria based on the type of trip the participants had chosen to define ‘extreme’. These were the level of environmental responsibility or impact, intensity of interaction with the environment, and physical difficulty or challenge of the experience. The first criterion was extended to cover not only the actual trip chosen but the general ‘level of commitment and motivation to be environmentally responsible’ (Weiler & Richins, 1995:30). So defining characteristics relate to the ecotourism trip, but the tourist is also assumed to have certain preferences, or values, because of their trip choice. Weaver (2002) summarised the distinctions suggested between hard (also called dedicated, specialist, active or deep) and soft (or casual, generalist, passive or shallow) ecotourists (see Figure 2.1). Demonstrating people on a hard-core style trip have higher levels of environmental concern or pro-environmental behaviours is complex (see Section 2.6) and results have not always been uniform. It is also acknowledged that tourists can, and do, move between these categories. Weaver (2002:32) conducted research in Australia and questioned the validity of the preference of hard-core ecotourists for ‘emphasis on personal experience’, due to a preference for an escorted or interpreted tour or attraction visit to enhance learning, and suggested an additional characteristic of ‘spiritual/personal growth’.
Figure 2.1 The characteristics of hard versus soft ecotourists

Wildlife tourism and ecotourism

Segmentation based on the recreational activity undertaken has also become common. For instance, wildlife tourism as a segment has been constructed based on recreational activity and has significant overlaps with areas such as nature-based tourism, special interest tourism, ecotourism (Higginbottom et al., 2001b:5) and the PERT sub-segment. Wildlife tourism can be considered to include flora and fauna, captive and wild settings, and consumptive and non-consumptive forms of wildlife tourism. However, it is acknowledged that the distinction between captive and natural settings is blurring (Chirgwin & Harvey, 1999; Higginbottom et al., 2001b:32). This research focuses on non-consumptive wildlife tourism in natural settings, and therefore may be regarded as a sub-set of wildlife tourism.

Within wildlife tourism, various levels of specialisation have also been argued (Duffus & Dearden, 1990; Higginbottom et al., 2001b; Martin, 1997; McFarlane, 1994; Moscardo et al., 2001b; Woods, 2001) and specific types of wildlife tourism have been examined. For instance, marine-based wildlife watching (Garrod, 2003; Muloin, 1998;
Drams, 2000) and bird watching studies (Bildstein, 1998; Eubanks & Stoll, 1999; Sekercioglu, 2002) show that both these niches have undergone rapid growth. However, trends and changes in these areas cannot be inferred to have occurred in all areas of wildlife tourism as the area is too diverse (Moscardo et al., 2001b). The specialisation within wildlife tourism is likely to have contributed to the development of the PERT sub-segment.

Additional trends in tourism have also contributed to the emergence of the PERT sub-sector. Motivations for taking holidays are specific and personal, and holidays have become increasingly tailored as many consumers seek to pursue personal interests during holidays, thus contributing to segmentation (Douglas, Douglas & Derrett, 2001:8). Special interest tourism, where the ‘traveller’s motivation and decision-making are primarily determined by a particular special interest’ (Hall & Weiler, 1992:5), is characterised as active and experiential tourism where tourists want to participate, learn and experience the place they visit, often in an ethical or sustainable way (Hall & Weiler, 1992:5-6). Hall and Weiler argued interest in taking REAL travel has been growing and volunteer tourism is a sub-set of special interest tourism (Broad, 2001). Hence, the growth in special interest tourism, and the growing interest in the environment (Rodger & Moore, 2004; Shackley, 1996) are likely to have contributed to the growth in PERT. In addition, the desire to see new places, or species (Shackley, 1996:10), have been noted as strong motivators in tourism and ecotourism. Within the PERT sub-sector, research trips may be conducted in locations not usually open to tourists, further enhancing their appeal. Callanan and Thomas (2005) considered a ‘volunteer tourism rush’ had occurred in the late 1990s and early 2000s “influenced by an ever increasing ‘guilt-conscious’ society” (Callanan & Thomas, 2005:183). They considered the growth in volunteer projects, variety of destinations promoted, range of target markets and players (such as tour operators, charities and private organisations) and increasing competition as having contributed to the growth of volunteer tourism.
2.2.3 Tourism outcomes and benefits

The benefits that may be accrued by stakeholders active within the PERT sub-segment is a focus of this research, and tourism related benefits are likely to be relevant. Outcomes or impacts are broader terms than benefits and include neutral or negative effects. The perceptions of outcomes between different groups and even individuals within a group may vary as outcomes are a subjective concept. Outcomes may include on-site and off-site aspects and be at an individual, community or broader scale. Because of the dynamic nature of environmental and societal parameters, outcomes can alter over time. Perceptions by an individual of the same outcome may also alter over time. An additional complexity for evaluation or measurement is that it is not always possible to separate the tourism-induced changes from other forces (Archer, Cooper & Ruhanen, 2005) and the impact of tourism cannot be assessed as an external force on a static community (Wall, 1996:110).

Tourism benefits are considered to be the positive outcomes that result from trips. In terms of leisure, a benefit is ‘a change that is viewed to be advantageous - an improvement in condition, or a gain to an individual, a group, to society, or to another entity’ (Driver, Brown & Peterson, 1991:4). The analysis of benefits requires a value to be placed on a consequence, to determine if it is a benefit. Hence, a number of individuals may perceive the same outcome to have different benefits, based on their own viewpoint. Identification of benefits depends on the scale of the investigation (individual, community or wider), the breadth of the research, the stakeholders considered and the paradigmatic approach and viewpoint of the researcher.

Benefits sought and gained by different groups vary. For instance, Governments, macrosocietal or community-based goals are often different from those of a commercial company seeking short-term profit-oriented goals. Benefits also vary within a group. Wegner, Moore and Macbeth (2004:124) noted within a protected area agency, rangers, scientists, managers and senior policy makers may all hold differing views. Also an impact may benefit one species, have a neutral effect on others, and negatively impact others, so the subject of the analysis is important. Positive conservation impacts may not
be positive in terms of animal welfare (such as removal of feral species) demonstrating the complexity of analysis (Green & Higginbottom, 2001; Higginbottom et al., 2001a:3). Indirect, as well as direct, benefits can also occur such as a decrease in poaching due to the presence of tourists (Higginbottom et al., 2001a:35).

An analysis of benefits, therefore, requires each output to be assessed against values, and some may be then be considered benefits. Muloin (1998:201-2) argued that a leisure benefit model developed by Mannell and Kleiber could be applied to tourism. The model listed five types of outputs from tourism; physiological, economic, environmental, social and psychological. Archer and Cooper (2005) categorised tourism impacts as economic, political, socio-cultural and environmental/ecological. The differences between these two sets of categories appear scale-related as Mannell and Kleiber’s physiological and psychological categories referred to individual impacts that could be cumulated to social impacts. Similarly, Archer and Cooper’s political category is a regional or national scale but could be considered part of a social outcome.

Potential positive impacts from ecotourism have been identified (Honey, 1999). Weaver (2001) noted direct economic, environmental and social benefits exist as well as less obvious indirect benefits. The benefits from ecotourism may include improving incentives for protection, conservation through education and economic mechanisms, improved stewardship, peripheral areas receiving additional employment and revenue, and enhanced local recreational benefits (Weaver, 2001). Ecotourism operations also create potential costs and these may include risks of exposure to less benign forms of tourism, too greater emphasis on economic valuations of nature, the impact of increased tourism, the expenses of maintaining infrastructure for tourism, uncertain or fluctuating revenue from tourism, the opportunity cost compared with other options, and a potential loss in local control or equity in ecotourism operations (Weaver, 2001).

Within wildlife tourism identified benefits include the provision of financial contributions, practical contributions by tourists and operators, socio-economic benefits,
and education of visitors with consequent conservation benefits (Higginbottom et al., 2001a).

The PERT sub-segment within volunteer tourism is considered a mechanism that can provide benefits. Wider research has examined the extent tourism can help conservation (Brandon & Margoluis, 1996; Crabtree & Gibson, 1991; Higginbottom et al., 2001a; Kahn & Johnstone, 1995; Sekercioglu, 2002; Trent, 1996) although difficulties have also been recognised (Green & Higginbottom, 2001; Issacs, 2000; Young, 1991). Broader potential positive impacts can be included, such as national goals of stimulating rural economies, encouraging productive use of land that is marginal for agriculture (Roe et al., 1997:26), encouraging more conservation friendly use of land, diversification of local economies, and earning of foreign exchange.

At the organisation level, visitor satisfaction is often used as the primary managerial criterion for success (Bultena and Klessig, 1969 and LaPage) as high satisfaction levels are seen as increasing subsequent visitation levels (Kozak, 2001; Oliver, 1993; Petrick, Morais & Norman, 2001; Reisinger & Turner, 2003; Riley, Niininen, Svivas & Willis, 2001) and therefore helping ensure viability for a business. Satisfaction theory is complex and satisfaction contributes to overall benefits but cannot be equated with benefits. Satisfaction is discussed further in the section relating to the benefits accrued by the tourist as the term is generally used with respect to the consumer, but can also be applied to the host community, supplier, or an employee. Further benefit evaluation at the organisational level is often limited to an economic analysis examining profitability.

The economic impacts of segments such as bird watching (Kerlinger, Eubanks & Payne, 1995), have also been assessed and economic benefits at a specific conservation site (Tisdell & Wilson, 2001). Although some researchers argue, the positive and negative economic impacts of tourism at several scales have been well investigated (Archer et al., 2005), studies have often been ad hoc and there has been little systematic research on key areas such as the positive effects on wildlife, or on establishing appropriate mechanisms and pricing (Higginbottom et al., 2001b).
Considerable further research on potential benefits has been undertaken in areas such as, guest-host interactions (Ap, 1990; Uriely & Reichel, 2000; Uriely, Reichel & Ron, 2003), developing attitudinal changes in visitors (Gomez-Jacinto, Martin-Garcia & Bertiche-Haud’Hayze, 1999; Kelly, 1997; Prentice, Witt & Hamer, 1998) and concerning environmental issues (Farrell & McLellan, 1987; Fennell, 1999; Green & Higginbottom, 2001; Higginbottom et al., 2001a; Higginbottom et al., 2001b; Jacobson & Lopez, 1994; Newman & Sage, 1996; Reynolds & Braithwaite, 2001; Wall, 1996).

Benefits to the tourist

Analysis of the benefits of tourism at the individual level helps develop an understanding of why people may choose to undertake a specific type of tourism, such as volunteer tourism, and be useful for marketing and estimation of potential demand. The impact of a tourism experience on the tourist will vary according to the stage of the experience. Jafari (1987) developed a tourist model with six stages: the life that generates the desire to take a holiday; the departure; the activities that occur during the holiday; the return home; the incorporation into daily life; and the life that has continued in the tourist’s absence (Jafari, 1987:151). A number of other researchers have discussed similar stages, but often omitted Jafari’s last stage. For instance, Stewart and Hull (1992:196) summarised them as the anticipation, travel to destination, on-site, return travel and recollection phases. The stages form a dynamic continuum and this research acknowledges that the benefits that accrue to the tourist vary at each stage and some may be temporally specific. The main focus of this research was the cumulated long-term views of the respondent after the trip, so the recollection, or post-trip, phase was the focus of the study.

Motivations, destination choice, and satisfaction of visitors and their inter-relationship have been well studied. These do not equate to goals and outcomes, but are related. The issues surrounding tourism motivation and its measurement are complex, and have been adapted from psychology (Gnoth, 1997). Tourist motivation tends to be multi-motive and dynamic as it changes across the life span of an individual, changes with the family
cycle and is influenced by broad cultural forces, such as an increased environmental perspective. Crompton (1979) identified seven socio-psychological ‘push’ factors and two ‘pull’ or cultural factors that explained tourism motivation. Push factors can be considered ‘internally generated drives’ that cause a person to seek a situation that they believe will reduce the drive (Gnoth, 1997:290-1). The pull factors relate to knowledge of specific situational characteristics, and influence destination choice, although Crompton (1979) argued push factors also influence destination choice. Weaver and Lawton (2002:174-175) summarised the influence of ‘push’ and ‘pull’ factors on the decision to travel and destination choice.

A number of psychological theories of motivation have been applied to tourism, such as Maslow’s hierarchy of needs (Ross, 1998:19-20). Ryan and Glendon (1998) examined the applicability of the leisure-motivation scale to tourism. The scale has four motives determining satisfaction gained from leisure pursuits. The first motive relates to an intellectual motive or mental activities such as learning, exploring, discovering, thought or imaging. The second motive is a social component incorporating the basic needs of friendship and interpersonal relations and the need for esteem from others. The third motive relates to competency and a mastery component in which an individual seeks to achieve, master, challenge and compete. The final motive is the stimulus-avoidance motive that assesses the drive to escape and get away from an over-stimulating life situation, and the need for some individuals to avoid social contact, to seek solitude, calm conditions and to rest and unwind.

Ryan and Glendon (1998) concluded the four motives were closely echoed in tourism literature. For instance, Pearce’s (1993) travel career ladder is a hierarchical model that can be used to explain holiday-taking over time. People may initially be motivated to take a holiday for reasons such as relaxation, but may move up the scale and seek stimulation, relationships, self-esteem and development and finally fulfilment. Ryan and Glendon (1998) found the scale quite consistent with Pearce’s travel-career concept (Pearce, 1993), and Iso-Ahola’s work (in Pearce, 1993). Despite this, distinctions exist between the tourism/work and leisure/work dichotomies (Ross, 1998) and between
tourism and leisure motivations (Pearce, 1993). An individual’s work situation may be either under-, or over-stimulating (Ross, 1998) and holidays can be used to redress this, so are tied to the concepts of self-actualization or self-realization (Gnoth, 1997:287; Pearce, 1993) and help establish an identity and sense of self (Wearing & Neil, 1997:14).

Considerable research in tourism has also examined repeat visitation and, to a lesser extent, brand loyalty. Weaver and Lawton (2002:175) described the feedback loop that occurs after a trip. Subsequent trip choice is influenced by altered views of a destination due to greater knowledge, or modifications in the traveller’s personality or culture. Travellers return to the same destination for reasons such as risk reduction, to meet similar people, emotional attachment, to explore an area more widely, and to expose it to others (Gitelson and Crompton, 1984). Pearce (1993) argued people return to the same holiday location as it contributed to their self-esteem (individuals have an increased knowledge of a place, talk and identify with a place) and may achieve fulfilment (from feeling a part of a place). The linkage between past satisfaction and repeat behaviour is discussed in Section 2.6.2.

Motivation theories have been applied to nature tourism. Nature tourists are considered to travel (Damude, 2000:3) as they want to experience natural phenomena, learn more about nature, be physically active, and meet people with similar interests. Case studies within nature tourism demonstrate a distinct difference between specialist and generalist (hard- and soft-core) ecotourists in their motivations and subsequent behaviours (McFarlane, 1994; Weaver, 2002). Woods (2001) considered it is likely that the specialist tourist is less easily satisfied as they have specific goals they wish to achieve and satisfaction levels may be a product of specific outcomes (sighting a specific species) rather than the broader experience. Muloin (1998:209) examined whether 11 benefits (derived from previous research) were perceived as important to visitors on an Australian whale-watching trip. The top ranked results were similar to factors identified as important in achieving satisfaction, but not identical.
In tourism studies, researchers have generally looked at on-site identified benefits accruing to the individual through techniques such as satisfaction analysis. Although satisfaction is often discussed as a single factor or a cumulated total, it is multi-faceted (Oliver, 1993) and composed of many independent components (Reisinger & Turner, 2003:196). The weightings of each component vary, and change over time, making measurement difficult and the timing of measurement critical (Stewart & Hull, 1992). Gnoth (1997) considered it to be the emotional response to an experience. Much of the research in tourism satisfaction has utilised the disconfirmation paradigm (Reisinger & Turner, 2003:176), and satisfaction is derived from congruence between expectations and the perceived outcomes of the experience. Although the connections between product quality, satisfaction and outcomes have been examined (Baker & Crompton, 2000; Riley et al., 2001) further research is required to validate and clarify this area. Methods of measuring satisfaction have limitations and indirect measures can be preferable (Reisinger & Turner, 2003).

Moscardo, Woods and Greenwood’s (2001b) summarised satisfaction case studies in Australian wildlife tourism, and satisfaction factors varied between individual case study results. Reynolds and Braithwaite (2001) identified quality factors that were intrinsic to the wildlife tourist experience and listed a set of context variables that were natural factors affecting the quality of the experience (but outside the control of the management) and a set of service variables that also affected customer perception of quality. Other researchers have investigated aspects such as close-up viewing of unique species in natural environments (Moscardo et al., 2001b; Orams, 2000; Woods, 2001) to determine the impact on tourist satisfaction.

The wide range of research that has examined why people travel and the travel choices they make, contributes to this research as it can be applied to PERT to determine why people choose to undertake this specific type of travel and why people may choose to repeat and take further trips. It is likely the reasons overlap with those of other related areas such as ecotourism and wildlife tourism, particularly hard-core tourists.
Other tourism outcomes

Identifying all outcomes of a tourism experience is rarely feasible, but an overall perspective of outcomes has been attempted in a few instances, such as Smith’s discussion of Antarctic tourism (Smith, 1994). It is possible to audit trips (Honey, 1999), but the exact nature and significance of environmental and cultural impacts is a function of the motives that consumers bring to these experiences, the efforts operators and environmental managers go to minimise adverse impacts and the interactions between clients and service providers (Kelly, 1997). Consequently the ability to generalise from a case study can be limited.

Other researchers have attempted to develop frameworks to examine specific outcomes such as using a total ecological footprint approach to examine tourism (Hunter, 2002). Because of the scale of the approach, detailed work is rarely feasible. Orams (1996b:41) developed a conceptual model of tourist-wildlife interactions and listed two sets of outcomes, for the wildlife and for the tourist. Outcome indicators for the tourist were divided into four categories: satisfaction/enjoyment; education/learning; attitude/belief change; and behaviour/lifestyle change. Progression between the categories from satisfaction to lifestyle change as outcomes was desirable, not necessarily for the individual, but for an organisation pursuing sustainable tourism objectives.

Reynolds and Braithwaite (2001) developed a series of diagrams to help explain the interactions between wildlife tourism and the effect on wildlife. They identified a series of trade-offs as necessary between ‘values of conservation, animal welfare, visitor satisfaction and profitability’ (Reynolds & Braithwaite, 2001:38). The diagrams concentrated on satisfaction aspects for visitors, rather than outcomes, and measured the wildlife tourism experience in terms of its richness (using authenticity, intensity, uniqueness, duration, species popularity and species status and modifying these with context and service variables) but did not take these points further to examine long-term outcomes from a short-term wildlife tourism experience.
Outcomes cannot be considered static as the natural and social environments are constantly changing. Duffus and Dearden (1990) extended Butler’s tourist lifecycle (1980) to produce a conceptual framework for non-consumptive wildlife tourism that incorporated this dynamism. As more tourists come to an area, infrastructure develops, and the type of tourist alters to become more mainstream, detrimentally affecting the wildlife habitat (Hall & Higham, 1998; Roe et al., 1997:13). An evolving visitor profile is likely to affect the level and type of tourist impact upon the wildlife setting (Roe et al., 1997; Wilson & Tisdell, 2001) and hence the overall outcomes and benefits over time.

Analysis of outcomes or the positive sub-set of these, benefits, is clearly complex. Intended outcomes do not equate to actual outcomes (Stern, 2000:408) and actual outcomes are the sum of both intended and unintended outcomes. Unintended outcomes may be negative in nature, such as deterioration of the biological environment. Alternatively, an unintended outcome may be positive. For instance, a researcher may have designed a PERT-style trip specifically to help finance their own research project, and an unintended outcome was that the participants enjoyed the trip and decided to take this type of holiday each year, also supporting other researchers. Outcomes may also be tangible, such as the publication of a report by a scientist, or intangible, such as a greater emotional affinity with nature.

In addition, the scale of analysis is important and alters the perspective concerning outcomes. For instance, where tourism is actively involved in supporting conservation, such as within various types of volunteer tourism, partnerships are evident (Dowling & Sharp, 1997; Selin, 1999; Turner et al., 2001) and encouraged (Higginbottom et al., 2001b:35). Partnerships involve a pooling or sharing of appreciations or resources among two or more stakeholders to solve a problem or create an opportunity that neither can address individually (Selin, 1999). Stakeholders can be regarded as ‘any group or individual who can affect or is affected by the achievement of an organisation’s objective’ (Freeman, 1984:46).
While the importance of cooperative environmental management is well established (Plummer & FitzGibbon, 2004) and collaboration is also seen as a powerful tool in contributing to sustainable tourism development (Sautter & Leisen, 1999; Selin, 1999; Wegner et al., 2004), stakeholders vary from each other in terms of their objectives and interests (which may also vary by level) and each stakeholder group will hold differing perceptions of outcomes. Detailed studies often focus on only one stakeholder group, such as operators, regulators or host community perceptions. But viable partnerships and collaborations generally are dependent on the value of the outcomes and the extent benefits are perceived by, and accrued, to each partner.

Research in management regarding the identification of stakeholders (Mitchell, Agle & Wood, 1997) is also relevant in tourism. Although stakeholder theory has not been greatly used within tourism research (Getz & Timur, 2005), it has often been implicitly acknowledged and some stakeholder research in the related area of wildlife tourism has been undertaken (Rodger & Moore, 2004), and specific examples case studied (Talbot & Gould, 1996), but difficulties exist (Moore & Carter, 1991) and further work examining the relationship and understanding between stakeholders is needed. The relationship between scientists and communities involved in monitoring have also been explored (Lunney & Matthews, 2002; Saunders, 2002; Wilson, 2002). Wegner, Moore and Macbeth (2004) recognised that a diversity of perspectives may exist within protected area agencies regarding the tourism industry, but further research is needed to understand this area.

Additional potential benefits resulting from an analysis at the societal level of tourism-conservation partnerships include increased public awareness of environmental issues and land management approaches. Areas such as PERT may contribute to a greater understanding of science and research by the public, and in turn, potentially greater support for it. The societal capacity and willingness to participate in activities which contribute to social capital and in particular, to participate in environmental policy and decision-making may be strengthened by increased rates of volunteering and this is discussed further in Section 2.5.
This section demonstrated analysis of the outcomes or benefits of tourism, or a specific type of tourism such as PERT, is complex. Not only does analysis vary depending on the scale and focus of the investigation, but the extent the goals of different stakeholders in a partnership overlap, may affect the outcomes, the benefits and hence the satisfaction with the partnership. Substantial work in sustainable development and sustainable tourism has explored the positive and negative impacts of tourism and the balance between these.

2.2.4 Tourism summary
The growth of the tourism industry has seen continual segmentation aiding both suppliers and consumers and areas such as ecotourism, special interest tourism, wildlife tourism, are likely to have contributed to the growth in volunteer tourism and the PERT sub-segment, as well as broader trends such as the growth in REAL travel. Determining the benefits that may accrue from a tourism trip is complex. Considerable work has been done regarding tourism motivations, and the relationship between expectations and satisfactions. However, it is beyond the scope of most studies to examine all types of benefits, and at all scales, equally. This research focused on participant perceptions of benefits during the post-trip phase of travel, recognising that perceptions of benefits may alter over time.

2.3 Volunteering
2.3.1 Introduction
This section outlines the relevant literature in volunteering research. Volunteering is an essential component of trips within the PERT sub-segment and an understanding of the issues within volunteering that may have influenced the growth of PERT are essential.

