

Ecotourism in New Zealand:

Profiling visitors to New Zealand Ecotourism Operations

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Research Paper Number Ten

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BIBLIOGRAPHIC REFERENCE

Authors: Higham, J.E.S., Carr, A.M. and Gale, S.
Publication date: 2001
Title: *Ecotourism in New Zealand: Profiling visitors to New Zealand Ecotourism Operations*. He tauhokohoko ng whakaaturanga a ng manuhiri ki rawa whenua o Aotearoa
Series Number: Research Paper Number Ten
Place of Publication: Dunedin, New Zealand
Publisher: Department of Tourism, University of Otago

Higham, J.E.S.; Carr, A.M. and Gale, S. (2001). *Ecotourism in New Zealand: Profiling visitors to New Zealand Ecotourism Operations*. Research Paper Number Ten. Dunedin. New Zealand. Department of Tourism, University of Otago.

ISBN 0-473-08203-9

ACKNOWLEDGEMENTS

This study was carried out by the Department of Tourism at the University of Otago. It was funded by the Foundation of Research, Science and Technology (FRST), New Zealand. This Research Paper is part of a series of reports produced by the Departments of Tourism and Marketing, University of Otago, as part of the FRST-funded Sustainable Tourism research programme.

The authors duly acknowledge the twelve ecotourism operations throughout New Zealand who participated in the study, and provided logistical assistance to the researchers during the data collection phases of the 1999/2000 and 2000/2001 field work seasons. The study operations included (north to south) Fullers Dolphin Encounters, Kauri Country Ltd, Miranda Shorebirds Centre, Kiwi Dundee Adventures, Mt Bruce National Wildlife Centre, Kapiti Tours Ltd, Dolphin Watch Marlborough, Whale Watch Kaikoura Ltd., Oamaru Blue Penguin Colony, Royal Albatross Centre, Penguin Place, Catlins Wildlife Trackers.

The authors also acknowledge the contributions of Alison McIntosh, who was involved in the early development of this research project, and Brian Niven (Department of Mathematics and Statistics, University of Otago).

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EXECUTIVE SUMMARY

The study of ecotourism is well advanced in the international context, particularly in countries such as Canada, Australia and the United States. No depth of detailed information exists in New Zealand where a lack of comprehensive analysis of the ecotourism sector is currently the case. This research was designed to achieve a more clear profile and understanding of visitors to ecotourism operations in New Zealand, and their ecotourism experiences.

A mixed-methods approach that involved two research phases was adopted by the researchers. The first phase (1999-2000) employed qualitative methods including participant observations and interviews to provide insights into ecotourism experiences in New Zealand. The second phase of the research (2000-2001) involved the development and administration of a questionnaire which generated a sample of 967 valid responses. The methodology required the researchers to consider the definition of ecotourism within the wider field of nature-based tourism. A database of nature-based tourism operations (n=479) was developed from which 247 ecotourism operations were identified. Selection criteria were then employed in the selection of 12 ecotourism operations throughout New Zealand at which data collection took place.

The research identified that the ecotourism sector in New Zealand is in the early stages of development. This avenue of development adds value to the natural environment in New Zealand. Visitor profiles revealed that the majority of visitors to ecotourism operations originate from New Zealand, the United Kingdom, the United States, Germany and Australia. Visitors reported the propensity to visit multiple ecotourism operations during their travel itineraries. In terms of environmental values, visitor profiles were found to be diverse with both experts and novices represented within the study sample. Ecocentric rather than anthropocentric values featured prominently in the New Zealand ecotourism visitor profile. Visitors reported a high level of satisfaction with ecotourism operations that they experienced. They also reported measures that could be adopted to enhance visitor satisfaction. These related to increasing awareness of the environment, and specific behaviour guidelines to mitigate visitor impacts.

The researchers conclude that developing ecotourism professionally in the New Zealand context is critical to the future of this sector. The adoption of accreditation programmes and quality standards are important initiatives in this process. At present no national ecotourism association exists in New Zealand, nor is there a recognised national certification programme for ecotourism operators, guides and/or interpreters. Visitors to ecotourism attractions proved to be mindful of a range of environmental issues, which supports the need for ecotourism operations, as well as local communities and industry, to demonstrate a commitment to environmental management (e.g., waste management, energy efficiency, water pollution and recycling). Visitors reported a high level of satisfaction but also favoured specific interpretation and behaviour guidelines to mitigate visitor impacts and increase visitor awareness of environmental issues.

The researchers recommend the continuation and expansion of accreditation initiatives. The extent to which ecotourism operators succeed in providing sustainable, low impact visitor experiences is viewed critically by many visitors, as is the extent to which ecotourism operations contribute to conservation in valuable and meaningful ways. Increasing awareness of adverse visitor impacts, and providing specific behaviour guidelines to mitigate potential visitor impacts are generally viewed as an important aspect of an ecotourism operation. Finally, it is recommended that the tourism industry continue to fulfill an advocacy role voicing support for sustainable industries and communities in New Zealand.

TABLE OF CONTENTS

CHAPTER 1: INTRODUCTION

1.1 Introduction	9
1.2 Research context	9
1.3 Ecotourism in New Zealand	10
1.4 Research objectives	10

CHAPTER 2: ECOTOURISM DEVELOPMENT

2.1 Introduction	12
2.2 Researching ecotourism	12

CHAPTER 3. METHODOLOGY

3.1 Introduction	13
3.2 Development of a nationwide ecotourism database	13
3.3 Selection criteria and study operations	13
3.4 Phase one. Qualitative phase (1999-2000): Overview of results	16
3.5 Phase two. Quantitative phase (2000-2001)	16
3.6 Data management	17

CHAPTER 4: DEMOGRAPHIC PROFILES

4.1 Introduction	18
4.2 Demographic profiles	18

CHAPTER 5: TOUR CHARACTERISTICS AND ECOTOURISM EXPERIENCES

5.1 Introduction	21
5.2 Tour characteristics	21
5.3 Ecotourism experiences in New Zealand	22
5.4 Information sources	23
5.5 Visitor experiences at ecotourism operations in New Zealand	25
5.5.1 Enjoyable aspects of the visitor experience	25
5.5.2 Negative aspects of the visitor experience	26
5.6 Visitor satisfaction	26

CHAPTER 6: ENVIRONMENTAL VALUES

6.1 Introduction	27
6.2 Membership of environmental groups or organizations	27
6.3 Environmental concerns	27
6.4 Tourism marketing	29
6.5 Analysis of environmental values	29
6.6 Environmental behaviours	31
6.7 Environmental performance	32
6.8 Visitor experiences	32

CHAPTER 7: DISCUSSION

7.1 Introduction	35
7.1.1 Professionalism	35
7.1.2 Visitor profiling and impact research	35
7.1.3 Environmental performance	35
7.1.4 Environmental issues and ecotourism	36
7.1.5 Visitor interpretation programmes	36
7.1.6 Best practice ecotourism	36

CHAPTER 8: CONCLUSION

8.1 Conclusions	38
8.2 Recommendations	39

References	40
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Appendices	42
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LIST OF TABLES

Table 1.	Fourteen selection criteria employed to distinguish ecotourism businesses that form a subset of commercial nature-based tourism operations	14
Table 2.	Twelve participating ecotourism operations organised into three geographical clusters	14
Table 3.	Frequency and percentage responses from participating businesses	17
Table 4.	Nationalities of visitors to New Zealand ecotourism operations (n=967)	19
Table 5.	Regional origins reported by respondents resident in New Zealand (n=304)	19
Table 6.	Age distribution of visitors to New Zealand ecotourism operations (n=967)	20
Table 7.	Employment status of visitors to New Zealand ecotourism operations (n=967)	20
Table 8.	Educational status of visitors to New Zealand ecotourism operations (n=967)	20
Table 9.	Decision making timeframe cross-tabulated with visitor origins (domestic/international)	22
Table 10.	New Zealand ecotourism sites and operations visited by respondents	23
Table 11.	Information sources utilised in advance of, or during, visits to ecotourism operations	24
Table 12.	Titles of guide books specified by respondents as important information sources (n=242)	24
Table 13.	Participation in activities while visiting ecotourism operations in New Zealand (n=922)	25
Table 14.	Levels of satisfaction (%) with ecotourism experiences (n=957)	26
Table 15.	Environmental group/organisation memberships reported by respondents (n=353)	28
Table 16.	Environmental issues identified as causes of concern among visitors to ecotourism operations in New Zealand (n=926)	28
Table 17.	Responses to variables listed to describe the environmental values of visitors	30
Table 18.	Factor analysis of New Environmental Paradigm variables	31
Table 19.	Environmental behaviours reported by visitors to ecotourism operations in New Zealand	32
Table 20.	Respondents' views on making tourism attractions in New Zealand more environmentally friendly	34
Table 21.	General guidelines for visitor interpretation at ecotourism operations	37

LIST OF FIGURES

Figure 1. Map of twelve study operations organised into three geographical clusters	15
Figure 2. Definitions of two opposing paradigms relating to environmental values	30

LIST OF APPENDICES

Appendix A: Observations guideline (phase one)	42
Appendix B: Semi-structured interview guideline (phase one)	44
Appendix C: Eco/Nature Tourism Survey (phase two)	46
Appendix D: Names of additional ecotourism sites and attractions visited by members of the sample	50
Appendix E: Comments relating to the environmental performance of ecotourism operators as perceived by visitors	51
Appendix F: Visitor comments relating to making tourism attractions in New Zealand more environmentally friendly	52

CHAPTER 1: INTRODUCTION

1.1 INTRODUCTION

The rapid development and widening appeal of ecotourism has raised significant challenges for the ecotourism sector (Wight 1993, Duffus and Dearden 1990; Reynolds and Braithwaite 2001). Operators offering a variety of ecotourism experiences face increasing pressure to ensure that the diverse consumers of their products receive the experiences that they anticipate. However the term 'ecotourism' has been applied so widely that it has in many regards become meaningless (Chirgwin and Hughes 1997). Under these circumstances many tourists may be unsure of the product offered by ecotourism operators and the qualities of experience that they seek to provide (Hvenegaard 1994). Chirgwin and Hughes (1997:2) explain that "there has been considerable debate on what constitutes an ecotourism experience". Visitors to ecotourism attractions may be classed as ecotourists whilst on site yet represent a broad range of demographic characteristics, personal backgrounds, travel preferences, motivations and tourist 'types' (Wight 1996, Boyd and Butler 1996, Burton 1998). Under these circumstances defining *ecotourism* may become an exercise in futility, however, there are advantages to be achieved, for both operators and visitors, in profiling *visitors* to ecotourism operations.

In recent years many researchers have contributed to the literature that addresses the definition of ecotourism. Important contributions to this literature include Valentine (1993), Orams (1995), Blamey (1997), Fennell (1999, 2001), Swarbrooke and Horner (1999), Fennell and Eagles (1989), Sirakaya, Sasidharan, and Sonmez (1999), and Bjork, (2000). Most definitions state that ecotourism generally takes place in environments that may be described as unmodified (Ceballos-Lascurain 1987, Valentine 1993), natural (Valentine 1993, Orams 1995, Boyd and Butler 1996, Blamey 1997, Fennell 1999, Swarbrooke and Horner 1999) or pristine (Ceballos-Lascurain 1987) areas. Many definitions of ecotourism make some mention of conservation, education, local ownership, small scale, economic benefit for local communities, the relevance of cultural resources, minimum impacts and sustainability. Most definitions encompass key aspects, such as 'host community participation', 'natural areas', 'low impact' and 'culture'. These defining criteria apply in New Zealand with varying degrees of merit. Establishing the defining criteria of ecotourism in New Zealand was central to this research. For this purposes the definition of ecotourism provided by the Ecotourism Association of Australia (1996) was adopted:

Ecotourism is ecologically sustainable tourism with a primary focus on experiencing natural areas that fosters environmental and cultural understanding, appreciation and conservation.

A subsequent definition presented by Weaver (2001) was also considered to apply in the New Zealand context.

Ecotourism is a form of tourism that is increasingly understood to be (1) based primarily on nature-based attractions, (2) learning-centred and (3) conducted in a way that makes every reasonable attempt to be environmentally, socio-culturally and economically sustainable.

The selection of operations that participated in the research was derived from the defining criteria relating to these definitions. They are outlined in Chapter 3 (Methodology).

1.2 RESEARCH CONTEXT

Attempts to define and profile visitors to ecotourism operations have been undertaken based on motivations and preferences (Wight 1996), environmental attitudes (Uysal et al. 1994), benefit segmentation (Palacio and McCool 1997) and cultural values (Blamey and Braithwaite 1997, Diamantis 1999). The academic literature establishes the strong relationship between individual and group values, choice of product and consumer behaviour (Pitts and Woodside 1986, Grunert et al. 1989, Gutman 1990, Schwartz 1992, Lawson et al 1996). The importance of consumer values as a motivator, determinant of on-site behaviour and potential tool for market segmentation has been researched within the tourism sector. Recent studies have utilised personal values (Muller 1991, Madrigal 1995) and social values (Blamey and Braithwaite 1997) as the basis for studying the profiles of tourists generally and ecotourists respectively. An extension of these programmes of research involves the study of the environmental values held by individual visitors to ecotourism operations as a means of profiling the growing ecotourism market.

