

**International Tourists' Environmental Orientation and
Willingness to Pay for Conservation:
Implications for New Zealand's Tourism and
Conservation Policy**

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ABSTRACT

Through books such as Carson's *Silent Spring* (1962), environmental disasters such as Chernobyl (1989) and increased scientific evidence of climate change and its consequences (IPCC 2007, UNWTO and UNEP 2008) people have become more concerned about human impacts on the environment. This growing environmental awareness and concern could affect choices towards tourism products and services for example, travel by air. Forsyth et al. (2007) write that environmentally conscious tourists may perceive aviation as increasingly negative and might consider flying less or even boycotting air travel. This attitude would have serious consequences for long distance destinations such as New Zealand. Some airlines have already responded to the more environmentally conscious consumer by launching carbon offsetting schemes. Becken (2004) and Fairweather et al. (2005) have found that some tourists are already willing to pay a voluntary fee to reduce carbon impacts created by their personal travel.

Generally, tourism products and services are increasingly scrutinised and demand is rising for sustainable forms such as ecotourism (Fennell 2003). Ecotourism relies on quality natural environments often found in national parks. According to New Zealand's Ministry of Tourism (2007) over 30 percent of all international tourists visited at least one park while on holiday. Through increased interest in nature experiences pressure rises for park managers to effectively administer the growing visitor numbers. Managers find themselves in the difficult position to protect and care for the natural environment to manage visitor numbers in an equitable, just and effective way.

This research studies tourists' environmental values, attitudes, behaviours and willingness to pay for carbon offsetting services and national park entrance fees. To meet the thesis aim, primary data was obtained using an on-site survey at four visitor centres located in the South Island of New Zealand. Overall, 385 of all 400 questionnaires were fully answered, resulting in a response rate of 95%. Data was

described and analysed and the main findings were compared with previous research. There was evidence for the existence of a pro-environmental orientated tourist in New Zealand, generally supporting findings of Higham and Carr (2002), Lück (2003) and Fairweather et al. (2005).

A strong interest in nature experiences was eminent. Over 80 percent had visited at least one national park while on holiday and were also willing to pay an entrance fee of NZ \$ 10.00 (mean). Most indicated to engage in pro-environmental behaviours. However, only 20 percent of all 385 tourists belonged to an environmental group indicating that a general ideological self-placement does not necessarily result in pro-environmental behaviour. German tourists showed stronger pro-environmental attitudes than respondents of other nationalities which generally supports Lück's (2003) findings. Furthermore, over 60 percent of tourists viewed climate change risks as being negative. Interestingly, over 50 percent were willing to pay a voluntary fee for carbon offsetting schemes.

While an environmental orientation amongst international tourists has been acknowledged, New Zealand's tourism managers should increasingly address environmental standards to meet the expectations of a 'clean and green' image. With regard to national park management in New Zealand it is recommended to re-address a discussion on entrance fees. It should be acknowledged that tourists are willing to pay NZ\$ 10.00 if money would be directly invested into environmental protection projects.

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ABBREVIATIONS

AC	Awareness of Consequences
BMU	Bundesministerium fuer Umwelt, Naturschutz und Reaktorsicherheit (Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, Germany)
CV	Contingent Valuation
CC	Climate Change
CVM	Contingent Valuation Method
DSP	Dominant Social Paradigm
DOC	Department of Conservation
EO	Environmental Orientation
EV	Environmental Values
EA	Environmental Attitudes
EFT's	Environmentally Friendly Tourists
EB	Environmental Behaviour
GHG	Greenhouse Gas
IPCC	Intergovernmental Panel on Climate Change
IVS	International Visitor Survey
NZTB	New Zealand Tourism Board
NZ	New Zealand
NAV	Natural Area Value
NABU	Naturschutz Bund (Nature Conservation Society, Germany)
NP	National Park
NEP	New Environmental Paradigm
RMA	Resource Management Act
RSPB	Royal Society for the Protection of Birds
TNZ	Tourism New Zealand

UNEP	United Nations Environmental Programme
UNWTO	United Nations World Tourism Organization
WCED	World Commission on Environment and Development
MfE	Ministry of Environment
	Ministry of Tourism
WTP	Willingness to Pay
WWF	World Wide Fund for Nature

1 INTRODUCTION

This study is concerned with the environmental orientation (values, attitudes, behaviour) of international tourists and their willingness to pay for conservation (carbon offsetting schemes and national park entrance fees). According to Ajzen and Fishbein's (1975) 'Theory of Planned Behaviour,' environmental values and attitudes may influence general behaviour intentions, such as willingness to pay, and subsequently actual behaviour. Kotchen and Reiling (2000) suggest that environmental values and attitudes significantly influence people's willingness to pay. Numerous authors argue that the way tourists view and relate to the physical environment may influence their choices with respect to tourism (Dunlap and Heffernan 1975, Fennell 2003). Environmentally orientated tourists may perceive aviation as negative due to its impact on climate change (Forsyth et al. 2007). Some already aim to fly less, or boycott air travel (Pleumarom 2007). Others aim to limit greenhouse gas emissions (GHG) by financially contributing to carbon offsetting services (Gössling et al. 2006, Becken 2007).

1.1 Research Context

Through increased environmental awareness and influences, such as the Brundtland Commission (1983), sustainable tourism forms have become popular. Fennell (2003), Starmer-Smith (2004) and Sharpley (2006) suggest that even though ecotourism can be regarded as a relatively small submarket, demand is growing at a significant rate. Environmentally orientated tourists, characterised for example by a strong interest in nature experiences and conservation, increasingly demand sustainable tourism forms which aim to minimise environmental, cultural and climate impacts (Weaver 2000, Weaver 2001, Fennell 2003). New Zealand's national parks and tourism 'icons', such as Fiordland, Mt. Cook, Tongariro or Abel Tasman are increasingly marketed to draw in the environmentally oriented international tourists seeking nature experiences (Page and Thorn 2002). People often seek inspiration and enjoyment from experiencing mountains, forests, lakes, rivers and other natural features (Eagles and McCool 2002, Bushell and Eagles 2007). The Ministry of Tourism (2007) suggests

that at least 40 percent of all international tourists visited more than one national park while on holiday. While demand for nature experiences rises, pressure increases to effectively manage visitors (Drumm 2007, Eagles and Mc Cool 2007). The Department of Conservation is in the difficult position to effectively manage visitors while guaranteeing free access to parks and protected areas.

The free access is a deeply cherished part and cornerstone of the New Zealand 'way of life' (DOC 2005). However, some argue that charging fees is both necessary and equitable to effectively manage protected areas (Kerr 1998). As no research was found researching people's willingness to pay this study makes an important contribution to the current literature on national park management in New Zealand.

1.2 Research Problem

Literature suggests that New Zealand's international tourists', especially German's, support pro-environmental views (Higham and Carr 2002, Lück 2003, Dickey 2003, Fairweather et al. 2005, Sandve 2007). This research investigates if respondents from different nationalities vary in their environmental attitudes and if they would be willing to financially contribute towards the environment (carbon offsetting schemes, national park entrance fees). Similar to Kuckartz et al. (2006), Becken (2004) and Becken et al. (2007) this thesis addresses tourists' climate change awareness and willingness to financially contribute to carbon offsetting schemes.

This thesis focuses on international tourists as they are crucial for New Zealand's economy; international visitors spent an estimated NZ\$ 6.1 billion in 2007 (Ministry of Tourism 2008). How environmentally orientated tourists are, and how they perceive New Zealand in this context, will consequently have an impact on word of mouth and future demand for tourism products. Negative perceptions of aviation may influence tourists' decisions to travel less far or even stay at home (Hamilton et al. 2005, Pleumarom 2007, Forsyth et al. 2007). To gain insight into tourists' environmental orientation and willingness to pay for conservation, primary data was

obtained. Overall, 385 questionnaires were completed by international tourists from 34 different countries at four visitor centres on New Zealand's South Island in February/March 2008.

1.3 Research Aim and Objectives

This thesis is based on a sample of international tourists and a sub-sample of German tourists. The thesis objective was to research tourists' environmental orientation (values, attitudes including climate change awareness, behaviours) and their willingness to pay towards the environment. The German sub-sample was chosen to compare results to the study by Kuckartz et al. (2006). The authors researched the environmental orientation of the general German population, including people's climate change awareness and willingness to pay for carbon offsetting schemes. The thesis objectives are stated as follows:

1. present information about tourists' perception of, expectations and satisfaction with New Zealand
2. measure tourists' values, environmental attitudes (climate change awareness) and behaviour
3. establish findings towards tourists' willingness to pay
 - a. for carbon offsetting schemes
 - b. for entrance fees to national parks
4. compare results between nationalities

Tourists' perception, expectation and satisfaction with New Zealand were assessed to establish a profile of the sample studied. Respondents were asked to indicate their agreement with 11 developed statements on a five point Likert-scale ranging from 1= strongly disagree, 0= neutral to 5= strongly agree. Tourists' values were measured using a short version of Schwartz' (1986) value scale. The scale has previously been proven useful by De Groot and Steg (2007). Environmental attitudes were assessed using Dunlap and Van Liere's (1978) New Environmental Paradigm (NEP) scale. The

scale had been successfully employed by Higham and Carr (2002), Lück (2003), Dickey (2003) Fairweather et al. (2005) and Sandve (2007). It was seen as useful to research tourists' climate change awareness in the context of environmental attitudes. Respondents were asked to indicate in how far they perceived climate change as a threat to themselves and their family in the future on a five point Likert-scale from 1= negative, 3= neutral and 5= positive. Pro-environmental behaviours were assessed using an open-ended question. In congruence with Higham and Carr (2002), Lück (2003) and Fairweather et al. (2005) respondents were asked if they belonged to any environmental group. A 'Contingent Valuation Method' (CVM) was used to assess tourists' 'Willingness to Pay' (WTP) for offsetting schemes. Respondents were asked to indicate a maximum amount they would pay for entrance fees to New Zealand's national parks.