Volunteering research is split into two major fields of research, one that draws on economics and law, and one that draws from sociology and politics (Lyons, Wijkstrom & Clary, 1998). This research is within the second area, focussing on volunteering as a leisure activity and so the disciplinary base is compatible with much of the tourism
research that is also a focus of this research. Initially, the varying definitions of volunteering and consequential statistical issues are discussed (Section 2.3.2) then the factors that influence the levels of participation in volunteering in society (Section 2.3.3). The rise of post-war environmental social movements and increasing levels of social concern and awareness in the general population are then briefly discussed to enable the growth of the environmental volunteering movement to be placed in context. This discussion on volunteering focuses on current issues in the developed world where most of the participants on PERT trips originate. Only aspects of volunteering directly relevant to this research are discussed here.

Section 2.3.4 discusses the factors that motivate a person to volunteer, the influences surrounding choice of voluntary activity and organisation, and the factors that are considered to influence a volunteer to stay volunteering with the organisation (retention). While these overlap, they are not identical and together indicate the benefits that accrue to the individual from volunteering. The act of volunteering creates wider benefits also and the values to organisations and to society are also explored.

This review of the volunteering literature focuses on determining the size of the voluntary sector and identifying factors that influence its size. These factors are likely to impact the size of the PERT sub-segment because of its volunteering component. However growth within the PERT sub-segment is also likely to impact the voluntary sector, not only directly by providing another type of volunteering opportunity that may attract people not currently volunteering, but also indirectly as the PERT experience may encourage subsequent volunteering. The impacts of PERT trips are explored further in this research.

2.3.2 Issues with definitions
In the western world there appears to have been a significant growth in voluntary organisations from the 1970s onwards and associated academic interest has grown in the 1990s (Oppenheimer, 2004:3; Perry & Imperial, 2001) in areas such as measurement, policy and social capital. The terms, 'the third sector', 'not-for-profit sector' and 'the
voluntary sector' are often used interchangeably. Although the growth in this sector is widely accepted, population-wide studies in some countries revealed declining volunteer rates in the 1990s and questioned whether shortfalls between supply and demand may occur. Analysis of volunteering rates is complex however as the measurement of volunteering has been problematic.

Part of the difficulty in measuring volunteering arises from the lack of agreement concerning a definition of a ‘volunteer’ (Cnaan, Handy & Wadsworth, 1996; Paull, 2003). The National Survey of Volunteering in the United Kingdom (Institute for Volunteering Research, 1997:2) defined volunteering as ‘any activity which involves spending time, unpaid, doing something which aims to benefit someone (individuals or groups) other than or in addition to, close relatives, or to benefit the environment’. This definition includes both formal volunteering (through an organisation) and informal volunteering (unmanaged). Australian Bureau of Statistics data includes only formal volunteering as it is based on a definition of a volunteer as ‘someone who willingly gave unpaid help, in the form of time, service or skills, through an organisation or group’ (Australian Bureau of Statistics, 2001:17). People who received reimbursement for expenses were included, but those who were paid in-kind for work done, were not included. Some types of unpaid work, such as work experience, community service order, student placements, or work-for-the-dole schemes are not considered volunteering and so there is a fundamental difference between abstract concepts of volunteering and volunteering as an activity in the not-for-profit sector (Warburton & Oppenheimer, 2000).

For the International Year of the Volunteer 2001, a cross-cultural definition suitable for use in different countries was developed. Three criteria were seen as essential to volunteering (Dingle, Sokolowski, Saxon-Harrold, Davis Smith & Leigh, 2001). Volunteering is not undertaken primarily for financial gain, and although expenses may be repaid, there is no wage associated with the voluntary work. The second criterion states that volunteering is undertaken of one’s own free will and so is not done by a pupil as part of a school program, or an employee under directions from an employer.
The last criterion requires volunteering to bring benefits to a third party, as well as to the people who volunteer, and the third party may include broad notions such as society or the environment. This definition does not restrict volunteering to be within a local community and so includes volunteer vacations or volunteer tourism and also emphasises it as a leisure activity.

2.3.3 Factors affecting changes in participation rates – concepts and measurement
The extent and nature of volunteering differs from country to country, within countries and over time due to perceived needs, opportunities and views (Australian Bureau of Statistics, 1996; (Bureau of Labor Statistics, 2003; Hall, McKeown & Roberts, 2001; Institute for Volunteering Research, 1997). Definitional and measurement problems make it difficult to accurately determine changing levels in societal volunteering. Growth has not been uniform across the spectrum of volunteering and observed levels of involvement in volunteering appear to be quite dynamic (Hall et al., 2001), have changed over the last few decades, partly due to societal changes, and will continue to change (Kearney, 2001; Merrill & Safrit, 2003).

The potential quality and quantity of volunteers alters with labour market fluctuations. Factors promoting voluntary work include the changing structure of the workplace and free time (Hall et al., 2001). However, increased ‘free’ time of the jobless, or early retirees, is not necessarily seen as increased time for volunteering as it depends on other stresses and pressures before this time is actually seen as ‘free’ to be given by choice to another activity (Warburton & Oppenheimer, 2000). Trends such as falling birth rates and more women entering the workplace may work against volunteer levels (Deery & Jago, 2001). Canadian research also suggested changing levels of religious affiliation and changing recruitment practices of volunteer organisations were significant influences on the levels of volunteering over time (Hall et al., 2001).

Government legislation also alters levels of volunteering. For instance, legislation on unemployment benefits, income tax, retirement age, and the length of the working week can all potentially affect the level of volunteering, while programs to decentralise social
welfare systems or to improve national information technology networks could all have a positive affect (Institute for Volunteering Research, 1997).

The political push in the 1980s and 1990s in countries such as the United Kingdom (Fyfe & Milligan, 2003), and the United States and Canada (Perry, 2004) to strengthen the civic sector, altered operations within the voluntary sector and 'mainstreamed' it into public policy. The consequential changes increased the opportunities for formal volunteering and there has been significant growth in citizen involvement in environmental decision-making (Conacher & Conacher, 2000; Schroeder, 2000). Changes in NGOs, concerning areas such as occupational health and safety, security checks, and insurance have meant NGOs can appear increasingly bureaucratic, and these types of changes can create potential recruitment problems (Deakin, 1991; Turner et al., 2001; Warburton & Oppenheimer, 2000).

The impact of other government initiatives is not yet clear. For instance, service learning (which links academic learning with community service) was utilised in 9% of all United States high schools in 1984 and grew to 46% in 1999 (Perry, 2004:173S) and stipend service through groups such as Peace Corps has also grown substantially. Environmental-oriented groups such as the United States’ Youth Conservation Corps and Californian Conservation Corps in the 1970s and 1980s aimed to alter the individual, and research across all civic service programs revealed the most prominent goal in these programs (91%) was to increase the server’s motivation to volunteer again (Perry, 2004:174S). Although service learning and stipend service are not necessarily regarded by all definitions as volunteering, the extent to which these types of government initiatives may change future volunteering participation rates is unknown.

A population’s participation rate in volunteering is influenced by social viewpoints concerning spending leisure time working as a volunteer. Participation rates in environmental volunteering will be also determined by perceptions about whether government, or other bodies, should be responsible for scientific tasks, clean up, and
general environmental care, or whether the community as a whole should bear some of the responsibility.

Levels of volunteering may alter with perceptions of the effectiveness of various forms of philanthropy. For instance, environmentalists may prefer to donate their time, or in-kind gifts, rather than dollars (Anonymous, 2001). However, many volunteering studies show a barrier to volunteering is lack of time and some people chose to donate financially instead (Hall et al., 2001:44). Volunteers are much more likely to donate than non-volunteers (O'Neill, 2001; Rooney, Steinberg & Schervish, 2004) and engagement through volunteering may be a critical initial pathway to encourage donations from the wealthy (Edwards, 2002:9).

The range of activities deemed to be included in volunteering will alter measured participation rates. Volunteering can encompass a vast array of activities, from decision-making and planning positions, fundraising, administrative or 'hands-on' tasks, to activism. The extent large scale activism such as attendance at anti-Iraq war rallies is included can alter country data over time (Quall, 2001). Political activism in post-industrial countries has been increasing and younger, better educated people are becoming more active in less traditional organisations (University of Michigan Institute for Social Research, 2003) so the inclusion of activism in data may significantly alter results. On a national scale, a one-off event such as the Sydney Olympics can also alter data and heighten awareness of volunteering, as can the impact of a tragedy, with a 20% increase in the likelihood of people having volunteered after September 11, compared to prior (Rooney et al., 2004:645).

There is considerable variation in the observed levels of volunteering. Explaining such variation using the factors described above can be complex (Zappala and Burrell, 2002). Demographic changes can alter participation levels in volunteering. Previous research indicated certain types of people are more likely to volunteer than others (see Appendix 1) but generally 35-44 year olds have the highest volunteering rate, although younger
people are more likely to be active in environmental volunteering and older people (65 years or older) are likely to devote more time to volunteering. Well-educated and higher income groups are also more likely to volunteer, but there are significant differences between survey results (see Appendix 1) and these differences may reflect definitional, sampling, country or cultural differences. Generational variations have also been observed in most major analyses.

Putnam (1996:44) suggested involvement in civic society had altered over the generations in the United States with the decline starting with people born in the 1930s. Population-wide surveys in Canada and the United Kingdom revealed a declining level of volunteering in the 1990s, and reasons for this have been suggested by a number of authors (Hall et al., 2001; Lyons & Fabiansson, 1998). Arguments have been made that the baby boomer generation is likely to be less philanthropic and more oriented to self-interest than civic responsibility, compared with the pre-war generation (Zappala & Burrell, 2002:52) and show a preference for project-based short-term volunteering, of which PERT-style trips are one example. As the baby boomer generation moves into retirement, a further decline in overall volunteer hours may result, as retired people have been the most highly committed volunteers.

A second key reason associated with declining volunteer levels is the observed drop in the participation rate of young people in some studies, such as a United Kingdom study between 1991 and 1997 (Institute for Volunteering Research, 1997). Although there is concern about an upcoming shortfall between volunteer supply and demand, not all studies indicated a continuing decline, such as recent data for the USA (Bureau of Labor Statistics, 2003) and an Australian analysis of time spent on volunteering comparing 1992 and 1997 data by Ironmonger (2000). Further United Kingdom research on young volunteers disagreed with the previously identified decrease in participation rates (Institute for Volunteering Research, no date [a]) and differences between surveys may be methodological.
Most surveys show the motivations for volunteering vary between age groups, and observed declines may have been due to volunteer management strategies not being appropriate for a particular target group. To ensure overall volunteering levels do not decline, volunteer managers need to change recruiting and management strategies to focus on the benefits of volunteering to the individual (Zappala & Burrell, 2002:52). Examination of the target groups and motivations for volunteering within PERT is therefore crucial to understanding demand.

Short-term volunteers can be termed ‘episodic volunteers’ (Macduff, 1995). The term describes discrete or sporadic volunteering, such as once a year for two weeks, rather than every week or once a month. Macduff (2004) described three types of episodic volunteer. Despite the intermittent nature of their contribution, episodic volunteers can have a strong commitment to an organisation, such as a person who always volunteers at the annual school fair, or an annual sporting carnival, local event or festival and she termed these ‘occasional episodic volunteers’ who managers can count on returning each year, but only give service for a short time. Alternately they may be volunteers who pick and choose between organisations and times according to their personal interest, motivations at the time, and own time availability, and there is no loyalty to an organisation. Macduff (2004) termed these ‘temporary episodic volunteers’ who volunteer for a short duration (such as for a beach clean-up). The third type is the ‘interim volunteer’ who gives service on a regular basis but for less than six to eight months. Volunteer tourism can be considered as episodic volunteering, as it is done in an occasional fashion, but it does not clearly fit within Macduff’s sub-divisions. People who take a trip each year may be ‘occasional episodic volunteers’, but for others it may be a one-off experience, or volunteers may take trips with different organisations each year.

*Environmental volunteers*

While there is much discussion in the literature relating to volunteering as a whole, this includes a wide diversity of fields such as caring for elderly, the sick and children, helping in schools, emergency services and sports officiating. Much less literature
specifically discusses issues regarding environmental volunteers. This section briefly traces the growing levels of global environmental concern and changes within environmental volunteering, as these will both have influenced the emergence of the environmental volunteer tourism sub-segment.

*Rise of contemporary environmental concern*

There is little agreement about how, or when, the post-war rise in environmental concern began (Pakulski & Crook, 1998). Rachel Carson’s ‘Silent Spring’ published in 1962 was an early influential work. As citizen initiatives grew and the popular press transmitted green issues, environmental concerns during the 1980s moved from being an intellectual discussion by the tertiary-educated middle class or counter-cultural individuals to mainstream issues that affected the broader public, politics and daily practices. In addition, the quest for a greater degree of public participation in planning and policy making became one of the major social movements of the late 1960s and early 1970s (Sewell and Phillips, 1979). Community participation, where citizens, resource managers and politicians worked together to resolve legitimate disagreements and fairly allocate environmental resources has become seen as a partnership model for the future, has been widely debated. Some of the key elements of conservation partnerships were summarised by Trauger, Whitney and Hatcher (1995). Within Australia, considerable debates concerning natural resource management participatory approaches have been discussed with respect to groups such as Landcare (Dovers, 2000) and the Natural Heritage Trust process (Lunney & Matthews, 2002).

The post-war greening of governments, societies and organisations has been well documented (Aplin, 1998; Burgmann, 2003; Castells, 2004; Dowie, 1997; Doyle, 2001; Hutton & Connors, 1999; Thapa & Graefe, 2003; Tranter, 2004). Measuring the growth in environmental concern, however, has not been easy, but a number of researchers have attempted it using attitude scales (Dunlap & Van Liere, 1978; Dunlap, Van Liere, Mertig & Jones, 2000; Noc & Snow, 1990; Van Liere & Dunlap, 1981; Weigel & Weigel, 1978). Although concern appears to have been increasing, measurement is problematic, trends are unclear and gender differences may exist (Steel, 1996).
Major long term studies in the mid-1990s, such as the Eurobarometer undertaken by The European Commission (INRA [Europe] - ECO, 1995; The European Opinion Research Group [EORG], 2002) and the World Values Survey 1981-95 that incorporated results from 79 countries (World Values Survey Association, no date), showed levels of environmental concern varied with socio-demographics and considerable differences in environmental concerns and behaviours existed between countries (INRA (Europe) - ECO, 1995). Environmental concern in Europe appeared to be high, but for some measures it dropped from 1992 to 1995 (INRA [Europe] – ECO, 1995), but increased again from 1999-2002 (The European Opinion Research Group [EORG], 2002). Australian data indicated a recent decline in environmental concern. In 1992, 75% of people stated concern about environmental problems (Australian Bureau of Statistics, 1992:32), compared with 68% in 2000 (Australian Bureau of Statistics, 2001e:13-15). The age category showing most concern, in 2000, for Australia, was the 45-54 year olds (69%), and this age category was also the most likely to register their concern (15%) in the previous 12 months.

Because of difficulties directly measuring environmental concern, indirect measures are often utilised. For instance, measures such as the level of philanthropic donations contributed to environmental/animal welfare causes could be used. In Australia in 1997, this was 2.3% of all donations (Philanthropy Australia, no date).

Environmental concern has also been associated with environmental group memberships amongst other factors (Dennis & Zube, 1988). The World Values Survey revealed 2.5% of respondents were active members in environmental organisations and 6.7% were inactive members (World Values Survey Association, no date). Examination of specific organisations revealed significant growth. For instance, the USA-based Sierra Club in the 1950s had around 7000 members, in the mid-1960s, 70,000, in 1984, 350,000 and in 2004, over 700,000 (Sierra Club, 2004). The National Trust in the UK had 170,000 members in 1968, 1.5 million in 1984 and in 2003 had more than 3.3 million (National Trust, 2004). However, broad scale data does not necessarily show continued growth. For instance, in Australia, in 1992, 6% of the population stated they 'were members of groups whose main activity is protection of the environment' (Australian Bureau of

Although the decline in membership could be due to the observed drop in environmental concern in Australia, the use of indicative measures is problematic. For instance, research showed 93% of people who stated they were concerned about environmental problems did not belong to any environmental group (Australian Bureau of Statistics, 2001e:18). In addition, other data sources such as the Australian Election Studies 1990-2000 data (Tranter, 2004:189) indicated a fluctuating level of membership between 2.4% and 5.4%, with no trend apparent. The 2001 Australian Election Studies data did show members of environmental groups consistently ranked a range of environmental issues as more urgent compared with the public (Tranter, 2004:192) and internationally, the World Values Survey data confirmed environmental members undertook higher levels of pro-environmental behaviours than non-members. Consequently, membership of an environmental organisation can only be considered an indicative measure of environmental concern, and research has demonstrated members can have quite different levels of environmental concern and activity (Schuett & Ostergren, 2003).

Defining and measuring social movements is difficult (Hutton & Connors, 1999:4). Burgmann (2003:238) argued that the recent downturn in reported environmental concern in Australia is not actually an ‘ebbing of the green tide’ from its high-water mark in 1988-1990, but is a ‘routinisation’ of public concerns, an idea supported by Tranter (2004:197). Overall, concern for the environment and pro-conservation attitudes are fundamental factors in determining environmental volunteer rates and the growth in public concern for the environment over the last 40 years is likely to be a factor in the growth of environmental volunteering and PERT. Whether the ‘mainstreaming’ of environmental concern has implications for the recruitment of environmental volunteers requires further research.

**Measuring levels of environmental volunteering**

Determining potential demand within an emerging area such as the PERT sub-segment is difficult but understanding current levels of environmental volunteering may
contribute to this. Measuring levels in the environmental volunteering movement is problematic due to the grassroots nature of many organisations. The 1999, the USA-based Sixth Biennial Giving and Volunteering Survey recording 1998 volunteering activities, specifically asked about environmental volunteering and found it constituted 5.5% of all volunteering (Dingle et al., 2001). A 2003 volunteer survey by the Bureau of Labor Statistics determined 1.7% of all volunteers in the USA were volunteers in environmental or animal care. Statistics Canada found in 1997 environmental volunteering was 2.9%, and in 2000 it was 2.8%, of all volunteering done by Canadians 15 years and older (Canada 2001). Of the Australian population, 3.8% of the population volunteer in environmental or animal welfare work (Australian Bureau of Statistics, 2001a:24).

Some socio-demographic variations exist (see Appendix 1) and examination of specific programs showed significant recent growth. For instance, in Australia in the last fifteen years Landcare has mobilized a large cross section of the rural population and about 30% of the country’s farming community have been Landcare volunteers (Byron & Curtis, 2002:59). In New Zealand, demand for volunteer opportunities significantly exceed supply and this is attributed to the growth of the environmental movement (James, no date:108). Published profiles of an individual organisation’s environmental volunteers vary considerably.

Although it has been difficult to measure changes in the rate of volunteering, trends show a long term increase in interest in environmental concern (Burgmann, 2003; Doyle, 2001), a preference for project-based or episodic volunteering emerging (Gazley, 2001; Merrill and Safrit, 2003), and increased self-interest as a motivator in volunteering (United Nations, 2001; Zappala & Burrell, 2002). Each of these can positively impact the growth of PERT.

*Measuring episodic volunteering and volunteer tourism*

Factors influencing the level of volunteering are also likely to affect the level of participation in volunteer tourism. Little information regarding the size of the volunteer
tourism sector is available and the extent existing statistical measures may capture volunteer tourism data is questionable. Most definitions of volunteering include volunteer tourism, despite the financial payment that distinguishes it from other types of volunteering. However, current measurement techniques may not accurately record levels of volunteer tourism. There are several reasons for this. Varying perceptions of the term 'volunteering' exist (Cnaan et al., 1996) and interpretation of the term by respondents may vary. O'Neill (2001:510) argued that some ethnic groups prefer terms such as 'helping' or 'sharing' and Dingle et al. (2001:23) recommended avoiding the use of the term 'volunteering' in a question. For instance, the 2000 Gallup poll in the USA, asked for the previous year, whether respondents had 'been active in a group or organisation that works to protect the environment' (Kitchell, Kempton, Holland & Tesch, 2000:19). Problems with the term 'volunteering' may be exacerbated within volunteer tourism where respondents may have difficulty reconciling the mixture of pleasure and work (Gazley, 2001).

The Eurobarometer research undertaken by The European Commission, discounted volunteering activity outside the local area, asking respondents whether they 'take part in a local environment action' and required a yes/no style response. The Australian Bureau of Statistics collected data on voluntary work and the most recent statistics (Australian Bureau of Statistics, 2001a) required voluntary work to be through a formal organisation and in the previous 12 months. Recent or regular volunteer tourism would be included but overseas volunteer work was specifically excluded (Australian Bureau of Statistics, 2001a). In addition, a respondent was asked to only include data from a maximum of three organisations they may have volunteered for in the prior 12 months. Yet active volunteers often support a number of organisations. Volunteer tourism may have been excluded from responses in favour of more recent volunteering, alternatively social or contextual factors may favour recall of local volunteer organisations. This technique used by the Australian Bureau of Statistics was considered less accurate by Ironmonger (2000:63) than the use of 24 hour or 48 hour diaries used in nationwide time use surveys. However, given the likelihood for volunteering, and episodic volunteering
to be clustered over weekends and possibly holiday periods, diaries may not accurately reflect the contributions of all types of volunteering.

Other volunteer measures may also exclude episodic volunteering. For instance, Lyons and Hocking (2000) argued volunteer commitment can be measured, and 'highly committed volunteers' were those who volunteered on average over 300 hours per year or six hours per week. The inclusion of an annual contribution phrase allowed episodic volunteering to be included, but other studies have defined highly committed volunteers by the number of hours per month contributed to one organisation, the number of years of volunteering in one organisation, or the volunteer frequency that is based on the number of times per year a person volunteered for the one organisation (Zappala & Burrell, 2002:45). Depending on the methodology used, none of these are likely to capture episodic volunteering properly.

Considerable research has been undertaken recently in the United States and Canada exploring methodological issues in volunteer research, particularly concerning accurate measures of volunteer rates. Issues such as recall, saliency, forward telescoping and social desirability, including ethical issues concerning guilt at low responses (Hall, 2001) were examined. Mechanisms to encourage recall included asking about volunteering in terms of activity, such as campaigning, fundraising or coaching, or the types of organisations, such as health care or environment. Researchers concluded that more questions, more prompts and longer surveys were more likely to give more accurate and greater responses concerning past volunteering (Rooney et al., 2004; Steinberg, Rooney & Chin, 2002).

Within volunteering research, questions concerning prior volunteering often use a reference period of the previous 12 months (such as used by Hughes & Black, 2002:61). Alternatively, to minimise recall issues, volunteer service can be recorded in smaller units, such as hours per week or hours per month (Steinberg et al., 2002:500) and the results can be multiplied to create annual data (Rooney et al., 2004:632). However, episodic volunteering such as a volunteer tourism may vary seasonally, due to holiday
periods, and is known to be positively influenced by major events or festivals (although often a researcher may be aware of these influences), so this approach may not be accurate for capturing PERT-style trips.