Research in the field of consumer behaviour confirms the importance of values as a means of profiling and segmenting markets (Lawson et al 1996). Rokeach (1968:111) defines values as “centrally held and enduring beliefs that guide actions and judgments across specific situations and beyond immediate goals to more ultimate end-states of existence”. Values, therefore, may be the basis upon which behaviours takes place. Visitors who consume tourism products are likely to demonstrate behaviours that comply with the values that they hold. Values are distinct from attitudes, as Lawson et al (1996) explain, because “values work at a higher level of abstraction and are deeper seated, more pervasive influences on behaviour” (Lawson et al, 1996: 81). Therefore values influence the attitudes that tourists may hold towards specific objects and situations, as well as expectations, decision-making processes, purchase choices and on-site behaviours. Research in the field of cultural values has greatly facilitated the understanding of values and the manner in which values determine aspects of consumer behaviour. Research instruments such as the Rokeach Value Survey (RVS) and List of Values (LOV) have been the basis of empirical research and evaluation (Madrigal 1995). This has led Lawson et al (1996:83) to conclude that values guide the actions and attitudes of individuals and that “the consequences of peoples’ values are present in all aspects of their behaviour”. The relevance of environmental values in the field of tourism is recognised by researchers such as Akama (1996) who discusses how western environmental values have influenced the development of nature-based tourism in Kenya.

Dunlap and Van Liere’s (1978) New Environmental Paradigm scale is one of the few quantitative instruments developed to assess environmental values that has been widely applied in a variety of research contexts. Lück (2001) provides a comprehensive analysis of research employing the NEP over the last twenty years and draws conclusions that support the reliability of the NEP scale. The NEP scale has been applied in the study of tourism, originally by Uysal et al. (1994), and more recently by Ryan (2000) and Lück (2001).

1.3 ECOTOURISM IN NEW ZEALAND

While natural resources have been central to New Zealand’s tourism product for over a century, the ecotourism sector in New Zealand is in the early stages of development. Many of the ecotourism operations identified in the current research have been established in the last decade. Many of those that have a longer track record are operated and managed by Trusts (Miranda Shorebirds Centre and Royal Albatross Centre) or the Department of Conservation (e.g., Mount Bruce National Wildlife Centre). The visitor operations managed by these organisations were generally established to serve local and largely domestic interests in conservation and the study of New Zealand’s natural heritage. In many such cases the visitor catchment has expanded in recent years to place these operations at the fore of the New Zealand ecotourism sector. They have been joined by a wide range of private commercial operations which serve visitor audiences that range from 2-4 visitors per week, to over 100,000 visitors per annum. They utilise a wide range of resources that may include accommodation and transport services, native flora and fauna, national, marine and forest parks and various parts of the conservation estate.

The resource base for ecotourism in New Zealand is the equal of any other international visitor destination. In order to achieve the highest possible international reputation for New Zealand ecotourism experiences it is necessary that operators:

- Provide high quality visitor experiences
- Manage economically viable business operations in the provision of ecotourism experiences
- Contribute to conservation in meaningful and valuable ways

In addition to analysing the environmental values of visitors to ecotourism operations in New Zealand, this report examines the ways in which these goals are being pursued in the New Zealand ecotourism context and seeks to provide direction for the further development of this sector of the tourism industry.

1.4 RESEARCH OBJECTIVES

This research project was funded by the New Zealand Foundation of Research, Science and Technology (FRST). A mixed-method approach was employed to profile visitors at ecotourism attractions in New Zealand, and measure and analyse the environmental values held by these visitors. The specific objectives that were developed to direct this research project are as follows:

1. To develop a bibliography of publications in the field of ecotourism
2. To profile visitors to ecotourism operations in New Zealand

3. To provide accurate insights into the tour characteristics and visitor experiences achieved at ecotourism operations
4. To analyse the environmental values held by visitors to ecotourism operations in New Zealand

The first phase (1999-2000) employed qualitative methods to provide insights into ecotourism experiences in New Zealand. The second phase (2000-2001) of the research involved the development of a questionnaire informed by both existing literature in the field of ecotourism and an understanding of the study context achieved in the first phase.

These objectives were intended to provide insights into ecotourism in New Zealand in a depth of detail that has not previously been achieved, with a view to fostering the development of this sector of the tourism industry.

CHAPTER 2: ECOTOURISM DEVELOPMENT

2.1 INTRODUCTION

The nature-based tourism industry is estimated to be growing at approximately the rate of 10-30 percent per annum (Wight 1996). Nature-based tourism encompasses commercial recreation including mechanised activities (e.g., four wheel driving, skidooring), adventure tourism and a variety of nature-based activities ranging from scenic flights and submarine experiences to forest and beach walks. Ecotourism is generally viewed as a subset of nature-based tourism. Ecotourism is a special interest form of tourism which may be distinguished from other forms of nature-based tourism on various grounds (see Chapter 3, Methodology). Foremost among these are the educational, conservation, low impact and sustainability components of ecotourism (Weaver 2001).

2.2 RESEARCHING ECOTOURISM

The ecotourism sector has been at the forefront of rapid growth in nature-based tourism (Wight 1996). As ecotourism operations have proliferated in New Zealand it has become more difficult to differentiate the ecotourism segment within the wider tourism market. This scenario supports Burton's (1998:119) claim that "ecotourism may very well be the leading edge of mass tourism rather than an alternative". Studying the diverse and poorly defined ecotourism visitor market in New Zealand is a research issue that demonstrates many parallels in the international context although international research into the field of ecotourism is well advanced in countries such as Australia.

The Australian tourism industry comprises about 600 ecotourism operators turning over an estimated \$250 million per annum, with another 2000 operations defined as nature-based (McKercher, 1998). A number of academic studies have been conducted in Australia that provide detailed insights into the ecotourism industry as it exists in the Australian context (Blamey 1997, Blamey and Braithwaite 1997, Chirgwin and Hughes 1997, Orams 1997, Reynolds and Braithwaite 2001). Similarly, studies that provide detailed insights into ecotourism in North and Central America are readily identified in the tourism literature (Uysal et al. 1994, Wight 1996). Such depth of detailed information does not exist in New Zealand, where a lack of comprehensive analysis of the ecotourism sector is currently the case, although isolated research efforts of note provide occasional exceptions to the rule (e.g., Barton 1994, Pearce and Wilson 1995, Higham 1998). This project was, therefore, designed to achieve a more clear profile and understanding of visitors to ecotourism operations, and their actual experiences, than has hitherto been the case.

CHAPTER 3: METHODOLOGY

3.1 INTRODUCTION

A mixed-methods approach (McIntosh 1998) was adopted to achieve the objectives of the research project. The methodological approach was organised into two phases. The first phase (1999-2000) employed qualitative methods to provide insights into ecotourism experiences in New Zealand. The research techniques employed in phase one included participant observations, interviews with visitors to ecotourism operations, and informal discussions with ecotourism operators. These research techniques provided detailed insights into the ecotourism phenomenon in New Zealand and assisted the researchers to identify critical issues in the field of study, as reported by ecotourism operators, and the visitors to their operations. The qualitative phase of the research also contributed significantly, as intended, to the development of a questionnaire in the second phase of the research. The second phase (2000-2001) of the research involved the development of a questionnaire the findings of which are reported in this Research Paper.

3.2 DEVELOPMENT OF A NATIONWIDE ECOTOURISM DATABASE

The initial stage of the project involved the development of a comprehensive database of ecotourism and nature-based tourism attractions in New Zealand. No comprehensive and up to date database of ecotourism operations was found to exist in the latter part of 1999. The development of an operator database was achieved via Internet searches of web-sites listing ecotourism attractions, requests for information from all Regional Tourism Organisations and Visitor Information Network visitor centres in New Zealand and content analysis of national and regional tourism directories, guide books, magazines and regional tourism information brochures. Information was obtained on over 400 operations whose main, primary business was offering general nature-based tourism activities to visitors.

Brochures and other promotional material from all operations were examined (where available) to determine the range of nature-based activities in existence. This exercise provided preliminary insights into the diversity of visitor operations in New Zealand that are considered to serve the nature/ecotourism market. These included mechanised forms of nature-based recreation (such as four-wheel drive trips), physical/adventure experiences (such as hiking, rafting, kayaking) and operations that place the main emphasis on observing, learning about or experiencing nature. The purpose of this exercise was to identify the diversity of this sector of the tourism industry, rather than attempt to define the ecotourism phenomenon.

3.3 SELECTION CRITERIA AND STUDY OPERATIONS

From the operations database 247 businesses were identified that claimed to deliver ecotourism activities – as opposed to nature-based adventure tourism or recreational activities. The primary product in these cases was to experience, observe and learn about aspects of New Zealand's natural environment (flora, fauna, geology, protected ecosystems, etc). Twelve study operations were then identified utilising selection criteria identified in Table 1. These criteria were developed with the aim of identifying a sample of operations to represent the diversity that exists within the ecotourism sector. Factors such as type of operation (transport, guiding, observation, education), core product (native forest, geological, ornithological, marine mammals), M ori/non-M ori ownership, focus on conservation, scale of operation and domestic/international visitor patronage were considered in the design of the cluster samples. Ecotourism operations ranging from small scale (low visitor numbers) and locally owned through to government or corporate-owned operations with annual visitor numbers exceeding 100,000 were included in the research project. Operations recognised in national and/or international ecotourism awards were also considered in the selection of case studies.

Table 1. Fourteen selection criteria employed to distinguish ecotourism businesses that form a subset of commercial nature-based tourism operations

1	Educational component within the product
2	Contribution to conservation
3	Active contributions to research
4	Local ownership
5	Dept of Conservation concessionaires
6	Limited number of visitors on daily excursions
7	Code of ethics identified by operation
8	National tourism award winner, Nature/Ecotourism category
9	International tourism award winner, Nature/Ecotourism category
10	Finalist national tourism awards, Nature/Ecotourism category
11	Finalist international tourism awards, Nature/Ecotourism category
12	Recommended in publications such as travel guides
13	Visits/manages protected species/habitat
14	Trust/foundation status

Twelve companies were selected to represent the spectrum of ecotourism businesses in New Zealand, as outlined in Table 2. For logistical purposes case study operations were selected in three regions (Figure 1). Operator track record was considered important as qualitative and quantitative data collection required operator viability over two years through to the completion of the research. Two reserve operations were included in the clusters. This was a precautionary measure designed to guard against the possible withdrawal of operators if they were unable to participate fully in the two-year research contract.

Table 2. Twelve participating ecotourism operations (and selection criteria that applied) organised into three geographical clusters

Cluster	Company name	Selection criteria*
Northern Region	Kauri Country Ltd, Matakohe	1, 2, 4, 6, 10, 12, 13, 14
	Dolphin Encounters (Fullers), Bay of Islands	1, 2, 3, 5, 8, 10, 12,13
	Miranda Shorebirds Centre, Firth of Thames	1, 2, 3, 4, 5, 12, 13, 14
	Kiwi Dundee Adventures, Coromandel	1, 2, 4, 5, 6, 8, 12, 13
Central Region	Mt Bruce National Wildlife Centre, Wairarapa	1, 2, 3, 4, 5, 7, 8, 9, 12, 13
	Kapiti Tours Ltd, Kapiti Island	1, 2, 4, 5, 6, 12, 13
	Dolphin Watch Marlborough, Picton	1, 2, 3, 4, 5, 6, 7, 12, 13
	Whale Watch Kaikoura Ltd., Kaikoura	1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 13
Southern Region	Oamaru Blue Penguin Colony, Oamaru	1, 2, 3, 4, 5, 10, 11, 12, 13, 14
	Royal Albatross Centre, Dunedin	1, 2, 3, 4, 5, 6, 8, 12, 13, 14
	Penguin Place, Dunedin	1, 2, 3, 4, 5, 8, 11, 12, 13
	Catlins Wildlife Trackers, South Otago	1, 2, 3, 4, 5, 6, 7, 8, 11, 12, 13

* 1 Educational component, 2 Contribution to conservation, 3 Active contribution to research, 4 Local ownership, 5 Dept of Conservation concessionaires, 6 Limited number of visitors on daily excursions, 7 Code of ethics, 8 National tourism award winner, 9 International tourism award winner, 10 Finalist national tourism awards, 11 Finalist international tourism awards, 12 Recommended in publications such as travel guides, 13 Visits/manages protected species/habitat, 14 Trust/foundation status

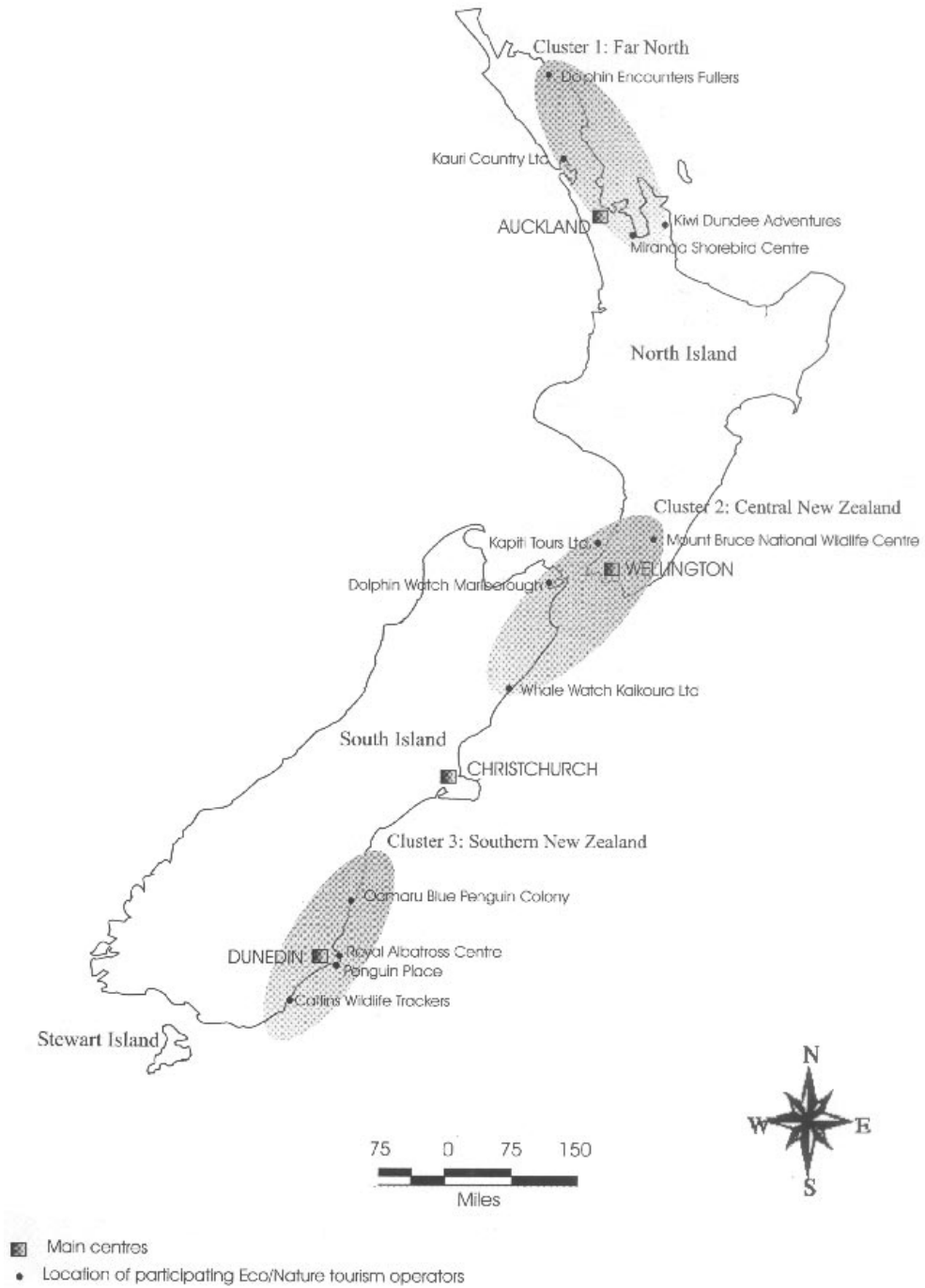


Figure 1. Map of twelve study operations organised into three geographical clusters