1.4 Research Approach

Due to time, money and personnel restrictions of a master's thesis, a quantitative method was used. Quantitative methods are common within tourism studies and have been proven useful for value, attitude and behaviour research (Higham 1999, Russel 2001, Higham and Carr 2002, Dickey 2003, Lück 2003, Jennings 2005, Sandve 2007). Quantitative methods have also been successfully used while researching respondents' willingness to pay for national park entrance fees (Lee 1997, Machado 2001, Lee and Mjelde 2007) and carbon offsetting schemes (Kuckartz et al. 2006, Becken 2007).

1.5 Organisation of the Thesis

The thesis is divided into six chapters including an introduction, a literature review consisting of two chapters, an outline of the methods followed by the analysis of primary data and the discussion of results. The research aims and objectives are concluded upon in the last chapter, followed by recommendations. The relationship between tourism and the environment is outlined in the second chapter. As a pressing theme to date, the interrelation of tourism and climate change is

highlighted. Sustainable tourism forms emerged from the realisation of tourism impacts on society, the environment and climate change. Therefore, the chapter also reviews literature on sustainable tourism and ecotourism. In the context of visitor management in New Zealand's national parks, the issue of charging entrance fees is addressed. The third chapter reviews literatures on environmentally orientated consumers and tourists, environmental value, attitude and behaviour theories are outlined and measurement techniques addressed. This chapter also reviews literature in the context of the CVM including tourists' WTP. Chapter four presents the method used within this study. An overview is provided, outlining the different approaches in tourism research. The quantitative approach is justified, the design, sampling technique and survey distribution are clarified and a summary is provided at the end of this chapter. Chapter five presents the results obtained through the on-site visitor survey. Results are extensively discussed and linked to previous research. Chapter six concludes this research in the light of the thesis aims and objectives. Key results are summarised in relation to the wider literature and implications and limitations are discussed. At the end of this thesis recommendations are provided and concluding remarks are made.

2 TOURISM AND THE ENVIRONMENT

2.1 Introduction

Chapter two outlines the relationship between tourism and the environment. As a relatively new field of research, tourism's interrelation with climate change is highlighted, providing examples of how both influence each other. The perspectives of tourism stakeholders and tourists on climate change are outlined. Voluntary carbon offsetting schemes are addressed in the context of sustainable tourism. To gain an insight into tourist's willingness to pay for entrance fees to national parks, this chapter briefly addresses visitor management in New Zealand's national parks.

2.2 Tourism and the Environment

Although there has been abundant research on the definition of 'tourism', (Echtner and Jamal 1997, Holden 2005, Hall 2005, Tribe 2005) confusion often still remains. Jafari (1977, p.6) defines it as 'the study of man away from his usual habitat, of the industry that responds to his needs, and of the impacts that both he and the industry have on the host's socio-cultural, economic and physical environments'. This definition is appropriate in the context of this thesis, as it addresses not only the mobility of tourists and the tourism industry, but also the impacts that both have on the economy, culture and the environment. In addition, Holden's (2000) system approach is seen as useful, as it points out the complexity of tourism. The industry is thereby influenced by different factors, such as government policy, entrepreneurial activity, human and natural resources. Multiple concerns and priorities need to be acknowledged when dealing with tourism and the environment.

Within the tourism literature, few authors define the term 'natural environment' or 'environment'. Butler (2000, p.337) emphasises the ambiguous meaning of terms as he broadly states: 'the environment, whatever that means, is clearly an essential part of this 'world''. Norton (1996) notes, that the terms 'nature' and 'environment' are social constructions of 'western' societies often associated with national parks and

zoos as representations. Liu (2003) points out that a better understanding of the characteristics of the environment is needed, especially in the context of sustainable tourism. More clarifying definitions of the 'environment' and 'natural environment' can be found within the resource management literature. Barrow (2006, p.40) defines the environment as: 'the sum of the conditions within which organisms live. It is the result of interaction between non-living (a-biotic)-physical and chemical-and living (biotic) components'. The 'natural environment' can be seen as contrasting with the 'modified environment' and is defined as a situation where there has been little human interference.

The relationship between tourism and the environment is often viewed as one of 'mutual dependency' or even of 'symbiotic' character (Shaw and Williams 2000) and has been extensively researched (Bramwell et al. 1998, Butler 2000, Holden 2000, Shaw and Williams 2000, Beaumont 2001, Gössling 2002, Liu 2003, Hall and Higham 2005). Tourism can be seen as a resource industry with the natural environment as its very foundation (Liu 2003). Tourism relies on the physical environment for natural resources and without a pristine environment, most destinations may not exist (Holden 2000). The quality of natural surroundings has been found to add to the appeal of a destination and is often seen as a key component of tourism (Bramwell et al. 1998, Holden 2000). However, the assumption that tourism relies on the natural environment varies with its diverse forms. A generalisation should be avoided and reference should be given to specific types of tourism, or certain circumstances and places (Hall and Higham 2005). Butler (2000) argues that some tourism forms, such as heritage tourism, have little relationship with the natural environment. However, ecotourism and nature-based tourism have been found to be almost entirely dependent on it.

A key aspect within tourism as an industry and academic field of research is the industry's impact on the environment (Gössling 2002). Tourism can have positive impacts resulting from conservation, increased environmental knowledge, awareness

and appreciation, as much as its economic benefits (Fennell 2003, Diamantis 2004, Bushell and Eagles 2007). On the other hand, many tourism forms often not only draw upon the natural environment, but often misuse it (Butler 2000, Hall and Higham 2005, Gössling and Hall 2006). Indeed, many researchers have found negative impacts of tourism affecting communities, residents, wildlife and natural resources (Hunter and Green 1995, Butler 2000, Gössling 2002). More recently, the relationship between tourism and climate change has been addressed. Many authors support the argument that tourism is an important course for climate change (Hamilton and Tol 2000, Becken 2004, Hall 2005, Hamilton et al. 2005, Peeters et al. 2006, Gössling and Hall 2006, Becken and Hay 2007, Gössling et al. 2008).

2.3 Tourism and Climate Change

Discussions on climate change are frequently found in the media (Lubbadeh 2007, Linke 2007) and academic research (Gössling 2002, Richardson and Loomis 2004, Hamilton 2004, Uyarra et al. 2005, Hall and Higham 2005, Craig-Smith and Ruhanen in Hall 2005, Hamilton et al. 2005, Hall and Boyd 2005, Bigano, Hamilton and Tol 2006, Peeters et al. 2006, Becken 2007, IPCC 2007, Jaworowski 2007, Meehl et al. in Solomon et al. 2007, Midgley et al. in Reid et al. 2007, Gössling et al. 2008). However, its definition, extent, course and implications often remain unclear. As an influential body, the Intergovernmental Panel on Climate Change (IPCC) (2008) defines climate change as directly, or indirectly, attributed to human activity which alters the composition of the global atmosphere. Climate change can be observed in addition to natural climate variability and can be regarded as a man-made phenomenon.

However, some academics still question climate change as a consequence of human activity. Some point out, that it occurs naturally within the earth history and cannot be regarded as atypical. Jaworowski (2007, p.38) for example, harshly criticises the IPCC for 'uttering its mantra of catastrophe about man-made global warming'. He further concludes: 'not man, but nature rules the climate. The Kyoto Protocol and the IPCC reports, [...] can do nothing for the climate. This, we shall learn in the near

future' (Jaworowski 2007, p.51). This doomed outlook, however, is a singularity and cannot be regarded as a scientific consent. Many authors agree that climate change is driven principally by the increased concentration of greenhouse gases (GHG) in the Earth's atmosphere (Gössling 2002, Hall and Higham 2005, Peeters et al. 2006, Becken 2007, IPCC 2007, Gössling et al. 2008). The IPCC (2007) found that GHG have increased by 70 percent between 1970 and 2004 and research predicts that emissions will continue to grow if no significant changes in policy and practice are made. Becken and Hay (2007) indicate that even if major and successful attempts are made to reduce emissions, they will still rise during the next decades. At the same time, significant climate change impacts, such as the rise of sea-levels, increasing floods, droughts and extreme weather patterns have been identified (Meehl et al. in Solomon et al. 2007). Friends of the Earth International (2007) point out those negative impacts already affect different parts of the world. The United Nations Environmental Program (UNEP) (2008) identifies climate change as one of the most critical global challenges of our times.

It is well established that climate conditions influence various aspects of tourism (Hall and Higham 2005, Becken and Hay 2007). Numerous researchers (Gössling 2000, Hall 2000, Hall and Higham 2005, Hamilton et al. 2005, Peeters et al. 2006, Becken 2007, Becken and Hay 2007, Gössling et al. 2008) and some environmental groups (World Wide Fund of Nature 1999, Friends of the Earth International 2007) have addressed the interrelation between tourism and climate change. However, Bramwell and Lane (2008) state that there is still pressing need for much more research. De Freitas (2001) points out that most of the current research is based on assumptions rather than empirical data. Uncertainties still exist regarding the magnitude of consequences for the tourism industry (Craig-Smith and Ruhanen in Hall 2005). An increasing number of publications assess climate change consequences for nations (Craig-Smith and Ruhanen in Hall 2005, Hamilton et al. 2005), destinations (Richardson and Loomis 2004) particular sectors of tourism such as ski tourism (Bürki et al. 2003) and nature-based tourism (Hall and Boyd 2005,

Uyarra et al. 2005, Reid et al. 2007). Climate change has also been discussed in relation to destination choice (Hamilton 2004, Hamilton et al. 2005, Bigano, Hamilton and Tol 2006) and tourism growth (Hall and Higham 2005). Hamilton et al. (2005) suggest that climate change will increasingly affect destination choice and long haul travel. Using a simulation model to estimate tourist flow, the authors suggest that a change of the global climate would lead to a gradual shift of tourist destinations towards the poles and mountains. Hamilton et al. (2005) write that the current dominant group, consisting mainly of western- international tourists, would travel less far, or even stay at home, leading to a decrease in international tourist numbers. Similarly, Hall and Higham (2005) suggest that long haul travel may become more expensive as industry regulations aim to reduce greenhouse gas emissions. Increased travel costs can hinder overall tourism growth. However, Bigano, Hamilton and Tol (2006) paint a more optimistic picture. Climate change may have positive or negative influences, but tourism activity is unlikely to change into decline. Diversification and adaptation to climate change are believed to secure the industry's future.