In contrast, most ecotourism and environmental concern studies have not stated a cut-off period for assessing the frequency of involvement in volunteering. For instance, using a five-point scale Schuett and Ostergren (2003:no page) used, ‘I am actively involved in organizations that are concerned with environmental issues’ and Orams and Taylor (2003:635) used, ‘I get (will get) involved with environmental activities’ with the five responses consisting of ‘always’, ‘frequently’, ‘sometimes’, ‘seldom’ or ‘never’. Beaumont (1999), also avoided the term ‘volunteer’ and asked about ‘local environmental group participation’ limiting the scope of conservation volunteering. Similarly the World Values Survey 1995 asked whether a respondent was an active, inactive or non-member of an environmental organization, and in 2000 altered this to first ask about membership and had an additional question ‘are you currently doing any unpaid voluntary work for … ’ a conservation, environmental or animal rights groups? Questions asking about current activity levels are less likely to accurately capture episodic volunteering. Previously used questions, of course, may be valid, depending on the goals of the researchers. For instance, regularity of the performance of a task may be considered relevant. But care needs to be taken in interpreting current data to examine the potential size of growth of PERT as this analysis demonstrates responses may not accurately represent environmental volunteering levels or level of involvement in environmental groups.

2.3.4 Benefits from volunteering

Ironmonger (2000:67) argued there are two types of benefits accruing from volunteering, the output benefits (the work achieved) and the process benefits (the benefits that accrue from having undertaken the task). Although both these types of benefits are important for the individual, organisation and society, measuring the benefits has not been easy and quantitative approaches examining the time taken to
create the output benefits at the organisation or society level have been the most commonly used techniques.

**Why people volunteer - factors that motivate a person to volunteer**

Volunteer behaviour can be seen as multi-motivated and the act of volunteering involves a series of stages in decision-making. At each stage the motivating factors and the benefits derived are thought to be slightly different (Clary et al., 1996) so the key stages are considered separately here.

According to leisure theory, volunteering is a 'non-work' activity, and the relationship between volunteering and leisure has been well explored by a number of researchers (Henderson, 1984; Parker, 1992; Parker, 1997; Stebbins, 1996a; Wearing & Neil, 1997). Volunteering, by definition, must be a basically a satisfying and rewarding activity, as it is done without coercion. Disagreeable features may exist but viewed over time, on balance, the volunteer finds the outcomes of the activity profoundly attractive.

Volunteering is related to social attitudes and dispositions (Warburton & Oppenheimer, 2000) and is a 'considered' pro-social behaviour where helpers have the time to decide when and how to help (Darley, 1991:317). It is generally accepted by psychologists that the primary motivation for human behaviour is self-interest (Darley, 1991:313), and altruism can be regarded as a selfish act done to attain higher order needs, rather than a selfless task (Knowles, 1972). The altruistic act can be seen as a type of personal enrichment (Stebbins, 1996a:217), bringing personal rewards, self-affirmation and helping establish one's own self-identity (Clary & Snyder, 1991:141). However, most researchers agree there are two key elements motivating people to volunteer, altruism and self-interest (Quall, 2001). These are not necessarily opposites and Beighbeder (in Wearing, 2001:50) used the phrase 'helping others to help themselves' which recognised the dual motives that are widely accepted in volunteering. Both the recipient and volunteer reap rewards from the volunteering (Clary & Snyder, 1999:157; Quall, 2001:68).
Clary and Snyder (1999:157) extended their earlier work (Clary & Snyder, 1991; Clary et al., 1996) and developed six categories of psychological functions met by volunteering: expressing or acting on values, seeking understanding, enhancement, career, social, and protective aspects such as guilt reduction. The first three are generally the most important but variations in importance are observed according to the demographic and socio-economic status of the volunteer, the type of volunteering and the length of volunteering (Zappala & Burrell, 2002:48). An alternative view to Clary and Snyder's functional analysis, was developed by Stebbins, who classified volunteering as a form of serious leisure (Quall, 2001; Stebbins, 1982, 1992a; 1996a).

He argued there were six qualities (Stebbins, 1982:6-7) that distinguished serious leisure from casual leisure:

- the occasional need to persevere;
- the tendency to have a career in the area;
- significant personal effort is needed, based on acquiring knowledge, training or skill and sometimes all three;
- durable benefits that accrue to the individual;
- a unique ethos that develops; and
- strong identification by the participant with the chosen pursuit.

Serious leisure was considered a 'systematic pursuit of an amateur, hobbyist, or volunteer activity that participants find so interesting and substantial that the participant seeks a career there in the acquisition and expression of its special skills and knowledge' (Stebbins, 1992a:3).

Based on this, Stebbins summarised the rewards accruing to the individual from volunteering and termed them 'durable benefits' (Stebbins, 1992a:7). He argued self-gratification and to a lesser extent social reward were important in casual leisure, but serious leisure could be described as a framework where 'the concepts of reward, value, career, altruism, satisfaction and self-interest cohere under the overarching perspective of serious leisure' (Stebbins, 1996a:218). The durable rewards can be split into personal and social rewards (Stebbins, 1996a:216-7). Personal rewards include personal
enrichment (such as cherished experiences including exceptional rapport, helping others, being altruistic), self-actualisation (such as developing skills, abilities and knowledge), self-expression (expressing these abilities, skills, knowledge), self-image (for instance a person may be known to others as a type of volunteer), self-gratification (including a sense of play and hedonistic pleasure), recreation (regeneration of oneself through volunteer capacity after work) and the financial return from volunteering. Social rewards include the social attraction of participating in the social world of the activity and the sense of accomplishment from the group effort of achieving a volunteer project.

Different types of volunteers place different emphasis on each of these rewards. Major international population-wide surveys (see Appendix 2) revealed some variation in results. The variations may have been cultural or related to survey structure or administration but for each survey, the identified motivational factors were included in the durable rewards Stebbins identified. The results in Appendix 2, suggesting gaining skills and work experience is more important to younger volunteers while using existing skills is more important to older people, confirm that motivations can alter with socio-demographic factors such as age.

Despite the conceptual arguments concerning altruism and self-interest, most studies concerning the motivations for volunteering include altruistic components. During the 1990s, an increased emphasis on personal development and self-interest responses relative to altruistic responses as motivators was noted (Institute for Volunteering Research, 1997; United Nations, 2001). It has been argued that these changes are partly due to the baby boomer generation that has a stronger focus on self-interest than the pre-war generation, where altruism was more apparent. Volunteering is considered a way to improve job prospects (Gay, 1998; Hall et al., 2001) and while all age groups volunteer for a mix of altruistic and self-interest reasons, career aspects (Clary & Snyder, 1999:157) and personal skills development are particularly important among young people (Institute for Volunteering Research, 1997). Research of older volunteers, such as Warburton, et al.'s (2001:598) study of Australian volunteers aged 65-74 years old,
found egoistic or self-interest reasons, such as feeling useful, gaining pleasure and satisfaction, and meeting people, were important motives as well as altruism.

Much less research has examined the motivations of environmental volunteers, a relevant area for understanding the motivations of participants within the PERT sub-segment. The results of Silverberg et al.'s (1999) work on volunteers in public parks in the USA was consistent with Clary and Snyder's, and Stebbins's, benefits as was Schroeder's (2000) examination of volunteers involved in restoration. Miles, Sullivan and Kuo (1998:33) determined six factors contributed to satisfaction with volunteers in ecological restoration including a chance to be away, meaningful action, participation, personal growth, physical aspects and fascination with nature. Weston et al. (2003:208) in a study of active Australian environmental volunteers with the Australian Threatened Bird Network, found 50% were active for conservation reasons, 29% for birds, 15% were interested in self-education and 6% due to the research. Cuthill's (2000) analysis of the use of volunteers on a coastal monitoring project found that the motivation varied from putting conservation ethics into practice, to enjoying a fairly unique leisure activity or a willingness to look after their own backyard. Kitchell et al. (2000:10) examined active environmental members in the United States and the ethnographic study revealed members became environmental activists from frustration. Respondents reported they had told the Government about a problem, waited, and nothing happened, so became active to achieve a result. Martinez and McMullin (2004) examined the differences between active and inactive members of the Appalachian Trail Conference and found efficacy (the belief that their volunteer work was worthwhile) and social networks the two key reasons why members became and stayed active, and competing commitments was the key reason why members remained inactive. Although personal growth was more important for active than inactive members, it was not considered very important. Similar research undertaken on Sierra Club active and non-active members had been undertaken by Manzo and Weinstein (1987) who found members were active because of social networks, differing beliefs about efficacy of citizen action, and the belief that they had been personally harmed by an environmental problem. When examined in detail,
each of these studies reflected the motivations of environmental volunteers are compatible with volunteer motivations in non-environmental areas.

The increased emphasis on self-interest as a motivator for volunteering observed in large scale studies is compatible with episodic volunteering and likely to contribute to the demand for PERT-style trips. Work done so far suggests that short-term, episodic or sporadic (Macduff, 1995) volunteers have the same motivations as long-term volunteers but the relative value of these factors is different (Gazley, 2001). Gazley suggested self-actualisation is very important for short-term volunteers and this may lead them to look for opportunities not only for service but for learning and growth. A trend towards volunteering being regarded as an educational enterprise has not yet, however, been confirmed by research. Episodic volunteering may also be growing as the regular time commitment requirements of volunteering have been identified as a barrier to volunteering (Hall et al., 2001; Warburton et al., 2001).

Factors that influence the choice of volunteer activity and organisation

The previous section discussed the benefits that accrue to the individual from volunteering and are thought to motivate a person to volunteer. The decision concerning what type of volunteering and which organisation to volunteer with, are affected by slightly different factors. Clary et al. (1996:496) found the values motivation was important in initiating volunteering, but the other five motivations they identified (seeking understanding, enhancement, career, social, and protective aspects such as guilt reduction) guided the choice of volunteering activity. However, environmental values (unlike most others) were a significant predictor of the choice of volunteering activity (Clary et al., 1996:496).

In environmental volunteering, people appear more inclined to support what they believe to be valuable, threatened or in short supply and the choice of organisation may depend partially on an individual’s view of what is worth their help. Although some researchers argue that volunteers seek to support ‘worthwhile’ organisations, care needs to be taken in this area. A study on tourist volunteering in Thailand on a conservation program
(Broad, 2001) determined that the success or perceived success of the project had little effect on the motivations of the participants and the problems and difficulties of the organisation even worked to increase motivations as the broader cause was seen as worthwhile.

A United Kingdom study of older volunteers found the decision to volunteer with a specific organisation was based on where they believed they could put their skills and experience to good use, the good reputation of the organisation, whether the organisation was short of volunteers and because someone asked (Institute for Volunteering Research, no date [b]). The same population study on volunteering confirmed the importance of 'being asked' (Institute for Volunteering Research, 1997) for all volunteers, with around half of volunteers stating this had played a key role in their decision-making. Martinez and McMullin's (2004) research in environmental volunteering also confirmed this as a key factor.

People evaluate potential volunteer activities not only in terms of 'worthiness' and altruistic components but also according to their perceived personal rewards from undertaking the activity. Personal rewards are considered important in younger people's selection of volunteer activities (Institute for Volunteering Research, 1997).

**Factors contributing to the retention of volunteers**

The factors that influence a person to start volunteering are not quite the same as the factors that influence commitment and determine how long a person stays a volunteer (McCudden, 2000). Commitment factors can be tied to three strands, the organisation, the task, and to people (Forster, 2001) and determine retention rates. Retention rates are considered one of the keys to success in managing volunteers (Lynch, 2000) as most volunteer organisations aim to retain a pool of volunteers who have already been trained, are familiar with the needs and requirements of the job, and who the organisation knows are reliable and conscientious. Recruitment and training costs can be reduced and hence retention should increase the rate of return from voluntary work to an organisation. In
terms of understanding the benefits that accrue to individuals, and to the organisation, these factors are important.

Three variables are considered to affect volunteer retention: when the volunteer experience fulfils their motivations, when volunteers feel their work contribution is meaningful, and when volunteers gain job satisfaction (Mesch, Tschirhart, Perry & Lee, 1998). Martinez and McMullin (2004) examining environmental volunteers, regarded the social networks and the volunteer’s belief in the value of their contribution as the reinforcing factors that kept the volunteers active. However, evidence concerning the influence of these factors on individual volunteers is inconclusive (Locke, Ellis & Davis Smith, 2003). Volunteer management handbooks address retention issues (Macduff, 1995; Pinkney-Baird, 1993) and consider conflict resolution, communication (Forster, 2001) and leadership styles as important but the keys to retention are tangible and intangible rewards (Gay, 1998; Lynch, 2000). Ongoing training is considered essential (Warburton & Mutch, 2000:39). Carroll (1999:9) argued that retention of environmental volunteers can have additional complexity as his study of Greenpeace showed it can be difficult ‘to manage volunteers motivated by expressive and solidarity incentives without destroying their commitment’. The inability to retain volunteers can be associated with volunteer burnout and clear and realistic expectations about volunteer workloads are crucial to minimise this (Byron & Curtis, 2002:64).

With episodic volunteers the commitment to the organisation may be more difficult to foster and so retention rates become an important issue. Handbooks for managers of volunteers and organisations discuss methods of ‘sustaining’ short-term volunteers during their period of work (Macduff, 2004:65) rather than providing ‘maintenance’ which is the process required to support long-term continuous service volunteers. Despite the recognition that episodic volunteers may return each year, the issue of supporting volunteers between their periods of work to ensure they return is disregarded. Some episodic volunteer organisations may not require, value or aspire to a high repeat rate (aiming instead for interim or temporary episodic volunteers). Others clearly value a high rate of return such as Earthwatch Institute (Weiler & Richins, 1995), but research
has not been extensive in this area. Youth volunteer tourism programs, by their nature, rarely focus on retention issues. Broad (2001:232), at a Thailand volunteer tourism site, examined whether the volunteers were likely to return and found only three of the 19 people studied indicated they may return to the site, and these were often for personal reasons. Longitudinal work in this area is difficult and researchers have generally not extended their work to determine whether the volunteers were likely to undertake more volunteer tourism trips. The extent to which the durable benefits Stebbins developed from serious leisure can be applied to short-term, non-repeated volunteer tourism is unclear, but Light (2002) suggested that the length of volunteering on environmental restoration projects was not a factor in determining key outcomes.

The benefits of utilising volunteers from an organisational perspective

The benefits an organisation derives from using volunteers are often considered quantitatively by calculating the value of volunteers to an organisation. A quick method used is to determine this is the total hours contributed. As well as hours actually spent on a task, other in-kind donations by volunteers can be included, such as travel costs to and from bird survey locations (Weston et al., 2003:210) for a study of volunteer contributions within the Threatened Bird Network, Australia. Other costs such as accommodation and food costs are also occasionally incorporated. The Institute for Volunteering Research (IVR) developed a Volunteer Investment and Value Audit (VIVA) so organisations can calculate a much more detailed view of the return to their organisation from the support (costs) of using volunteers, such as management, training, expenses, uniforms and other expenditure. Initial findings showed for every pound spent by an organisation on volunteers, a return of two to eight times occurred. This technique became popular with organisations preparing funding applications or developing volunteer strategies (Gaskin, 1999).

These quantitative measures still fail to capture the full extent of the benefits of volunteering to the organisation, a deficiency that may be more problematic for some types of organisation. Organisations using volunteers can be categorised broadly into three types; self-help organisations focussing on fulfilling member needs; service
delivery organisations; and campaigning organisations aiming to influence social change. Each of these organisations has different goals and each type of organisation may differ in how they measure the contribution of volunteering in achieving their goals. The Volunteer Investment and Value Audit is currently being expanded to incorporate non-financial contributions and outcomes such as increased community impacts volunteers have (Howlett, 2000) that indirectly support the organisation.

Further organisation benefits have also been noted. For instance, volunteers act as goodwill ambassadors in the community, help forge better relations between the organisation and community (which has wide ramifications including marketing to potential new staff), and volunteers are more likely to donate to the organisation they volunteer for, and promote wider fundraising activities (Handy & Srinivasan, 2004:36). The extent PERT volunteers contribute benefits at the organisational level will vary depending on the benefits sought and therefore recognised as benefits by the organisation and other factors such as the nature and length of the relationship between organisation and volunteer.

**The benefits of volunteering from a societal perspective**

In the same way organisations have quantitatively measured the total number of hours of volunteering, converted this to an equivalent full-time worker number, and placed a salary equivalent value on each task undertaken by volunteers to give a total value, this has also been done at the aggregate level. For instance, the Australian Bureau of Statistics Non-Profit Institutions Satellite Account used this method to impute volunteer wages for 1998/99 as $8.9 billion (Australian Bureau of Statistics, 2002:3). Four different economic methods of estimating the wage component value of volunteer work were described by Handy and Srinivasan (2004). The calculation of a wage equivalent provides a starting point, but is limited in its scope and application for determining the economic value of volunteering in Australia (Paull, 2003:60).

Governments may support volunteering as it is seen as a cost-efficient form of service delivery (Warburton & Mutch, 2000). It is also seen as a positive contributor to social
capital and an indicator of social capital levels (Kerr & Tedmanson, 2003:25). Qualitative measurements of volunteering rose to prominence with the discussions of social capital in the 1980s and academic work in the area flourished in the 1990s (Winter, 2000), particularly in response to Putnam’s work (1996). Social capital has been debated within many disciplines and ‘it is understood and defined differently by different theorists, who offer different perspectives in analysing the concept of social capital, its creation, accumulation and outcomes, but who agree that its basic underpinnings are trust, reciprocity, cooperation, shared values and a model of active citizenship’ (Kerr & Tedmanson, 2003:24). Social capital refers to the social processes and relationships needed to enhance the greater ‘public good’. The World Bank identified three levels of social capital. The first are ‘horizontal associations’ between people, providing social networks that allow cooperation and coordination for the mutual benefit of members. The second level is broader and includes the trust and knowledge needed for people to work in groups, and so includes a vertical aspect. The third level covers the political and social environments that support the social relationships such as the more formalised institutional structures and links (Winter, 2000:49-50).

Volunteering is only one set of practices that is considered to contribute to social capital (Healy, 2003b), but is an important one. In areas where people may be of different ethnic, religious, economic or social backgrounds it can help build social commonalities (Byron & Curtis, 2002; Howlett, 2000), resolve conflicts, incorporate people outside society’s mainstream (Gay, 1998), and help build a capacity for citizenship including disenfranchised people (Dingle et al., 2001; Warburton & Oppenheimer, 2000). Although extensive literature exists on the contributions of volunteers to social capital (Light, 2002; Winter, 2000), it is noted that volunteering does not necessarily build social capital as strong local involvement may turn inwards and concentrate despair, distrust and anger (Cox, 2000:149) or promote social exclusion (Kerr & Tedmanson, 2003).
Volunteering has been shown to promote good health and emotional well-being (Howlett, 2000), with broad benefits to society. Project Green Gym run by the British Trust for Conservation Volunteers in the United Kingdom (Reynolds, 2000) demonstrated volunteering in conservation activities can promote fitness in sedentary people, improve their health and well being and potentially reduce their social isolation, and alleviate stress, depression and anxiety. Environmental volunteer tourism (using Earthwatch) has also been used to examine the extent these types of trips can assist in drug rehabilitation (Small, Nolan & Roberts, 1999). Clearly, social and individual goals can be achieved through volunteering programs, but the identification of the specific aspects of these programs that promote desired changes requires further investigation.

Other outcomes recognised in tourism may be applicable to volunteer tourism. For instance, the 'demonstration effect' is discussed in tourism (Bramwell and Lane, 1998:74) where local community members imitate aspects of tourist behaviour. Imitative behaviour can be either negative or positive, but with respect to volunteering, foreigners coming to volunteer may increase pride in a local species or area, and encourage local volunteering. Fisher (2004) argues the forms the demonstration effect can take vary, and the extent any of these may occur in volunteer tourism has not been researched.

Although extensive work has been done determining the benefits to society from high levels of volunteering, much of the research assumes that volunteering is undertaken at a local level by people within the community. Whether the benefits from volunteer tourism, where volunteers usually come from outside the community, are similar to local volunteering is unknown. Some research has been done examining long-term international volunteering (Mesch et al., 1998), but the benefits from programs such as Peace Corps may be very different to those from PERT-style trips. The benefits from different types of volunteering such as activism, or volunteering within planning and decision-making bodies, are also likely to vary.
2.4 Scientific Influences on the Growth of the PERT Sub-segment

2.4.1 Field volunteers

The growth of the PERT sub-segment also relies on scientists and researchers as the providers of trips and issues concerning the use of volunteers in field research will alter the supply side of PERT. Volunteers have continuously been involved in science and made many very valuable contributions to it (Leopold, 1949:185). From the 1950s onwards, a substantial pool of formally trained scientists became established, and there was considered to be a clear distinction between the capabilities of this group and amateurs. The distinction stemmed from the increasing technical side of scientific work and the need for specific equipment, access and permits for certain activities, sites and laboratories (Robin, 2001). Despite this, professionalism is considered to exist within amateurs (Bildstein, 1998) and volunteers may only be amateur in the sense that they are unpaid (Perring, 1976). Low budgets have often meant volunteers are an essential part of expedition work and also provide companionship and safety. Teamwork and cooperation are vital and knowing each other, having a diverse set of skills, and being able to fulfil a range of tasks can ensure the success of a field team.

Management in many fields, including tourism, requires broad ecosystem knowledge (Green & Higginbottom, 2001; Higginbottom & Hardy, 1999; Reynolds & Braithwaite, 2001; Rodger & Moore, 2004; Tyler, 1999). Unfortunately the ecosystem information base for proper management decisions is not easy or quick to attain, and varies from site to site. Budget cutbacks have meant there is a shortage of paid, skilled people to conduct research, yet the expansion of industries potentially impacting the ecosystems, such as that associated with ecotourism, have been developing rapidly. An understanding of ecosystems also often requires long term research time scales, yet much of the funding and grants available for scientists are short term.

Scientists have increasingly recognised the advantages of using non-specialist volunteer researchers in conservation-oriented projects, such as helping conduct baseline surveys or monitoring in marine and terrestrial habitats (Lunney & Matthews, 2002; Newman, Buesching & Macdonald, 2003; Saunders, 2002; Underwood & Chapman, 2002).
Utilising non-specialist volunteer researchers can allow extensive surveying to be conducted, provide substantial financial savings through the provision of free labour and allow long term programs to be conducted (Darwall & Dulvy, 1996:223). In addition, volunteers can add a variety of diverse skills to the team and unlock new funding as increasingly volunteers are willing to pay to be involved (Newman et al., 2003:194).

The importance of each advantage varies but the ability to harness a large number of people over a wide geographic area has been crucial in the production of work such as the ‘New Atlas of the British and Irish Flora’ (Department for Environment Food and Rural Affairs United Kingdom, 2002) and the ‘Atlas of Australia’s Birds’ (Birds Australia, 2002). Large scale environmental surveys conducted regularly, such as The Great Christmas Bird Count (Boxall & McFarlane, 1993), have allowed data to be collated that would be not feasible to attain any other way. These datasets can be statistically powerful and reveal historical changes and variations between years.

2.4.2 Wider benefits of active involvement of members of the public

While the use of volunteers within field research has often focussed on improving the ability to natural resource managers to conduct the research, the utilisation of volunteers has a wider educational value that has also been noted (Brown, 1998; Lunney & Matthews, 2002:145; Saunders, 2002; Stepath, 2000; Wilson, 2002). Advantages exist when scientists, organisations and communities develop a common understanding and work together to achieve a goal and the concept of sustainable development involves allowing those who use a natural resource, such as members of the public, help manage and maintain it. Conservationists and scientists have also recognised that if they want to be able to promote certain conservation ideas they need to actively involve and gain the support of local people (Cuthill, 2000; Saunders, 2002; Schroeder, 2000). A holistic shift towards incorporating human dimensions in natural resource management has been noted (Schroeder, 2000) and supports fostering inclusiveness (Dovers & Wild River, 2003:523). One mechanism to engender local support is through encouraging active involvement in the environment. Over the last ten years a burgeoning of ‘citizen science’
or ‘community monitoring’ projects has occurred and these have helped achieve a number of goals for natural resource managers.