3.4 PHASE ONE. QUALITATIVE PHASE (1999-2000): OVERVIEW OF RESULTS

The first phase of the research employed qualitative methods including participant observations (Appendix A) and interviews (Appendix B) with visitors to selected case study operations. The researchers conducted over 80 personal interviews and undertook participant observations on between three and eight tours/excursions per case study (tours/excursions varied from fourteen daily tours of one hour duration, to weekly tours of 3-4 days duration). The researchers completed this task working in pairs to mitigate observer bias. These techniques were deliberately broad ranging to provide detailed insights into the scope of ecotourism, the environmental values held by visitors to ecotourism operations in New Zealand and aspects of visitor behaviour. Phase one field work was intended to provide guidance for the development of the questionnaire that took place in the second part of the research project. This provided valuable insights into ecotourism operations, management techniques, visitor profiles and behaviour at selected case study sites. Observations confirmed that all twelve case study operations received both specialists (experts) and generalist (novice) visitors. All indicators that could possibly be observed confirmed the existence of a broad spectrum of visitor profiles at ecotourism operations in New Zealand. These key indicators included aspects such as group size and composition, visitor interaction with guides, carrying and use of personal equipment (e.g., binoculars, sketch pads, microphones, and identification books), specific subjects of visitor interest, on site behaviour, and compliance with guidelines.

The personal interviews with visitors that followed were designed to provide insights into visitor experiences at selected ecotourism operations and the environmental values held by visitors. Again, it was apparent that visitors to the study operations sought a variety of experiences and held a wide range of environmental values. Interviews confirmed that some visitors had planned, often months in advance, and anticipated specific ecotourism experiences. For many international visitors this was a primary motivation behind their visit to New Zealand. Many others, however, were casual visitors for whom gaining experiences in natural environments was not necessarily due to specialised interests in ecotourism, but rather a consequence of their decision to visit New Zealand where natural attractions are central to the tourism product. These visitors reported that they were travelling primarily for reasons such as to visit friends and relatives, as part of a cruise, or, in the case of many domestic travellers, to socialise with friends or acquaintances (e.g., as part of a family outing, or Senior Citizen group excursions). Insights into the environmental values held by visitors were achieved through the interview process. Visitors were asked to consider environmental issues relating to their ecotourism experience, their responses to visitor interpretation programmes, awareness of local, regional or national environmental issues in New Zealand and/or their country of origin, environmental group membership, and global environmental issues of concern to them. This process provided valuable qualitative insights into the widely varied environmental values and behaviours of visitors to study sites.

3.5 PHASE TWO. QUANTITATIVE PHASE (2000-2001)

The second phase conducted during the 2000-2001 field season involved the design and distribution of a questionnaire which is the subject of this Research Paper. The researchers aimed to achieve a sample of 800 respondents. The questionnaire was pilot tested (n=77) at the four operations that comprise the southern New Zealand cluster of operations (Figure 1). Quantitative data collection took place during the second field season from November 2000 to April 2001 employing a personal administration technique. At the completion of the field season a total of 978 responses had been received (Table 3). Of these 967 valid responses were entered on the database due to partial non-response invalidating eleven returned surveys.

Table 3. Frequency and percentage responses from participating businesses

Cluster	Company name	Frequency	Percent
Northern Region	Kauri Country Ltd, Matakohe	12	1.2
	Dolphin Encounters (Fullers), Bay of Islands	57	5.8
	Miranda Shorebirds Centre, Firth of Thames	93	9.5
	Kiwi Dundee Adventures, Coromandel	35	3.6
Central Region	Mt Bruce National Wildlife Centre, Wairarapa	107	10.9
	Kapiti Tours Ltd, Kapiti Island	76	7.8
	Dolphin Watch Marlborough, Picton	71	7.3
	Whale Watch Kaikoura Ltd., Kaikoura	122	12.5
Southern Region	Oamaru Blue Penguin Colony, Oamaru	82	8.4
	Royal Albatross Centre, Dunedin	109	11.1
	Penguin Place, Dunedin	86	8.8
	Catlins Wildlife Trackers, South Otago	116	11.9
Unspecified		12	1.2
TOTAL		978	100.0

3.6 DATA MANAGEMENT

Responses were coded and entered onto SPSS Version 10.0 which provided the data management requirements of the research project. Data cleaning and cross-checks were performed during the data entry process. Inaccurate entries were identified and corrected with reference to questionnaire numbers that appeared on the printed questionnaires and the electronic version of the data. Data entry revealed a valid response of 967 questionnaires. Data analysis included a range of analytical techniques. Univariate analysis was performed on all questions to provide descriptive frequencies. The multiple response function was used to aggregate data generated from questions 2-4, 7-9, 11-13 and 17 (see Appendix C). Bivariate analyses, namely cross-tabulations, were performed to provide insights into relationships between variables. Simple data recoding was undertaken in some cases to allow meaningful cross-tabulations to be performed. In selected instances Chi Square tests of statistical significance were applied to cross-tabulated data. Multivariate analysis involved the application of factor analysis to data generated from question 15.

CHAPTER 4: DEMOGRAPHIC PROFILES

4.1 INTRODUCTION

Various attempts have been made to segment and profile visitors to ecotourism attractions to achieve insights into the types of visitors who are often referred to generally as ecotourists (Weiler and Richins 1995, Wight 1996, Palacio and McCool 1997, Blamey and Braithwaite 1997, Woods and Moscardo 1998). Contributions to the New Zealand literature in this field include Barton (1994) and Pearce and Wilson (1995). However, no systematic profiling of visitors to ecotourism operations in New Zealand has been undertaken previously. The following profile is generated from primary quantitative data (n=967) collected during the Southern Hemisphere summer, November 2000-April 2001. Data presented in this chapter draws from Section Three of the questionnaire (see Appendix C).

4.2 DEMOGRAPHIC PROFILES

The gender balance represented within the sample described a majority of female (55.6%) over male (40.4%) visitors to ecotourism operations in New Zealand. A total of 39 respondents (4.0%) provided no answer to this question. The nationalities reported by respondents present a clear picture of the origins of visitors to ecotourism operations in New Zealand (Table 4). The largest single source of visitors was domestic New Zealand travellers (n=273). International markets were dominated by the United Kingdom (n=251) and the United States of America (n=146). Other important sources of visitors to ecotourism operations in New Zealand observed in this study include Germany, Australia and Canada. These results reflect the important inbound New Zealand visitor markets as reported by Tourism New Zealand (2001). When these results are organised into the major tourism market groups the relative importance of each, in terms of the New Zealand ecotourism product, clearly emerges. When aggregated from Table 4 the European nationalities emerge as the most significant market group (n=418). The importance of European nationals to the development of the ecotourism product in New Zealand stands in contrast to the North American (n=185) and Asian (n=25) markets, which pale by comparison. It should be noted that the survey was administered only in English, however, this finding was supported by observations and interviews conducted in the first phase of the research where visitors of Asian origin were infrequently observed or reported by operators.

Although 273 respondents identified New Zealand as their nationality, 304 responded that they reside in New Zealand. It is noteworthy that while 251 respondents identified themselves as British, only 215 reported that they reside in the United Kingdom. Those resident in New Zealand (n=304) were drawn from a range of New Zealand regions, as outlined on Table 5. International visitor generating regions of note included the South East of England (44), London (25), California (29), Nottinghamshire (17), New South Wales (12), Colorado (12), Ontario (12), New York (10), Minnesota (10), Victoria, Australia (9) and Devon (8).

Table 4. Nationalities of visitors to New Zealand ecotourism operations (n=967)

Nationality	Frequency	Percent
New Zealand	273	28.3
United Kingdom	251	26.1
United States of America	146	15.1
German	48	5.0
Australian	45	4.7
Canadian	39	4.0
Holland	27	2.8
Switzerland	18	1.9
Denmark	13	1.3
Belgium	10	1.0
Sweden	9	0.9
Japan	8	0.8
Israel	8	0.8
France	6	0.6
Ireland	6	0.6
Netherlands	6	0.6
Wales	5	0.5
Malaysia	4	0.4
Singapore	4	0.4
Italy	4	0.4
Others *	28	2.9
No response	9	0.9
Total	967	100.0

* Other include Scotland (5), China (4), India (4), Hong Kong (3), Spain (2), South Africa (2), Croatia (2), Czech Republic (1), Brazil (1), Jamaica (1), New Caledonia (1), Slovenia (1) and Mexico (1).

Table 5. Regional origins reported by respondents resident in New Zealand (n=304)

New Zealand region of residence	Frequency *
Wellington	66
Auckland	58
Waikato	24
Canterbury	17
Hawke's Bay	17
Otago	15
Wairarapa	15
Wanganui	11
Manawatu	10
Kapiti Coast	8
East Coast	5
Marlborough	3
Northland	2

The age distribution of visitors to ecotourism operations in New Zealand defies generalisation (Table 6). The ages reported by respondents are relatively evenly spread across the spectrum and can not be generalised in the manner often associated with the backpacker market, for example. The most significant proportion of visitors to ecotourism operations in New Zealand are aged in their twenties and early thirties. The middle age brackets (35-44 and 45-54) are less well represented but constitute a significant proportion of visitors nonetheless. The more mature visitor profile certainly applies to the New Zealand ecotourism market with those falling into the 55-64 and 65-74 age groups representing important markets to the ecotourism sector of the New Zealand tourism industry.

Table 6. Age distribution of visitors to New Zealand ecotourism operations (n=967)

Age category	Frequency	Percent
15-19	26	2.7
20-24	94	9.7
25-34	207	21.4
35-44	148	15.3
45-54	160	16.5
55-64	196	20.3
65-74	110	11.4
74 +	19	2.0
No response	7	0.7
Total	967	100.0

The employment status of respondents confirms a preponderance of full time employed travellers visiting ecotourism operations (Table 7). Employment status reflects the age distribution data insofar as retired travellers represent a significant proportion of the total sample (21.5%).

Table 7. Employment status of visitors to New Zealand ecotourism operations (n=967)

Employment category	Frequency	Percent
Employed full time	387	40.0
Employed part time	84	8.7
Self employed	88	9.1
Retired	208	21.5
Student	97	10.0
Homemaker	35	3.6
Unemployed	38	3.9
Other	22	2.2
No response	8	0.8
Total	967	100.0

Visitors to ecotourism operations in New Zealand fit the stereotype in terms of educational achievement (Table 8). Fractionally over two-thirds of visitors held tertiary qualifications (67.5%), and almost a quarter (23.4%) held postgraduate degrees.

Table 8. Educational status of visitors to New Zealand ecotourism operations (n=967)

Educational attainment	Frequency	Percent
Primary School	4	0.4
Secondary school	154	15.9
Tertiary	426	44.1
Postgraduate degree	226	23.4
Vocational/trade qualification	114	11.8
Other	25	2.6
No response	18	1.9
Total	967	100.0

CHAPTER 5: TOUR CHARACTERISTICS AND ECOTOURISM EXPERIENCES

5.1 INTRODUCTION

This research project sought to gather quantitative data addressing the tour characteristics and experiences of visitors to ecotourism operations in New Zealand. This section of the questionnaire (Appendix C, Section One) required respondents to consider their ecotourism experiences in New Zealand regarding information sources, activities undertaken, most/least enjoyable aspects of the ecotourism experience and visitor satisfaction. Chapter Five presents the results of section one of the questionnaire in two parts; the first considers the general tour characteristics of visitors to ecotourism operations in New Zealand, and the second provides a review of the ecotourism experiences achieved by visitors.

5.2 TOUR CHARACTERISTICS

Respondents were asked if they had previously visited the operation at which they received the questionnaire. As might be expected the majority (85.5%) of respondents were visiting the study operation for the first time (n=827). The exceptions (n=138) represented 14.3% of the sample, of whom most (44.9%) had visited the attraction once previously. Fifty-one respondents identified that they had received the questionnaire at an ecotourism operation that they had visited between 2-10 times previously, and twenty-three respondents had visited the study operation more than ten times in the past. Two respondents returned no answer to this question.