In relation to nature based tourism, Hall and Boyd (2005) project that climate change related loss of species and change of ecosystems will negatively affect this form of tourism. Uyarra et al. (2005) researched the context between tourists' destination choice, environmental features and climate change for the Caribbean Islands. Their findings suggest that climate change related alteration of environmental features may have negative impacts on travel to these islands. Midgley et al. (in Reid et al. 2007) estimated potential climate change effects on Namibia's ecotourism sector. The authors' state, that climate change induced acidification could threaten the important and lucrative tourism sector. Any impacts on biodiversity and natural ecosystems due to climate change will consequently have negative impacts on travel demand.

2.3.1 Tourism Contribution to Climate Change

Although most research in tourism focuses on the effects of climate change for the industry, it has been found that tourism in turn contributes towards it (Peeters et al. 2006, Becken and Hay 2007, Gössling et al. 2008). The Intergovernmental Panel on Climate Change (IPCC) assessed the effects of aircrafts on climate and atmospheric ozone in their special report 'Aviation and the Global Atmosphere' (Penner et al. 1999). It was found that aircrafts emit GHG, such as carbon dioxide (CO₂), ozone (O₃) and methane (CH₄) directly into the upper troposphere and lower stratosphere where they are found to impact the atmospheric composition. The emitted gases were found to trigger the formation of condensation trails that may cause increasing cirrus cloudiness which is found to have an influence on the overall warming of the atmosphere.

Penner et al. (1999), Becken and Hay (2007), Gössling and Peeters (2007) and Gössling et al. (2008) congruently state that tourism related aviation is one of the key factors influencing climate change through its contribution to greenhouse gas (GHG) emissions. Worldwide air-travel is suggested to contribute between 3.5 percent (Penner et al. 1999), 4.6 percent (Gössling and Peeters 2007) and 5 percent (UNWTO and UNEP 2008) to overall anthropogenic GHG emissions. Within the New Zealand context Smith and Rodger (2007) found that New Zealand's emissions are much higher than the world average due to the contribution of tourism. The authors calculated that the CO₂ emissions from 2.4 million international visitors' return air flights in 2005 were an estimated 7.9 million tonnes, which was seen as roughly equal to the emissions from all the country's coal, gas and oil-fired oil generation. This was stated to equate for 10 percent of the country's Kyoto-liable greenhouse gas emissions in 2005.

Although tourism's contribution to climate change has been found to be significant, no globally valid laws, regulations or policies exist to date to address the issue. The

industry is currently not included in the Kyoto Protocol. Nevertheless, tourism's contribution towards climate change has been acknowledged by many tourism officials. In their recently published report, 'Climate Change and Tourism- Responding to Global Challenges' the UNWTO and UNEP (2008) state, that climate change will become an essential issue affecting tourism development and management. Recent UNWTO conferences (Davos 2007, Bali 2007) discussed options to mitigate GHG. It was concluded that action is required within the different sectors of the tourism industry. Adaptation is necessary for changing climate conditions, and existing and new technologies need to be applied to improve energy efficiency and secure financial resources.

The IPCC Fourth Assessment 'Summary for Policymakers' (2007) suggests different mitigation potentials for the tourism industry. Aviation related greenhouse gas emissions can be reduced through fuel efficiency and traffic management. Tourism businesses can mitigate their greenhouse gas emissions through efficient management including staff training, reward systems, regular feedback and documentation of existing practice. Furthermore, consumer behaviour can contribute to climate change mitigation through changes in lifestyles and consumption patterns (IPCC 2007). Similarly, the UNWTO and UNEP (2008) state that business and consumer awareness of climate change is crucial for a sustainable tourism industry in the future.

2.3.2 Climate Change Awareness

Despite the fact that global climate change is obviously an issue for the industry, research suggests, that few businesses and tourists seem to fully comprehend its relationship. Regarding the industry's perceptions of climate change Hall (2006) researched the attitudes and behaviour of businesses in New Zealand. He found that climate change was regarded as potentially significant in the future, but in the short-term ranked well below other business concerns. In the case of Finnish nature-based

tourism entrepreneurs, Saarinen and Tervo (2006) similarly found that although generally aware of the issue of climate change, half of the interviewees did not believe that the phenomenon actually existed, or would influence the region's tourism industry in the future. Climate change was seen as a minor threat or not as a threat at all.

Gössling et al. (2006) quantitatively interviewed leisure tourists in Zanzibar regarding their climate change perceptions. Findings suggest, that few tourists realise the relationship between tourism and climate change. Becken (2007) supports this after qualitatively interviewing tourists in New Zealand. Very little awareness was found regarding aviation and its contribution to climate change. It appears that despite its importance, climate change and its relation to tourism is not fully acknowledged by tourism businesses or tourists. Nevertheless, researchers have also argued that tourists generally have become more environmentally aware and the demand for environmentally sound practice within the tourism industry has risen (Sharpley 2006). The industry realises the possible impacts for tourism growth and many airlines accommodate to the environmentally conscious consumer market by launching voluntary carbon offsetting schemes (Air New Zealand, Lufthansa) (Taiyab 2005, Gössling et al. 2007).

2.3.3 Carbon Offsetting Schemes

Authors suggest that the future credibility of sustainable tourism is linked to the effort and ways of mitigating GHG emissions. Various attempts are made to reduce emissions especially within the aviation sector. An increasing number of companies and non-profit organisations now offer voluntary compensation schemes which aim to capture carbon emissions and reduce GHG concentration in the atmosphere (Becken 2004, Hart et al. 2004, Taiyab 2005, Peeters et al. 2006, Kuckartz et al. 2006, Gössling et al. 2007). Through these schemes, concerned tourists are able to reduce their aviation related GHG emissions by financially supporting tree planting schemes or renewable energy projects. Carbon offsetting schemes seem to become

increasingly popular and people's reasons for support range from personal values and attitudes towards the environment to governmental sustainable management approaches (Gössling et al. 2007).

Hart et al. (2004) described existing carbon offsetting schemes and discussed voluntary mechanisms and regulatory models. The authors conclude that GHG offsets in form of forest sinks could be useful in the context of New Zealand's tourism industry. Tree planting schemes may restore native forests, create tourist attractions and increase the appeal of the country's '100% Pure' identity. Becken (2004) explored tourists and 'tourism experts' perceptions of climate change and forest carbon sinks. Tourists in Australia and New Zealand were asked if they would be willing to participate in tree-planting schemes to offset their emissions. Results suggest that even though over half of the respondents were sceptical towards the link between climate change and tourism, 48 percent of all tourists were willing to plant a tree. Tourism experts viewed climate change as a potential threat for the industry, but its fossil fuel consumption was not necessarily seen as a contributor to climate change. Fairweather et al. (2005) asked tourists in New Zealand if they would be willing to pay \$15.00 to offset emissions via a tree planting scheme. Results indicate, that 43 percent would want to participate, 25 percent rejected and 32 percent were unsure. Gössling et al. (2007) examined voluntary carbon offsetting schemes and found substantial differences between organisations in terms of emission calculation, compensation measures, pricing, evaluation processes and company structures which lead to consequences for the efficiency and credibility of offsetting schemes. Clarity and regulations are required to guarantee efficiency and credibility within offsetting schemes.

The mitigation of aviation related GHG emissions through voluntary carbon offsetting services is essentially related to the aim of reaching a more sustainable tourism industry (Gössling et al. 2007). A pressing need exists for sustainable tourism management and environmental management within destinations. Good

management practices can secure tourism activity, manage resources in a way that increases its quality, and preserve ecosystems for the future (Huybers 2002). Influenced by the World Commission on Environment and Development's (WCED) report, 'Our Common Future,' (1987) and its definition of sustainable development, many realise that social, economic and environmental aspects need to be considered to develop and sustain tourism activities in a socially equitable and environmentally responsible way (Bramwell et al. 1998, Welford et al. 1999, Butler 2000, Shaw and Williams 2000, Huybers and Bennet 2002, Higham and Carr 2002, Gössling and Peeters 2007, UNEP and UNWTO 2008).

2.4 Sustainable Tourism

Although the WCED definition of sustainable development has been criticised for being too vague, not offering mechanisms to successfully implement the approach (Solow 1993) and being contradictory (Castro 2004) it nevertheless had a major influence on the establishment of sustainable tourism forms (Bramwell et al. 1998, Welford et al. 1999, Swarbrooke and Horner 1999, Butler 2000, UNWTO 2008). Butler (2000) writes that in order for tourism to be sustainable, it needs to be developed and maintained in a manner and scale which allows tourism activity to be viable in the future. Tourism activities need to be planned with an outlook on future generations and should not degrade or alter the environment in which it exists. The UNWTO (2008) states, that, to reach a more sustainable tourism future, careful planning and management is required which meets a quadruple bottom line of environmental, social, economic and climate responsiveness.

Butler (2000) argues that the most significant progress in planning and management has been made through the establishment of concepts such as sustainable development and ecotourism. Sustainable tourism is often mentioned in congruence with ecotourism as both aim to minimise the industries environmental impacts (Weaver 2000, Weaver 2001, Fennell 2003, Diamantis 2004). While creating awareness amongst tourists, ecotourism has been found to incorporate sustainability goals

(Diamantis 2006). Björk (2000) emphasises the popularity of ecotourism as essentially related to the 'greening' of markets, increasing knowledge of the fragility of the environment, better informed managers, and the recognition that there is a close relationship between good ecology and good economy. As a special interest form, or a sub-component of nature-based tourism, ecotourism should incorporate educative and sustainability components (Blamey 2000), be based on ethical values (e.g. codes of conduct) and strengthen the appreciation and dedication to conservation issues (Higham and Carr 2002, Fennell 2003). Bramwell (1998) notes that sustainable tourism forms may improve the industry's image, lower resource consumption and provide increased opportunities for new products and services which may appeal to environmentally aware consumers.