Involving volunteers can help increase the level of public awareness of ecological problems through active participation in ecological survey work (Darwall & Dulvy, 1996; Saunders, 2002; Step, 2000), increase the understanding of the role of science by the public (Newman et al., 2003:195; Wilson, 2002:75), raise public levels of environmental awareness, and more generally allow individuals to learn (Newman et al., 2003; Saunders, 2002).

Educational outcomes can also be more specific and volunteer involvement may create a wider understanding of the program or site through increasing public knowledge; can create an increased local community understanding and support for subsequent management strategies based on that research (Lunney & Matthews, 2002; Saunders, 2002); and increase the understanding of, and support for the organisation undertaking the program (Cuthill, 2000; James, no date:107). Community monitoring processes can have further advantages (Lunney & Matthews, 2002) such as allowing researchers access to private lands and historical data, as well as allowing public access to conservation areas (James, n.d.:45) which may be otherwise difficult to access.

Political considerations are rarely a primary reason for running these trips but can be quite a strong secondary reason for an organisation to become actively involved. Science has become a technical area, unable to be properly understood by the public and is criticised as being elitist (Goodstein, 1993), creating problems at the political and practical level (Lunney & Matthews, 2002). For instance, the Natural Heritage Trust has been the largest funding body for biodiversity projects in Australia in recent years, but the process that allocated the funding to community groups has largely bypassed research scientists (Lunney & Matthews, 2002). In addition, taxpayers dollars fund or support much of the scientific research. To ensure the funding is continued, political support for the value of scientific research and the role of scientists is essential and this has been argued as a reason why scientists should explain their work to the public.
(Hodgson, 1992). There is a trend towards greater public participation in environmental policy and decision-making (Healy, 2003a) and mechanisms such as environmental volunteering, that enhance the skills and willingness of the public to become involved in this process are necessary. Despite the importance of education in achieving short and long-term natural resource management goals, quantification of the educational benefits of community monitoring has not been carried out (Saunders, 2002:60), nor have the educational benefits of volunteer field trips been fully analysed.

Wilson (2002:75) argued the value of the outputs of volunteer work varied depending on the way the volunteering was undertaken, as indicated in Figure 2.2. Wilson identified three key ways in which the wider community could be involved in scientific study; by making unaided observations; working as a volunteer on a scientific project; or through partnerships with scientific experts. Built from professional experience rather than a specific study, it indicates the perceived values of different types of volunteering involvement from a scientist’s perspective. Further work is needed to clarify the benefits and the variations in relationship between the ‘volunteering’ and ‘partnerships’ categories.

![Figure 2.2 The varying values of community volunteering](image)

Figure 2.2 The varying values of community volunteering
2.4.3 Issues with using volunteers

While positive aspects of involving volunteers in environmental field projects have been discussed, limitations also exist (Newman et al., 2003; Wilson, 2002). The suitability of the research question to the use of volunteer labour, and the skill of the scientist in designing a straightforward and robust method able to be undertaken by volunteers, must be assessed. Generally, the more effort and thought put into the organisation and logistics of a trip, the richer the rewards (Kenneally, 1981:54).

The use of volunteers is often criticised on the grounds that the information collected will be unreliable (Giles, 1969; Lunney & Matthews, 2002; Newman et al., 2003; Saunders, 2002) as a result of either insufficient training, or a lack of consistency through the use of large numbers of different observers (Darwall and Dulvey, 1996:223). Specifically, amateurs are considered not able to adequately identify species and habitat types, estimate size and area, collect quantitative data (Wells, 1995) or structure ecological monitoring programs (Lunney & Matthews, 2002; Underwood & Chapman, 2002). Researchers examining these claims have argued that provided appropriate protocols and training exist, volunteers are generally able to assist in gathering certain types of data (Lunney & Matthews, 2002; Newman et al., 2003; Wilson, 2002), but generally cannot be involved with analytical research aspects that require greater knowledge or skills (Underwood & Chapman, 2002).

Although volunteers have been used in some way for a significant portion of field research, there has been little published acknowledgement of volunteers (Newman et al., 2003:195; Saunders, 2002). Volunteers may have had a relatively minor role. Alternatively, it has been suggested that mentioning volunteers in published research increased the likelihood of criticism (Lunney & Matthews, 2002; Saunders, 2002). In 1993, the US National Biological Survey prohibited the use of volunteers as they were incompetent and biased (Newman et al., 2003:190). Others argue that volunteers are increasingly being viewed more positively (Neilsson in Kenneally, 1981:25) and the advantages of volunteers (described above) are more widely recognised.
Researchers have examined the issues surrounding the validity of volunteer data, focussing on non-specialist volunteers. Major variations have been noted depending on the type of collection, the recruitment process of volunteers, how volunteers were used, the scientific protocol, training involved, the previous knowledge and experience of the volunteers, and the length of time volunteers spent on the task. The use of volunteers in coral reef monitoring was found to be possible (Brown, 1998; Darwall & Dulvy, 1996; Harbourne, 1998; Mumby, 1995). Larger sample sizes improved the results from volunteers and the power of non-expert data was shown to be comparable to, or better, than that generated by a smaller group of experts (Pattengill-Semmens & Semmens, 1998). Similar research involving other species has been undertaken (Bleich, 1998; Freilich & LaRue, 1998; Mackney & Spring, 2001; Newman et al., 2003).

Despite issues concerning the use of volunteers in data collection, advantages for the scientific community are also evident. Many of the benefits accruing to scientists or natural resource managers from volunteers are likely to be valid for volunteer tourism and Gilmour and Saunders (1995) confirmed this using Earthwatch as an example. However, the training and long term use of local community members to assist with monitoring will have different costs and benefits than using short term volunteers (Newman et al., 2003:195) who return to (usually) distant homes. For instance, the engendering of support for subsequent management decisions based on research results, a significant benefit for many researchers, may not be present with volunteer tourism. Newman, Buesching and Macdonald (2003:196) also recognised that volunteers have their own goals, and these together with an individual volunteer's attitude and fitness were significant in influencing their performance of tasks.

2.5 Research on Volunteer Tourism and the PERT Sub-segment
The previous sections highlighted the growth and the need for continued segmentation of the tourism market, influences on the rate of participation in volunteering including the growth of the green movement and interest in environmental volunteering, and funding, labour and education needs of the scientific community. According to Wearing
and Neil (1997:145-6) the modern phenomena of travelling overseas as a volunteer began around 1915, but this involved organisations such as Peace Corps (although this type of stipend volunteer are outside the scope of this research). In Section 2.2.2 the relationship between tourism and work was briefly explored and the identification of ‘working holiday’ as category within tourism (Cohen, 1973). Working holidays were associated with youth travel conducted often during school breaks, but Uriely (2001:4) extended this to describe tourists on a volunteer programme and tourists who have a work experience as part of their trip.

Despite the apparent contradiction between work and holiday, the characteristics of work, leisure, recreation and volunteerism can be regarded as intertwined (Henderson, 1984) and volunteering is increasingly being recognised as a tourist option. Books on volunteer vacations (a United States term) or conservation holidays (a United Kingdom term) exist (Ausenda, 1998; Lederman, 1996; McMillon, 1999; Ocko, 1990; Tovey, 1993), encouraging the public to take these types of holidays. Internet sites specifically catering for volunteer tourism (discussed in Chapters 4 and 5) also exist. The youth market has been targeted, particularly after high school, and before College, in both the United States and United Kingdom. Callanan and Thomas (2005) described the recent growth in volunteer tourism as stemming from the partnerships between charities and tour operators that have combined to sell fundraising and adventure holidays, and described the GAP year market in the United Kingdom. Galley and Clifton (2004) noted the overlap with educational tourism and ‘college credit’ trips, where students travel to pursue research in a different location. These trips often involve overseas travel, cultural experiences, adventure and personal learning, together with volunteering. Other researchers have indirectly referred to the area, such as Orams’ (1996b:46) statement that ‘[m]any tourists are more than willing to give of their time, money and labour in order to assist wildlife’.

While there has been little segmentation research within volunteer tourism, several authors have defined the area for their own purposes. Broad (2001:68) stated that ‘volunteer vacations involve volunteers paying to participate on organised trips’ and saw
conservation holidays as a sub-set of these offering opportunities in areas such as 'research, animal care and rehabilitation' (Broad, 2001:2). Shackley (1996:51) also described conservation holidays in terms of environmental conservation, but conservation holidays do include cultural and historic preservation activities and need not relate to environmental conservation. Wearing (2001:1) argued that volunteer tourism is part of alternative tourism, and describes it as 'an organised way to undertake holidays that might involve aiding or alleviating the material poverty of some groups in society, the restoration of certain environments or research into aspects of society or environment' able to 'offer an alternative direction where profit motives are secondary to a more altruistic desire to travel in order to assist communities'. However, this description did not specifically define it.

The sub-segment has also received academic attention. Case studies exist usually analysing one experience, such as Earthwatch (Gilmour & Saunders, 1995; Newman et al., 2003), a Western Australian botanical trip (Revitt, 1999), Landscape Expeditions (Webb, 2002), a Thailand gibbon rehabilitation site (Broad, 2001; 2003), Youth Challenge International in Costa Rica (Wearing, 2001) and Project Wallacea in Indonesia (Galley & Clifton, 2004). Other researchers have examined specific aspects of a trip or organisation (Russell, 1995; Russell & Ankenman, 1996; Weiler & Richins, 1995; Weiler, Richins & Markwell, 1993). The focus of these has largely been the volunteers or participants, often profiling the socio-demographic characteristics (see Appendix 1) and examining motivations for joining and, more rarely, the outcomes for the participants and their impact on their surroundings (Broad, 2001; Wearing, 2001). A discussion of the overall program and broad benefits is often documented. Other researchers have described aspects of the growth in the area (Callanan & Thomas, 2005; Gazley, 2001; Turner et al., 2001) and Hartman (1997) examined the conversations between Earthwatch participants and the researchers (Principal Investigators). Additional significant work has focussed on areas such as the validity of volunteer data (discussed in Section 2.4) or the benefits of involvement in Earthwatch trips for drug and alcohol rehabilitation (Small et al., 1999).
Wearing's (2001) case study of Youth Challenge International in Costa Rica examined the impact of the stay on the volunteer and confirmed Gazley's view. He summarised the motivating factors as altruism, travel/adventure, personal growth, professional development, the program itself, and that the opportunity was the 'right time/ right place'. Wearing grouped the personal development into four main categories consisting of personal awareness and learning, interpersonal awareness and learning, confidence, and self-contentment. These clusters were interrelated and fitted within the serious leisure framework examined earlier. Wearing concluded that personal growth and a changed self identity were important outcomes and the experience was likely to impact the volunteer's values.

Broad (2001) undertook an ethnographic study of a long term volunteer tourism site in Thailand concerned with the rehabilitation of gibbons. Broad found altruism, desire to travel, career development, personal interest/ personal development and organisation specific factors (that determined why the volunteer chose that location) were the key motivators. Her results were similar to Wearing's (2001) finding and she determined that personal growth (increased confidence, gained knowledge and skills learned) was most often a consequence of the volunteering, not modified behaviour. Her study was small scale (40 volunteers of whom 19 were interviewed) but is the only detailed longitudinal work done in the area. Broad (2001:237) noted a second key consequence of the volunteering, a strengthened commitment to conservation. In addition, volunteers commented that they viewed the world differently and were more relaxed and contented. Broad's (2001) examination of the impact of the volunteer tourism time on the lives of the volunteers also found six of the 19 volunteers experienced a 'major life turning point' because of their stay (such as a changed career direction, new partner, permanently relocating to Thailand).

Several papers have discussed Earthwatch volunteers. Gilmour and Saunders (1995) detailed the types of benefits Earthwatch participants on an Australian trip accrued and confirmed, that for some, it was an experience that changed their lives. Newman, Buesching and Macdonald (2003:196) focussed on the validity of volunteer data using
155 volunteers in the United Kingdom (149 from United Kingdom) and from sustained informal subsequent contact with volunteers stated 4.5% changed career or re-trained in biology and a minimum of 30% joined conservation groups. The researchers concluded that ‘as well as providing volunteers with the skills necessary to contribute to wildlife conservation, it is also possible to foster their enthusiasm and encourage them to put these skills to good use’ (Newman et al., 2003:196).

Weiler and Richins examined Earthwatch participants using three dimensions, environmental responsibility or impact, intensity of interaction, and physical difficulty or challenge (Weiler & Richins, 1995:30). On each dimension they found these volunteer tourists to be ‘extreme’ or ‘deep green’ ecotourists and concluded volunteers appeared to exhibit ‘some very distinct motivational and behavioural characteristics’ (Weiler & Richins, 1995:32). The most important reasons for joining were ‘doing something meaningful or conservation-oriented’, ‘interest in the subject matter’, ‘desire to learn new things or be challenged’ and ‘interest in helping the researcher’ (Weiler & Richins, 1995:33).

Galley and Clifton (2004) examined mostly British ecovolunteers who travelled to Indonesia. The key motivators identified were experiencing something completely new, taking part in a rare opportunity, observing the diversity of animals, being able to put the experience on their curricula vitae, and challenging. The motivators were then grouped into two sets, personal development and academic achievement. This organisation varied slightly from the earlier examples as it encouraged volunteers to come to conduct their own tertiary associated research rather than just help other researchers.

Extensive work examining the concept of self and self identity through psychological examination of the wilderness experience and outdoor challenges (Scherl, 1988) has been undertaken. This type of research has been extended into volunteer tourism. Wearing (2001) examined self identity as the focus of his PhD and this was also explored together with other aspects by Broad (2001) in her PhD. Other aspects of
individual benefits are less well studied within volunteer tourism and longitudinal work is needed to determine the durability of these benefits.

Each of these studies focused on international travel, cross-cultural experiences and sometimes youth development. Further work is needed to clarify the extent these factors are important across other types of volunteer tourism. Webb (2002) examined a Landscape Expeditions trip in Western Australia and although the demographics of the single trip study were not given, most Landscape Expeditions participants have been from Western Australia (see Appendix 13 and Chapter 6). Webb focused on how the participants constructed their perceptions of their experiences and found ‘education’ and ‘social dimensions’ were the two key themes that emerged and the ‘nature of the landscape’, ‘relationship with the landscape’ and ‘emotion’ were also themes that emerged from the experiences. He concluded that the length of time participants were on a trip was crucial, and four to five days was a minimum for this type of trip (Webb, 2002:160).

Wearing (2001) extended the analysis of outcomes to examine the guest-host social exchange and concluded that the local community could potentially benefit from this type of tourism because of its ethical and sustainable nature. Broad’s (2001) work confirmed that the existence of a volunteer tourism site impacted the local community, both socially and economically, but did not examine this area further to explore the extent this created benefits. Wearing (2001:124) noted his case study was representative of a specific type of alternative tourism experience, but could not be used as a predicative model. Wearing (2001:149) concluded that volunteer tourism should be “a means by which tourism can become an ‘environmentally friendly’ industry,” and noted its ethical aspects. But this generalisation across volunteer tourism is questionable as there is no necessity within volunteer tourism for projects to work with host communities or aspire to the ethical levels he discussed.

Callanan and Thomas (2005) regarded the volunteer tourism market as a rapidly growing niche and attempted to provide a broad overview of the market. They analysed
the styles of operations present in the United Kingdom and undertook an analysis of the sector by examining one website, Go Abroad.com, and the projects offered within it. Their analysis concluded that the volunteer tourism market could be further subdivided according to aspects such as the duration of a trip (they used a four week period to define the shortest category), the extent of involvement, the prior skills and qualifications required, and the extent to which the focus was on self-development or altruism. The research provided an interesting overview and argued 'self-interest motives are secondary to altruistic ones' (2005:196), but did not incorporate motivation research from within volunteering within their arguments.

Volunteer tourism does not necessarily involve international travel, cross-cultural situations, a focus on the exotic, nor contact with host communities, as presented in both Wearing and Broad’s examples. Further research is required to clarify whether the research done so far is also applicable to more localised volunteer tourism or short-term volunteer tourism. While the benefits derived from volunteering have been explored, the range of benefits that may accrue through volunteer tourism are likely to vary. For instance, it is not clear the extent to which volunteer tourism may provide benefits to the volunteer’s own community during the post-trip phase and the importance of analysis of the post-trip phase of volunteer tourism where mental consolidation occurs was confirmed by Broad (2001).

2.6 Influencing Behaviour to Accrue Benefits
Influencing behaviours to achieve benefits was seen as an important goal within tourism, volunteering and natural resource management. Staff in conservation organisations considered education the most important benefit associated with wildlife tourism in Australia (Higginbottom, 2001 #154:iii) and one of the keys to sustainability within the industry (Higginbottom et al., 2001b:vi). Yet good education is often not present, in the case of wildlife tourism within Australia, and so educational benefits are not being realised (Higginbottom et al., 2001a:59). Because of the direct and indirect impacts of education it is also unclear what benefits could and do occur (Higginbottom et al., 2001a:58, 64).
Research in this area has been difficult. The term ‘behavioural change’ is often used in discussions surrounding how behaviours can be influenced. It implies significant change but in reality changes may be very small, subtle and incremental, making analysis difficult. Aspects of large-scale social projects, such as recycling, have been well studied (Bratt, 1999a; 1999b; Steel, 1996) but only a few structured field experiments in ecotourism have been undertaken (Beaumont, 1999; Orams, 1997).

In volunteer tourism, the influencing of behaviour is often a dependent process between stakeholders and the positive modification of significant pro-environmental behaviours appears to be a key goal, during a trip, and in the post-trip phase of travel, for a number of stakeholders. An individual stakeholder may have multiple goals but examples could be a tourism operator seeking to encourage visitors to minimise their environmental impact on the surrounding area so the tourism business maintains its long-term scenic attractiveness, an environmental volunteer organisation hoping volunteers will increase their volunteering activities, or a scientist hoping participants will provide wider support for the conservation of a species or area.

Behaviour change has received significant academic attention in a number of disciplines and builds on work such as behavioural decision-making theory (Wright, 1984). Relevant aspects are summarised below. Although this thesis focuses on pro-environmental behaviour change, the theories and discussions below could also be extended to examine socially significant behaviour change.

2.6.1 Influencing behaviours

Environmentally significant behaviour can be classified according to its impact: ‘the extent to which it changes the availability of materials or energy from the environment or alters the structure and dynamics of ecosystems or the biosphere itself’ (Stern, 2000:408). Behaviours may be direct, or indirect, and may be intended, or a by-product of other actions. Stern (2000:421) considered private sphere pro-environmental behaviours could be grouped into four main categories with sub-divisions within them.
The first category was environmental activism such as active involvement in environmental organisations and demonstrations. The second category was non-activist behaviour in the public sphere that included petitioning, membership and contributions to environmental organizations and supporting pro-environmental public policies. The third category of private sphere environmentalism included consumer purchase behaviours, maintenance of household equipment, changes in equipment use or curtailment of lifestyle, waste disposal behaviours and green consumerism. The final category included other types of behaviours such as decisions made within workplace.

Other researchers have used different groupings (Karp, 1996:118) but Stern argued his distinctions between behavioural types were conceptually coherent, statistically reliable and psychologically meaningful (Stern, 2000:410), but acknowledged coherent sub-types exist within some of these. Different patterns of social-psychological and socio-demographic predictors are associated with each of the behavioural types. Environmental field volunteering could be regarded as a non-activist behaviour in the public sphere. Researchers have often used a selection of the behavioural types to gauge an individual’s levels of environmental activity, such as political activism, recycling, education, green consumerism and community activities (Thapa & Graefe, 2003:89).

2.6.2 Demonstrating cause and effect

While the benefits of positively modifying desired behaviours have been discussed (particularly in Sections 2.2.3, 2.3.4 and 2.4.2) and pro-environmental behaviour changes are a goal for some stakeholders within PERT, determining how to encourage behaviour modification to occur has been problematic. The area is extremely complex. Considerable research in social psychology and persuasive communication exists and it is briefly summarised here.

New knowledge is incorporated into existing knowledge and this may impact the values, beliefs and attitudes of an individual which, in turn, determine an individual’s decision-making regarding a behaviour. The Theory of Reasoned Action (summarised in Fishbein & Manfredo, 1992) modelled the causal process. The Theory of Planned Behaviour
(Ajzen, 1991) extended these ideas and postulated that behaviour can be predicted from intentions that correspond directly (in terms of action, target, context, and time) to that behaviour. Considerable work has further investigated various stages of this process. A critical stage in the process of changing people's behaviours is the interpretation of new information (Petty, McMichael & Brannon, 1992) and the Elaboration Likelihood Model of Persuasion developed by Petty and Cacioppo (Griffin, 2000) examined possible routes regarding how new information is dealt with. Crocker (1984) described the schematic processing approach that helped clarify how incongruent information may be dealt with.

Despite the logic in The Theory of Planned Behaviour, a number of the steps may be independent of each other. For instance, a change in attitude can occur without a specific message being absorbed and it is well recognised that knowledge (such as the negative impacts of smoking) will not necessarily change behaviour (Petty et al., 1992). Attitudes about the behaviour, subjective norms and beliefs concerning control will all influence the intention to undertake a behaviour (Ajzen, 1991; Ham & Krumpe, 1996). Parker, Manstead and Stradling (1995) suggested the addition of a personal moral norm may also be useful, and noted earlier research that contributed to the formation of The Theory of Planned Behaviour, had included a similar factor. Intention to undertake a behaviour does not always lead to that behaviour being undertaken (March, 2004). Influencing pro-environmental behaviour is difficult also as 'environmental intent is only one factor affecting behaviour, and often, it is not one of the most important' (Stern, 2000:415). For instance, the travel choice decision for a trip to an eco-lodge may be based on price, attractions, amenities and other factors and the extent to which an eco-lodge fulfils sustainable goals rarely can be determined in advance (or even during a stay) by consumers and hence it is difficult to take into account during the decision to purchase. Examining actual activities can be misleading as pro-environmentally friendly activities can result from many non-environmental intent decisions (such as buying a push bike as an individual cannot afford a car).
Stern built on the work of other researchers and developed a value-belief-norm (VBN) theory of non-activist environmentalism that incorporated a number of the theoretical developments in the area, including The Theory of Planned Behaviour, and described the causal chain that leads to behaviour (Stern, 2000:413). Stern’s VBN theory has been tested against other theories and Stern argued it was a stronger predictor of each behavioural indicator than the other theories (Stern, 2000:413) although none were good indicators of activism, ‘which appears to depend on other factors in addition to an environmentalist predisposition’ (Stern, 2000:413). He concluded attitudinal factors (that incorporate several social psychology theories), personal capabilities, contextual factors, and habit and routine, were causal variables that influenced the intent to conduct environmentally significant behaviour (Stern, 2000:421). Olli et al. (2001:181) examined organised environmentalists (who they defined as active volunteers in environmental organisations) in Norway and argued the social context of active participation in environmental organisations significantly augmented respondent’s environmental behaviours.