The number of previous visits reported by respondents was cross-tabulated with visitor nationality in the expectation that most of those who had previously visited the study operations would be New Zealanders. Visitor nationality data were recoded to simply represent domestic (those who stated that their nationality was New Zealand) and inbound visitors (respondents from international origins). The cross-tabulation of previous visits and visitor origins (repeat visitors only) confirmed that 58.1% of New Zealanders had previously visited the site at which they received the questionnaire. The same applied to only 6.0% of international visitors (Chi Square=149.9, df=7, p=.000). In each case there existed a number of respondents who had visited one of the participating operations on multiple occasions (New Zealanders, n=93; international visitors, n=37).

Respondents were then asked when they had decided to visit the ecotourism operation at which they received the questionnaire. This question revealed that a wide range of planning horizons exist when tourists are considering visits to New Zealand ecotourism operations (Table 9). The cumulative data confirms that most decide to visit ecotourism operations on the day of (14.4%), the day prior to (13.8%), or the week in advance (15.4%) of the actual visit. However, it is noteworthy that a significant proportion of visitors to ecotourism operations in New Zealand decide upon their visit months and, in the case of 9.5% of the total sample (n=92), a year or more in advance of the actual visit. Clearly, in many cases, visits to New Zealand ecotourism operations are carefully planned and anticipated.

When responses to this question were analysed on the basis of domestic and international visitor origins several points of distinction emerged. While long decision making horizons exist within both sub-samples, New Zealanders demonstrate a slightly increased propensity to visit ecotourism operations on the spur of the moment, or plan to do so between one and six months in advance. International visitors by contrast are more likely to make a decision to visit an ecotourism operation during the days or week prior to the actual visit, or to plan a visit to a New Zealand ecotourism operation between six and twelve months, or more than one year in advance. While these observations may be drawn from the data presented in Table 9, it should be noted that both domestic and international visitors to New Zealand ecotourism operations demonstrate tendencies towards decision making across the time scales reported by respondents.

Table 9. Decision making timeframe cross-tabulated with visitor origins (domestic/international)

Planning timeframe	Domestic		International		Total	
	n	Percent	n	Percent	n	Percent
Today	48	17.7	84	12.9	139	14.4
Yesterday	27	9.9	95	14.6	133	13.8
One week previously	38	14.0	106	16.3	149	15.4
Previous month	36	13.3	58	8.9	99	10.2
Previous 2-3 months	28	10.3	59	9.0	92	9.5
Previous 4-6 months	27	9.9	37	5.7	64	6.6
Previous 7-12 months	20	7.4	81	12.4	104	10.8
One year or more	14	5.1	76	11.6	92	9.5
Not my decision	6	2.2	26	4.0	58	3.6
No response	27	9.9	30	4.6	35	6.0
Total	271	100.0	652	100.0	923	100.0

5.3 ECOTOURISM EXPERIENCES IN NEW ZEALAND

Respondents were asked whether they had visited other ecotourism or nature-based tourism operations prior to their visit to the operation at which they received the questionnaire. All 967 respondents provided an answer to this question and the majority (80.5%) indicated that they were indeed visiting multiple ecotourism operations during their travel itinerary. This result could not be differentiated on the basis of domestic or international visitor status. Approximately 80.0% of both the domestic and international sub-samples had visited ecotourism operations in New Zealand prior to their visit to the study site.

There followed an open-ended question which invited respondents to name the ecotourism operations that they had visited in New Zealand prior to their visit to the study site. Respondents were able to name up to three ecotourism operations in this question. Responses were unprompted (respondents were not informed of the other operations that were participating in the research). The study sample of 967 respondents collectively provided 1552 responses for what they perceived to be ecotourism operations and/or destinations. Respondents who took the time to name ecotourism attractions and activities that they had visited collectively listed exactly one hundred sites at which they had achieved ecotourism experiences in New Zealand. The most frequently cited operations are documented on Table 10. A full list of responses to this question is provided in Appendix D

Table 10. New Zealand ecotourism sites and operations visited by respondents *.

Operation	Frequency	Percent of responses	Percent of Cases
Fiordland National Park	184	11.9	25.0
South Island National Parks	151	9.7	20.5
North Island National Parks	138	8.9	18.8
Royal Albatross Centre	132	8.5	17.9
Whale Watch Kaikoura Ltd.	92	5.9	12.5
Penguin Place	88	5.7	12.0
Westland Glaciers	74	4.8	10.1
Rotorua Geysers/mud pools	68	4.4	9.2
Wildlife/Nature reserves	52	3.4	7.1
Waitomo Caves	48	3.1	6.5
Seal Colonies	47	3.0	6.4
Tiri Tiri Matangi Island	44	2.8	6.0
Catlins	38	2.4	5.2
Gannet Colonies	30	1.9	4.1
Mount Bruce Wildlife Centre	30	1.9	4.1
Oamaru Blue Penguin Colony	23	1.5	3.1
Kiwi Houses	20	1.3	2.7
Kapiti Island	16	1.1	2.2
Stewart Island	15	1.0	2.0

* Total responses 1552, Valid cases 736, Missing cases 231.

Percent of responses 100%, Percent of Cases 210.9%.

5.4 INFORMATION SOURCES

Respondents were asked to consider the information sources that they utilised in advance of, or during their visit to the attraction at which they received the questionnaire (Table 11). Twelve closed-response options were provided and respondents were invited to tick as many as were applicable to them. An 'other' category provided a further 163 responses. This question received responses from 937 respondents (97.9%) who provided a total of 1529 responses (1.6 information sources cited per respondent).

Table 11 clearly demonstrates the relative importance of information sources used by visitors to ecotourism operations in New Zealand. These data confirm the importance of word of mouth promotion and the fact the recommendation by family and/or friends carries great sway with visitors planning a travel itinerary, and experiences to be achieved along the way. International visitors also rely heavily on guidebooks. This result was apparent in the pilot testing of the questionnaire and so an additional question was included in the final copy of the survey seeking information on guide books utilised by visitors to ecotourism operations (see Table 12, below). Visitor Information Centres clearly play an important part in disseminating information on ecotourism experiences to travellers. This research also confirms the importance of a well designed brochure. Brochures were cited by 11.2% of the sample as influential information sources, compared to 3.9% who reported using the Internet as a source of information on New Zealand ecotourism operations. However, it is important to highlight the possibility that ecotourism operations in New Zealand have a weak Internet 'presence' which, if true, would heavily influence this result.

Table 11. Information sources utilised in advance of, or during, visits to ecotourism operations

Information source	Frequency	Percent
Department of Conservation	61	3.9
Family/Friends	314	20.5
Visitor Information Centre	199	13.0
Travel Agent	92	6.0
Guide Book	280	18.3
Television	28	1.8
Internet	61	3.9
Newspaper/Magazine article	57	3.7
Brochure	172	11.2
Place of accommodation	26	1.7
People I met while travelling	52	3.4
Directly from the operator	24	1.5
Other *	163	10.6
Total	1529	100.0

* 'Other' included: Part of school programme (29), saw it as drove by (25), tour group (13), Forest and Bird (8), Map (8), live in the area (8), Kiwi Experience (7), Contiki Tour (6), APT Tour (5), Local Council (5), AA Magazine (4), Staff social gathering (4), Miscellaneous (20), Other - not specified (21).

A significant proportion of visitors (18.3%), predominantly international in origin, identified that they utilised guide books as a primary information source. The majority of these respondents (86.8%) specified precisely which guide books they had consulted in planning their visit to the ecotourism operation at which they had received the questionnaire (Table 12). As might possibly be expected, the Lonely Planet travel guide was cited by 55.7% of all those respondents who identified guide books as a source of information that they use.

Table 12. Titles of guide books specified by respondents as important information sources (n=242)

Guide book title	Frequency	Percent
Lonely Planet	135	55.7
The Rough Guide	25	10.3
Let's Go	14	5.7
AA Guide	13	5.3
Frommer's	7	2.8
Dutch Travel Guide	6	2.4
Fodor's	6	2.4
Stefan Loose Germany	6	2.4
Others	30	12.3
Total	242	100.0

5.5 VISITOR EXPERIENCES AT ECOTOURISM OPERATIONS IN NEW ZEALAND

The following section addresses the experiences achieved by visitors at ecotourism operations involved in the current study. This section documents the responses generated from five questions which required respondents to consider the activities that they had engaged in, the most and least enjoyable aspects of the visitor experience, overall satisfaction and whether or not they would recommend the attraction to others.

When asked to identify the ecotourism activities that they had participated in 96.3% of respondents identified at least one such activity (Table 13). Respondents were able to nominate more than one activity that they had engaged themselves in, and a total of 3979 activities were identified by the sample (4.3 activities identified per respondent). The most popular activity engaged in by visitors to ecotourism operations in New Zealand was viewing wildlife (n=792 responses). This finding supports the important conclusion that managing wildlife tourism experiences, and mitigating potential adverse visitor impacts upon wildlife species, is a critical challenge facing the New Zealand ecotourism sector. Walking (n=631 responses) is another popular visitor activity. Responses to this question also confirms the popularity of visitor interpretation programmes, the most popular of which appear to be educational talks provided by guides and interpreters (n=461 responses). Other popular avenues of visitor interpretation include static displays and the viewing of slide and film shows. The 'other' category (n=13) included a small number of respondents who identified activities such as talking to other enthusiasts and sitting in the café socialising and drinking cups of tea.

Table 13. Participation in activities while visiting ecotourism operations in New Zealand (n=922)

Visitor activities	Frequency	Percent
Walking	631	15.8
Viewing displays	384	9.6
Viewing protected areas	559	14.0
Viewing slide show/film	230	5.7
Educational talk	461	11.5
Viewing wildlife	792	19.9
Sight seeing	286	7.1
Photography	293	7.3
Boat trip/sailing	170	4.2
Guided walk	99	2.4
Buying souvenirs/crafts	61	1.5
Others	13	0.3
Total	3979	100.0

5.5.1 ENJOYABLE ASPECTS OF THE VISITOR EXPERIENCE

Two questions were included to ascertain the most and least enjoyable aspects of the visitor experience. In each case open-ended questions were employed to allow respondents to provide answers in their own words. Closed-response questions were withheld as they were considered to place unacceptable limitations on the range of potential responses. The result was a rich data set addressing the aspects of visitor experiences that were most and least enjoyable, and a wide range of answers in response to each question.

Accounts of the most enjoyable aspects of visitor experiences at New Zealand ecotourism operations were provided by 930 respondents (97.2%) who provided 1269 responses (1.36 answers per respondent). The most common response to this question described the wildlife viewing experience which received 476 responses (37.5%). It is interesting to note that the 'explanations given by staff' and 'commentaries provided by interpreters' accounted for a further 13.9% of responses. Other avenues of response that received over 40 responses included 'viewing wildlife at close quarters' (n=84), 'views and scenery' (n=80), 'viewing wildlife in their natural environment' (n=74), 'bush walks' (n=47) and 'the feeling of getting close to nature' (n=41).

5.5.2 NEGATIVE ASPECTS OF THE VISITOR EXPERIENCE

The least enjoyable aspects of the ecotourism experience received 753 responses from 701 respondents (1.07 responses per person), although it must be highlighted that the most common response from these people (27.4%) was ‘nothing’ (n=206). A number of other common responses that the operator had little or no control over included the weather (n=57), ‘having to leave’ (n=20) and ‘rough conditions on the boat trip’ (n=17). However, while these initial findings suggest that the respondents had few grounds for dissatisfaction, several categories of response do provide valuable insights into aspects of the visitor experience that need to be monitored and/or carefully managed. Fifty respondents (6.6% of responses to the question) identified that ‘too many people’ accompanied them during the experience indicating the need to monitor levels of visitation and/or tour group size, appropriate to the experience being sought by visitors. A further 29 respondents (3.9%) cited inappropriate behaviour and ‘people not obeying the rules’ as something that detracted from their on-site experience. Other comments registered in response to this question included ‘waiting around’ (n=22), ‘did not get to see enough wildlife’ (n=19), ‘lack of time available’ (n=15), ‘lack of signage’ (n=12) and ‘unhelpful staff’ (n=12).

5.6 VISITOR SATISFACTION

This section concluded with two questions requiring respondents to consider their overall satisfaction, and whether or not they would recommend the experience that they had achieved to others. Visitor satisfaction data were generated employing a nine point Likert scale labelled ‘extremely dissatisfied’ and ‘extremely satisfied’ at points one and nine. The response to this question reflected a high level of satisfaction (Table 14).

Table 14. Levels of satisfaction (%) with ecotourism experiences (n=957)

Extremely Dissatisfied		Dissatisfied		Neutral		Satisfied		Extremely Satisfied	
1	2	3	4	5	6	7	8	9	9
0.0	0.2	1.2	0.6	2.4	4.0	23.8	35.6	31.3	

This conclusion was supported by high levels of recommendation reported by respondents. All 967 respondents provided an answer to this question and 96.8% indicated that they would recommend the experience that they had achieved. When asked to explain the basis for their recommendation a number of general comments were provided. These included ‘unique’ (n=140), ‘the ecotourism experience’ (n=111), ‘scenery’ (n=46), ‘anyone interested would enjoy this experience’ (n=37), ‘excellent wildlife viewing’ (n=32), ‘variety of flora and fauna’ (n=13), ‘non-intrusive’ (n=13) and ‘low key and user friendly’ (n=11).

A quite separate category of responses was also revealed in the data that described an interesting aspect of the ecotourism experience. The desire for learning is often recognised as a fundamental defining quality of the ecotourism experience and this emerges clearly as an important aspect of the recommended experience. A significant proportion of respondents alluded to this point, stating that they would recommend the visitor experience they had gained as follows: ‘interesting and informative’ (n=93), ‘professional, enthusiastic and knowledgeable staff’ (n=68), and ‘a great place to learn about and appreciate nature’ (n=49). However, in addition to this, a number of respondents recognised the role performed by the New Zealand ecotourism operator in fostering environmental awareness and challenging the environmental values of visitors in pursuit of post-experience pro-environmental behaviour. Responses in this category included ‘help learning and understanding issues associated with the conservation of endangered species’ (n=80), and ‘devoted to the protection of the environment’ (n=19). This aspect of the ecotourism phenomenon in New Zealand is explored in detail in the following chapter, which considers the environmental values held by visitors to ecotourism operations in New Zealand.