Nevertheless, Gössling and Hall (2006) argue that the word 'sustainable' is a standard term which is frequently thrown into policy and planning documents. It is further suggested that the industry cannot claim to be moral; even though sustainable tourism has been intensely researched and adapted, negative environmental impacts continue. Authors such as Wall (1997) suggest that many ecotourism forms have not been found to be sustainable. Holden (2000) points out that sustainable tourism can represent various meanings to different people and Farsari and Prastacos (2003) state that the definition and implementation of sustainable tourism still remains vague which is seen as the concept's greatest weakness. With regards to the ecotourism sector in New Zealand, Dickey (2005) highlights problems such as the lack of clarity with the definition of ecotourism, inappropriate use of terms and a lack of specific management. Liu (2003, p.459) points out that the debate on sustainable tourism and ecotourism is: 'patchy, disjointed and often flawed with false assumptions and arguments'. She further argues that ecotourism is mainly promoted for marketing reasons, to further diversify tourism products and to attract more tourists or increase their length of stay. Ecotourism has further been promoted in relation to destinations with locational disadvantages which hinder mass tourism. Wall (1997) notes, that the term

sustainable tourism is used to promote a 'clean and green' image which is often little more than an attention-grabber. Huybers (2002, p.7) goes further to criticise ecotourism as 'a type of tourism that seeks to capitalise on opportunities arising from increased environmental awareness among tourists who are looking for an informative and educational experience'.

It appears that the practicability of sustainable tourism challenges academics and practitioners (Saarinen 2006). Butler (1997) and Welford et al. (1999) state that the concept often remains rhetoric and guidance, regulations and control are needed to reach sustainability within the industry. At the same time, tourist education, campaigning activities and taxation are required to influence consumer choice. On the other hand, sustainable tourism forms have been found to support conservation practice and foster environmental education through nature experiences, which are often related to protected areas and national parks (Krüger 2005, Bushell and Eagles 2007). Eagles and Mc Cool (2002) indicate that through the rise of ecotourism pressure rises on parks and protected areas.

2.4.1 Sustainable Tourism and National Parks

Reinius and Fredman (2007) found that protection status matters to tourists. According to Eagles and Mc Cool (2002) and Bushell and Eagles (2007) labels such as 'National Park', 'World Heritage Site', 'Biosphere Reserve' have significant brand identity and are increasingly used to market destinations. New Zealand can be regarded as a prime example as it is extensively promoted as a nature-tourism destination through its official '100% Pure' campaign (Ministry of the Environment 2001, Shaw 2000, Morgan et al. 2002). National Parks such as Tongariro, Mt Cook or Fiordland are extensively 'touristified' to add to the destinations overall attractiveness (Page and Thorn 2002).

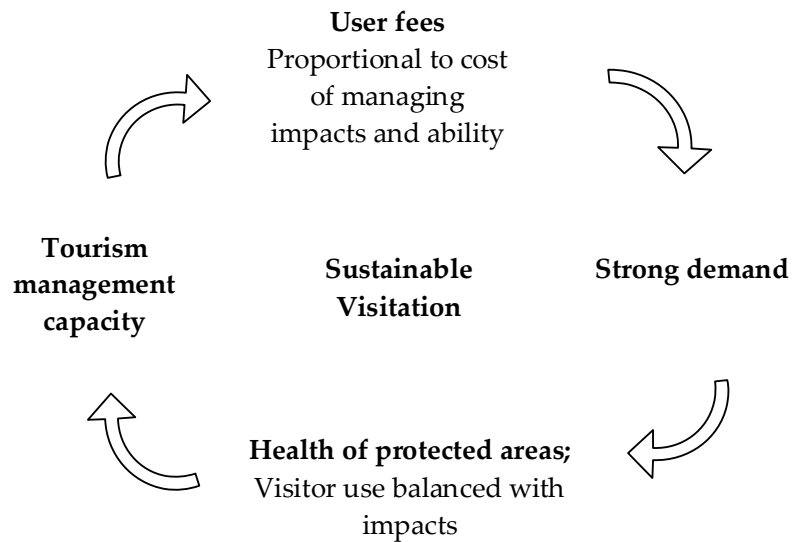
While national parks offer many tourism opportunities through their natural assets (wildlife, mountains, forests), numerous authors argue that parks could benefit from

a sustainably managed tourism industry. Benefits include revenue generation and the ability to educate tourists, raising awareness and appreciation (Eagles and McCool 2002, DOC 2003, Bushell and Eagles 2007). However, it has frequently been noted that tourism practice often puts increased pressure on natural resources (Page and Thorn 2002). In case of New Zealand's national parks, rising visitor numbers lead to increased environmental impacts such as track erosion, disturbance of wildlife, noise, toilet waste and rubbish and increased fire risks (DOC Visitor Strategy 2003). The Department of Conservation (DOC) Visitor Strategy (2003, p.7) points out that 'the risk of detrimental visitor impacts occurring is increasing with increase in visitor numbers (mainly international visitors), commercial activity and an expanding range of visitor activities'. In this context, Eagles and McCool (2002) point out that careful, effective and lawful visitor management is required to guarantee tourism activity and the existence of quality natural resources. Butler (2000) and Huybers and Bennett (2002) advocate methods to minimise environmental impacts of tourism including regulations, zoning, design and layout and modification of user behaviour. Visitor behaviour can be altered through information, rationing (e.g. entry, activity), codes of conduct and pricing. Butler (2000) emphasises that quantitative restrictions (e.g. visitor quotas) and national park entrance fees could be useful. On the other hand, he reminds, that not all approaches are acceptable in all situations. In areas where access and use has traditionally been free and unrestricted, the adoption of fees may be difficult, if not impossible.

However, Drumm (2007) emphasises that with rising visitor numbers it becomes increasingly important to employ adequate pricing mechanisms. As national parks are often under-priced, and mainly paid for by tax-payers, different types of fees (concessions, licences and permits, leases and rent fees, user fees and entrance fees) may ensure that tourism contributes to visitor management, nature conservation and the funding of protected area operations. The author suggests that appropriate fee systems (type and level of fees) mainly depend on management objectives and constraints and visitor price responsiveness which can be assessed using visitor

surveys. Drumm (2007) advocates the ‘Virtuous Cycle of Tourism User Fees’ (Figure 2.1).

Figure 2.1 Virtuous cycle of tourism user fees



(Adapted from Drumm 2007, p.208)

A positive feedback loop between user fees and demand should be achieved to balance visitor use and impacts, and to create a sustainable visitation that guarantees the health of protected areas. However, protected area management can be challenging through conflicts between economic development and resource protection. Prato and Fagre (2005) indicate that decisions in resource management are highly influenced by values and attitudes of stakeholders; therefore, the understanding of these values is crucial when dealing with policies. The management of national parks may be associated with utilitarian, intrinsic, spiritual and ethical values. Utilitarian values imply that protected areas have value because they satisfy human needs; they can be classified in use and non-use values. Intrinsic values are related to an ecocentric view that implies that equal rights should be given to all living things regardless of their benefits for humans. Spiritual and ethical values emphasise the interconnection of humans and nature.

2.4.2 Visitor Management in National Parks (New Zealand)

The Department of Conservation manages protected areas under the Resource Management Act (RMA) (1991). The Department of Conservation provides visitor services, education on wildlife and conservation, safe visitor facilities and advice on personal safety of visitors. Within the Conservation Act (1987) and Visitor Strategy (2005) emphasis is placed on the intrinsic value of conservation lands. However, it was also agreed upon the co-existence of conservation, visitor recreation and 'tourism'. Lands with high value for conservation and recreation have been visited by both New Zealand and overseas visitors for more than a century. Today, a rapid growth of tourist numbers with relatively low back-country skills put pressure on areas that are primarily managed for conservation (Visitor Strategy 2003). According to the International Visitor Survey (Ministry of Tourism 2007) more than 660,000 visitors visited at least one national park within the year ending March 2007. Tourism New Zealand (2007) predicts a further annual tourism growth from international markets by 4 percent.

Although the Ministry commits to a sustainable development approach where tourism should be managed in a way that meets the quadruple bottom line of climate, social, economic and environmental responsiveness (Tourism Strategy 2015), it is likely that environmental impacts rise. In this context, tension increases between area conservation and visitor use. Visitor impacts are already felt on the 'Great Walks' like the 'Routeburn Track' and in key scenic areas like 'Milford Sound' (Visitor Strategy 2003). Milford Sound receives over 1 million visitors per year, and problems occur especially during the peak season (December-March), where traffic congestion and noise are increasingly noticed. Furthermore, sensitive alpine environments are found to be significantly damaged (Fiordland National Park Management Plan 2007). As a result of increasing visitor impacts, the Fiordland National Management Plan (2007, p.4) calls for an urgent need to improve visitor monitoring and information: 'there is an urgent requirement to improve information bases and monitoring of visitor use and trends in Fiordland national park to assist in

management forecasts and proactive responses to identified use trends'. Negative impacts of visitor use have also been found to affect the environmental quality of the Mt. Cook national park. Its Management Plan (2004, p.28) indicates, that it may '[...] be necessary to manage the method or amount of access to avoid compromising the park's natural, historic and cultural resources and to maintain the range of visitor experiences, such as the enjoyment, inspiration, solitude or experiencing the natural quiet of an area.' It is further suggested that in certain circumstances, the closure of areas may be necessary. The Department of Conservation uses a complex system of concessions, user fees and permits while managing national park visitors (General Policy for National Parks 2005). However, even though some fees are charged, domestic and international tourists are able to visit national parks and protected areas without entry charges. The free access of New Zealand's parks goes back to National Parks Act (1952) where it was first established, and again confirmed in the National Parks Act (1980).