Although work has been done identifying the socio-demographic correlates of environmental concern (Van Liere & Dunlap, 1981), less work has demonstrated a relationship between socio-demographic factors and behaviours. Several researchers have noted women were more likely to engage in private, personal environmental behaviours related to the household, while men were more likely to be active in the public sphere (in Olli et al., 2001:184). Researchers have suggested higher education is positively related to environmental concern (Tranter, 2004:194) although efforts to measure this have not produced consistent results (Olli et al., 2001:184). The Olli et al. research determined that females, older people and active participation were significant catalysts of environmental behaviour, but education was minor and family income had little effect (Olli et al., 2001:197). They did not observe a gender difference in type of behaviours displayed, but found, overall, women exhibited more environmentally friendly behaviours than men. They argued the observed differences in age were the result of generational experiences and not necessarily due to environmental concerns. For instance, older people may repair broken items rather than buy new due to social
upbringing, rather than do so for resource conservation reasons. Johnson, Bowker and Cordell (2004:178) examined ethnicity, environmental beliefs and behaviours in the United States and noted the complexities, finding environmental behaviours varied by ethnicity, despite similarities in certain socio-economic factors and environmental beliefs. They concluded the direct ethnic effect was much more powerful than the effect mediated through the New Ecological Paradigm (Johnson et al., 2004:179).

**Issues and outcomes in effective communication research**

Effective communication strategies aiming to change knowledge, beliefs, attitudes and behaviours have been advocated and developed within tourism (Armstrong & Weiler, 2002; Beaumont, 1999; Ham, 1986, 2003; Ham & Krumpe, 1996; Ham, 1992; Mayes & Richins, 2003; Moscardo, 1998; Orams, 1996a, 1997; Orams & Taylor, 2003). Education is considered a key management technique in tourism and can decrease inappropriate behaviour (Green & Higginbottom, 2001; Moscardo, 1998; Orams, 1996a, 1996b) and improve positive outcomes (Higginbottom et al., 2001a:56; Orams, 1996a). Environmental education increases visitor levels of enjoyment (Kahn & Johnstone, 1995; Orams, 1996a) and visitor satisfaction (Moscardo, 1998; Moscardo et al., 2001b; Orams, 1996b). Broader benefits also result as, for instance, international travel can provide a learning process for the individual and improve society's cross-cultural tolerance and understanding (Kelly, 1997). Ecotourist activities are sometimes described as having the ability to influence the direction of the participant's life as the ecotourist returns from the experience with a new perspective. These changes in individuals can also have flow-on effects as described in Maher's (2003b:442-3) work examining ambassadorship that potentially results from visits to Antarctica. Despite the widespread acknowledgement of the benefits of education through tourism at the individual and societal level, Wearing and Wearing (2001) noted the potential for changes in the self and identity through cross-cultural interactions, is largely missing in most tourism analysis.

Significant relevant work has been conducted in related areas of education and particularly environmental education. Typically measured outcomes in outdoor
education studies are changes in self-concept, self-confidence and locus of control (Neill & Richards, 1998). Work in adventure education programs has also focussed on the beneficial outcomes derived from these programs (McKenzie, 2000; Scherl, 1988) and usually highlighted self-concept and inter-personal skills as outcomes (Hattie, Marsh, Neill & Richards, 1997). Considerably less work has examined how these outcomes have been achieved, but the importance of experiential learning is recognised within outdoor and adventure education and broader educational research (Kolb, 1984; Light, 2002; Orams, 1997; Prentice et al., 1998). Adventure education programs have shown mastery and success at tasks is crucial and the physical environment, the activities, processing, the group, the instructors and the participant all can alter the results (McKenzie, 2000). Trips longer then 20 days recorded greater effects on participants both immediately and in the longer term (Hattie et al., 1997:63). Perceived changes in adults appear to higher than those for youths (Hattie et al., 1997:57) although this may have been influenced by the compulsory nature of some youth programs studied (McKenzie, 2000; Neill & Richards, 1998:7). Other demographic factors may have influenced the results but studies in this area were not conclusive (Hattie et al., 1997). Volunteer motivations can also be affected by demographic differences (Clary & Snyder, 1991; 1999:158-9).

In ecotourism, the causal progression from increased knowledge to changing environmental attitudes and ultimately environmental behaviours has been explored and a number of intervening factors identified. Results have been quite varied, possibly due to methodological difficulties (Beaumont, 1999; Orams, 1997; Tarrant & Green, 1999). For instance, the determinants of experience are multi-dimensional so multiple causation occurs (Prentice et al., 1998) making it difficult to identify the tourism-induced change. Researchers (Beaumont, 1997; Webb, 2002) have noted the difficulties in separating the impact of the experience, from the impact of the interpretation program on visitors. Most ecotourism researchers have not attempted to do this, although experiments with control groups have been undertaken (Orams, 1997). Observing actual behaviour change is often impossible in a tourism setting and so the tourist's viewpoint of the personal perceived beneficial experience of an activity is often examined. Benefits and experiences are
subjective and ecotourists will have different perceptions, partly due to differing social constructions of nature (Russell, 1995). Other aspects have also meant analysing behaviour change in a tourism setting has been problematic.

The development of a pro-environmental approach to life may not be the result of a single memorable influence but a gradual awakening (Palmer & Neal, 1994:9). Research in education supports this notion and learning is considered to be a continuous process grounded in experience (Kolb, 1984:28). Lengthier stays may lead to fuller understandings of places and subjects (Russell & Ankenman, 1996) and this may allow an intensity in an experience to occur that Broad (2001:230) argued was positively associated with behaviour change. So the short-time frame of many tourism interactions is likely to be a limiting factor. Beaumont’s study of ecotourists at Lamington National Park in Australia concluded that ‘the ecotourist experience is effective at increasing environmental knowledge but small gains in knowledge from a single ecotourist experience are not sufficient for increasing or strengthening environmental attitudes which may be deeply entrenched’ (Beaumont, 1999:382). More work is needed to clarify issues relating to the duration of an interpretation program and the consequential impacts as Light (2002) suggested the length of volunteering on environmental restoration projects was not a key factor in determining individual outcomes.

Beaumont (1999:396) argued that a positive influence on environmental attitudes that occurs from a single environmental education program will erode over time unless reinforcement occurs. While reinforcement can strengthen an attitude, the Elaboration Likelihood Model examined reasons the impact of a message may wear off (Griffin, 2000:197-8). Messages that have been incorporated using peripheral cues, where there is little or no message elaboration and little mental effort concerning the incorporation of new knowledge, generally do not impact attitudes in a lasting manner.

Emotion can strengthen the linkage between environmental education and behavioural change (Orams, 1996a:89). Kals, Schumacher and Montada’s (1999:178) German study found emotional affinity was a powerful predictor of nature-protective behaviour and the
affinity could be traced to present and past experiences in natural environments. Research on the human dimensions of wildlife tourism has only recently started to receive attention (Schanzel & McIntosh, 2000) and the emotional response from encounters with ‘charismatic megafauna’ have been noted. A study of penguin viewing in New Zealand (Schanzel & McIntosh, 2000) revealed visitors accrued personal on-site benefits such as stress reduction, stimulation, mood benefits and learning benefits and one of the two main beneficial visitor experiences was mood benefits (affection). The range of mood benefits suggested that the experience of wildlife viewers is more sensory and complex than has been reflected in traditional studies of wildlife encounters. Despite the difficulties in measurement, volunteer tourism trips may provide an intense experience and a life changing experience for some (Broad, 2001; Newman et al., 2003). Webb’s (2002) work indicated emotive and spiritual factors were one of the five key experiences and further work is needed to examine the role of emotion in influencing behaviours.

Measuring the impact of a trip on behaviour is complex. Behaviour modification, when it does occur, may be subtle and incremental, and people’s skills and abilities to undertake an existing behaviour may have improved, rather than people having changed the frequency of a behaviour. Changed ability is hard to detect and measure. Other researchers have often used pre- and post-trip surveys, asking questions concerning the level of knowledge, attitude or frequency of an activity, to determine changes induced by a trip. These may not, however, reveal the subtle modifications that may have occurred.

Post-trip surveys often only examine intent to change behaviour as insufficient time has passed for actual behaviour change to have occurred (Orams, 1997; Orams & Taylor, 2003). Schanzel and McIntosh’s (2000) study, for instance, measured intent to change behaviour at the end of an interpretation program in wildlife tourism and found off-site benefits were perceived to be ‘increased understanding’ and the researchers stated this may lead to a higher ‘environmental awareness’ which may be ‘beneficial to others and society, including, for example, endangered species’ (Schanzel & McIntosh, 2000:38).
They concluded, however, that overall, the on-site beneficial experiences were not necessarily translating into potential off-site environmental benefits. Many studies do not contain a longitudinal component and discussions of appropriate methodological strategies for evaluating an interpretative program often involve the interviewer being at the site (Yamada & Ham, 2004).

Longitudinal research is not only necessary to measure actual behaviour modification but the continuous process of knowledge gain, attitude change and behavioural modification raises the logistical question of when behaviours should be measured. Leisure researchers have noted the benefits of leisure may be quite transitory, such as mood, but other benefits may be more permanent and long-term benefits are often more highly valued than short-term benefits (Mannell & Stynes, 1991:468). Outdoor education research suggested knowledge gains persist for a period of one month to two years after the experience (Beaumont, 1999:390), but gains from short-term tourism settings may be lower and last a shorter period. Although most educational programs indicate knowledge gain decreases quickly over time, it is also acknowledged impacts may not appear for some time. A meta-analysis (Hattie et al., 1997) on 96 adventure education studies noted the effects on participants continued to increase over time after participants returned to their home environment. In the meta-analysis, the mean for measuring the follow-up effect was 5.5 months (Hattie et al., 1997:55). Beaumont (1999:391) found that four months after an environmental experience, 14% of those surveyed had made subsequent pro-environmental changes and these were predominantly in two areas; minimal impact practices in natural areas, and direct political action such as writing to politicians, signing petitions or attending meetings. She found ‘people had reflected on their experience since returning home and felt more strongly about the need to protect and preserve natural areas’ (Beaumont, 1999:383), than they had when interviewed immediately after the trip.

Longitudinal complexities exist. Beaumont (1999) found in the short-term, that ecotourists with the least knowledge of the environment but with strong ecotourist motivations, showed the greatest changes. However, ecotourists that already had strong
pro-environmental attitudes were most likely to have been influenced by the visit on an enduring basis.

Longitudinal studies are also needed in volunteering research (Clary et al., 1996:503-4) as some impacts on both the giver and receiver may emerge years later. For instance, reciprocity in volunteering (where those who have been helped by volunteering, later begin to volunteer and help others) is not easily measured. Research in tourism satisfaction also indicates the importance of longitudinal work. Stewart and Hull (1992) examined satisfaction during and after a trip and argued real time measures may be more useful for measuring the nature and quality of actual experiences, but post-hoc measures may be more useful for identifying long-term recreational benefits and future choice behaviour.

Because of the complexity in measuring behaviour modification resulting from ecotourism, researchers have usually targeted a few specific behaviours for analysis or evaluation (Lackey & Ham, 2003; Mayes, Dyer & Richins, 2004; Werner, Rhodes & Partain, 1998). Ham (1986) and Orams (1996b:47) argued managers should pre-determine the outcomes required and then design specific interpretative programs incorporating messages to achieve these targets (Ham & Krumpe, 1996; Orams, 1996a). The ease of influencing behaviours will alter depending on what those behaviours are. Short-term, on-site behaviours (such as ‘keep on the track’ or ‘don’t feed the animals’) may be important for some natural resource managers. Case studies of on-site behaviours have evaluated the use of interpretation (Lackey & Ham, 2003) and visitor itinerary or route choice (Moscardo, 1998:6-7). Ham and Krumpe (1996:16) identified a range of short and long-term, on-site and off-site, behaviours by on-site visitors, local communities and remote audiences that may be desired goals. Intervening factors may alter the ability to influence off-site behaviours, particularly behaviours conducted a considerable period later. For instance, family member’s views and ease of undertaking a task can impact an individual’s likelihood to undertake recycling (Bratt, 1999a; 1999b).
Researchers have also used an exploratory approach and asked whether a trip had ‘... changed you in any way?’ (Birtles et al., 2002:44). Using a short list of selected behaviours can make surveys shorter and easier, but potentially lose important detail. Mayes and Richins (2003) asked about 10 specific behaviours and noted in their study of participants after a dolphin-swim program, participants who stated they intended to become more involved in conservation activities had a preference for activities that took less time, effort or money (Mayes & Richins, 2003:494). The behaviours tested by most researchers do not equate easily with the much broader educational goals listed in Section 2.4.2 by organisations however.

Interpretation on a PERT trip may not be designed around a specific educational goal but around a scientific goal such as to collect as much high quality data as feasible within the time and constraints of using volunteer tourists. Educational benefits may still accrue as Nycander and Holle (1996:174) found ‘[t]he combination of personal relations with the guides, exposure to scientific documents, and the utilization of educational materials of different formats to educate visitors constitute valid techniques’. The value of the wilderness experience itself is also known to be significant in creating psychological well being (Scherl, 1988). The involvement of volunteers in scientific research is likely to create questions (and answers) concerning why the work is being done, what its impact may be. Although this is not a targeted interpretative program, these types of questions and thought processes are likely to encourage change according to persuasive communication theory (see Section 2.6.2).

Environmental education research indicated the locus of control is a crucial factor in the modification of behaviour (Hwang et al., 2000). People need to think their own actions can make a difference, and need to know what the potential actions are, and how to carry them out (Hwang et al., 2000:24). Opportunities to apply the desired action skill should be incorporated into education programs to encourage specific behaviour change. Orams (1996a:90) argued that this step has often been ignored in ecotourism interpretation and programs should include hands-on activities where visitors participate in environmentally friendly behaviours. Cognitive dissonance may occur (coping with
physical and mental challenges is often an integral part of outdoor education) during activities and this may assist in achieving behaviour modification (Crocker, 1984; Orams, 1996a). While hands-on activities within PERT may extend over a couple of weeks with a constant series of opportunities to undertake specific behaviours, these behaviours are oriented to achieving a research goal (not necessarily targeting educational goals). The extent that this alters the likelihood of creating durable benefits or long-term specific behaviour modification within PERT or volunteer tourism requires further examination.

Although the focus of much of the behavioural change research has been conducted at the individual level, behaviour change at the community or broader level has also been discussed (Higginbottom et al., 2001a:48). For instance, a community involved in local wildlife tourism, will possibly alter its own conservation efforts as increasing value is placed on a local commodity, such as wildlife (Roe et al., 1997; Shackley, 1996). Alternatively, the educational process may alter the conservation views of the public and potentially alter governmental decision-making regarding the environment (Maher, 2003a).

An additional behaviour that is relevant to this thesis, and of interest to natural resource managers and operators, is whether participation in a PERT-style trip influences volunteers to join another trip sometime later. Repeat visitation has been addressed within tourism and repeat purchase decisions within consumer behaviour. Generally, it has been assumed that high satisfaction is more likely to lead to repeat behaviour, and although high satisfaction does not necessarily lead to repeat behaviour, a dissatisfied participant is unlikely to repeat (Petrick et al., 2001). Petrick, Morais and Norman (2001) found past behaviour was the best predictor of entertainment traveller’s intentions to revisit an entertainment destination, and past satisfaction and perceived value were also related, but were poor predictors of intentions to visit and see live entertainment or visit and book an entertainment package.
For PERT-style trips, the repeat purchase decision can be analysed as a decision to undertake another PERT-style trip (not necessarily to the same destination) or as a decision to purchase from the same organisation, potentially displaying brand loyalty. Riley et al. (2001) argued product loyalty requires both repeat behaviour and dispositional attitudes to that product. Factors affecting the repeat purchase decision were discussed in volunteering, as the retention of volunteers, and repeat decisions of episodic volunteers overlap with the research on repeat behaviours from tourism and consumer behaviour. Lehto, O’Leary and Morrison (2004) also noted prior experience with a trip will influence pre-trip decision-making and on-site destination activities.

**Evaluation of results from interpretation programs**

Within tourism, interpretation is a mechanism for achieving education (Moscardo, 1998; Orams, 1996a) and is often used to target environmental behaviour change. The results of interpretation can be evaluated and this is 'the process of collecting and analysing information about a social program, its audience, or its impacts on an audience for the explicit purpose of improving its ability to serve the audience in intended ways' (Ham, 1986:9). To evaluate interpretation, the purpose or goals of the interpretation program must be clarified, so the degree to which the desired outcomes were achieved can be judged (Ham & Krumpe, 1996:21). The goals of an ecotourism interpretation program, however, are often not explicitly identified (Orams, 1997).

Developing a qualitative and quantitative performance index to measure the effectiveness of delivery, output, and short and long-term benefits concerning the impact of education projects has proven difficult (Tribe, 1999), and frameworks within wildlife tourism were discussed in Section 2.2.3. Multiple measures are needed, as no single variable is sufficient to understand the impact of interpretation (Ham & Krumpe, 1996:21) and various techniques have been suggested (Ham, 1986, 2003; McArthur & Hall, 1993; Yamada & Ham, 2004). Although a systematic evaluation of a program should be undertaken (Ham, 1986:26), this may be difficult as many aspects of pro-environmental behaviour change, such as increasing the stewardship for an area, are difficult to measure.
Discussions concerning the range of behaviours influenced and the impact over time have usually been hypothesised from theory, or been based on case studies. The results have sometimes been conflicting and this may be due to actual differences or methodological issues, but the legitimacy of applying existing knowledge from ecotourism or environmental education into volunteer tourism is unclear.

2.7 Limits of Current Research and Implications for Future Research

So far this Chapter has explored broad work such as ecotourism, wildlife tourism, volunteering, and aspects of natural resource management, as well as research within volunteer tourism. Despite the considerable depth of related research, there are significant gaps. Research, to date, in ecotourism or segments such as wildlife tourism, has been market-oriented or led by conservation groups looking to analyse the economic strength, conservation orientation and sustainable nature of this type of tourism (Roe et al., 1997). Ecotourism ‘is still in its infancy as a focus of both research and practice’ (Weaver, 2001:595) and the disciplinary infancy of ecotourism probably has contributed to a lack of certain types of research such as longitudinal studies (Backman & Morais, 2001:608).

Because tourism has been so heavily segmented, further research is needed in many areas but often the nature of the research is the same in each of the segments. This is likely to be true for the PERT sub-segment. For instance, research needed in Australian wildlife tourism has been summarised in a series of key reports (Higginbottom et al., 2001a:29-30; Moscardo et al., 2001b). The reports recognised the importance of understanding the impact of interpretation and education in tourism, the need to develop ways to achieve pro-environmental behaviours, and the further research needed to enable tourism to support conservation. A systematic assessment of nature based tourism to determine what conservation benefits are resulting from this type of tourism (Higginbottom & Hardy, 1999:22; Higginbottom et al., 2001a:60) has also been identified as required as well as the development of alternative ways to see and
experience wildlife (Moscardo et al., 2001b:iv) that can alleviate pressure on wildlife and their habitats, and enhance visitor experiences.

A key recommendation from the Australian review of wildlife tourism was that governments should support organisations where tourists are volunteering (Higginbottom et al., 2001a:v). Further research is needed to not only clarify the area of volunteer tourism and the factors that affect its magnitude (Higginbottom et al., 2001a:35), but also to clarify related areas and the outcomes and benefits of each.

Despite the apparent increase in episodic and environmental volunteering, little research has focussed on either, making it difficult to analyse aspects of volunteer tourism with respect to these. Gazley (2001) called for further work examining retention rates, recruitment and management styles. Best practice models need to be developed as much of the existing work in volunteering assumes long-term regular commitment to one organisation, but episodic volunteering does not necessarily include this. These issues also need examining within volunteer tourism.

Researchers within the key fields of tourism, volunteering and natural resource management have indicated the need for further research within the area of volunteer tourism. The need to find additional ways to support environmental research was also evident. Because many of the research issues in volunteer tourism, and the narrower area of PERT, have not yet been adequately addressed in the broader related areas within tourism or volunteering, detailed examination of the PERT sub-segment is complex, and comparative work is limited. Specific shortfalls in current research relevant to the subsequent work of this thesis can be grouped into the following categories:

- definitional and measurement problems in related areas of tourism and volunteering;
- a limited understanding of benefits derived from trips, particularly those derived from educational programs;
- measurement difficulties relating to behaviour modification;
insufficient research on volunteer tourism, particularly operations within the PERT sub-segment; and

- a limited understanding concerning how episodic volunteering may affect other types of volunteering.

Aspects relating to each of these are covered in the key questions that have emerged from the literature review and tentative research questions that may help answer these calls for further research are explored in the next section.

2.8 Further Research Requirements

Relevant research from the key areas of tourism, volunteering and natural resource management has been discussed. Overlapping areas are discussed in this section to provide a combined understanding and reveal the most appropriate directions for further research.

2.8.1 Identifying the characteristics of the PERT sub-segment

Research in volunteer tourism has principally involved single site case studies (see Section 2.5) or been related to a single issue such as the validity of volunteer data (see Section 2.4.3). Little discussion exists concerning its size, boundaries, or the variations within it, and studies that have attempted this (Callanan & Thomas, 2005) have searched a single website to gauge the range of volunteer tourism. There may be several reasons for this. Economically, and in overall numbers, volunteer tourism is not a significant section of the tourism sector and much academic research is tied to industry issues in more mainstream tourism. Many researchers have preferred to stay within one research area, rather than tackle a multi-disciplinary area. The small numbers of participants and programs, and scattered nature of the work creates logistical limitations for research. Consequently, although volunteer tourism has been mentioned by a number of researchers as a potentially useful way to achieve a series of goals, there has been little research within the field.

Segmentation was discussed in Section 2.2.2 and the process is used to help operators market effectively and to assist researchers in analysing a niche. The area of volunteer
tourism, and of PERT within it, needs to be examined to help answer questions outlined in Section 2.7. The characteristics that define the PERT sub-segment, and the profile of participants within it, need to be analysed. Terminology issues with ‘tourist’ and ‘volunteer’ may cause difficulties. Like most product markets, some boundaries may be arbitrary and newly emerging product markets are often less stable than established ones and this is likely to be observed in an analysis of the PERT sub-segment.

Section 2.7 demonstrated the need for an understanding of the models, approaches and partnership arrangements within the sub-segment. Small, individual researcher examples may be quite different to large multi-country and multi-researcher approaches and it is likely there is a diversity of approaches. Preece et al., (1995) recommended the compilation of a compendium of successful models showing how ecotourism contributing to biodiversity research and conservation, so operators could be made more aware of the range of working examples, enhancing their ability to select the best technique for their own situation.

2.8.2 Who participates on PERT trips?
The need for participant profile information stems from industry needs to target market. Profiling is also used by researchers to help understand a segment. Case studies have indicated demographic profiles are relevant in discussing benefits sought, motivations and levels of environmental concern. Considerable research has been done and examples are presented in Appendix 1. Variations within volunteer tourism are likely (Broad, 2001:206) and more work is needed to clarify the profiles within the PERT sub-segment.

Participants undertaking environmental volunteer research trips have been classified as ‘extreme’ ecotourists (Weiler & Richins, 1995) and are considered ‘hard core’. There is no accepted measure of a ‘hard core’ ecotourist, and additional work is needed to understand this classification. It has been related to both trip characteristics and participant’s values. However, measurement of areas such as environmental concern is not easy. While the development of a profile of volunteer tourists is useful both to
marketers and to natural resource managers trying to understand the likely behaviours of visitors, it has a further implication for researchers.

Beaumont (1998b) asked ‘are we preaching to the converted?’ and investigated the view that ecotourists may already hold strong attitudes and values prior to joining a trip and so were motivated to join a trip with a strong educational message. She noted previous research had often found it difficult to demonstrate how a trip or visit influenced respondents due to the ‘ceiling effect’ (respondents were already holding strong pro-environmental attitudes and undertaking significant behaviours so an educational trip was not likely to promote further change) (Beaumont, 1998b:273). Within the PERT sub-segment, if the goal of natural resource managers is to use volunteer tourism to create a pool of trained volunteers the ‘ceiling effect’ may not be an issue. But if the goal is to educate a wide audience on the value of an area, species or other aspect, volunteer tourism trips may not be targeting the audience managers are seeking, as PERT trips may be attracting people already familiar or aware of these issues.