CHAPTER 6: ENVIRONMENTAL VALUES

6.1 INTRODUCTION

Tourism New Zealand's promotion focuses on the portrayal of a clean, green '100% Pure' destination image and experience. The environments that international visitors and the New Zealand public encounter have in many regions been the focus of development, extensive usage of fossil fuels, agricultural chemicals and haphazard commitment by local and national governments to mitigating the impacts of pollution and wastes. The possibility that the environmental history of New Zealand is detrimental to the 'clean green image' that is perpetuated for tourism purposes remains an issue of great relevance to the ecotourism sector. This section examines the environmental interests associated with visitation to ecotourism operations in New Zealand. It is organised into two sections which firstly profile the environmental values held by visitors to ecotourism operations, and secondly, report on visitors' perceptions of the environmental performance of ecotourism operators in New Zealand.

6.2 MEMBERSHIP OF ENVIRONMENTAL GROUPS OR ORGANISATIONS

The researchers set out to profile the environmental values held by visitors to ecotourism operations in New Zealand. Membership of environmental groups or organisations was considered an important indicator of the environmental interests of visitors. Respondents were asked to indicate if they were members of any environmental groups. Fractionally over one-third (39.0%) of the 950 respondents who provided an answer to this question indicated that they were current members of at least one environmental group (n=377). Respondents were then able to name the groups or organisations of which they were a current member. A multiple response analysis of this question generated 516 responses from 353 respondents, which included the names of 68 groups or organisations. The most common responses are outlined in Table 15 which confirms the importance of local conservation and walking group memberships. The importance of international environmental organisations such as Greenpeace, WWF and the Royal Society for the Protection of Birds, and domestic groups such as Forest and Bird, the Miranda Naturalists Trust and Kiwi Conservation Club is evident in Table 15.

6.3 ENVIRONMENTAL CONCERNS

Respondents were then asked if they were concerned about human-induced changes on the environment and, if so, which environmental issues cause them most concern. As might be expected, most (89.9%) reported some concern about human-induced environmental change (n=926). Respondents were able to nominate two environmental issues of concern to them. The majority (n=757) did so providing 1429 responses. The fifteen most common avenues of response, which represent the majority of issues articulated by respondents, are outlined on Table 16. Other responses were generally local or regional variations of the issues reported on Table 16 as well as marine pollution, nuclear testing, lack of recycling and overfishing.

Table 15. Environmental group/organisation memberships reported by respondents (n=353)

Environmental group/organisation	Frequency of responses	Percent
Various local conservation groups	76	14.7
Greenpeace	57	11.0
Forest and Bird (NZ)	56	10.8
WWF	46	8.9
Royal Society for the Protection of Birds (UK)	42	8.1
National Conservation groups	38	7.3
National Trust (UK)	36	6.9
Local walking groups	24	4.6
Sierra Club (USA)	16	3.1
Conservation Trust (UK)	11	2.1
Miranda Naturalists Trust (NZ)	9	1.7
Kiwi Conservation Club (NZ)	7	1.3
Tiritiri Matangi Supporter (NZ)	6	1.1
Karori Wildlife Sanctuary (NZ)	6	1.1
Friends of the Earth	6	1.1
Yellow-eyed Penguin Trust (NZ)	5	1.0
Others	75	14.5
Total	516	100.0

Table 16. Environmental issues identified as causes of concern among visitors to ecotourism operations in New Zealand (n=926)

Environmental issues	Frequency of responses	Percent
Pollution	218	15.2
Global warming	124	8.6
Deforestation	113	7.9
Ozone depletion	98	6.8
Overpopulation	93	6.5
Loss of habitat	73	5.1
Water pollution	70	4.8
Waste management issues	65	4.5
Loss of endangered species	60	4.1
Urbanisation	49	3.4
Depletion of natural resources	44	3.0
Car use/fossil fuels	40	2.7
Genetic modification (GM)	36	2.5
Introduced species	24	1.6
Lack of biodiversity	17	1.1
Other	305	21.3
Total	1429	100.0

6.4 TOURISM MARKETING

Awareness of the 100% Pure New Zealand tourism marketing campaign was reported by 25.1% of the sample. The questionnaire asked visitors to consider whether they felt the 100% Pure New Zealand campaign is justified based on the experiences that they had achieved in New Zealand. Respondents were able to answer this question whether they were aware of the 100% Pure campaign or not. The majority felt that the campaign was justified as it accurately reflected the situation that they had experienced in New Zealand. However, 16.4% of respondents (n=159) felt otherwise. A cross-tabulation was performed to examine responses to this question on the basis of nationality. The analysis confirmed that New Zealanders were more critical of this campaign than international visitors. Fractionally under one-third of New Zealand respondents (32.6%), or 89 respondents considered the 100% Pure focus to be unrealistic. A further 11 respondents from New Zealand confirmed an element of doubt by answering 'Yes and No' to this question. Inbound visitor nationals who were most critical of this promotional campaign included visitors of Canadian (17.9%), German (16.7%), Australian (13.3%) and Japanese (12.3%) nationality. A higher proportion of visitors from other nationalities felt that the promotion was unjustified, albeit from small sub-samples. For example, three of four Scottish respondents were critical of the notion that New Zealand is promoted as a 100% Pure tourist destination.

A multitude of reasons were provided by respondents when asked to explain their answer. The most common responses were general comments that included 'there is room for improvement in New Zealand's environmental performance' (12.4%), 'New Zealand compares unfavourably with other international countries' (9.7%) and 'New Zealand's current situation is due only to the small domestic population' (3.2%). Specific issues raised by respondents included litter, lack of recycling, environmental degradation, logging, the use of fertilisers and sprays, high private vehicle use, introduced species, human waste management and little use of alternative energies. Each of these issues were generally mentioned by less than 5.0% of the total sample. This highlights the potential impact that other key industries may have with regard to delivering a tourism product that is promoted with a clean, 'green', environmental theme.

6.5 ANALYSIS OF ENVIRONMENTAL VALUES

The environmental values held by visitors to ecotourism operations in New Zealand were specifically addressed employing two variable lists. The first provided a list of twelve variables that comprise the New Environmental Paradigm (NEP). An eighteen variable list of environmental behaviours was also included in the questionnaire to assess the extent to which visitors to ecotourism operations are actively engaged in pro-environmental behaviour.

Table 17 reports the responses generated from the NEP scale. These data confirm a high level of concern for the achievement of a state of environmental equilibrium. Concern for the balance of nature, and human impacts upon the natural environment emerges clearly from Table 17. The factor analysis reported in Table 18 explains a three-factor solution which incorporates nine of the twelve NEP variables. The existence of three NEP subscales provides a close reflection of the factor solution reported by Uysal, Jurowski, Noe and McDonald's (1994) research conducted in the US Virgin Islands. This analysis confirms the existence of a factor comprising of four variables that describes the view that the balance of nature is delicate and easily upset. This factor describes an ecocentric (see definitions, below) or biocentric attitude towards the environment. Two additional factors emerged from the analysis. Factors two and three were comprised of variables that described 'human over nature' and 'limits to growth' (Table 18). This factor analysis explained 60.8% of variance which compares favourably with the study conducted by Uysal et al (1994) which explained 60.3% of variance.

Figure 2. Definitions of two opposing paradigms relating to environmental values

Ecocentric / Biocentric Philosophy	Philosophy that all things in the biosphere have an equal intrinsic value and an equal right to exist. Advocate practice of little intervention, placement of high values on natural resources, no use or responsible use and very small numbers of tourists. Measures of natural value related to undisturbedness, naturalness and completeness. Ecocentric philosophy complies with preservationist view of resource protection.
Anthropocentric Philosophy	Dominant philosophy of the Western world. Implies that nature can be conceived only from the perspective of human values. Humankind determines the form and function of nature within human societies. Anthropocentric philosophy may support views of conservation or exploitation, intervention in the management of nature and high levels of access to natural areas.

Source: Fennell (1999: 252-254)

The similarities between the current analysis and that of Uysal et al (1994) are noteworthy. Indeed the labels given to each of the three factors to emerge from the current analysis were retained from the research conducted by Uysal et al in 1994. However, it should be highlighted that much of the variance within the current sample was explained by the factor 'balance of nature' (35.9%). By contrast the first factor to emerge from the analysis performed by Uysal et al (1994) using data generated from the US Virgin Islands was 'humans over nature', described by the authors as a predominantly anthropocentric ideology, which explained 34.7% of variance. The prevalence of ecocentric attitudes towards the environment (support expressed for the 'balance of nature') held by visitors to ecotourism operations in New Zealand is a finding that should be recognised by operators seeking to achieve high levels of visitor satisfaction.

Table 17. Responses to variables listed to describe the environmental values of visitors

NEP variable	1	2	3	4	5	n	Mean	Std. Dev
1. Humans must live in harmony with nature in order to survive	7	15	55	241	633	951	4.55	0.74
2. The balance of nature is very delicate and easily upset	6	18	71	303	558	956	4.45	0.76
3. Humankind is severely abusing the environment	11	26	90	305	512	944	4.36	0.85
4. The earth has limited room and resources	33	40	66	227	586	952	4.36	1.02
5. When humans interfere with nature it often produces disastrous results	11	41	125	320	443	940	4.22	0.92
6. To maintain a healthy economy we will have to develop a 'steady state' economy where industrial growth is controlled	19	54	187	340	337	937	3.98	0.99
7. We are approaching the limit of the number of people earth can support	23	82	215	296	324	940	3.87	1.06
8. There are limits to growth beyond which our industrialised society can not expand	33	69	206	293	321	922	3.87	1.08
9. Humans have the right to modify the natural environment to suit their needs	307	291	224	97	21	940	2.19	1.07
10. Humans need not adapt to the natural environment because they can remake it to suit their needs	450	264	117	63	49	943	1.94	1.15
11. Plants and animals exist primarily to be used by humans	463	282	139	41	21	946	1.81	0.99
12. Humans were created to rule over the rest of nature	576	178	96	53	43	946	1.74	1.13

1= 'strongly disagree', 2= 'disagree', 3= 'neutral', 4= 'agree', 5= 'strongly agree'

Table 18. Factor analysis of New Environmental Paradigm variables

NEP variable statements	Factor loading	Eigen-value	Variance explained
Factor 1. Balance of nature			
When humans interfere with nature it often produces disastrous results	0.803	3.227	35.9
Humankind is severely abusing the environment	0.743		
The balance of nature is very delicate and easily upset	0.689		
Humans must live in harmony with nature in order to survive	0.511		
Factor 2. Humans over nature			
Plants and animals exist primarily to be used by humans	0.829	1.307	14.5
Humans were created to rule over the rest of nature	0.819		
Humans have the right to modify the natural environment to suit their needs	0.633		
Factor 3. Limits to growth			
To maintain a healthy economy we will have to develop a 'steady state' economy where industrial growth is controlled	0.809	0.938	10.4
We are approaching the limit of the number of people earth can support	0.787		

6.6 ENVIRONMENTAL BEHAVIOURS

Analysis of the environmental values held by visitors to ecotourism operations in New Zealand included the collection of data relating to environmental behaviour. This section of the questionnaire required respondents to consider their domestic environmental behaviour (as opposed to environmental behaviour while travelling). Eighteen variables describing environmental behaviours were included. These variables were drawn from behaviours reported in the qualitative phase of the research (1999-2000) and literature concerning environmental behaviour of tourists. Respondents indicated the extent to which they engage in each behaviour via four closed-response options - 'never', 'sometimes', 'often' and 'always'.

The results of this analysis are reported in Table 19, which reveals a high level of active interest on the part of many visitors in the routine practices of recycling and conserving energy. The majority of respondents indicated that they 'often' or 'always' engage in recycling. The same scenario applied when respondents considered the extent to which they conserve energy at home. Respondents reported widespread interests in pursuing nature-based activities during their leisure time. The majority (n=485) indicated that they 'often' engage in nature-based activities when time permits. Willingness to contribute time and/or money to environmental issues, and the importance of environmental policies when voting in political elections were also reported by a significant proportion of the sample. Respondents were generally occasional participants in conservation projects in their home areas although 289 respondents indicated that they 'never' contribute to such projects. These findings indicate widespread interests in conservation and the natural environment which are most readily pursued when undertaking leisure travel. Pro-environmental behaviours were generally reported within the sample. The prevalence of European nationals, and the high level of environmental behaviours that they reported, is a noteworthy aspect of the ecotourism visitor profile in New Zealand.