In congruence with these acts DOC's Visitor Strategy (2003, p.3) emphasises the free access while stating: 'the opportunity to freely visit forests and coastlines, mountains and rivers, historic sites and attractive landscapes, is a deeply cherished part of the New Zealand way of life'. Traditionally, free access may have not jeopardised the environmental quality of national parks due to relatively small visitor numbers. This however, has changed today and is likely to continue in the near future. It now appears that managers are facing the challenge to guarantee free access, while maintaining the parks' character and ensuring that its resources remain for future generations. It is debatable if an alteration of access methods may be necessary in the near future. As the Ministry of Tourism New Zealand commit to a sustainable tourism approach (Tourism Strategy 2015), the question arises, if charging user fees can be considered as a realistic, feasible, equitable and sustainable management option. Charging entrance fees is a highly debatable topic (Kerr 1999). It is therefore surprising, that no research was found that assesses international tourists' willingness to pay for such fees. Overall, the question remains, if tourists would

generally be willing to financially contribute to national park management and conservation.

2.5 Summary

The interrelation of tourism, the environment and climate change was addressed. It was found that tourism contributes to climate change, especially via aviation related carbon dioxide emissions. The tourism industry will likely be affected by a changing climate. Environmentally orientated tourists already consider flying less, or boycotting air travel. In this context, increasing numbers of companies and organisations offer carbon offsetting services. Concerned tourists can offset their emissions by financially supporting tree planting schemes, or renewable energy projects. The effort and ways of mitigating GHG emissions can be associated with the goal of reaching a more sustainable tourism industry. The definition of sustainable tourism emerged subsequent to the approach of sustainable development, first defined at the Brundtland Commission (1983). For tourism to be sustainable it should meet a quadruple bottom line of environmental, social, economical and climate change responsiveness. As a special interest form, ecotourism is often mentioned in congruence with sustainable tourism as it advocates the minimisation of environmental impacts and aims to foster conservation efforts.

Through Tourism New Zealand's '100% Pure' campaign, New Zealand can be imagined as an ecotourism destination. Portrays of unspoilt and remote nature may act as a pull-factor to choose New Zealand as a destination. Increasing tourist numbers are looking for nature experience often related to national parks. As tourist numbers increase and environmental impacts felt, the pressure rises to effectively manage visitor numbers in an equitable and fair way. While the current status quo is free entry to New Zealand's national parks, the question arises, if entrance fees could be used to monitor and manage visitors, and to create funds for conservation.

Table 2.1 Summary of research papers reviewed (Part One)

Authors reviewed	Synopsis	Relation to thesis
Carson 1962, Club of Rome 1972, IPCC 2007	- concern about human impact on environment	- importance of research topic, background
Saarinen 2006, Gössling et al. 2008	- concern rises of tourism impact on environment - impact on environment hits back on tourism future viability	- background
Welford et al. 1999, Butler 2000, Shaw 2000, Huybers 2002, Higham and Carr 2002, Bramwell and Allertop 2003, Gössling 2007, UNWTO 2008	- realisation within academia and industry that tourism needs to be socially equitable and environmentally responsible (sustainable)	- link tourism to sustainable practice idea
WCED 1983, WCED 1987, Ministry of Environment (New Zealand) 2008, Ministry of Tourism (New Zealand) 2008	- definition and approach of sustainable development and its use in NZ	- understanding of sustainable tourism background - acknowledgement of its use within New Zealand
Solow 1993, Norgaard 1994, Redclift 1989, Castro 2004	- critics of WECD's sustainable development approach	- con of WECD sustainable development approach - objectivity, sustainable approach not regard as ultimate tool
Swarbrooke 1989, Bramwell et al. 1998, Welford et al. 1999, Butler 2000, Holden 2000, UNWTO 2007	- sustainable tourism emerged from sustainable development approach - sustainable tourism definition - focus minimal environmental impact - unclear how sustainable tourism shall be achieved - commitment to sustainable approach (UNWTO) - term still unclear as meaning differs according to actor	- background of sustainable tourism - defining approach - complexity; difficulties in implementation - subjectivity of term
Wall 1997, Butler 1997, Welford et al. 1999, Huybers 2002, Liu 2003, Saarinen 2006, Sharpley 2006, Gössling 2007	- debate unclear and based on false assumptions - term used for marketing reasons - still challenge to define and implement - term rhetoric without guidance - both supply and demand actions can realise sustainability - sustainable approach often associated with Eco and Nature-tourism	- criticism of sustainable tourism debate - examine issue of practicability - acknowledge link between eco and nature tourism and sustainable tourism approach
Diamantis 2004, Goodwin 1996, Blamey 1997, Ziffer 1989 in Fennell 2003, Hawkes and Williams 1993, Wallace and Pierce 1996 in Higham and Carr 2002, Fennell 2003	- ecotourism as special interest tourism - educative, sustainable, ethical, dedicated to conservation	- define ecotourism, nature tourism, link with sustainable tourism approach, key characteristics - subjectivity of term

Authors reviewed	Synopsis	Relation to thesis
Liu 2003, Huybers 2002, Wall 199, UNWTO 2008	<ul style="list-style-type: none"> - term mainly used for promotion, diversification of tourism products, attract more tourist, increase length of stay, in location not suitable for mass tourism - capitalises environmental awareness - sustainable ecotourism needs to meet quadruple bottom line, careful planned 	<ul style="list-style-type: none"> - criticism of ecotourism - discrepancy between ecotourism and sustainable concept prevails - importance of responsible planning practice - complexity of planning situation for sustainability
Bramwell and Lane 1993 Butler 2000, Bramwell and Allertorp 2001, Gössling 2007, Goodall 1995 in Bramwell 1998, Huybers 2002	<ul style="list-style-type: none"> - sustainable tourism management - sustainable development and ecotourism significant concepts for tourism - sustainable concept makes sense to tourism industry, economically - environmental quality as pull factor four tourists 	<ul style="list-style-type: none"> - definition of sustainable tourism management - linking concept of sustainable tourism management and tourism system approach - importance of environmental management
Mowforth and Munt 1998, Butler 2000, Huybers 2002	<ul style="list-style-type: none"> - e.g. impact assessment, carrying capacity, area protection - methods to minimize tourism impact, e.g. visitor fees to national parks 	<ul style="list-style-type: none"> - environmental management specific - link management option of visitor fees to thesis
Shaw 2000, DOC 2003, Higham and Carr 2002, Dickey 2005, Warren and Taylor 1994, Pearson 1998	<ul style="list-style-type: none"> - accreditations as pull factor (e.g. for New Zealand) - tourists drawn to NZ environment - ecotourism relatively new to NZ, problems - increased pressure on environment through tourism; impact assessment and visitor management needed 	<ul style="list-style-type: none"> - importance of national parks for NZ tourism - background NZ 'green' tourism - acknowledge small magnitude of ecotourism - acknowledge pressure on NZ environment
Reinius and Fredman 2007, Eagles 2001	<ul style="list-style-type: none"> - brand identity, pull factor for destination choice - Tongariro and Fiordland draw cards 	<ul style="list-style-type: none"> - importance of national parks
Ministry of Tourism IVS 2007, DOC Visitor Strategy 2003, RMA 1991	<ul style="list-style-type: none"> - increased pressure on National Parks - DOC's difficult role in providing visitor service and protect environment 	<ul style="list-style-type: none"> - comprehend magnitude of national park tourism in NZ - understand management role of DOC
DOC, NP Management Plan 2007 (Fiordland), NP Management Plan 2004 (Mt Cook), Cessford <i>et al.</i> in Arnberger <i>et al.</i> 2002	<ul style="list-style-type: none"> - Fiordland national park, visitor numbers, increasing pressure predicted for future, urgent need for visitor monitoring and information - Mt Cook national park, closure might be necessary at times, different methods for visitor monitoring 	<ul style="list-style-type: none"> - national park specific, background - exemplification of problem: increased pressure from tourism - visitor monitoring examples
Higham and Carr 2002, DOC, Visitor Strategy 2003	<ul style="list-style-type: none"> - free excess as way of life, difficult management position of DOC 	<ul style="list-style-type: none"> - bring forward issue of free visitor excess to national parks, charging visitor fees as option for sustainable management?

3 ENVIRONMENTALLY ORIENTATED TOURISTS

3.1 Introduction

Following from the review of literature on tourism, the environment and climate change, sustainable tourism and national parks, chapter three evaluates research on environmentally orientated tourists. Furthermore, research on tourists' willingness to pay for entrance fees to national parks and voluntary carbon offsets is reviewed. Through the rise of environmental consciousness and concern about humans' impact on the environment, consumers increasingly question products and services in regards to their environmental impact and efforts to minimise these. Along with other factors, people's values and attitudes play an essential role in the perception and evaluation of products. Consumer decisions are not only a question of money, but increasingly seen as a reflection of oneself (Schlegelmilch et al. 1996).

3.2 Environmentally Aware Tourists

Attempts have been made to establish knowledge about the environmentally aware or 'green' consumer (Schlegelmilch et al. 1996, Butler 2000, Miller 2003). Butler (2000) notes, that people's attitudes towards the environment have changed greatly over time, and Schlegelmilch et al. (1996) suggest considerable increase in environmental consciousness over the last decade. The UNWTO (2001) forecasts that the public awareness of environmental issues is likely to grow through increased media reporting of worldwide environmental problems, such as climate change.

Environmental awareness and concern can have significant effects on consumer behaviour. Miller (2003) suggests that people already make decisions based on environmental quality for day-to-day products. Schlegelmilch et al. (1996) point out that those consumers who exhibit high levels of environmental consciousness make more 'green' purchasing decisions than those who exhibit low levels. Wight (1993) states, that through people's desire to contribute to more sustainable forms of consumerism, the 'green' product market is growing at a significant rate. This, in

turn, has an impact on the demand for apparently environmental friendly tourism forms, such as ecotourism (Schlegelmilch et al. 1996). Some predict that demand for ecotourism will grow three times faster than other tourism forms (Starmer-Smith 2004, Sharpley 2006).