The reasons participants join a trip needs to be understood. It is possible that potential participants could be local volunteers wishing to extend themselves or do something similar during a holiday, or be holiday makers looking for something different, such as a ‘REAL’ experience (Hall & Weiler, 1992). Volunteer tourism is quite different from traditional views of tourism (seen as a non-work activity) and volunteering (seen as a free activity or even expenses paid activity). The extent participants consider themselves to be volunteering, or on holiday, during these trips and, therefore, to what extent the motivations from each of these areas may be relevant is not yet clear. Research has indicated overlaps between motivations of episodic volunteers, such as learning and personal growth, and motivations of ecotourists and wildlife tourists.

Determining the repeat level amongst volunteer tourists is also relevant. Developing brand loyalty is important in tourism (Kozak, 2001; Petrick et al., 2001; Riley et al., 2001). Volunteer retention is considered valuable by volunteer organisations but has not been well examined in episodic volunteering. Volunteering research suggests a volunteer
tourist may join another trip with the same organisation due to retention factors associated with a connection with that organisation and a commitment to its goals, but self-interest is important in retention and volunteers may repeat because of their desire for a specific experience. Weiler, Richins and Markwell’s (1993) work demonstrated retention is also considered important by a volunteer tourism organisation (Earthwatch Australia) although it is likely to be less relevant to those focusing on youth volunteering. The consequences of high or low levels of repeat visitation in volunteer tourism are not clear. Repeaters should have been influenced by previous attendance on a volunteer tourism trip, and so expectations and motivations for joining may be different for this group. Further research is needed to determine the repeat rates of volunteer tourists and issues in this area.

2.8.3 Why join a PERT trip? - participant benefits

The perceptions surrounding benefits are likely to alter over time and this research focussed on post-trip perceptions. These are important to natural resource managers and operators interested in education and behaviour change. They are also relevant to the long-term views participants have of the value of the trip, altering word-of-mouth advertising and possible repeat purchases, which are of concern to operators. The range of perceived benefits is not yet well understood, although some areas such as self-identity have been explored within volunteer tourism.

Stebbins (1982) identified the durable benefits that accrued from volunteering, but these were based on volunteering being a part of serious leisure due to the systematic pursuit of a volunteer activity. Research within volunteering has noted the cumulative nature of benefits, such as an increase in self-confidence. These benefits cumulate gradually and are reinforced by regularly undertaking volunteering activities. The impact of a short episodic volunteer trip is unlikely to be the same. However, durable benefits (apart from financial return) may also accrue to some extent from a satisfying learning holiday. Stebbins acknowledged the relevance to tourism, arguing a tourism trip can be a form of serious leisure if it is a continuation of an amateur hobby or interest (Stebbins, 1996b) although educational trips are not necessarily serious leisure as it depends on the
participant’s pursuit of the activity pre- and post-trip (Stebbins, 1996b). While the linkage between serious leisure and volunteer tourism has been acknowledged by some researchers (Broad, 2001; Wearing, 2001), the extent of pre- or post-involvement has not been fully explored and further research is needed.

2.8.4 Are there other benefits? - other partners
For long-term viability of an industry, benefits need to accrue to each of the partners, but calculating the overall benefits from a trip is complex. Most research to date has focussed on assessing the impact of tourism on wildlife (Higginbottom et al., 2001a), on the perceptions of tourists (Wearing, 2001), or on both the natural resource and the tourist (Orams, 1996b; Reynolds & Braithwaite, 2001). Yet the goals of the operator and their ability to produce the tourism product is also crucial (Figgis, 1993). The PERT sub-segment appears to be supply led (James, no date; Turner et al., 2001) and so the goals and benefits perceived by researchers are also crucial. The goals of natural resource management organisations may not be synonymous with various types of individuals within the organisation (Wegner et al., 2004) and researchers must be willing to involve tourists in their field work. Hence, understanding the perceptions of members of the field crews, including the trip leaders is important.

Similarly, organisational goals are often viewed simplistically from a commercial viewpoint. Many ecotourism operators assist in conservation-related activities and the motivations could be for personal or commercial reasons (Higginbottom et al., 2001a:33). These activities may provide personal benefits as well as commercial benefits such as improving their own knowledge base, ability to interpret to tourists or helping the long-term conservation of their site or be due to personal beliefs. Although acknowledged, this area has rarely been examined.

The broader cumulation of benefits at a societal level is also important. Uriely and Reichel’s (2000) examination of the relationship between working tourists (including unpaid workers) and their hosts in Israel, indicated differing motivations based on whether the relationship involved monetary exchange, and this altered the social
exchange. Further work is needed to determine the benefits of volunteer tourism for a host community and for the participant's home community.

The benefits from education

It was beyond the scope of this thesis to examine all the benefits that potentially arise from a volunteer tourism trip. A review of other research revealed the benefits accruing from education may be significant for long-term outcomes for each of the key partners. Although considerable work has been undertaken exploring persuasive communication theory and how interpretation programs in tourism can help affect pro-environmental behaviours, studies have usually examined only a small number of potential behaviours. These have usually been related to management priorities or been an easier behaviour to examine. In both tourism and volunteering, short-term benefits have been easier to determine than long-term benefits (Schanzel & McIntosh, 2000).

The chance to learn new skills and knowledge is frequently mentioned in volunteer tourism. Yet many studies have not incorporated a longitudinal component to examine whether new information is actually utilised, and if so, how. A trip may have influenced a person's ability, or the frequency, with which they do a task. Some benefits appear to only emerge with time, or are perceived after some time, alter in their importance over time, or need time to have elapsed for them to be manifested. A better understanding of benefits during the post-trip phase may indicate further ways trips can be adapted to help enhance the achievement of desired goals.

Because of the overlaps and interdependence of the educational benefits, the benefits accruing to one stakeholder cannot be analysed independently of other stakeholders, yet most previous studies have focussed on one stakeholder only. Other aspects such as repeat visitation and the pre-existing profiles of participants are also likely to impact the nature of the outcomes and the durability of benefits. Understanding the interdependence of the benefits should help evaluate the partnership arrangements. Although benefits-based management is supported as a concept (Orams, 1996b), natural resource managers have generally concentrated on models focussing on minimising the negative
impacts on the environment (Roe et al., 1997:59) in their attempts to find techniques to deal with growing tourism. These generally address the symptoms, such as on-site impacts, rather than the causes which is the visitor behaviour (Archer & Wearing, 2001). Further work is needed so the full range of visitor experiences can be understood and non-biological dimensions can be incorporated into conservation programs (Higginbottom et al., 2001b; Roe et al., 1997:69; Schanzel & McIntosh, 2000; Stratford, Mazur, Lunney & Bennett, 2000).

2.9 Summary
This review of the background literature revealed a wide range of research can be applied to volunteer tourism. The area appears to have emerged from the growth and segmentation within the tourism industry, changes within the volunteering sector and included increasing interest in episodic volunteering, and growing concern for the environment. The requirements of natural resource managers have also meant there is interest in the supply of PERT-style trips.

The need for further research in this area has been identified in tourism, volunteering and natural resource management. Certain types of volunteer tourism trips have been suggested as able to provide a suitable mechanism by which tourism can contribute to conservation. For successful partnerships, either formal or informal, benefits need to accrue to each of the stakeholders.

Relevant research within tourism and volunteering indicated a wide range of reasons explaining why potential participants may join these trips, as well as potential benefits for organisations and natural resource managers. Further work is needed to identify which reasons are dominant within PERT-style trips.

As it was beyond the scope of this research to analyse all types of benefits equally, this literature review focussed on one area of proposed benefits, environmentally significant behaviour. The achievement of natural resource manager or tourism operator goals such as the encouragement of pro-environmental behaviour in participants and the participant
goal of learning are likely to be interdependent. The review of decision-making theory and planned behaviour demonstrated the complexity surrounding behaviour change, difficulty measuring it and extensive array of prior work. Because of the subjective nature of benefits, they cannot be directly measured, yet an understanding of the perceptions of benefits is clearly crucial and a means of measuring these is needed. The literature revealed that two key problems exist. One is identifying and measuring the range of benefits, particularly subtle modifications of environmental concern or behaviour. The other problem is the longitudinal nature of the accrual of benefits that potentially can be derived from volunteer tourism.

Knowledge reviewed from the areas of tourism and volunteering overlapped and both areas are relevant research within volunteer tourism. Despite the relevance of a wide array of earlier research, only a few studies have been undertaken within volunteer tourism. These have generally focused on a single organisation, often on motivations and experiences of the volunteers, and generally have been cross-cultural, but have demonstrated the importance of self-interest and personal development for participants. Identification of existing knowledge and gaps enabled a research approach to be developed. Initially the area of PERT, a proposed niche within volunteer tourism, and the characteristics that distinguish it from other types of volunteer tourism need to be examined. The reasons both volunteers and researchers become involved with PERT-style trips and the benefits they seek through participation will help to increase the understanding of the issues of supply and demand and hence future growth in the sub-segment. The approach used to analyse these areas is outlined in the next chapter.
CHAPTER 3
METHODOLOGY

3.1 Introduction
The need for further research identifying the PERT sub-segment and analysing the ability of the PERT sub-segment to enhance linkages between tourism and conservation by providing benefits to key stakeholders was outlined in Chapter 2.10. An exploratory approach probing a range of areas was considered appropriate and the methodological approaches used in this study are described in this chapter.

The research approach adopted is described in Section 3.2 and the inductive, multi-method and iterative nature of the research is outlined in Section 3.3. A two-staged research approach (described in Section 3.4) was necessary as initially the PERT sub-segment needed to be identified and its characteristics described so case studies within the sub-segment could then be analysed. Section 3.5 outlines the decision to use a collective case study approach and issues, including the number of case studies selected. Section 3.6 examines the research tools used in each stage and this is extended in Section 3.7 which describes the approach used for each of the three key groups: the organisation, members of the field research teams, and participants, during the second stage of the research. Further issues concerning the design of the survey tools used for participants are described in Section 3.8 and Section 3.9 reviews the overall research design to ensure rigour. Limitations are discussed in Section 3.10, although specific limitations and issues are addressed within the description of the relevant stage of the research. A summary is given in Section 3.11. Appendices 4 to 11 document the information sheets and survey forms used in the research.

3.2 Research Approach
The benefits each stakeholder perceived that they accrued from PERT-style trips were examined. Although this may not reveal all types of actual benefits resulting from PERT-style trips, an understanding of the perceptions of benefits is crucial in terms of management, as decisions made by stakeholders are partially based on these perceptions.
Given the conceptual focus of this research, a post-positivist paradigm was adopted. Researchers such as Lincoln and Guba (1985), Denzin and Lincoln (1994), Guba and Lincoln (1994) and Cresswell (1994) have discussed paradigmatic approaches and noted a qualitative approach emphasised the richness of meaning and could incorporate varying researcher approaches such as the tools used by post-positivists, critical theorists and constructivists. A post-positivist approach was considered appropriate for this research as it acknowledged multiple constructed realities and did not aim to control the process but aimed to gain an understanding of some aspects of the PERT sub-segment. Rather than creating generalisations applicable in any location or at any time, as a positivist approach aims to do, this research considered tourism to be a contextualised experience that makes generalisations difficult (Hobson, 2003) and tourism research often involves socially constructed knowledge (Riley, 1996:22). Despite this, quantitative approaches and positivist paradigms have been dominant in tourism (Decrop, 1999:157) and in major tourism journals (Riley & Love, 2000). However, this research examined a range of aspects within the PERT sub-segment in an exploratory manner and was contextual (in time and space) as the PERT sub-segment was regarded as growing and emerging as a sub-segment, and was impacted by outside uncontrollable influences during the research (such as September 11, 2001). By taking this approach, the research did not aim to demonstrate cause and effect, as a positivist approach may, and instead acknowledged that many factors were simultaneously impacting upon the PERT sub-segment and its stakeholders.

At an epistemological and axiological level a post-positivist approach was also appropriate. In this research, the process of conceptualising perceptions of outcomes and benefits required the respondents to describe their views which were then interpreted during the coding and analysis stages (described in Chapters 6, 7 and 8). Academic rigour was applied to this process and peer reviewing undertaken, but the transfer of information was not deemed to allow the researcher to remain distant, non-interactive and objective as required for a positivist approach. This research enhanced meaning and understanding within the PERT sub-segment and based on an examination of the
language differences between approaches, a post-positivist approach was also most appropriate (Creswell, 1994).

In addition, over the previous 12 years I had lived in Asia, Australia and the USA and worked for environmental not-for-profit organisations as well as within the tourism industry and my work history influenced the direction and focus of this research. I had also travelled widely with my work and examined a number of volunteer tourism operations within this period. As this background and my values affected the choice, direction and focus of the project, a post-positivist approach was appropriate for this research.

Quantitative approaches are often deductive, requiring scholars to state hypotheses in advance and test these empirically under controlled conditions. Qualitative approaches usually involve an inductive approach, but many variations exist within both qualitative and quantitative approaches. For instance, a quantitative survey may be used to develop a descriptive understanding and ethnographers may use a deductive approach (Hammersley, 1992:48). The literature review revealed some work had been conducted in the area of volunteer tourism but much of the knowledge was based on a small number of respondents or had a narrow focus (see Section 2.5), usually within one organisation and aspects of the results were unlikely to be representative of other types of volunteer tourism. Previous research had provided valuable detailed information but there has been little exploration of the sub-segment or examination of differences within it. The lack of extensive prior research justified an exploratory approach for this research.

An iterative approach was used with one stage of the research influencing the next. Different sources of data were used to provide as much depth and range of information as possible and different perspectives on information. It resulted in a mixed-method approach, mostly using qualitative techniques but also adopting quantitative techniques when appropriate (such as participant surveys and quantifying textual material using
content analysis). The mixed method approach is discussed further in Sections 3.3 and 3.9, and was used to strengthen the results, but also meant a single, more focussed qualitative paradigmatic view such as phenomenology was not followed (see Tesch, 1990:72-3 for a summary of 26 approaches to qualitative research design). Many researchers only loosely apply a specific viewpoint within qualitative research (Bryman, 1988:53) often to maximise the results within the practical and logistical constraints of their field research.

Most researchers no longer view the separations between quantitative and qualitative approaches and their associated paradigmatic views as clear cut (Bryman, 1988; de Vaus, 2002; Fielding & Fielding, 1986; Guba & Lincoln, 1994; Miles & Huberman, 1994; Potter, 1996; Silverman, 1993; Tesch, 1990:56) particularly when viewed at the methods level, but also some argue at the epistemological level (Howe, 1988) and at all levels (Guba & Lincoln, 1994:107). However, the approaches used for this research, provided a tool for ensuring a consistent research design and the paradigmatic view of the researcher had implications for the way this research was conducted.

3.3 Methodological Approach
The first stage of this iterative research (Chapters 4 and 5) identified the characteristics of the PERT sub-segment within the volunteer tourism sector and the approach used is described in Section 3.4.1. It provided the context and background information for the second stage. The 'tradition of inquiry' (Creswell, 1998:21) used in the second stage (Chapters 6, 7 and 8) followed a collective case study approach and is described in Section 3.5.

During the development of the exploratory approach used in this research, analysis of the rigour of the intended approach, and identification of the necessary tasks to build into the research design to ensure rigour, were clarified. The concept of rigour in qualitative work has been widely discussed (Baxter & Eyles, 1997; Decrop, 1999) and Lincoln and Guba (1985) outlined four necessary criteria: credibility, transferability, dependability and confirmability. These criteria were developed earlier by Guba and
have been widely adopted and used by qualitative researchers. Each criterion was considered during the development and implementation of this research, and the research approach undertaken is reviewed against each criterion in Section 3.9.

To help provide rigour and credibility extensive triangulation was adopted. Triangulation and multiple methods are closely related. Some researchers argue the terms are inter-changeable, and analysis of the same research question from different angles and data sources can aid analysis, limit personal and methodological bias and encourage the generalisability of the study (Decrop, 1999:158) and add rigour, breadth and depth to the results (Denzin & Lincoln, 1994:2; Jennings, 2001:151). Others argue triangulation does not necessarily correct any bias or improve validity (Oppermann, 2000) but ‘each method reveals different aspects of empirical reality, (so) multiple methods must be employed’ (Denzin 1978:28). Triangulation is synonymous with convergent validation but can be extended. Denzin identified four types of triangulation: data, investigator, theory and methodological. Janesick suggested a fifth type, interdisciplinary (in Jennings, 2001:151). Not all researchers agree with the broad use of the term and triangulation, ‘should be used only for data triangulation and possibly investigator triangulation and it is in data triangulation that this author [sic] sees its best application and its truest resemblance to the origins of the term triangulation, because all measurements would be of the same kind and based on the same ontology and epistemology’ (Oppermann, 2000:144). The distinction between triangulation and multiple methods is accepted, but in this research the term ‘triangulation’ will be used in its wider sense, although a clear understanding of the paradigmatic position is still needed.

Many qualitative researchers believe a pragmatic approach based on the researcher’s requirements should be adopted (Brannen, 1992; Bryman, 1988, 1992; Potter, 1996) as the practical realities of gathering the most relevant information for evaluation outweigh epistemological concerns of mixing methods (Patton, 1990:193). A multi-method approach is recommended in tourism research (Backman & Morais, 2001:604) where many of the concepts being measured, such as ‘tourist motivation’, provide significant
fieldwork problems (Hartmann, 1988:89). The second stage of this research adopted a collective case study approach or multi-site qualitative approach (described further in Section 3.5) and it is common for this style of research to use a multi-method approach (Bryman, 1988:129; Yin, 2003). Arguments concerning the logic or implications of a specific triangulation are discussed in the appropriate chapters.

A multi-method approach can appear to be driven by logistical issues rather than research design. Although logistics played a role in the data collection process, this research design was driven by the research questions developed in Chapter 2.10 and the application of academic rigour to the methodological approach. Because of the nature of doctoral research multiple investigator triangulation was not used. Cross-referencing results with prior research, particularly those involving the same organisations, was undertaken and multiple coders were used in content analysis to ensure the results were consistent.

3.4 Methods

The first stage of the iterative approach, described in Section 3.4.1, examined the broad area surrounding the PERT sub-segment within volunteer tourism to determine the characteristics of the product market and answer the questions posed in Section 2.10.1. The first stage also informed the approach for the second stage, aiding question design and describing the population from which case studies were selected. A collective case study approach was used to analyse the perceived benefits of the participants, the field crews and the organisations. The case study approach is described in Section 3.5.

3.4.1 First stage of research

The first stage involved an initial global search (Chapter 4) followed by a more detailed Australian search (Chapter 5) to produce a set of criteria that allowed operations within the PERT sub-segment to be identified. Academic, grey and popular press literature, advertisements, organisation-produced material, volunteer literature, including from the Internet, and discussions with key stakeholders were used to compile the hypothesised positive outcomes listed in Appendix 3. This research was carried out iteratively and
included numerous discussions with organisations, operators and scientists to seek their views on the industry distinctions within the wider area and operational differences and similarities. Specific data collation issues are described in Chapters 4 and 5 together with the results.

The information was used to inform the structure, research tools and question design used in the case study analysis. I had also spent time (21 days in total) at four volunteer tourism sites within the scope of the PERT sub-segment, both prior and during this research. Three sites were international and one was within Australia. Two of the sites were included in this survey work. During this time, extensive conversations were had with researchers and participants but none of the visitation time frames coincided with the actual research undertaken in this thesis, so the data was considered background. It informed the process, but was not directly included within this work.

The results provide a temporal snapshot and the dynamic nature of the market place meant this work is not readily replicable. However the value of, and need for, this type of contextual data was outlined in Section 2.8.1. The search was also essential to provide a base for the next stage of the research. Chapters 4 and 5 provided the sampling frame for the case study selection and placed the case studies in a contextual setting within the PERT sub-segment. The provision of a contextual setting is an important conceptual step in qualitative case study research (Miles & Huberman, 1994; Stake, 1994).

3.4.2 Second stage of research
Although the results of the first stage of this research (Chapters 4 and 5) revealed the PERT sub-segment was relatively small, it was not possible to conduct detailed research on all the organisations operating in Australia and a case study approach was examined for the second stage of this research.
3.5 Selection of a Case Study Approach

3.5.1 Issues in the selection of case study approach

A 'bounded system' is needed for a case study approach (Creswell, 1998:36). This research examined the operations of individual organisations, providing a logical boundary, and as each organisation had already been placed within its broader context in Chapters 4 and 5, a case study approach was feasible. Case studies are often considered 'stand alone' pieces of research not comparable to other studies. Generalisation difficulties can result, inhibiting the development of a body of knowledge surrounding the topic (Backman & Morais, 2001:601). These fail to fulfil the 'transferability' criterion of research rigour mentioned in Section 3.3. Not all researchers agree and a case study can be chosen to 'lead to better understanding, perhaps better theorising, about a still larger collection of cases' (Stake, 1994:237). The theorising can be done to a general process or structure rather than a population with the careful selection of case studies (Hay, 2000; Lincoln & Guba, 1985; Silverman, 1993:160; Tesch, 1990:69; Yin, 2003). 'Typical' cases can provide useful insights into causal processes in other contexts. Disconfirming cases can challenge a researcher's interpretations or portrayal of an issue. But care is needed, and Eisenhardt (1989:546) argued it is possible to generalise from a case study, but to do so is a positivist approach. Alternatively generalisations can be regarded as providing insights rather than laws.

Further analysis of the suitability of a case study approach revealed it is commonly used in ecotourism and tourism (Backman & Morais, 2001:601) and in volunteering research. Case studies allow holistic real life events to be investigated (Yin, 2003), are well suited to exploratory and descriptive research work (Yin, 2003), contemporary events where the researcher has no control, and answering 'what' type questions. Case studies are ideal where the complexity and number of variables involved means other research designs are not appropriate (Finn, Elliott-White & Walton, 2000). Although some researchers have argued inductive research is a key characteristic of case study analysis (Gillham, 2000:3), Yin (2003:14-5) argued there can be strong common ground between qualitative and quantitative approaches. Both sources of evidence can be used in case
study research and multiple sources of evidence are a major strength of case study research (Yin, 2003:97).

Based on these factors, a case study approach was considered the best choice for this study. Only certain facets of the case studies were of interest in this research, as outlined in Section 2.8, so an embedded analysis (Yin, 2003) was adopted.

A case study approach is often associated with direct observation (Tesch, 1990) and a style of analysis that involves 'dialoguing with data' (Tesch, 1990:65). However, direct observation is not necessary in a case study (Yin, 2003) and was not explicitly used in this research. This research was not constructed to examine cause and effect but to provide illumination on the area (Tesch, 1990:93) and so did not analyse the data to examine the meaning of the texts or action as undertaken by many case studies (Oppermann, 2000:145). The selected techniques for data collation and analysis do not invalidate this research approach as a collective case study, but required clarification as the approach controlled, and explained, the way the data was analysed in this research. Yin recognised multiple strategies were feasible and ‘a survey within a case study’ (Yin, 2003:9) may be an appropriate technique.