Table 19. Environmental behaviours reported by visitors to ecotourism operations in New Zealand

Behaviour variable	1*	2	3	4	N	Mean	Std. Dev
I collect and recycle used paper	67	119	200	565	951	3.33	0.95
I actively recycle household items and waste at home	36	185	343	399	953	3.16	0.85
I reuse/recycle plastic bags	27	121	340	463	951	3.30	0.80
I recycle aluminium cans	110	134	185	501	930	3.16	1.06
I conserve energy at home	42	229	425	239	935	2.92	0.82
I actively pursue nature based activities during my leisure time	19	244	485	195	943	2.91	0.73
I would be willing to contribute time, money, or both to environmental organisations	36	460	277	165	938	2.61	0.82
Environmental issues influence my vote in political elections	102	381	260	193	936	2.58	0.94
I use phosphate free cleaning products	106	358	209	187	860	2.55	0.96
I refuse excess packaging when I buy products	121	403	280	140	944	2.47	0.90
I purchase liquids in glass bottles that can be recycled	79	477	279	109	944	2.44	0.80
I purchase organic produce when available	143	470	245	85	943	2.29	0.83
I prefer to use biodegradable packaging to plastic packaging	113	574	188	35	910	2.16	0.68
I participate in conservation projects in my home area	289	403	175	74	941	2.04	0.90
I use public transport instead of a car	261	475	154	51	941	1.99	0.81
I use aerosol sprays	215	634	86	17	952	1.90	0.61
I use sustainable energy sources (eg solar power)	455	284	128	63	930	1.78	0.92
I cycle instead of using motorised transportation	497	290	131	24	942	1.66	0.81

* 1= 'never', 2= 'sometimes', 3= 'often', 4= 'always'

6.7 ENVIRONMENTAL PERFORMANCE

Four questions were utilised to provide insights into visitors' experiences regarding the environmental performance of ecotourism operators as perceived by visitors. These questions were included in the questionnaire to address issues that featured prominently in interviews with visitors conducted in the first phase of the research (1999-2000). Respondents were asked to consider whether ecotourism operators in New Zealand provide sustainable eco-experiences. This question required respondents to consider all ecotourism operations that they had patronised during their New Zealand travels. Over three-quarters of the sample responded positively, although it should be noted that 15.9% of the sample provided no response. Sixty respondents (6.2%) had experienced what they considered to be 'unsustainable' eco-experiences and a further five respondents ticked both 'yes' and 'no'.

When invited to elaborate on their answer, over half of the sample (n=486) took the opportunity to do so (Appendix E). The list of explanatory comments included those that explained both sustainable and unsustainable ecotourism experiences (depending on whether the respondent answered 'yes' or 'no' to the previous question). The majority of comments described sustainable ecotourism experiences. Most comments mentioned operations which provided interesting information and attempted to educate visitors about relevant environmental issues. The open-ended question format provided qualitative responses that confirmed the importance of environmental education to the New Zealand ecotourism sector. This was seen by respondents to contribute to sustainable ecotourism experiences. Comments provided by respondents included "the guide had a very good knowledge and provided good explanations", "they try to educate the tourist about the attraction and the subject of the tour", "very well

organised, informative and interesting”, “New Zealand ecotourism operators are committed to conservation and preserving natural beauty” and “operators provide lots of information to educate visitors on issues of importance”. These five comments, presented in the words of the respondents, summarise approximately 171 comments provided by respondents. Other comments that summarised feelings reported generally within the sample included “non-intrusive tours where flora and fauna come first”, “operators show a strong appreciation of the surrounding environment” and “most are clearly aware of the impacts of overutilisation and overexploitation”. These comments demonstrate the growing reputation of the New Zealand ecotourism industry, and reflect the awareness of visitors, many of whom anticipate high standards from such experiences.

A number of respondents provided comments to explain ecotourism experiences achieved in New Zealand that they considered to be unsustainable. Fourteen respondents provided comments explaining that the standards achieved by operators vary greatly with some demonstrating a tendency to exploit the attraction. Other comments that received upward of five responses included “attractions limit damage rather than prevent damage”, “not truly eco-friendly but rather superficial e.g., using diesel powered boats”, and “some operators are turning things into a circus”. These comments provide insights into the means by which the collective performance of the ecotourism sector can strive for further improvement. To that end, one respondent provided the comment that “ecotourism seems to mean different things to different operators”. This comment summarised the views of numerous respondents interviewed in the first phase of the research and provided further evidence of the need for the tourism industry to establish defining parameters for ecotourism in New Zealand.

6.8 VISITOR EXPERIENCES

Two aspects of the visitor experience feature centrally in the achievement of ecotourism experiences in New Zealand. These aspects included the extent to which visitors were provided with guidance from tour operators explaining appropriate low impact visitor behaviours, and the extent to which operators educate visitors about environmental issues of relevance to the attraction. These findings confirmed insights into the visitor experience achieved via interviews conducted in the first phase of the research.

When asked if they felt that they were adequately briefed about appropriate environmental behaviour at the attraction 86.0% responded positively. Approximately ten percent of the sample felt that they had not been adequately briefed regarding behaviours that would mitigate the potentially adverse effects of their ecotourism experiences. This question received a non-response rate of only 3.2%. The general feeling reported by respondents was a situation in which most ecotourism operators bringing visitors into direct contact with the natural environment are providing valuable advice on environmental behaviour. The following question asked if respondents were made more aware of environmental issues at the attraction where they received the questionnaire. The majority, 87.1%, reported that they had been made more aware of environmental issues during their visitor experience.

Finally, respondents were invited to make recommendations that, if adopted, would make tourism attractions in New Zealand more environmentally friendly (Appendix F). This question provided a response rate of 64.6%. A total of 1023 open-ended comments were provided by 618 respondents (1.65 comments per respondent). Analysis of these qualitative responses was achieved by organising general comments into distinct categories. The most frequently cited response described the need for group numbers to be limited and for small tour group sizes to be enforced, particularly in fragile environments (n=129). Thereafter, a high number of comments reflected the themes established in answers to the previous question. A common issue identified by visitors (n=105), provided in 17.0% of responses, related to ‘public education’. A further 101 responses (16.3%) recommended that increased visitor awareness of the adverse environmental impacts of inappropriate visitor behaviour would contribute significantly to the achievement of this goal. The more frequently cited responses to this question are listed in Table 20. In addition to responses documented on Table 20, a number of visitors commented generally that ecotourism operators in New Zealand were ‘disturbing the environment as little as possible’ (n=17), and ‘fine the way they are’ (n=16).

Table 20. Respondents' views on making tourism attractions in New Zealand more environmentally friendly (fifteen most common responses)

General comments	Frequency	Percent
Smaller group numbers. Limit numbers on tours in fragile areas	129	20.9
Public education	105	17.0
Increase awareness of adverse visitors impacts	101	16.3
More rubbish bins and recycling opportunities	92	14.9
Better public transport, fuel/energy efficiency	54	8.7
Restrict development	36	5.8
Keep attractions as natural as possible	23	3.7
Promote activities that do not consume natural resources	22	3.6
Recycling/composting/limit packaging	20	3.2
Enforce rules to discourage littering	20	3.2
Be aware of the potential impacts of tourism	19	3.1
Keep it honest and less commercialized	17	2.8
Educate tourists, operators, local residents on sustainable tourism	16	2.6
Produce fewer brochures and pamphlets	11	1.8
Buildings/signage should blend with surrounding environments	10	1.6

CHAPTER 7: DISCUSSION

7.1 INTRODUCTION

A number of points of discussion emerge from this research. Much anecdotal evidence exists to suggest that the ecotourism sector is in the formative years of development in New Zealand. Numerous operations have come into existence in the last decade. Some of the more experienced operations involved in the ecotourism sector in New Zealand were initiated in the last ten years. Wight (1996) observes that the ecotourism sector in North America has developed rapidly in recent years. This comment describes the current situation in New Zealand. There is little doubt surrounding the potential for ecotourism development in New Zealand. The various operations that were included in the current research provide commercial visitor experiences, generate employment, and add economic value to the conservation estate and other natural areas/resources, while contributing to conservation and generally maintaining low impact experiences in natural areas. The current stage of development in New Zealand is one in which pursuit of the highest possible international reputation for ecotourism experiences needs to be fostered.

The Research Paper seeks to contribute to the development of ecotourism in New Zealand by identifying the following issues:

7.1.1 PROFESSIONALISM

Defining ecotourism in New Zealand is a high priority. This has been the focus of efforts by the New Zealand Tourism Industry Association Eco/Nature Tourism Working Party. Currently there is a lack of clarity, in both supply and demand, in terms of what ecotourism means in the New Zealand context - and what qualities of experience ecotourism operations provide. This research project involved an investigation of the academic and non-academic literature addressing this issue. It was found that the defining criteria that apply to ecotourism in the New Zealand context include: a strong commitment to visitor education, visitor interpretation programmes, active contributions made to conservation, collaboration with research institutions, low impact visitor operations, and, in most cases, local ownership and the employment of local people. Providing indigenous cultural perspectives on the natural environment, and raising awareness of relevant environmental issues are also central to a number of New Zealand ecotourism operations. TIANZ initiatives to develop quality standards for Eco/Nature Tourism and support for the Green Globe 21 accreditation programme will contribute to the professional development of the ecotourism sector. Further initiatives may include the development of a national ecotourism association and an accreditation scheme based on the individual rather than the operation, by which operators, guides and interpreters can be professionally benchmarked (see 7.1.6 below).

7.1.2 VISITOR PROFILING AND IMPACT RESEARCH

Profiling visitors to ecotourism operations and the experiences that they report is critical to the further development of the ecotourism sector. This report questions use of the term 'ecotourist' as it was found that visitors to ecotourism operations in New Zealand comprise a diverse collection of visitor types. The majority of study operations, including the more specialised, small scale operations, were found to receive a diversity of visitors that are described by Duffus and Dearden (1990) as 'specialists and generalists' or 'experts and novices'. The diversity of visitor types that are represented within the ecotourism market and the impacts associated with their visitor behaviour needs to be considered in future product development and research.

7.1.3 ENVIRONMENTAL PERFORMANCE

Environmental performance is a basis upon which many visitors assess the ecotourism experiences that they receive. This research confirms that ecotourism operations are generally high performing in this regard, but further opportunities exist here. The highest performing operators in terms of environmental performance generally receive unequivocal praise from visitors. Operations that directly provided visitor information on appropriate behaviour and visitor impact mitigation techniques to be adhered to by visitors were generally well received and effective. Visitor concerns that should be monitored in the future include proximity of tourists to wildlife, the numbers of tourists present at ecotourism sites at any one time, and the impacts arising from visitation, particularly the use of fossil fuels in transporting visitors.

7.1.4 ENVIRONMENTAL ISSUES AND ECOTOURISM

This research confirms that the environmental values of visitors to ecotourism operations in New Zealand are varied. Respondents reported favourably on the extent to which ecotourism operations in New Zealand challenge visitors to consider their environmental values. Operations need, where possible, to cater for varied audiences in terms of environmental interpretation. A significant proportion of respondents may be described as casual visitors for whom learning about conservation and environmental issues is a new experience. The capacity for ecotourism operations to stimulate interests in environmental issues and challenge the values held by visitors is seen as a defining quality of ecotourism in New Zealand.

7.1.5 VISITOR INTERPRETATION PROGRAMMES

The qualitative phase of this research project afforded the opportunity for the researchers to achieve detailed insights into effective interpretation programmes and visitor responses to them. Effective visitor interpretation was observed to contribute significantly to visitor on-site behaviour and to visitor satisfaction. Table 21 summarises aspects of best practice in visitor interpretation within the ecotourism sector. Introducing training schemes for interpreters (e.g., The Australian Nature/Ecotourism Accreditation Program) may be beneficial in achieving the highest standards of visitor interpretation in the ecotourism sector.

7.1.6 BEST PRACTICE ECOTOURISM

Best practice operations are identified and widely recognised in Australia. The relatively recent development of the ecotourism sector in New Zealand requires that successful operations are recognised and aspects of best practice are disseminated to assist further development of this sector. The aspects of best practice ecotourism that appear to apply particularly in the New Zealand context include nature conservation, visitor interpretation/education, visitor impact management, financial performance and overcoming constraints such as seasonality and operational capacity.

Table 21. General guidelines for visitor interpretation at ecotourism operations

<p>Non-specific focus of interpretation</p> <p>It emerged from this research that while many single wildlife species in New Zealand provide for compelling visitor interpretation programmes, a wider focus adds an important dimension to the visitor experience. Interpretation that draws attention to the flora and fauna with which focal species coexist was well received by visitors.</p>
<p>Ecological interpretation</p> <p>Ecological interpretation describes programmes that consider the intricacies and delicate inter-relationships that exist within an ecosystem/ecological area being visited by tourists. The macro or ecological focus of interpretation was found to offer much potential for ecotourism operations seeking to enhance visitor satisfaction. This is also considered by Boo (1991) and Orams (1995) to contribute to visitor awareness of ecological issues which can be translated into pro-environmental visitor behaviour.</p>
<p>Interpretation of human impacts on the environment</p> <p>Visitors appeared to greatly appreciate insights into human impacts when integrated into ecological interpretation. Human actions are inextricably integrated into ecological interpretation programmes with emphasis placed on past human actions that have shaped the ecosystems of areas that people visit today. Visitor attention may successfully be focused on the point that current human actions may influence and impact upon the ecosystem and that in entering an environment, visitors become a part of the ecosystem, albeit temporarily. Appropriate visitor behaviours are outlined effectively under these circumstances.</p>
<p>Conservation advocacy</p> <p>Conservation advocacy is a prominent and popular feature of successful ecotourism operations in New Zealand. This goal may be achieved using both direct interpretation techniques and printed materials. Various printed documents include DOC Conservation Management Strategies, brochures, information on national conservation projects (e.g., Restoring the Dawn Chorus and Reclaiming the Mainland) and Conservation News. These provide visitors with up-to-date information on conservation projects, volunteer conservation programmes, contact people and current environmental issues relating to New Zealand wildlife. These were observed to be the subject of great interest among many visitors to the study operations where such materials were available.</p>
<p>Environmental issues</p> <p>Challenging visitors to consider environmental issues and their responses to them is an aspect of visitor interpretation that is generally well received. This corresponds with what Orams (1995:90) refers to as “opportunities to act” in pursuit of pro-environmental outcomes. Ecotourism operations are well placed to foster pro-environmental behaviour via information relating to signing petitions, email contact details of government Ministers, conference/symposium announcements, reports and volunteer programmes, among others.</p>