It is established that high levels of environmental awareness can result in 'greener' purchasing behaviour which can have positive consequences for environmentally friendly tourism forms, such as ecotourism (Schlegelmilch et al. 1996, Butler 2000, Sharpley 2006). On the other hand, knowledge and concern about environmental issues can result in less demand for travel and tourism. Some environmentally conscious tourists already question air travel and its contribution to global GHG emissions. Pleumarom (2007) states that people already consider flying less with some claiming air-travel should be stopped altogether. Forsyth et al. (2007, p.23) points out: 'consumer may become hostile to air transport, may perceive it as a rogue industry, and boycott air travel'. Tourists may seek to limit GHG emissions and view air travel as irresponsible. Hence, awareness of environmental consequences could lead to a decrease of air travel with significant impacts on long-haul destination, such as Australia or New Zealand (Forsyth et al. 2007).

3.3 Tourists' Values, Environmental Attitudes and Behaviour

Research has focussed on demographics (Uysal et al. 1994, Luzar et al. 1995, Harper 2001) and psychographics (Zografos and Alicroft 2007) in order to understand tourists' environmental orientation. Increased efforts have been made to research tourists' values and attitudes as they are known to influence behaviour intention and actual behaviour (Ajzen and Fishbein 1975). The importance of peoples' values and attitudes within the context of consumer behaviour has also long been acknowledged within the marketing literature (Vinson et al. 1977). Numerous authors have researched tourists' values and attitudes in order to assess the relation between values, traveller type and travel style (Madrigal 1995), tourists' motivation, values and perception (Ateljevic 2000) and the relation of personal values to travel decisions

(Pitts and Woodside 1986). Many have looked more specifically at tourists' environmental values (Akama 1996, Blamey and Braithwaite 1997, Tarrant and Green 1999, Higham et al. 2001, Wearing et al. 2002, Higham and Carr 2002, Lück 2003, Fairweather et al. 2005, Lee and Moscardo 2005, Winter 2007, Zografos and Alicroft 2007).

Winter (2007) provides information about specific values of natural area visitors. The author measured tourists' intrinsic, non-use, use, spiritual, and recreation values and found that the measurement of intrinsic values can assist in identifying visitors who are likely to be concerned with the natural areas they visit and who would also want to support conservation strategies. The author suggests that the tourism industry is able to communicate environmental values. This is seen as especially important as many people only come in contact with nature through leisure activities.

Higham et al. (2001) and Higham and Carr (2002) researched domestic and international tourists' environmental values and attitudes in relation to ecotourism experiences in New Zealand. Respondents were asked about environmental group membership and environmental issues of concern to them. Membership to an environmental group was considered as an important indicator to assess tourists' environmental interest. Results suggest, that over half (58.6%) of all interviewed respondents were a member of an environmental organisation. Greenpeace, WWF and RSPB were the three most mentioned. With regards to respondents' concern about environmental issues, most (87.6%) seemed concerned about environmental changes associated with pollution, deforestation, ozone depletion and global warming. The majority of interviewees (61.8%) mentioned that ecotourism encounters had challenged them to consider environmental issues. The authors conclude that ecotourism experiences may be effective in influencing people's environmental beliefs and opinions. Tourism experiences which incorporate ecotourism criteria, such as environmental education, can be seen as helpful to spark a long-term environmental interest. Lück (2003) investigated the environmental

values, attitudes and behaviour of tourists at dolphin tours in New Zealand and explored in how far those relate to their tourism experience. Results suggest that respondents generally supported pro-environmental values and attitudes. However, a discrepancy was found between values and attitudes and stated behaviour. Even though respondents apparently cared for the environment, only 16 percent were a member of an environmental organisation such as WWF (9.1%), Greenpeace (8.6%) or Sierra Club (2.0%).

Fairweather et al. (2005) linked environmental values and attitudes of international tourists in New Zealand to their response to 'Eco-labels' and suggest that evidence can be found for visitors with bio-centric views. Bio-centric visitors tend to lower incomes, university education and to be either European, or New Zealander. The authors suggest that international tourists in New Zealand may well be pro-environmental in their outlook and that more than 67 percent of all 290 interviewed tourists agreed with New Zealand's 'clean and green' image. Despite the interesting results, it is unfortunate that international and domestic visitors were included, even though the title suggests that only international visitors were sampled. Support was found for the existence of environmentally orientated tourists in New Zealand (Higham and Carr 2002, Lück 2003, Fairweather et al. 2005). However, tourists who express pro-environmental values and attitudes do not necessarily engage in pro-environmental behaviours (Diekman and Preisendorfer 1998, Lück 2003). Nevertheless, most researchers agree that the knowledge of apparent environmental values, attitudes and behaviours of tourists can aid decision making in tourism and resource management (Higham and Carr 2002, Lück 2003, Fairweather et al. 2005, Winter 2007).

3.3.1 Defining Environmental Values

Several authors explored the complexity of human values within the social psychology literature (Kluckhohn 1951, Rokeach 1968, Schwartz and Bilsky 1987, Schwartz 1992, Schwartz 1994). Rokeach (1968, p.159) first defined 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'. According to this definition, values may be understood as central to a person's cognitive system, which have influence on someone's behaviour that may lead to the achievement of long-term goals. Schwartz and Bilsky (1987) found, that in much of the literature, five key dimensions are reoccurring. Values are thereby:

1. concepts or beliefs
2. related to desirable end states or behaviours
3. going beyond specific situations
4. guidance for selection or evaluation of behaviours and events
5. ordered by relative importance

Crick-Furman and Prentice (2000) argue that personal values are contextual and situational. Values are not seen as constant but adapted to different environments and contexts according to the immediate goals and objectives of the individual. This finding is especially important within the tourism context as values may be different when expressed at home, or on holiday (Crick-Furman and Prentice 2000). Schultz et al. (2004) understand environmental values as values that have been found to correlate with specific environmental attitudes or concerns. O'Brien and Gurrier (1995 in Gurrier et al. 1995, xiv) define environmental values as 'green' values, or 'values that propose or support action towards environmental care and responsibility'. Crick-Furman and Prentice (2000) suggest, that how people depict an environment, and what they value within it, varies according to their immediate aims and objectives within a particular context. Dutcher et al. (2007) hypothesise, that environmental values draw from a sense of connectivity with nature. Overall, values have been found to be centrally held, guide actions and judgements that may lead to specific long-term goals. Values are understood to go beyond specific situations and be rated according to their importance in a person's life (Kluckhohn 1951, Rokeach 1968, Schwartz and Bilsky 1987, Schwartz 1992, Schwartz 1994). The theory and

understanding of human values is complex and an inclusive discussion would go beyond this thesis. An overview of definitions, and critical discussions of what constitutes values, can be found in Rohan (2000).

3.3.2 Defining Environmental Attitudes

Attitudes can be understood as: 'a psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour' (Eagly and Chaiken 1993 in Albarracin et al. 2005, p.4). Albarracin et al. (2005, p.5) state: 'the term attitudes is reserved for evaluative tendencies, which can both be inferred from and have an influence on beliefs, affect, and overt behaviours; [...] affects, beliefs, and behaviours are seen as interacting with attitudes rather than as being their parts'. As a specific form of attitudes, Weigel (1983) refers to 'environmental attitudes' as a representation of values about the environment that influences one's behaviour towards it. Within environmental attitude research, two broad ideological approaches can be found, namely anthropocentrism and ecocentrism. Anthropocentrism generally views human as the centre of creation and nature at mercy of human development.

Ecocentrism, by contrast, views humans as an interacting part of nature and emphasises a strong sense of respect for nature in its own right. These two ideological approaches embrace different ideas on values. Anthropocentrism is generally associated with instrumental values related to the environment where the natural environment is seen as provider of resources, material and aesthetics. Humans are in control of nature, and problems are solved through technological development; intrinsic values are only granted to human beings. Ecocentrism, by contrast, emphasises the interconnectedness of humans and nature. Intrinsic value is applied to individual living organisms, species and entire biotic communities. Anthropocentrism and ecocentrism can be seen as two opposing poles on a spectrum of attitudes towards the environment (Dunlap and Van Liere 1978, Lundmark 2007).

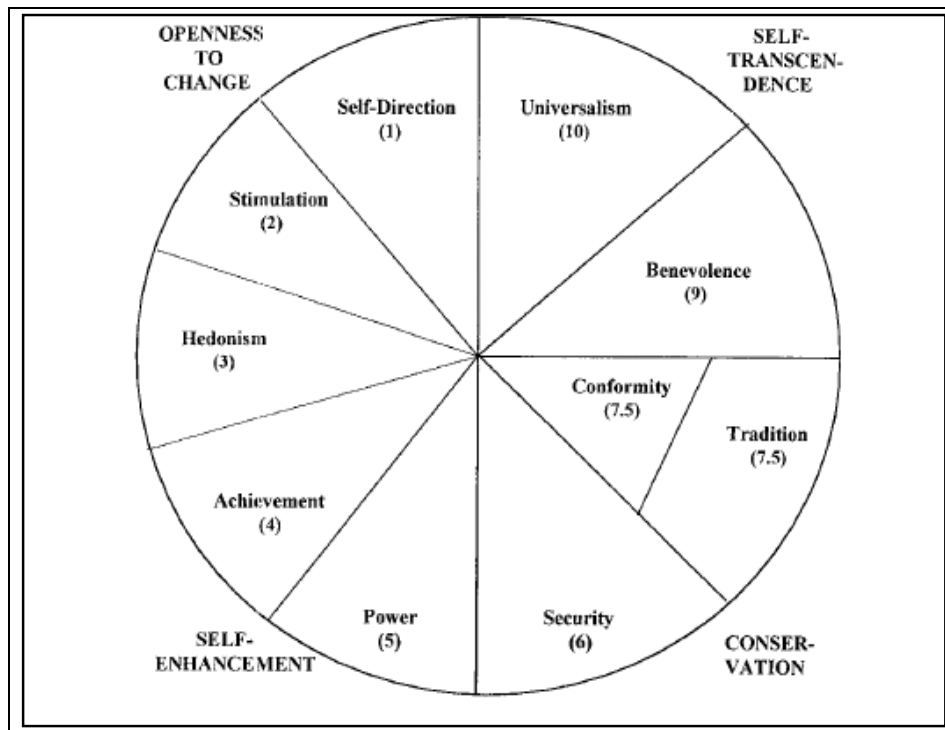
3.3.3 Measurement of Environmental Values

Research suggests, that values underlie environmental attitudes and behaviour (Stern et al. 1995, Karp 1996, Poortinga et al. 2004, Schultz et al. 2005, Groot and Steg 2007) Studies used Schwartz's 'Value Theory' (1992, 1994) to assess personal values in an environmental context (de Groot and Steg 2007). Poortinga et al. (2004) point out, that in most studies, value scales such as Schwartz's (1994) are used to predict environmental behaviour.