Chapter 2 indicated previous research in volunteer tourism had focused on a single trip or type of trip and a duplication of this type of research, such as Broad’s (2001) detailed ethnographic study or Webb’s (2002) single trip analysis, would neither add significantly to the research knowledge in this area nor would it answer the questions posed in Chapter 2.10. To encourage transferability, research on more than one case study was preferred and most multiple-case designs are stronger than single-case designs (Yin, 2003). Comparative case study analysis has been under-utilised in tourism research (Weaver, 2001:595) and is encouraged as ‘studies replicated with the same methodology on different data-sets in order to find similarities and or differences’ (Oppermann, 2000:145) will help strengthen the study area. Terms used to describe this approach are a collective case study (Stake, 1994:237), multi-site qualitative research (in Stake,
1994:245) and cross-case analysis (Creswell, 1998:63) and this approach was adopted for this research.

3.5.2 Number of case studies

Most researchers choose no more than four cases (Creswell, 1998:63), as too many case studies tend to dilute the overall analysis, but a larger number can enhance the ability to provide broader insights from the research. For logistical and budgetary reasons, the research concentrated on Australia allowing a strong geographic component to the work. The research design must drive data collection (Tesch, 1990) and methods and logistics cannot be regarded as separate entities, but are intertwined in the development of a workable research project. The capacity of the researcher to undertake the work must also be considered (Hay, 2000). Chapter 5 revealed the number of operations within Australia was small, trip numbers were limited and the number of participants per trip was small. A cross-sectional (latitudinal) snap shot for one time period (Weaver & Oppermann, 2000) using a quantitative survey approach across all Australian organisations was considered. The cooperation of each organisation would be needed and this required considerable effort. In addition, the inclusion of secondary data sources from the organisation and headquarter visits was considered desirable and so a cross-sectional snapshot was considered logistically too large and may not have provided the depth of data needed. During the start of the data collection phase I also began full-time work and the ability to incorporate a number of organisations into the study simultaneously became questionable.

Instead of taking a latitudinal snapshot across Australia, three case studies were eventually selected from the nine organisations identified as operating in Australia (see Chapter 5). The more limited number of organisations allowed more depth of analysis and the inclusion of additional information sources, such as internal secondary data. Larger organisations were chosen (see Section 5.6) to provide a sufficient number of trips and participants for the survey approach used.
3.5.3 Additional case study issues

Because of the lack of information concerning the trips, a logistically determined goal of surveying every participant, on every trip, for one year, for each organisation was set. All members of the field teams in Australia during the identified survey period would also be surveyed as well as organisation staff. Saturation sampling was intended but it was not possible in advance to determine whether this would be achieved. Issues surrounding data availability for each case study are discussed in Section 3.10.4 and response rates are discussed in Chapters 7 (for members of field crews) and 8 (for participants). Because the organisations were not all surveyed concurrently, trips over an 18-month period (2002-03) were analysed and the longitudinal surveying (described in Section 3.7.3) meant the primary data collection was not completed until September 2004.

Each case study was examined as a stand-alone entity to determine the patterns in each case prior to examining the patterns within the aggregated results. Patterns and theory could be checked for each case, as well as the aggregate (Eisenhardt, 1989:542) and this clarified the approach as one of replication across case studies, not broad sampling (Yin, 2003:47). Although a replication approach was used, for conciseness and ethical reasons, not all data for participants and members of the field crews are presented this way. To gain organisation permission for the research, the researcher stated a comparative approach would not be published that may have resulted in one organisation appearing to provide more benefits than another. In a competitive market where volunteers and scientists are carefully regarding the 'value' of their involvement, organisation sensitivity was understandable. The participant and members of the field crews results were aggregated but non-sensitive significant differences are noted in the results and discussion chapters. The aggregation of the results from several cases studies for presentation has been done by a number of researchers (Rodger & Moore, 2004) and allows themes to be examined and presented in a concise manner.
3.6 First and Second Stage

3.6.1 Background

This research was approved by the Southern Tasmania Social Sciences Human Research Ethics Committee of the University of Tasmania. Ethical considerations during the collection process helped determine the most appropriate collection techniques and processes. Three groups were examined and Table 3.1 highlights the techniques used and material sent to each participant in each group. Further information is given on each of these in Section 3.7, including detailed explanations regarding the informed choice, anonymity and confidentiality for each group. Minor changes were made to the participant information sheets depending on which organisation the participants had travelled with (so the appropriate organisation name was used) and whether they were contacted (and returning the form) by email or post.

Table 3.1 Material sent to participants in each group

<table>
<thead>
<tr>
<th>Group</th>
<th>Technique</th>
<th>Material</th>
<th>Location of form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organisation</td>
<td>Face-to-face interview</td>
<td>Telephone discussion</td>
<td></td>
</tr>
<tr>
<td>Field crews</td>
<td>Telephone survey</td>
<td>Information sheet for field crews</td>
<td>Appendix 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Telephone survey questions</td>
<td>Appendix 5</td>
</tr>
<tr>
<td>Email survey</td>
<td>Email survey (or post)</td>
<td>Email survey</td>
<td>Appendix 6</td>
</tr>
<tr>
<td>Participants</td>
<td>Mail-out survey</td>
<td>Information sheet, first survey</td>
<td>Appendix 7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>First survey</td>
<td>Appendix 8</td>
</tr>
<tr>
<td></td>
<td>Mail-out survey</td>
<td>Information sheet, second survey</td>
<td>Appendix 9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Second survey</td>
<td>Appendix 10</td>
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<tr>
<td></td>
<td></td>
<td>Reminder notice, first and second survey</td>
<td>Appendix 11</td>
</tr>
</tbody>
</table>

3.6.2 Use of secondary data

Numerous secondary data sources were used in the first and second stages of this research. For instance, textual advertising material was used during the global search to determine the operations of each organisation and their advertised potential benefits for
participants. Organisation mission statements were also compared with staff comments on organisation goals and outcomes. The coding techniques used here were the same as the techniques used to code the open-ended responses from the surveys and this process is described in Section 3.8.5. Although there are issues surrounding the use of secondary data sources (Finn et al., 2000:58-63), the appropriate selection of secondary data material, such as described in Steven's examination of hotel ethical codes (1997, in Finn et al., 2000:145-6), minimises many of these issues.

3.6.3 Second stage - primary data collection
Yin (2003:21) outlined the components for case study research design and these have been followed here. The study's questions and propositions were addressed in the literature review. The units of analysis (three organisations) were discussed in Section 3.5 and analysed in Chapter 6.

Trips run by the three organisations were examined using a collective case study approach and extensive triangulation. The organisation, the members of the field crews and the participants were analysed and the research tools used for each are discussed in Sections 3.7.1, 3.7.2 and 3.7.3 respectively. Case specific aspects of each tool are highlighted in the appropriate chapters.

A Delphi technique via email could potentially overcome logistical problems of geographically diverse locations and identify specific issues of interest for this stage of the research. The Delphi technique was not undertaken because the same people would also be interviewed as part of each case study and respondent burden was potentially a significant problem. In addition, significant material had already been collated covering participant, organisation and field crew viewpoints during the global search, and this was used instead (Appendix 3). My extensive background research and the detailed examination of each organisation's operations and trips (Chapters 5 and 6) were vital. Broad (2001:121) recognised that respondents assume the researcher has a degree of understanding concerning the example, as argued in Patton (1990), and prior knowledge was particularly significant in the telephone interviews with members of the field crews.
and also helped to establish rapport, improve the understanding of responses and aided comprehension of the open-ended responses in participant surveys.

3.7 Second Stage – Stakeholders

In Chapter 2 it was noted that there are numerous stakeholders in tourism-conservation partnerships, but for this study only three were examined: the organisation, the members of field crews and the participants. These stakeholders, discussed separately below, were directly involved with each trip surveyed. Other stakeholders such as local community, or natural resource managers, were not included here as it was logistically beyond the scope of this research to include them.

3.7.1 Organisations

Once the initial approval was received from each organisation to include upcoming trips in this research, a visit to their office was arranged. For Naturewise, which was at a start-up phase, the local office was visited. The Australian manager of the new program was interviewed face-to-face on three occasions, but the Australian headquarters were not visited. Face-to-face informal discussions were held with organisation staff. Individual staff within each organisation had different perspectives or knowledge that was relevant and respondent fatigue was considered to be likely using other research techniques. Face-to-face discussions were also essential. The cooperation of the organisation staff was needed to determine appropriate techniques for overcoming ethical issues to allow subsequent surveying of participants and members of the field crews. In addition, face-to-face discussions assisted in accessing potential secondary data contained within offices, and determining limitations associated with it. Printed and published material was also collected, such as advertising, annual reports, and newsletters for textual analysis. Data collation of secondary material was also undertaken in one office.

The analysis of each organisation is summarised in Chapter 6 and issues regarding these visits are discussed there. Anonymity and confidentiality were not always feasible for this stage as the key people, or person, within an organisation administering the programs is identifiable. Issues concerning anonymity and confidentiality of responses
were discussed in advance with individuals prior to the commencement of the organisational research being undertaken. A copy of the relevant section of this research was sent to the organisation, not only for member checking purposes, but for confirmation that no confidential information had been published inadvertantly or misinterpretation of discussions had occurred.

3.7.2 Members of the field crews
All people who took part in the field work for each surveyed trip in Australia were selected for interviewing. Members of field crews included scientists, researchers, organisers and logistical assistants. A more detailed description of the field crews composition and response rates are discussed in Chapter 7. An information sheet concerning this research was sent to each organisation (Appendix 4), which then contacted the field crews, forwarding the information sheet, and requesting permission to send their contact details to me. Not all field crew members gave their permission. The names of researchers were often public information with organisations describing the trip operations in some detail in their advertising or printed material, and so the level of non-response was usually able to be determined. This was checked with the organisation.

Scientific publications are often used as a measurable output of fieldwork, but this was not considered a good summary of benefits. Considerable time lags can occur between data collection and publication and not all field trips result in publications, so the use of published material as an indicator was not feasible for this research. In addition, a broader view of benefits was required. Involvement appeared to have significant implications for this group of people and personal benefits as well as work-oriented benefits may exist.

Various types and ways of conducting interviews have been examined (Finn et al., 2000:73-4) and various factors were considered during the selection of the survey method (Dillman, 1978, 2000). Although a Delphi technique via email was a logical approach to obtain this type of information, it was rejected as it would have often
revealed the speaker to other members due to details in the conversations. Instead, field crews were surveyed in two phases: a telephone survey and an email survey. The information gathered in the first stage (and presented in Appendix I) and from the participating organisations (Chapter 6) revealed potential benefits and the reasons why members of the field crews were involved with the trips. Together with the research needs identified in Section 2.8, these were used to help frame questions for both surveys. The email survey contained closed-ended questions concerning reasons for joining the trip and satisfaction with the outcomes of each of these reasons. It was delivered after the telephone interview so the ideas in the email survey did not influence answers given during the telephone interview.

Appropriate techniques to incorporate in telephone surveys (Dillman, 1978) were used. A suitable time for the interview was arranged in advance, usually via email, and participants knew the approximate length of time the interview would take, so had made a considered decision to participate prior to receiving the telephone call.

A semi-structured telephone interview was most appropriate as it was necessary to engender support and cooperation. Also, significant variation existed in responses, intensity of views, and time before respondent fatigue became apparent. In addition, the interviewees were often very busy in the field, their physical locations were highly scattered, office hours were sometimes limited, and individual conversations were considered more preferable for eliciting problems or negative comments (Bradburn & Sudman, 1979:134; Lofland, 1971) than group discussions.

The semi-structured telephone survey (Appendix 5) was used to gather the following core data from field crews:

- how did they get involved with the trip and what they saw as their role in the trip;
- their prior experience utilising volunteers;
- differences they perceived between the utilisation of various types of volunteers;
- why they utilised volunteers on the surveyed trip;
- the scientific goals of the trip and the extent they felt they achieved these;
perceived goals of the organisation or broader goals and the extent they perceived these were achieved;

personal goals for involvement in the trip and the extent they felt they achieved these;

positives and negative aspects about having volunteers involved in this trip; and

other aspects thought to be relevant.

All responses were aggregated and identifying aspects in indicative quotes used in Chapter 7 were removed. Content analysis, as described in Section 3.8.5, was used in the transcribed interviews and further analysis techniques are described in Chapter 7. At the conclusion of the telephone interview, respondents were informed about the second survey and asked if they would be involved in this final stage.

The survey (Appendix 6) was emailed or posted to each person involved in the second survey. It contained tabular information that was easier to obtain via written, or electronic form, than via telephone. The responses for questions 1 and 2 were developed from the information obtained in the first stage (see Appendix 3) and from the participating organisations (Chapter 6). These were designed to overlap with the responses from the telephone survey but the closed-ended tabular nature of the questions meant the questions were asked and answered in a more consistent fashion than was possible in semi-structured style interviewing. An 'other' category was included to allow respondents to state additional reasons. Question 3 was included since data quality issues with volunteers were noted in the literature review as an area of concern. Socio-demographic information was also gathered to determine whether responses varied with any of these characteristics. The telephone survey and email survey responses were able to be cross-checked for each individual.

3.7.3 Participants

Several options for data collection were explored. Personal diaries have been used to help monitor a process of change and can be quite versatile allowing either qualitative or quantitative data to be collected. They can be used to reveal what the trip meant to the
person at the time of writing and can minimise question influences (Markwell & Basche, 1998). Respondent burden was a concern and because of this, the use of diaries was not supported by the first organisation contacted and was rejected as a research tool.

The use of face-to-face interviewing would have been logistically difficult and significantly compromised the amount of information that could be obtained. Other researchers have noted difficulties with this approach as participants can be unwilling to have their holiday time interrupted with detailed discussions concerning the impact of the trip on them (Broad, 2001). Little time is available to conduct the interviews and interviewing can decrease the leisure time of participants during field-based research-oriented trips (Webb, 2002). In addition, in volunteer tourism, strong social bonds can exist between, and within, participants, scientists and often the organisation and this can lead to difficulties in obtaining honest answers (Broad, 2001; Revitt, 1999) a common issue in face-to-face interviewing (Bradburn & Sudman, 1979:166). Broad (2001) countered this by staying long enough to become a part of the group, but PERT style-trips are short-term.

**Issues concerning mail-out surveys**

The decision to use a mail-out survey (see Appendix 8) considered the advantages and disadvantages of this tool (Dillman, 1978:72-6). The use of a traditionally quantitative tool in a qualitative study is not unusual (Bryman, 1992:65). It was used as an efficient means to collect descriptive data across a geographically and spatially fragmented set of people, rather than as a quantitative tool to obtain statistically representative answers for subsequent generalisation to a population. Mail-out surveys can be used to obtain deliberative responses and allow for reflexivity by the respondent before answering, and this was considered desirable. The length of the survey was minimised to encourage higher return rates and this was crucial due to the small numbers involved in trips. Previous researcher comments concerning social desirability effects were noted and key questions were mingled with others to allow the respondent to answer positively to at least some questions. Efforts were made to minimise leading the respondent but still elicit sufficient information and so a combination of closed- and open-ended questions
were used. Open-ended questions were also used to ensure each question was applicable to all respondents as a series of trips by several organisations were surveyed using the same survey and variations existed among the trips.

Question design issues are discussed in Section 3.8, but response rate issues and whether a mail-out survey would elicit the quality and quantity of data sought are elaborated upon here. Estimating the level of non-response and consequential issues in advance is extremely difficult. In tourism research, response rates of 10-40% are common for postal surveys (Finn et al., 2000:102). Broad’s (2001:109) detailed ethnography in volunteer tourism included a post-trip survey and had a 61% response rate. Taylor (1993) had a 55% response rate from a survey conducted one to six months after a visit to a botanical garden. Weiler and Richins (1995:33) surveyed Earthwatch Australia participants for the three previous years and obtained a 64% response rate with two follow-up mailings. Dillman (1978:21) argued the use of his Total Design Method for mail-out surveys improved response rates and even partial use averaged a response rate of 71%. Societal changes such as the attitude to unsolicited mail may have altered likely response rates but the basic principles Dillman (1978) advocated were sound for obtaining good response rates to a mail-out survey.

Non-response decreases sample size and reduces representativeness. Because a low total population existed for this research, a high response rate was desired. The total population was known from the organisation’s records and some characteristics of the non-response group could be calculated. Although poor response rates can occur for a number of reasons (Dillman, 1978; Veal, 1997), the commitment of participants on PERT trips was potentially high and the notion of social exchange (Dillman, 2000) was incorporated in the survey design as respondents may be quite motivated to assist with research that potentially improved these types of trips.

The length of a survey can alter response rates. Dillman (1978:27) argued surveys over 10-12 pages and 125 items showed a decline in response rates. Goode and Hatt
recommended a survey should take 10-25 minutes and importantly should be on a topic respondents were able, and willing, to respond to.

Initially a pre-trip survey, to determine motivations and expectations, and a post-trip survey, sent immediately after the trip to determine perceived benefits was the preferred option. This approach was not undertaken for several reasons. It was a substantial respondent load for a single participant to answer three surveys, in addition to the forms and paperwork the respondent needed to complete for the organisation. Total participant numbers were likely to be too small to split the survey group (as done by Beaumont, 1999) so half could fill in a pre-trip survey and half a post-trip survey.

Instead, a post-trip survey was sent to participants as soon as the trip was over, asking questions about pre-trip and post-trip aspects. The use of a post-trip survey is not ideal and is likely to have introduced certain biases, but is not uncommon in tourism research. For instance, Weiler and Richins (1995) asked about Earthwatch participant’s motivations for joining a trip up to three years prior to the survey and Broad (2001:120 and 293) also asked about motivations post-trip. Like Broad, who triangulated post-trip responses concerning pre-trip information, this research was able to cross-reference reasons for joining trips given in the post-trip survey with secondary data in organisation application forms asking for the same type of information.

Dillman’s Total Design Method (1978:183) recommended a mail-out followed by follow-ups at one, three and seven week intervals. The survey for this research needed to be completed as soon after the trip as practical and a long delay was considered undesirable. Participants who undertook extended holidaying after the trip were classed as a non-response (even if they returned the survey some time later). For this reason, as well as logistics, Dillman’s recommendations were not followed and only one reminder letter, with a second copy of the survey, was sent out. All survey forms had handwritten notes on them stating what the trip survey form related to and asking the respondent to note that the form was photocopied on two sides (both to save postage and as these trips were about environmentally friendly activities the usual practice of photocopying on one
side only was not followed). The note was handwritten so it stood out visually. The reminders for both surveys consisted of a handwritten note (see Appendix 11). Handwriting added considerably to the workload, but due to small numbers it was considered worthwhile and added a personal touch that seemed to make a difference as many surveys were returned with personal comments on them.

Another issue concerning the use of mail-out surveys is the difficulty in eliciting sufficient depth in responses and face-to-face interviewing is often considered superior in this area. In fact, the results can be very similar depending on the construction and care taken in development and piloting (Bryman, 1988:134-5). Although careful survey design can minimise problems, some aspects may be less likely to emerge from mail-out surveys. Open-ended questions are appropriate where pre-coded answers may fail to give responses that are ‘meaningful in wording and substance’ (Schuman & Presser, 1981:80) or where the pre-coded answers may influence a respondent. Closed-ended questions were developed utilising the extensive background work done in Stage 1 (see Appendix 3) but as this research was exploratory, open-ended questions were also needed. For instance, the range of responses concerning how respondents may be utilising new skills or knowledge was considered too wide to incorporate into pre-coded answers. Both types of questions were used to aid triangulation. As earlier researchers had demonstrated the sample population was likely to be skewed to professional, well-educated people, the inclusion of open-ended questions was reasonable and would hopefully elicit significant comments.

Closed or pre-coded questions in mail-out surveys are easy and allow accuracy of coding and analysis (Schuman & Presser, 1981). Coding of open-ended questions can be time consuming and introduce errors. Content analysis was undertaken (see Section 3.8.5) so results could be quantified and compared with other answers to the same survey. Cross-checking of the coding process using other researchers was undertaken to help increase rigour.
The need to examine longer-term benefits or modified activities was indicated in the literature review. Measurement techniques such as diaries, or continued contact were considered, but these can create problems as participants alter their behaviour due to 'being watched' or due to the reminders that they 'should' be modifying certain behaviours. It is also a difficult process to administer for large numbers of people and can create significant respondent burden. Instead, a second mail-out survey was utilised.

The timing of post-hoc surveys are known to affect results (Stewart & Hull, 1992). Beaumont (1999) examined participants four months after an ecotourism experience. A period between 6-12 months was estimated as needed to allow participants to have returned home from their holiday, returned to 'typical' daily routines, the excitement of the holiday to have worn off, and the participant to have decided to modify a behaviour and had sufficient time to implement the decision. Volunteer research (discussed in Chapter 2.5) and adventure education research (such as that summarised in Hattie et al., 1997) argued that the effects can increase over time. Arguably, a period over 12 months was needed to demonstrate whether the trip had influenced specific behaviours such as holiday-taking or episodic volunteering patterns. Logistical problems prevented a longer time frame being used and because significant holidaying is often done on an annual basis (due to leave issues with work), a period of under 12 months was preferred to minimise response problems if a second volunteer tourism trip had been undertaken. The name and date of the trip the respondent had taken (and the survey questions related to) was handwritten on each survey to help avoid this type of problem. The second survey was piloted using a six month interval and the interval was lengthened to eight to nine months for the final research to hopefully decrease any perceived respondent burden and as it was considered a more methodologically desirable time period.

**Ethical issues**

Each organisation had slightly different internal methods of dealing with the privacy issues of participants. As the survey was conducted after the trip, organisations informed participants about the research before the trip by mail, or during the trip, and participants had the opportunity to decline to participate. Staff within one organisation also did much
of the mail-out themselves (although all preparation and provision of stamps was done by the researcher) ensuring anonymity for respondents (unless they chose to respond to the second survey). All respondents were sent the information sheet, together with the survey, allowing them an understanding of what participation entailed prior to making a decision. Although the assistance of organisation staff was required for the mail-out, the posted material used University letterhead and the stamped return envelope came directly to the researcher, so it was clear the survey was not being returned to the organisation. International reply-paid coupons were included (with an instruction note) for all international postage.

While confidentiality of participants was ensured by aggregation of results, anonymity on survey forms was not necessarily ensured. However, the invitation for respondents to participate in the second survey by giving their name and contact details was provided on a separate sheet to the first survey so it could be detached and sent in separately. A unique identification number was used for every participant and this was placed prominently on the first survey, the response sheet for the second survey and the second survey (if sent) in the top right hand corner. An explanatory note was also included in the information sheet for the first and second survey explaining the purpose of the identification number. The tracking technique, recommended by Dillman (1978) and followed by Beaumont (1999: 179), allowed returns to be tracked so reminders were not sent out incorrectly, allowed matching between first and second surveys, and it provided as much anonymity as possible.

At the end of the first survey, respondents were asked to fill in their contact details (see Appendix 8) if they were happy to participate in the second, and final survey, eight to nine months later. While optional involvement in the second survey decreased the response rate, it was considered appropriate by organisations and overcame administrative issues concerning the ethics of obtaining names and addresses a second time. The second survey (see Appendix 10) was sent via email, or posted, depending on the respondent’s preference. Response rates are discussed in Chapter 8.
3.8 Participant Survey

3.8.1 Development of the survey tool

The qualitative work developed in Stage 1 was used to inform the design and development of this quantitative research. Section 2.8 had outlined the key research areas and information on participant profiles and perceived benefits was sought. The literature review indicated the complexity of measuring benefits and the multitude of methods used by different researchers. The potential to explore further topics of interest (such as determining why participants chose to take one trip compared to another, or a different type of trip) were further examined during the development of the survey tool and during the development process the breadth of topics included was finalised.