CHAPTER 8: CONCLUSIONS AND RECOMMENDATIONS

8.1 CONCLUSIONS

- The ecotourism sector in New Zealand demonstrates diversity in terms of scope and scale. A total of 247 ecotourism operations were identified within a nature-based tourism industry which, in the latter part of 1999, comprised of approximately 479 operations where natural resources were a core business component. These were located via literature search, Internet search, and through contact with DOC and VIN centres.
- Visitor profiles revealed that the majority of visitors to ecotourism operations originated from New Zealand and the United Kingdom. The prevalence of visitors from Europe is a noteworthy finding. Visitors of all ages were represented within the sample. Respondents were generally well educated (67.5% tertiary educated).
- Visitors reported the propensity to visit multiple ecotourism operations during their travel itineraries. The dissemination of promotional materials via other ecotourism operations and the development of networks of ecotourism operations are important conclusions.
- In terms of environmental values, visitor profiles were found to be diverse with both experts and novices represented within the study sample (n=967). Ecocentric rather than anthropocentric values featured prominently in the New Zealand ecotourism visitor profile.
- Visitors to ecotourism operations hold three general views towards the natural environment, according to data generated employing the NEP scale. These may be labeled 'balance of nature', 'humans over nature' and 'limits to growth'.
- Visitors to ecotourism operations were generally mindful of a range of environmental issues, many of which are relevant to the ecotourism operations that they visit. Waste management, water pollution and loss of endangered species are issues about which visitors voiced general concerns. Ecotourism operators can respond to these concerns by ensuring that their businesses meet the highest possible standards of environmental performance.
- Visitors reported a high level of satisfaction with ecotourism operations that they experienced. In order to enhance visitor satisfaction respondents reported in favour of increasing awareness of the environment, and specific behaviour guidelines to mitigate visitor impacts.
- The pursuit of sustainable ecotourism visitor operations was considered to be served by limiting visitor numbers in fragile areas, promoting the environmental performance of the visitor operations (e.g., energy efficiency and recycling), enforcing rules relating to visitor behaviour and providing high quality visitor interpretation programmes.
- New Zealand's reputation as an ecotourism destination may be enhanced by ensuring that promotions such as the 100% Pure campaign are supported by the realities of environmental management in New Zealand. This requires wider commitment from communities and industries in nature/ecotourism destinations, by adopting pro-environmental practices, through adherence to legislation, and by supporting pro-environmental technologies and schemes such as Green Globe 21 and Zero Waste 2010. Reducing the use of plastic bags in supermarkets is one such measure that was widely cited by respondents during phase one of the research.
- The increasing diversity of ecotourism visitor interests and the potential to add value to the ecotourism experiences through product development and high quality visitor interpretation can be utilised to provide quality service within the ecotourism sector.

8.2 RECOMMENDATIONS

- The adoption of a definition and strategy for ecotourism in the New Zealand context is critical to the future development of this sector. It is recommended that defining criteria should include operator commitments to visitor education, interpretation of natural and cultural heritage, contributions to conservation, and reducing negative impacts. Defining criteria that are widely cited in the relevant literature, but were considered not to apply in New Zealand include being small scale visitor operations and set in environments that may be described as remote, natural, pristine, primeval, and/or wilderness. Numerous exceptions to these criteria exist in New Zealand. Ecotourism operations such as Mount Bruce National Wildlife Centre, Whale Watch Kaikoura Ltd., and Oamaru Blue Penguin Colony are not small-scale operations or situated in remote areas. They confirm that large-scale ecotourism operations that are accessible to visitors can contribute positively to the environment.
- The accreditation of ecotourism operations is recognised as an important step in assuring visitors of the operational standards achieved within the sector. This process should draw on the defining criteria established for the sector, and allow a high level of transparency regarding, for example, the environmental performance and support for conservation achieved by ecotourism operators.
- Environmental performance is viewed critically by many visitors to ecotourism operations. It is recommended that ecotourism operators seek to achieve the highest possible standards in environmental performance.
- In order to enhance visitor satisfaction ecotourism operators need to demonstrate a commitment to increasing awareness of adverse visitor impacts. Specific behaviour guidelines that are delivered to assist visitors to mitigate potential visitor impacts are generally viewed as an important aspect of an ecotourism operation.
- The tourism industry needs to continue to fulfill an advocacy role voicing support for sustainable industries and communities in New Zealand. This research confirms that the environmental legacy of New Zealand industries, and substandard environmental management at the community level affects the reputation of the tourism industry.
- Visitor operations management in the ecotourism sector should centre on enhancing the environment as the central focus of the visitor operation. This represents a paradigmatic shift from mitigating negative impacts, to maximising positive impacts. This can be achieved by fostering contributions to conservation through ecotourism. The current research suggests that this goal is viewed favourably by visitors to ecotourism operations, much to the benefit of the international reputation of New Zealand as an ecotourism destination.

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Appendix A: OBSERVATIONS GUIDELINE (PHASE ONE)

Operation name:	
Operation description:	
Date:	
Tour size:	
Tour time:	
Weather conditions:	
Observation category	Observations
Tourist type	
Transport mode	
Group size	
Clothing	
Equipment	
Language	
Demographic profile	
Tourist behaviour	
Tourist conduct	
Movement	
Questions/conversation	
Interest/disinterest	
Souvenirs	
Guide-tourist interaction	
Group dynamics	
Involvement of tour participants	
Post tour observations	
Tourist compliance	
Noise	
Remaining on walkways	
Photography	
Recommended distances observed	
Tourist impacts	
Soil impacts	
Vegetation impacts	
Water impacts	
Air impacts	
Wildlife disturbance	
Geological impacts	
Littering	

Observation category	Observations
Operation description	
Tour duration	
Experience description	
Information	
Content	
Codes of conduct/Guidelines	
Fixing expectation	
Educational content	
Printed materials provided	
Site use and development	
Design and materials	
Development of facilities	
Interpretation design	
Environmental modification	
Infrastructure	
Hardening	
Impacts	
Wildlife impacts	
Geological impacts	
Spatial Visual	
Energy efficiency	
Waste disposal	
Site aesthetics	
Vehicle use-impacts and emissions	
Noise (eg engine revolutions)	
Speed/directions of movement	
Other	

General comments and observations

Appendix B: SEMI-STRUCTURED INTERVIEW GUIDELINE (PHASE ONE)

This interview forms one part of a research project titled *Ecotourism and Environmental values in New Zealand*. It is being conducted by the Department of Tourism, University of Otago. Your responses will be treated in strict confidence.

1. Why did you decide to come on this tour today?

Why was that important to you?

2. How would you describe the experience that you have gained here today?

Was that the experience that you expected?

3. What did you like most about the experience you gained here today?

4. Do you think it is important for visitors to this site/tour to gain that experience?

Why?

5. What do you think is the main experience that this attraction is wanting visitors to gain?

Do you feel that you have gained that from your visit here today?

6. Have you gained an appreciation for any environmental issues from your visit here today?

7. Do you feel that you have gained an appreciation for the need for conservation of the New Zealand environment from your visit here today?

In what ways?

- 8. Do any environmental issues associated with your experience today cause you concern?

- 9. Are any environmental issues, in New Zealand or elsewhere, a particular concern to you?

- 10. Do you consciously or actively contribute to the protection of the environment in the course of your normal daily routine?

- 11. Have you consciously or actively contributed to the protection of the environment while travelling in New Zealand?

- 12. Your gender is (please delete one) Male Female
- 13. Your age is? _____
- 14. Your nationality is? _____
- 15. Do you belong to or support an environmental organisation? (please list)



Eco/nature Tourism Survey

This survey is part of a nation-wide study funded from the New Zealand Government's Public Good Science Fund and being carried out by the **Centre for Tourism** at the **University of Otago**. It aims to understand visitors' experiences and to create a profile of the visitors to ecotourism attractions. The resulting information will assist ecotourism operators with product development and marketing.

Some of the issues we are looking at are complex but it is important that we gain information on all aspects of your experience. To ensure you have the time we would appreciate it if you would fill in this survey after you have finished your visit. The questions concern your experience at the ecotourism attraction where you received the questionnaire.

The information gathered will be treated as strictly confidential. The data will only be used for the purpose of this research. No individual responses will be identified. The research findings will be available from September 30th 2001 at <http://www.commerce.otago.ac.nz/tourism/FRST/Ecotourism.htm>. When you have completed the questionnaire please return it directly to the researcher who gave it to you or mail it in the freepost envelope provided. Your help is greatly appreciated.

THANK YOU!

Dr James Higham
Project Leader
Ph: (03) 479-8500
jhigham@commerce.otago.ac.nz

Anna Carr (Junior Research Fellow)
Stephanie Gale (Research Assistant)
Ph: (03) 479-8057
acarr@commerce.otago.ac.nz

Date: _____

Location: _____

Section One: Your experience at this attraction

- 1) Is this your **first** visit to this attraction? Yes ₁ No ₂ How many previous visits have you made? _____
- 2) When did you decide to visit this attraction? _____
- 3) Where did you get information about this visitor attraction? (Tick as many responses as are applicable)

Department of Conservation (NZ) <input type="checkbox"/> ₁	Internet <input type="checkbox"/> ₈
Friends/Family <input type="checkbox"/> ₂	Newspaper/Magazine Article <input type="checkbox"/> ₉
Visitor Information Centre <input type="checkbox"/> ₃	Brochure <input type="checkbox"/> ₁₀
Travel Agent <input type="checkbox"/> ₄	People I have met while travelling <input type="checkbox"/> ₁₁
Guide books (name at bottom of page) <input type="checkbox"/> ₅	Accommodation (please name _____) <input type="checkbox"/> ₁₂
Television <input type="checkbox"/> ₆	Directly from the operator <input type="checkbox"/> ₁₃
Other <input type="checkbox"/> ₇ (please specify) _____	

4) What activities did you participate in during your visit to this attraction? (please tick more than one box if necessary)

- | | | | | | |
|--------------------------|--------------------------|---|-------------------------|--------------------------|----|
| Walking | <input type="checkbox"/> | 1 | Viewing wildlife | <input type="checkbox"/> | 8 |
| Four wheel driving | <input type="checkbox"/> | 2 | Sight seeing | <input type="checkbox"/> | 9 |
| Viewing displays | <input type="checkbox"/> | 3 | Photography | <input type="checkbox"/> | 10 |
| Visited a protected area | <input type="checkbox"/> | 4 | Boat trip/sailing | <input type="checkbox"/> | 11 |
| View slide show/film | <input type="checkbox"/> | 5 | A guided walk | <input type="checkbox"/> | 12 |
| Educational talk | <input type="checkbox"/> | 6 | Buying souvenirs/crafts | <input type="checkbox"/> | 13 |
| Other/s (please specify) | <input type="checkbox"/> | 7 | _____ | | |

5) Were you made more aware of environmental issues, at this attraction? Yes 1 No 2

6) Were you adequately briefed about appropriate environmental behaviour at this attraction? Yes 1 No 2

7) What aspects of your visit to this attraction did you enjoy most? _____

8) What aspects of your visit at this attraction did you enjoy least? _____

9) Would you recommend this attraction to others? Yes 1 No 2

a) Please explain: _____

10) **OVERALL** how satisfied were you with your experience at this attraction? (Circle one only)

Extremely Dissatisfied	Dissatisfied	Neutral	Satisfied	Extremely Satisfied
1.....	2.....	3.....	4.....	5.....
6.....	7.....	8.....	9.....	

Section Two: General

11) Have you been to other nature based tourism attractions in New Zealand? Yes 1 No 2

If yes, please name the last three that you can remember: _____

12) In your experience, do ecotourism operators in New Zealand meet your expectations in providing sustainable eco-experiences? Yes 1 No 2

Please explain your answer: _____

13) Are you aware of Tourism New Zealand's "100% Pure" marketing campaign? Yes 1 No 2

14) Do you think New Zealand's reputation as a clean and green destination is justified? Yes 1 No 2

Please explain your answer: _____

15) Please indicate the extent to which you agree/disagree with each of the following statements, using the scale provided. Circle one number only.

	Strongly Disagree		Neutral		Strongly agree				
a) The balance of nature is very delicate and easily upset.	1	.....	2	.....	3	.....	4	.....	5
b) We are approaching the limit of the number of people the earth can support.	1	.....	2	.....	3	.....	4	.....	5
c) To maintain a healthy economy, we will have to develop a 'steady state' economy where industrial growth is controlled.	1	.....	2	.....	3	.....	4	.....	5
d) Humans must live in harmony with nature in order to survive.	1	.....	2	.....	3	.....	4	.....	5
e) Humankind is severely abusing the environment.	1	.....	2	.....	3	.....	4	.....	5
f) When humans interfere with nature, it often produces disastrous results.	1	.....	2	.....	3	.....	4	.....	5
g) Plants and animals exist primarily to be used by humans.	1	.....	2	.....	3	.....	4	.....	5
h) Humans have the right to modify the natural environment to suit their needs.	1	.....	2	.....	3	.....	4	.....	5
i) Humans were created to rule over the rest of nature.	1	.....	2	.....	3	.....	4	.....	5
j) The earth has limited room and resources.	1	.....	2	.....	3	.....	4	.....	5
k) Humans need not adapt to the natural environment because they can remake it to suit their needs.	1	.....	2	.....	3	.....	4	.....	5
l) There are limits to growth beyond which our industrialised society cannot expand.	1	.....	2	.....	3	.....	4	.....	5

16) Please indicate your opinion about the following statements. Circle one number only.