Numerous studies have demonstrated the usefulness of Schwartz's (1992, 1994) model to categorise and measure people's values in various countries (Schultz et al. 2005). Schwartz's (1992, 1994) theory and model of basic human values proposes, that 56 values items are important in people's lives. These value items have been found to represent 10 universal value types. Representative cross-cultural research revealed that these values can be ordered according to four value categories (Figure 3.1): openness to change, conservatism, self-transcendence and self-enhancement. Values of self-direction, stimulation and hedonism are related to openness to change. Values of tradition, conformity, and security are found to relate to conservatism and values such as benevolence and universalism are associated with self-transcendence. Values of power and achievement define a category of self-enhancement. Altruistic and biospheric values can be associated with the category of self-transcendence.

A review of the environmental psychology literature by de Groot and Steg (2007) suggests that a positive relationship exists between self-transcendent value orientations, stronger environmental beliefs and pro-environmental behaviour. On the other hand, people who strongly prefer self-enhancement values have been found to less likely engage in pro-environmental behaviour. Studies also suggest that values influence environmental behaviour indirectly, via behaviour-specific beliefs, attitudes and norms (Stern 2000, de Groot and Steg 2007). De Groot and Steg (2007) used a short version of Schwartz's Values Scale (1992, 1994) consisting of 13 values that belonged to the self-enhancement versus self-transcendent dimension.

Figure 3.1 Theoretical model of value constructs



(Adapted from Schwartz et al. 2001, p.522)

Poortinga et al. (2004) point out, that within Schwartz's 'Value Scale' (1992, 1994) environmental values are underrepresented. The scale was not developed to research people's environmental orientation, or pro-environmental behaviour. Following from the difficulty to research people's environmental values using Schwartz (1992, 1994) original scale De Groot and Steg (2007) included values that distinguish between egoistic, altruistic and biospheric value orientations. The following value items were used: wealth, social power, authority, ambition, influence (egoistic value orientation), equality, a world of peace, social justice, helpfulness (altruistic value orientation), respecting the earth, preventing pollution, unity with nature, and protecting the environment (biospheric value orientation). Respondents were supposed to indicate to what extent these values were important for them 'as a guiding principle in their lives' on a 9-point scale from 'opposed to my values' to 'extremely important'. Following from Schwartz (1992, 1994), respondents were

urged to vary their statements as much as possible and to rate no more than two values as extremely important.

3.3.4 Measurement of Environmental Attitudes

The measurement of attitudes can be complex (Ross 1994, Krosnick 2005). Environmental attitudes have been assessed using mainly quantitative assessment scales, such as Pelletier's (1998) 'Motivation towards the Environment' scale, Dunlap and Van Liere's (1978) 'New Environmental Paradigm' (NEP), Dunlap's et al.'s (2000) 'New Ecological Paradigm', Winter's (2007) 'Natural Area Value scale' (NAV) and Stern et al.'s (1993) 'Awareness of Consequences Scale' (AC).

As one of the most widely used quantitative measurement scale the New Environmental Paradigm (NEP) measures people's fundamental views about nature and human's relationship towards it. The NEP was mainly inspired by Pirages and Ehrlich's (1974) Dominant Social Paradigm (DSP) reflecting the anti-environmental attitudes of western industrialised society. The original NEP scale, consisting of 12 Likert-type items, focuses on beliefs about humanity's ability to upset the balance of nature, the existence of limits to growth for human societies, and humanity's right to rule over the rest of nature. More recently, Dunlap et al. (2002) proposed the revised NEP scale to set a balance between pro and anti-NEP statements. The scale has been proven as a valid and reliable environmental value measurement tool within quantitative research (Albrecht et al. 1982, Thapa 1999, Lundmark 2007) and has been successfully used in numerous tourism studies (Higham and Carr 2002, Dickey 2003, Lück 2003, Fairweather et al. 2005, Sandve 2007).

However its consistency, conclusiveness, primitiveness and length, have been debatable issues. Lück (2003) argues that the scale is of limited use in a wildlife or ecotourism context as tourists at those places generally hold high environmental values and are concerned about negative impacts on the environment. He suggests that the NEP scale should be used in other tourism areas, for example mass-tourism

resorts. The type of tourists may be more diverse at those places, revealing a fundamental difference in environmental consciousness. Although the NEP scale is not without flaws its reliability and validity has been supported by numerous studies (Albrecht et al. 1982, Thapa 1999, Lundmark 2007).

One of the fundamental questions in environmental value and attitude research is how both influence pro-environmental behaviour (Thapa 1999, Stern 2000). Numerous studies indicate a positive relation between environmental values, attitudes and pro-environmental behaviour (Roberts and Bacon 1997). Recent research of Schultz et al. (2005) provides further evidence for the link between all three factors. Nevertheless, inconsistencies have also been found in people's values and attitudes and their actual behaviour. A person who holds pro-environmental values and attitudes does not necessarily act in a pro-environmental way (Diekmann and Preisendorfer 1998).

3.3.5 Defining Environmental Behaviour

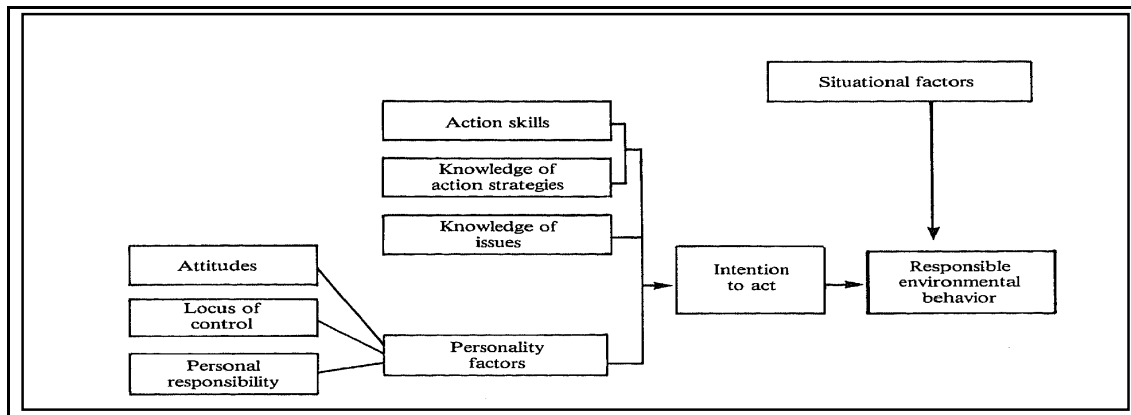
Bamberg and Möser (2007, p.15) view environmental behaviour as: 'a mixture of self-interest (e.g. to pursue a strategy that minimises one's own health risk) and concern for other people, the next generation, other species, or whole ecosystems (e.g. preventing air pollution that may cause risks for other's health and/or the global climate)'. This definition does not explain a specific behaviour, but rather reflects a general attitude towards the environment. Stern (2000) argues that environmentally significant behaviour can be defined by its impact. Environmental behaviour may be significant depending on the extent of which it changes the availability of materials, or alters the structure and dynamics of ecosystems or the biosphere.

3.3.6 Environmental Behaviour Theory

Early studies assumed that environmental behaviour is a result of knowledge and attitude. To achieve pro-environmental behaviour, people should become more knowledgeable about environmental issues (Maloney and Ward 1973). This linear

assumption has however been criticised as being too simplistic and ignoring other variables (Manfredo 1994). Hines et al. (1987) constructed the 'Model of Responsible Environmental Behaviour,' where variables such as knowledge of issue, action strategies, locus of control (awareness of consequences of own behaviour), attitudes, verbal commitment and sense of responsibility have an influence on environmental behaviour. Furthermore, situational factors play an important role. Economic constraints, social pressures and opportunities to evaluate actions have been found to either counteract, or strengthen each factor within the constructed model. According to the model in Figure 3.2, personality factors can lead to the intention to act and consequently to responsible behavior. A person, who expresses pro-environmental attitude and environmental concern, has a sense of personal and external control of decision-making (locus of control) and feels responsible for the environment, may actively seek the knowledge of issues and strategies for actions and acquire skills to fulfill these actions. An intention to act may be formed which may be influenced by external factors and finally result in responsible environmental behavior. Hines et al. (1986) 'Model of Responsible Environmental Behaviour' has similarities with the 'Theory of Planned Behaviour', first described by Ajzen and Fishbein (1975). The theory proposes that beliefs (values) may lead to favourable or unfavourable attitudes towards a specific behaviour. Subjective norm and perceived behavioural control are understood to influence and lead behaviour intentions which are further seen as an immediate antecedent of behaviour (Ajzen 2008).

Figure 3.2 Model of responsible environmental behaviour



(Adapted from Hines et al. 1986, p.7)

Stern (2000) proposed a 'Value-Belief-Norm' (VBN) theory of environmentalism that links value theory, norm-activation theory, and the New Environmental Paradigm (NEP) through a causal chain of five variables: personal values (especially altruistic), NEP, 'Awareness of Consequences' (AC), the belief to be able to reduce threat and personal norms. These five variables are said to influence intention and actual behaviour.