Question design, ordering and layout took several months. A wide range of useful texts exist on survey construction (Bradburn & Sudman, 1979; de Vaus, 2002; Dillman, 1978; Finn et al., 2000; Schuman & Presser, 1981; Sudman & Bradburn, 1982; Veal, 1997) and these were used together with copies of surveys previously used in tourism (Beaumont, 1999; Orams & Page, 2000), volunteering (Dingle et al., 2001) and research concerning specific aspects such as philanthropy research (Hall, 2001; O'Neill, 2001). Because of the generic nature of the survey (being used for different trips and different organisations) and due to the prior work conducted, it was not the aim of this research to determine specific details on knowledge, attitude or intent to undertake a behaviour. Despite this, some questions were asked on these to allow respondents to answer positively, to provide a logical flow for the respondent, to overlap with other questions, and to cross reference with the second survey. Closed- and open-ended questions were used.

Terminology problems within volunteering, both in terms of community perceptions regarding the activity and measurement (see Section 2.3) had been noted. Some people consider the term 'volunteer' to have negative connotations such as unprofessionalism (Kenny, 2003; O'Neill, 2001:510; Stebbins, 1996a; Turner et al., 2001) and suggest the term should be avoided in research. The literature review also noted the term 'tourist' had negative associations for some people and the terms 'tourist' or 'tourism' were
avoided by some volunteer tourism organisations, partly for tax reasons (McCormally & Blum, 1990; Weaver, 1990). Consequently in this research, where participants are actively working to 'save the environment', the term 'tourist' is considered unacceptable by some, and difficult to reconcile by others (Wearing & Neil, 1997), and instead the term 'participant' was used.

3.8.2 Survey pre-testing and modifications

Pre-testing and piloting is considered essential (de Vaus, 2002; Sudman & Bradburn, 1982; Veal, 1997) but was difficult due to small numbers in the sample frame. Initial testing was conducted on five people involved in tourism or tourism research to eliminate ambiguities, check the layout and logic of the flow of the questions, and question understanding. Discussions were held with each individual to get feedback. The survey was shortened and wording changes were made. For instance, a question about talks given to schools, associations or clubs was removed to help shorten the survey. Remaining open-ended questions in both surveys could elicit this information.

The survey is based on one developed by me and used with respondents involved with a similar type of organisation, REEF, a USA-based not-for-profit organisation where volunteers help collect underwater fish data. Seven trips were surveyed with a total of 58 participants and a 66% response rate (38 people) for the first survey occurred. Twenty-eight participants agreed to take part in the second survey and 13 returned the second survey (46%).

The response rate, particularly for the second survey, was lower than preferred. As a result of the pilot, the first survey was shortened and simplified (for instance, in questions 4a and 4b a ranking column was removed). The second survey was subsequently significantly shortened and the layout improved. For instance, it had been a six-page instrument containing 19 questions and a series of questions on attitude were removed as attitude analysis was not a specific goal of this research. The cover page was also rewritten in an effort to demonstrate the value of the second survey and engender a greater response rate. The interval between the trip and second survey was also
increased from six months to eight to nine months after the trip, to decrease perceived respondent burden.

3.8.3 First survey
The first survey (Appendix 8) was sent out soon after a participant returned from the trip. Questions 1, 2, and 3 related to pre-trip volunteer tourism activities. Recall was a potential problem although the details of dates and length of trips asked for were not crucial but were used as a guide for coding the type of holiday undertaken. Weiler and Richins (1995) surveyed participants in Earthwatch programmes for up to three years previously about their motivations and satisfaction levels from taking part in the trips and did not indicate problems with recall. For one organisation, the reliability of answers to question 1 could be cross-checked with secondary data and this showed high levels of accuracy and is reported in Chapter 8.

Questions 4a and 4b were designed to indicate why participants joined the trip and what they perceived they accrued from the trip. The potential reasons used in question 4 were developed from the literature review and the information in Appendix 3. The pre-coded responses focused on specific goals and outcomes of interest to natural resource managers.

Questions 5, 8, 9 and 10a and 10b aimed to gather information on aspects considered relevant by other stakeholders, such as knowledge, skills, and behaviour. Question 6 was an open-ended question included to help understand other responses and potentially elicit emotive responses not necessarily expressed elsewhere. Although logistical or management issues surrounding these trips was not the focus of this research, question 7 was included to allow participants to indicate negative aspects about the trip, indicate things that may have gone wrong and allowed other responses to be placed in perspective. Question 10 had been previously developed and used by Beaumont (1999) and was included here to allow later comparative analysis.
In Chapter 2 difficulties in analysing pro-environmental behaviours were discussed. Stern's (2000) typology of environmentally significant behaviours (see Chapter 2.8) and questions already developed by other researchers (Beaumont, 1999; Orams, 1996b; Tarrant & Green, 1999; Weiler & Richins, 1995) were examined to help achieve comparability of results. Questions 12 and 13 on membership of conservation associations, environmental clubs, special interest or outdoor groups have been asked by many researchers (Beaumont, 1999; Dennis & Zube, 1988; Orams, 1997; Weiler & Richins, 1995) and were developed from these. Question 14 was based on the eight behaviours asked by Beaumont (1999) but two were incorporated into one and another concerning 'watching environmental shows or reading environmental literature' was added (from Tarrant & Green, 1999:22). These behaviours have limitations as a trip may affect specific environmental beliefs, values or attitudes and consequently influence specific behaviours rather than broad environmental behaviours that do not necessarily specifically relate to the trip, so an open-ended question (question 15) was used to help counter this problem.

Questions 9, 11 and 16 asked about possible future uses of any new skills or knowledge or repeat trip-taking. Although hypothetical questions are not popular due to questionable accuracy, these questions were repeated in the second survey to indicate whether these professed future uses had, in fact, occurred in the eight to nine month period after the trip had been undertaken.

3.8.4 Second participant survey

The questions were designed to extend the results of the first survey and questions 6, 7, 8, 10, 11 and 12 were directly comparable to the first survey and question 5 was used for broader comparisons. Because of the desire to compare answers between the two surveys, questions such as 6 and 10 where design limitations were recognised during the processing of the first survey data, were kept identical and not corrected in the second survey (see Chapter 8). Question 1 asked about the frequency of holiday-taking and question 9 asked about respondent's views of the balance between volunteering and holidaying incorporated in the trip. Both questions 1 and 9 were originally included in
the first survey but moved to the second survey after the pre-testing phase to decrease respondent fatigue. Because repeat behaviour was of interest, questions 2 and 3 concerned further volunteer tourism trips and question 4 asked for reasons for taking another trip (which could be compared with original reasons for joining given in the first survey).

### 3.8.5 Results

The results of both surveys were analysed using the SPSS computer statistical package. The first and second survey comments by individual respondents were matched and are discussed in detail in Chapter 8.

Various textual coding processes (Manning & Cullum-Swan, 1998; Tesch, 1990:79-80; Weber, 1990; Williamson, 1978) were analysed to determine the most appropriate technique for the open-ended responses from surveys, and textual material. ‘Manifest content analysis includes the visible, surface content of a communication which can be easily counted’ (Fennell, 2001a:406). A second technique involves determining the ‘imputed audience derived meaning’ (Manning & Cullum-Swan, 1998:247). It is also referred to as the ‘context’ of the text (Denzin & Lincoln, 1994) or ‘latent content analysis’ (Fennell, 2001a) and refers to an analysis of the underlying meaning or symbolism in a text. Content analysis has been used widely within tourism studies, such as on the plethora of definitions of ecotourism (Fennell, 2001a). A relatively simple manifest content analysis technique was used here. Categories were not pre-set but allowed to emerge from the data. Careful development of categories, care in coding, and coding checks using other people (five people coded samples of texts, coding rules were re-assessed if needed, and coding checks were repeated) were undertaken to ensure rigour. Where appropriate, open-ended questions were coded, quantified and included in SPSS.

### 3.9 Review of Approach

Section 3.3 discussed the need to ensure rigour within qualitative research. Lincoln and Guba (1985) had outlined four necessary criteria: credibility, transferability,
dependability and confirmability. The research design was assessed against each of these.

Credibility relates to the need for a strong connection between the experiences that groups have and the construction of the concept and interpretation of the experiences used and then portrayed by the researcher. Suggestions by Lincoln and Guba (1985:301) to help support credibility such as prolonged engagement, persistent observation, and triangulation were carried out extensively in this research. Refinement of the working hypothesis with new information and peer debriefing (through PhD supervisors) were also undertaken and some aspects of referential adequacy and member checking were done where feasible. In addition, publications of sections of this thesis in academic journals and conference presentations (listed on page viii), helped provide peer feedback and strengthen the research. Tesch’s (1990:95-7) detailed summary of the analysis of data through the research process also helped maintain strong links between data and interpreted results. Credibility relates to the quantitative criterion of internal validity. Unfortunately the literature revealed a number of problems in this area. There are significant terminology problems in volunteer tourism. Some of the concepts used are not yet well defined, nor have they been well researched in a comparable way for use in this research. Well-established theories exist in related areas but have not been extended conclusively into the area of volunteer tourism. These problems supported the use of a multi-method approach to strengthen the results and it was recognised that individuals may hold divergent views from grouped experiences.

Transferability is similar to the terms ‘representative’ or ‘external validity’ in quantitative research where generalisations can be made to a wider field allowing theory to be developed. In qualitative research, concepts are often contextual in time or space. A collective case study approach was used in the second stage and the ability to generalise from case studies is considered questionable but can be feasible at the theoretical level rather than the population level (see Section 3.5). Baxter and Eyles (1997:516) argued that rather than generalising from their work, qualitative researchers should provide the depth of information and data to allow readers to transfer the findings
if appropriate, a view supported by Lincoln and Guba (1985:316). The detail in this thesis allows readers to draw their own conclusions regarding transferability. Some traditionally quantitative techniques were used in this research, and their purpose was to allow descriptive work on a wider range of trips and individuals than was possible through most other qualitative techniques such as face-to-face interviews or participant observation. The added breadth was hoped to minimise the impact of factors such as bad weather or personality conflicts that could affect the results of a single trip.

Dependability relates to the quantitative concept of reliability and the ability of the data to be replicated over time and space. Research must be reproducible, stable or consistent and accurate. However, in qualitative work the construct itself is considered contextual. The literature review indicated a number of the measures of interest in this research will vary over time and between countries and other contextual aspects may exist. For instance, the PERT sub-segment is dynamic and reliant on partnerships and collaborative work. This research was undertaken between 2001 and 2004. Research replicating this work is likely to obtain different results as the sub-segment, the organisations within it, and the trips offered, change. The more detailed work contained in Chapters 6, 7 and 8 were conducted on organisations in Australia. Differences between countries are likely to exist. Instead, the plausibility of design should be seen as dependable and well-designed constructs and sufficient data can help achieve this. Overlapping methods is one technique Guba suggested to further strengthen claims here (Lincoln & Guba, 1985:317) and this was included in this research.

The last of the four criteria, confirmability, is similar to the quantitative concept of objectivity and refers to both the data and researcher. This thesis provides a detailed description of the entire research helping to achieve this criterion.

3.10 Limitations of Design

Limitations of the overall scope of this research have been discussed in Chapter 2 and earlier in this chapter. As this research used a multi-method approach, specific issues relating to each data set are discussed in the relevant chapter but four broad issues are
discussed here: measurement of the concepts; stakeholder coverage; response issues; and the availability of data.

3.10.1 The difficulty of measurement of behaviour modification
Measurement of behaviour modification was discussed extensively in Chapter 2 and the problems raised by other researchers were considered in the design of interviews and surveys in this chapter. Subtle alterations can be as important as more obvious or tangible changes, particularly if these accumulate over time. Any influences the trip had on participants must have been perceived by the respondent to have been included as a response and this may not have always occurred. In addition, although open-ended questions were used to allow a wide array of responses and not unduly lead the respondent, it is likely that only the more significant concepts in each open-ended question were elucidated by the respondent. Although some respondents included long detailed replies, most open-ended questions received a relatively short response and respondents may have felt that after giving two or three examples this was sufficient, even if perhaps the respondent had made ten different modifications. Hence, more significant, major, or salient examples or those the respondent thought the researcher was seeking, are more likely to have been recorded.

The surveys were constructed so responses consisted of respondent’s perceptions of their own behaviours and consequently the answers required careful interpretation. For instance, respondents may have regarded themselves relatively low in terms of being an ‘environmentalist’ (question 10a) yet appeared to be quite active in terms of pro-environmental behaviours (questions 14 and 15), or respondents may have rated themselves higher in 10a but appeared to be relatively inactive in terms of responses to questions on pro-environmental behaviour. The issues surrounding the interpretation of the results are discussed further in Chapters 8 and 9. Issues exist with self-reporting (Bratt, 1999a, 1999b; Steel, 1996) such as social bias, but as the aim of this research was to understand the benefits the respondent perceived and these are dependent on the respondents own values, self-reporting was appropriate.
A number of studies have shown that asking questions about activities undertaken some time ago can have significant problems. Generally people filter out some of the less pleasant memories and tend to recall the more positive aspects. While this type of filtering may have affected answers to this survey, most questions concerned current activities or views and were not asking detailed questions about the past. Because a PERT-style trip would usually be considered a major event for most respondents, recall was not considered a major issue.

In a longitudinal study of resident perceptions in New Zealand, Young, Thyme and Lawson (1999) demonstrated that the timing of a survey can trigger a 'halo effect' where a person's perceptions of an issue are affected by the familiar issues rather than all the available facts, thus altering the responses. The timing and setting for the completion of the surveys used in this research will have influenced the results (Stewart & Hull, 1992).

3.10.2 Limited number of stakeholders
Although local host community involvement is considered essential for sustainable tourism and ecotourism, it was not a goal of this research to determine whether the PERT sub-segment fulfilled definitional aspects of those terms. Local communities were excluded as stakeholders from this research as many trips surveyed did not include significant interactions with local communities or interactions with local communities were not a specific goal of the trips. Logistically, it was also beyond the scope of this research to contact stakeholders within local communities over the varied geographic areas surveyed. Additional stakeholders in the PERT sub-segment also exist, such as broader natural resource management groups, researchers who utilise the data but were not members of the field crews, and local scientific communities. This research focussed only on the organisation, members of the field crews and participants. The limited range of stakeholders included in this research is acknowledged and further research examining the wider impacts of the sub-segment is needed.
3.10.3 Response bias

Minimisation of socially desirable effects are an issue for many researchers and were relevant to this research. Previous research has shown people are likely to exaggerate when reporting on their positive environmental behaviours (Olli et al., 2001). At the end of adventure education trips participants ‘typically experience elation or good feelings’ that can impact on self-reported measures (Hattie et al., 1997:55). Even members of the popular press note the likelihood of positive bias in the area studied. Volunteers tend to establish close relationships and, ‘at the end of a project, amnesia smooths over the rough parts, and many recruits verge on hyperbole in praising their experience’ (Ocko, 1987:no page). Discussions with participants, scientists and organisations may have engendered exaggerated actual benefits. Researchers may need future grants, or hope for future support from this type of program, and have positively altered their responses. Participants may purposively over-represent the benefits in their enthusiasm to see the trips (or support for a specific scientist) continued. Other researchers have noted strong social influences in participant responses relating to other participants, the scientists, and often the organisation, and these can lead to difficulties in obtaining answers (Broad, 2001; Revitt, 1999). However, determining the extent of social desirability effects, acquiescence or agreeing response effects (Schuman & Presser, 1981) is complex. It is impossible to determine their effect on results and responses may have been consciously or sub-consciously influenced. Issues also vary between self-administered and face-to-face interviewing (Dillman, 1978:62).

Mail-out surveys can decrease social effects compared with face-to-face interviewing as respondents feel more comfortable making negative comments and interviewer influences are minimised. Revitt (1999) in a study of a PERT-style trip encountered social bias problems but helped counter participant bias by also interviewing the scientists who were more forthcoming about issues than participants. Comparisons between stakeholder responses were also carried out within this research.

This research asked respondents to think about how a trip may have affected them. Because of the permission process and approaches used, each respondent had time to
think about this and decide whether to participate in the research. The time lag also meant they could reflect prior to writing their answers (or prior to the telephone interview with members of field crews). Stewart and Hull (1992) pointed out reflection is not necessarily a negative but can increase the accuracy of responses, a view supported by Broad (2001:97) in her research within volunteer tourism.

A number of techniques were used to help alleviate the issue of participants wishing to state they had made a change because of the trip (when, in fact, they may have only intended to make changes but not yet done so). Techniques such as indirect questioning and triangulation were used. During face-to-face and telephone interviewing (and a lesser extent mail-out surveys) the sequencing of questions was crucial and considerable research has been undertaken in this area by other researchers (de Vaus, 2002). The ordering of the questions was also used to gain respondent’s confidence, to avoid leading the respondent and to allow a participant to make a range of positive comments early (if they felt it was appropriate) hopefully reducing the temptation to inaccurately answer positively to subsequent questions. During completion of the second survey, it was assumed that respondents would not recall their answers to the first survey and the ability to compare between the surveys was useful.

The influence a trip had on a subsequent behaviour may, or may not, have been perceived (and remembered) by the participant (Stewart & Hull, 1992). Also, the literature review indicated that modification of behaviours and changing views are likely to be incremental and a number of factors may have a cumulative effect. This research did not examine cause and effect and the results of this research may not solely be due to the trip.

Small changes in wording can make significant differences to the results of mail-out surveys and also alter the results of telephone and face-to-face interviews. Closed-ended questions have been criticised as biasing respondents as the presentation of answers may include aspects the respondent had not thought about and so influence the results, although Schuman and Presser (1981:110) argued faults with closed-ended questions
were more likely to be due to pre-coded answers being unrepresentative rather than social bias occurring. These issues were addressed in the survey design as much as possible.

3.10.4 Data availability

Although it had been planned to collect data for a 12 month period for each case study, logistics meant this was not feasible for all organisations. Two Landscape Expeditions trips in June were not able to be included in the survey work, due to prior approved research of another academic and so six trips, rather than eight, were included. Despite the stated one-off nature of the program, all trips had either been run before in the same format or in a very similar format. Surveyed trips included Exploring Barlee! Wildlife of the Barlee Range Nature Reserve; Buckshot and Breakaways – Plants and Animals of the Gibson Desert; Botanical Treasures in an Everlasting Landscape; Beyond the Dreaming – Project Eden; and Loggerhead Turtles of Dirk Hartog Island, Shark Bay (two trips).

Surveying across a 12 month period appeared feasible for both Earthwatch Australia and Naturewise and this was approved by each organisation. However, once the initial stages of data collection had started it became apparent that more limited data collection was feasible than planned for both organisations.

It was not possible to get a complete listing of all participants who had recently taken an Earthwatch trip in Australia. This research was undertaken through the Melbourne office, the regional head quarters. However, it did not coordinate all participants who joined trips within the region. For instance, a North American participant wishing to join an Australian trip was normally registered by the USA office, but an Australian participant joining the same trip was registered through the Earthwatch Australia office. Discussions with staff revealed no list of all attendees for each Australian trip was held in the Melbourne office and the USA office did not respond to queries. Therefore the sample frame used in Chapter 8 had limitations. During the initial stages of this research, discussions had indicated it appeared likely that for a one year research period (2003)
around 100-150 people would be within the scope of this survey and contactable via their database. Although a few would be sponsored corporately, the proportion of these was thought to be relatively low.

During the research period, from 1 January to 31 December 2003, 170 participants were registered for a trip within the sample frame through the Melbourne office, but only 38% of these were 'retail' (had paid for the trip themselves) and the remainder were sponsored. The potential number of respondents was lower than anticipated and this changed the ability to statistically analyse the final data as well as adding limitations to the research.

Australian projects operating in 2003 within the scope of this research (short-term Discovery weekends were not included) included Echidnas and Goannas of Kangaroo Island; Australia’s Forest Marsupials; Rainforests of Northern Australia; Bringing back the Bilbies; Itjaritjari - The Outback’s Mysterious Marsupial; Koala Ecology; Australia’s Vanishing Frogs; and Freshwater Turtles of the Kimberley.

Naturewise was a new program being started by Conservation Volunteers Australia. A pilot program was run in 2000 and commercial tours were planned for the end of 2001. Unfortunately the impact of both September 11, and the virtually simultaneous collapse of Ansett (a major Australian airline), meant the program was delayed until mid-2002. Ten trips were planned annually. For this research, all trips that were part of the Naturewise Discoveries (see Section 6.4.2) for 2003 were surveyed. Although the program did develop from mid-2002 onwards, special interest groups were catered for (such as post-trip conference tours) and fewer Naturewise Discovery trips were run than initially planned. Two types of trips were run during the survey period. One involved bird surveying in the Tasmanian Wilderness World Heritage Area for 14 days and the other was a one week trip touring through key tourism areas of Tasmania and conducting survey work in several locations.
3.11 Summary

This research aimed to address the research questions identified in Chapter 1 and refined in Chapter 2. While the literature review provided broad directions for the research, an analysis of the appropriate paradigmatic approach and research design was needed. This chapter confirmed a qualitative and inductive approach was the most appropriate and feasible. Both logistical and methodological considerations were important and shaped the research direction.

A two-staged iterative approach was adopted. The first stage examined the area of PERT and required a global search of various information sources. The global search (outlined in the next chapter) and more detailed analysis within Australia (Chapter 5) informed, and provided the context, for the second stage of the research. The first stage also gathered substantial background material concerning the proposed benefits for various stakeholders and this was used to help develop the questions and approach used in the second stage of the research.

A collective case study approach using embedded analysis was adopted for the second stage of the research. It used a multi-method approach to gather data from three key stakeholders (presented in Chapters 6, 7 and 8). Considerable triangulation was undertaken to maximise the strengths and minimise the weaknesses of each method as a combination of approaches usually results in stronger research findings. This approach was considered most appropriate as the literature review had revealed there was little published data in the specific area and some of the areas of analysis were likely to be problematic. The work was exploratory. It was not the intention to build theory from it, but the results may have broader applications and these are discussed in Chapters 9 and 10.
meet local people. Each organisation’s marketing also emphasises the altruistic aspects of helping research and conservation. It is inferred that the trips provide everything a specialist ecotour offers, and more. For instance, Earthwatch material stated the learning of new skills as an additional aspect a participant would gain. Earthwatch trips were clearly differentiated from other forms of tourism, both in a legal sense and in marketing, and so the organisation differentiates itself in the marketplace.

Chapter 9 compares the goals and benefits derived at the organisational level, with the goals and benefits of the participants and members of field crews. Staff discussions noted the achievement of organisational goals was dependent on the ability to attract both researchers and volunteers and some inter-dependence is likely. The socio-demographic profiles of the participants can also alter trip outcomes and this is discussed further in Chapters 8 and 9.

6.6 Summary
The three organisations were quite distinct in their structures, target markets and type of trip offered. For instance, Earthwatch Australia is part of a large international operation that attracts researchers from outside its own organisation and participants are both Australian and international. Alternatively, Landscope Expeditions is part of a state government department, almost all researchers are employees of the department and most participants come from the same state. Naturewise is a relatively recent program developed by an organisation focussing on conservation issues more than research.

Despite these differences, the organisational goals for operating PERT-style trips were quite similar with the key major reasons being financial benefits, supporting research or conservation and education. These were also similar to those reasons identified globally within Chapter 4. However, the approaches used to attain these goals varied amongst the organisations. Staff within the organisations also recognised that the goals of field crews and participants must be at least partially achieved to ensure long-term supply and demand exist and therefore organisational goals are met. The results from this chapter
are combined with the results in Chapters 7 and 8, allowing a discussion of the interrelationships between benefits in Chapter 9.