	Never		Sometimes		Often		Always
a) I use aerosol sprays	1	.....	2	.....	3	.....	4
b) I actively recycle household items and waste at home	1	.....	2	.....	3	.....	4
c) I conserve energy at home (e.g.: energy efficient fridge)	1	.....	2	.....	3	.....	4
d) I use sustainable energy sources (e.g.: solar/hydro power)	1	.....	2	.....	3	.....	4
e) I collect and recycle used paper (e.g.: newspapers)	1	.....	2	.....	3	.....	4
f) I use phosphate free cleaning products	1	.....	2	.....	3	.....	4
g) I refuse excess packaging when I buy products	1	.....	2	.....	3	.....	4
h) I purchase organic produce when available	1	.....	2	.....	3	.....	4
i) I purchase liquids in glass bottles that can be recycled	1	.....	2	.....	3	.....	4
j) I reuse/recycle plastic bags	1	.....	2	.....	3	.....	4
k) I recycle aluminium cans	1	.....	2	.....	3	.....	4
l) I use public transportation instead of a car	1	.....	2	.....	3	.....	4
m) I cycle instead of using motorised transportation	1	.....	2	.....	3	.....	4
n) I use biodegradable packaging to plastic packaging	1	.....	2	.....	3	.....	4
o) I actively pursue nature based activities during leisure/holiday time	1	.....	2	.....	3	.....	4
p) I participate in conservation projects in my home area	1	.....	2	.....	3	.....	4
q) Environmental issues influence my vote in political elections	1	.....	2	.....	3	.....	4
r) I would be willing to contribute time, money or both to organisations that protect the environment	1	.....	2	.....	3	.....	4

17) What do you think could be done to make tourism attractions environmentally friendly?

Please specify: _____

- 18) Would you like to spend some of your free time in the next year increasing your understanding and appreciation of nature? Yes ₁ No ₂
- 19) Do you belong to any environmental or nature organisations, groups or clubs? Yes ₁ No ₂
 a) If yes, please specify _____
-
- 20) Are you concerned about human induced changes on the environment? Yes ₁ No ₂
 If 'Yes' please identify your two main environmental concerns:
 (a) _____ (b) _____

Section Three: About Yourself

- 21) What is your nationality? _____
- 22) Which country and region do you normally live in? Country: _____ Region: _____
- 23) Please indicate your age bracket.
- | | |
|--|---|
| 15 – 19..... <input type="checkbox"/> ₁ | 45 – 54..... <input type="checkbox"/> ₅ |
| 20 – 24..... <input type="checkbox"/> ₂ | 55 – 64..... <input type="checkbox"/> ₆ |
| 25 – 34..... <input type="checkbox"/> ₃ | 65 – 74 <input type="checkbox"/> ₇ |
| 35 – 44..... <input type="checkbox"/> ₄ | 75 + <input type="checkbox"/> ₈ |
- 24) Are you: Female ₁ Male ₂
- 25) How did you travel to this attraction? Guided tour group ₁ Public Transport ₂ Independently ₃
- 26) What is your current employment status?
- | | |
|--|---|
| Employed full time <input type="checkbox"/> ₁ | Student <input type="checkbox"/> ₅ |
| Employed part time..... <input type="checkbox"/> ₂ | Homemaker..... <input type="checkbox"/> ₆ |
| Self Employed <input type="checkbox"/> ₃ | Unemployed..... <input type="checkbox"/> ₇ |
| Retired <input type="checkbox"/> ₄ | Other <input type="checkbox"/> ₈ |
- 27) If applicable what is/was your usual occupation? _____
- 28) Please indicate your highest educational attainment.
- | | |
|--|--|
| Primary School <input type="checkbox"/> ₁ | Post graduate degree <input type="checkbox"/> ₄ |
| Secondary School <input type="checkbox"/> ₂ | Vocational/trade qualification <input type="checkbox"/> ₅ |
| Tertiary (University)..... <input type="checkbox"/> ₃ | Other <input type="checkbox"/> ₆ |

Thank you for your help with this survey. Please return it directly to the researcher who gave it to you or mail it in the freepost envelope provided.

**Appendix D: NAMES OF ADDITIONAL ECOTOURISM SITES AND
ATTRACTIONS VISITED BY MEMBERS OF THE SAMPLE**

Attractions	Count	Responses(%)	Cases(%)
Whale Watch Kaikoura Ltd.	92	5.9	12.5
Kapiti Island Alive	16	1.0	2.2
Dolphin Watch Marlborough	4	0.3	0.5
Catlins Nature Tours	1	0.1	0.1
Oamaru Blue Penguin Colony	23	1.5	3.1
Mt Bruce Nature Reserve	30	1.9	4.1
Royal Albatross Centre	132	8.5	17.9
Penguin Place	88	5.7	12.0
Miranda Shorebirds Centre	10	0.6	1.4
Fullers Dolphin Encounters	13	0.8	1.8
Kauri Country	13	0.8	1.8
Kiwi Dundee Adventures	1	0.1	0.1
Geysers/Mud Pools	68	4.4	9.2
Wildlife/Nature Reserves/Parks	52	3.4	7.1
Waitomo Caves	48	3.1	6.5
Gannet Colony	30	1.9	4.1
Rangitoto Island	6	0.4	0.8
Seal colonies	47	3.0	6.4
Waitakere Ranges	1	0.1	0.1
Tramping	21	1.4	2.9
Sub Antarctic Islands	3	0.2	0.4
White Heron Colony West Coast	11	0.7	1.5
Stewart Island	15	1.0	2.0
Okirito Estuary	7	0.5	1.0
Catlins	38	2.4	5.2
Nelson Lakes	3	0.2	0.4
Aquariums	21	1.4	2.9
Cape Palliser	2	0.1	0.3
DOC camping grounds and info centres	2	0.1	0.3
White Island	2	0.1	0.3
Ninety Mile Beach	7	0.5	1.0
Whangaroa Bay	1	0.1	0.1
Coastal kayaking	12	0.8	1.6
Shag Point/Oamaru Yellow Eyed Penguins	14	0.9	1.9
Kauri Museum	4	0.3	0.5
Coromandel Peninsula	4	0.3	0.5
Auckland Dolphin Discovery Tours	2	0.1	0.3
Little Barrier Island	4	0.3	0.5
Tiri Tiri Matangi Island	44	2.8	6.0
Fox and Franz Josef Glaciers	74	4.8	10.1
DOC summer programme trips	2	0.1	0.3
Moeraki Boulders	7	0.5	1.0
Akaroa Harbour Cruises	14	0.9	1.9
Kiwi Houses	20	1.3	2.7
North Island National Parks	138	8.9	18.8
South Island National Parks	151	9.7	20.5
Punakaiki/Pancake Rocks	28	1.8	3.8
Conservation islands	7	0.5	1.0
Turangi trout hatchery	4	0.3	0.5
Fiordland	184	11.9	25.0
Zoos	5	0.3	0.7
Geo Tours Auckland	1	0.1	0.1
Kaikoura Dolphin/Seal Swim	9	0.6	1.2
Ocean Wings Kaikoura	1	0.1	0.1
Dolphin Swim	9	0.6	1.2
Guided nature walks (general)	2	0.1	0.3
Bay of Islands	3	0.2	0.4
Antarctic Cruise	1	0.1	0.1
Total responses	1552	100.0	210.9

736 valid cases

**Appendix E: COMMENTS RELATING TO THE ENVIRONMENTAL
PERFORMANCE OF ECOTOURISM OPERATORS AS
PERCEIVED BY VISITORS¹**

Comments	Frequency	Percent	Valid Percent
Operators produce too many brochures	1	0.1	0.1
Tourism places pressure on the attraction	6	0.6	0.6
Not much environmental protection	1	0.1	0.1
Guide had a very good knowledge/good explanations	29	3.0	3.0
They try to educate the tourist about the attraction	51	5.3	5.3
Very well organised, informative & interesting	50	5.2	5.2
Had no expectation	13	1.3	1.4
NZ committed to preserving natural beauty/conservation	19	2.0	2.0
Some do not provide value for money	2	0.2	0.2
Attractions do not prevent damage but they do limit it	4	0.4	0.4
Not enough recycling done in NZ	2	0.2	0.2
Difficult to say as lack of comparison	34	3.5	3.6
Concern over bikes and ATVs on beaches	2	0.2	0.2
Not intrusive - flora/fauna come first	51	5.3	5.3
Some are better than others	10	1.0	1.0
DOC is very active and provides very good information	4	0.4	0.4
They can only work with what is left and do well with it	3	0.3	0.3
Supply more information on the impacts of tourism	4	0.4	0.4
They provide lots of information	22	2.3	2.3
Demonstrate appreciation of surrounding environment	28	2.9	2.9
Most activities are too expensive	3	0.3	0.3
Most aware of the impacts of over-utilisation	17	1.8	1.8
NZ compares well with other countries	3	0.3	0.3
Safe	2	0.2	0.2
Good value for money	1	0.1	0.1
Operators vary greatly	14	1.4	1.5
Something for everyone	8	0.8	0.8
Driven by the need to stay viable	9	0.9	0.9
Not enough good publicity to increase awareness	1	0.1	0.1
Low awareness about endangered NZ birds	1	0.1	0.1
Safety messages over the top	2	0.2	0.2
They do a good job	4	0.4	0.4
Not truly eco friendly eg diesel powered boats	5	0.5	0.5
Need for more funding to improve current situation	5	0.5	0.5
More detailed information should be available	5	0.5	0.5
Could be more vocal in public arena	2	0.2	0.2
Want to show wildlife but protect it too	5	0.5	0.5
Not sure	18	1.9	1.9
Seem to be	5	0.5	0.5
National parks and wilderness areas	2	0.2	0.2
It was really good	7	0.7	0.7
Some operators are turning things into a circus	4	0.4	0.4
Ecotourism means different things to different operators	1	0.1	0.1
Other	17	1.8	1.8
Total	955	98.8	100.0

1. Includes all Eco/Nature tourism operators experienced by visitors during their New Zealand travels.

**Appendix F: VISITOR COMMENTS RELATING TO MAKING TOURISM
ATTRACTIVE IN NEW ZEALAND MORE
ENVIRONMENTALLY FRIENDLY**

Comment	Frequency	Responses (%)	Cases (%)
Smaller group numbers/limit numbers	129	12.6	20.9
More rubbish bins/recycling opportunities	92	9.0	14.0
Restrict development	36	3.5	5.8
Noise restrictions	12	1.2	1.9
No smoking	5	0.5	0.8
Fine the way they are	16	1.6	2.6
Public education	105	10.3	17.0
Use recyclable products for services	19	1.9	3.1
Better public transport/fuel/energy efficiency	54	5.3	8.7
Impose a levy to promote environment	14	1.4	2.3
Increase awareness of impacts of behaviour	101	9.9	16.3
Promote a passion for the environment	11	1.1	1.8
Keep up with current measures	13	1.3	2.1
Be more aware of the impact of tourism	19	1.9	3.1
Increase awareness of what is available	10	1.0	1.6
Promote activities that do not use up	22	2.2	3.6
Natural resources	1	0.1	0.2
Bring people closer to nature	5	0.5	0.8
Wheel chair access where possible	13	1.3	2.1
Good walking tracks	8	0.8	1.3
Fewer contradictions - be ecofriendly	11	1.1	1.8
Make more recycling bins available	12	1.2	1.9
Set aside wildlife/wilderness only areas	1	0.1	0.2
Use volunteer guides for information	14	1.4	2.3
Friendly knowledgeable staff	20	2.0	3.2
Enforce rules more to discourage littering	5	0.5	0.8
Need to separate waste for recycling	11	1.1	1.8
Produce less brochures and pamphlets	1	0.1	0.2
Don't put parking spaces in at every area	17	1.7	2.8
Disturb the environment as little as possible	8	0.8	1.3
Eco toilets	13	1.3	2.1
Reduce over packaging/plastic bag use	15	1.5	2.4
Provide recycling/composting facilities	8	0.8	1.3
Advertise as being an environmentally friendly location	1	0.1	0.2
Human waste should be managed better	23	2.2	3.7
Keep attractions as natural as possible	13	1.3	2.1
Government financial support	16	1.6	2.6
Educate tourists, operators and local communities	5	0.5	0.8
Make attractions less expensive	9	0.9	1.5
Promote attractions that encourage protection	1	0.1	0.2
Stop tour buses going on Ninety Mile Beach	1	0.1	0.2
Energy efficiency no automatic doors	3	0.3	0.5
Let operators govern the tourism levels	3	0.3	0.5
Follow the reuse/reduce/recycle system	6	0.6	1.0
Encourage native tree planting	3	0.3	0.5
More litter bins	1	0.1	0.2
Encourage Buy NZ instead of imported products	2	0.2	0.3
Increase the tax on aviation fuel	8	0.8	1.3
More guided tours to restrict behaviour	10	1.0	1.6
Buildings/signage should blend with environment	17	1.7	2.8
Keeping it honest/less commercialised	1	0.1	0.2
Increase use of telescopes	5	0.5	0.8
Eradicate pests	2	0.2	0.3
Focus on a learning experience	8	0.8	1.3
Better toilet facilities	10	1.0	1.6
No views/ideas	4	0.4	0.6

More shade trees	3	0.3	0.5
Organic food	3	0.3	0.5
Determine carrying capacity	1	0.1	0.2
Solar power	1	0.1	0.2
Encourage bicycle use	8	0.8	1.3
DOC approved/conform to set environmental stands	2	0.2	0.3
More/better signs	6	0.6	1.0
A balanced approach	5	0.5	0.8
Strengthen planning laws	12	0.1	0.2
Maintain wonderful public transportation	1	0.1	0.2
Can't do much as going there causes damages	1	0.1	0.2
Ban bubblegum	1	0.1	0.2
General countryside needs improvement	1	0.1	0.2
Protect environment - tourism comes second!	5	0.5	0.8
Have things for kids	1	0.1	0.2
Air NZ could provide more information on these	1	0.1	0.2
Ban cameras altogether	1	0.1	0.2
Ensure visitors behave appropriately	1	0.1	0.2
Encourage volunteer work at attractions	1	0.1	0.2
Spread impact through increasing no of sites	1	0.1	0.2
Impose a levy to go to conservation	4	0.4	0.6
Ban jet skis	1	0.1	0.2
<hr/>			
Total responses	1023	100.0	165.5
<hr/>			
618 valid cases			