3.3.7 Measurement of Environmental Behaviour

While some assessment scales focus on respondents' personal values (Schwartz 1992, 1994) and others concentrate on people's environmental values, attitudes and general views about the interrelationship between humans and nature, (Dunlap and Van Liere 1978, Dunlap et al. 2000, Winter 2007) quantitative assessment scales can also be found in the environmental behaviour context. Everyday environmental behaviours such as recycling, trying to reduce car use or buying eco-friendly products, have previously been assessed using 4-point Likert-scales. Tarrant and Green (1999) used an 11-item environmental behaviour scale asking about the participation in carpooling, watching environmental shows or reading environmental literature. The authors used a dichotomous choice question (yes/no) to ask respondents if they 'had, in the last couple of years' contacted a public official about environmental issues, subscribed to an environmental publication or contributed money to an

environmental group.

While many tourism related studies have used quantitative assessment scales to research environmental behaviours (Dickey 2003, Lück 2003, Sandve 2007) many used open-ended questions (Higham and Carr 2002, Fairweather et al. 2005). Higham and Carr (2002) and Fairweather et al. (2005) asked respondents about their environmental group membership, which was seen as an important indicator of general environmental interest. However, Ajzen and Fishbein (1975) found that self-reported behaviour can often not be regarded as an accurate assessment of actual behaviour. Inconsistencies have been found between what respondents say they will do (intention) and what they actually do (behaviour) (Ajzen and Fishbein 1975, Hines et al. 1987, Diekmann and Preisendorfer 1998, Thapa 1999). Even though the assessment of self-reported behaviour can be seen as a limitation, it is in most cases difficult if not impossible to directly observe behaviours (Ajzen and Fishbein 1975) and it is often the most pragmatic option to gather self-reported behaviours, given time and cost restrictions (Ajzen and Fishbein 1975, Wiidegren 1998).

3.4 Tourists' Willingness to Pay (WTP)

Ciriacy-Wantrup (1947) first proposed the 'Contingent Valuation Method' (CVM) as an approach to measure economic values of non-market goods, such as recreation resources, wildlife and environmental quality goods (Hanemann 1994). CVM is based on respondents stated 'Willingness to Pay' (WTP) where the individual is usually asked how much they would pay for resources or activities under hypothetical market scenarios (Lee and Mjelde 2007). Kim et al. (2007) write that the CVM can be considered as a straightforward way of researching respondent's willingness to pay.

Table 3.1 Divergent views of CVM

Critics of CVM	Proponents of CVM
Respondents will engage in strategic behaviour (Scott 1965, Bohm 1972, Knestch and Davis 1974, Abala 1987, Posavac 1998).	WTP surveys provide meaningful evaluations (Knetsch and Davis 1974, Mitchell and Carson 1989, Cummings et al. 1995).
Respondents will not give meaningful answers (Freeman 1979, Feenberg and Mills 1980, Cummings et al. 1986, Kahneman 1986).	Strategic bias is not a significant problem for CV studies under most conditions (Brookshire et al. 1976, Smith 1977, Mitchell and Carson 1989).
Opinions or attitudes may be poor predictors of actual behaviour (Feenberg and Mills 1980, Bishop and Heberlein 1986, Loomis et al. 1996, Byrnes and Goodman 1999).	There is strong support for the ability of surveys to predict behaviour (Randall et al. 1983, Mitchell and Carson 1989, Cummings et al. 1995).
Biases arise from the framing of WTP questions in the CVM questionnaire (Tversky and Kahneman 1981).	Careful questionnaire design can control potential biases (Hanemann 1994, Smith 1994, Bateman and Langford 1997)

(adapted from Hudson and Ritchie 2001, p.5)

However, the use of CVM is debatable and numerous researchers argue for or against its use to estimate respondents' willingness to pay (Table 3.1). Issues include that it is often not clear how exact the CVM measures a person's willingness to pay. Uncertainties prevail if the monetary amount is underestimated, or overestimated (Bramwell et al. 1998). It is also debatable which question format should be used. Researchers argue for open- or closed ended WTP questions. Open ended questions have the advantage to make people think specifically about how much they would pay (Machado 2000 in Rhoades and Stallings 2001). The disadvantage is that they are much more difficult to answer. As Hannemann (1994, p. 23) argues: 'people can generally tell you whether they would pay some particular amount, but they find it much harder to know what is the most that they would possibly pay'. Furthermore, they are more likely to state what the good costs and not what it is worth to them. Some, therefore, support the use of closed-ended questions to avoid confusion of respondents. However, according to Loomis (1990) both, open- ended and closed-ended question formats have been proven to be reliable estimates of total willingness to pay and evidence suggests that one method cannot be regarded superior to the

other (Kealy and Turner 1993). The success of a contingent valuation depends on its design and implementation and through careful questionnaire design, biases can be minimised. The main ways of assuring reliability are summarised, for example, in Hanemann (1994). Further discussion of controversies and evidence within contingent valuation can be found in Carson, Flores and Maede (2001).

3.4.1 WTP for Carbon Offsetting Schemes

Through increased environmental awareness and knowledge of climate change and its consequences, several studies focus on the assessment of people's willingness to pay for tourism and aviation related carbon offsetting schemes and services (Fairweather et al. 2005, Kuckartz et al. 2006, Becken et al. 2007). Kuckartz et al. (2006) used a closed-ended, multiple choice question (yes/no/don't know/don't fly) to evaluate people's willingness to pay to offset emissions created by air-travel. A hypothetical amount of 5.00 Euro for short haul and 20.00 Euro for long haul trip was suggested. Results indicate that 25 percent were willing to pay a fee, some 34 percent were not, 30 percent indicated to not fly at all and 11 percent were unsure. The study further suggests that the willingness to pay increased with the level of education and income. Within the New Zealand context Fairweather et al. (2005) asked respondents if they would be willing to pay NZ \$15.00 for a tree-planting scheme to offset greenhouse gas emissions. Results indicate that 43 percent of all respondents would be willing to participate, 25 percent were unwilling and some 32 percent were unsure. They also found that 'bio-centric' respondents were more willing to offset their emissions.

3.4.2 WTP for Entrance Fees to National Parks

The CVM has been used within the nature-based tourism context (Lee 1997) and ecotourism context (Lee et al. 1998) as much as in other fields like land conservation (Kniivilae 2006), forestry (Adams et al. 2008) and management of world heritage sites (Kim et al. 2007). Numerous researchers have successfully used the contingent

valuation method within the tourism, environmental conservation and national park context (Schulz et al. 1998, Machado 2001, Lee and Han 2002, Togridou et al. 2006, Lee and Mjelde 2007, Reynisdottir et al. 2008, Baral et al. 2008). Machado (2001) investigated the willingness to pay of international visitors to the Galapagos national park. An open-ended question was used while asking people about their willingness to pay in relation to three different environmental management scenarios. It was found that visitors were willing to pay higher entrance fees than currently charged. Baral et al. (2008) found similar results while researching the WTP for national parks in Nepal. He found that most visitors were willing to pay an entrance fee noticeably higher than the current fee and that most respondents were motivated by the aim to better protect the environment. Consequently, the authors recommended an increase of the current entrance fee. Schultz et al. (1998) similarly found that people were willing to pay a higher entrance fees for two different national parks in Costa Rica.

Using a dichotomous choice question, Li and Han (2002) investigated visitors' WTP for five different national parks in South Korea. Findings suggest, considerably higher fees could be charged. It was found, that natural resources of national parks provide significant use and preservation values for visitors. The authors suggest that results may help managers in decision-making on pricing policy for national parks. Management policies that differentiate admission fees according to the characteristics of national parks should be supported. Reynisdottir et al. (2008) measured tourists' willingness to pay for natural attractions in Iceland. Even though no entrance fees are currently charged and the management and maintenance of sites is paid largely by tax payers, the researchers found, that a modest fee would be feasible. Furthermore, it was found that tourists' willingness to pay was slightly influenced by factors such as country of residence, age and attitudes towards environmental protection. Overall, it has been found that CVM can be successfully employed to help determine park entrance fees in developing and developed countries alike. However, a lack of research exists assessing tourists' willingness to pay for entrance fees in New Zealand.

3.4.3 WTP and Environmental Values/Attitudes

An important and growing area of research assesses the relationship between values and attitudes and stated willingness to pay (Dietz et al. 2005). Studies suggest that environmental beliefs are related to WTP (Spash 1997, Kotchen and Reiling 2000). It is further suggested that attitudes and beliefs can be used to explain WTP, since it can be regarded as a behavioural intention (Kotchen and Reiling 2000, Cooper et al. 2004). Many have used the NEP scale to assess environmental attitudes within CV surveys (Stern et al. 1995, Kotchen and Reiling 2000, Cooper et al. 2004). Kotchen and Reiling (2000) found that pro-environmental attitudes result in higher estimates of mean willingness to pay (WTP) and suggest that analysing environmental attitudes in the context of CV studies is useful to explain non-use valuation responses. Kotchen and Reiling (2000, p.104) state: 'since responses are entirely hypothetical and are frequently criticised for being upwardly biased, comparing them to indices of environmental attitudes provides one test of internal validity'. Ojea and Laureiro (2007) explored the relationship between altruistic, egoistic and biospheric values and willingness to pay and conclude that ethical aspects affect the decision making process of an individual. Value orientations play an important role in the pro-environmental attitude formation and are found to affect willingness to pay (WTP) estimates for environmental goods.

3.5 Summary

It was found that some tourists become more environmentally aware which may lead to more demand for environmentally sound products and services. Consumers make more 'green' purchases and increasingly challenge the travel industry in demanding more environmentally sound practices. Contingent valuation methods have been successfully used to estimate people's willingness to pay for non-market goods such as national parks. After Ajzen and Fishbein's 'Theory of Planned Behaviour' (1975) the willingness to pay for offsetting schemes can be seen as a behaviour intention which is influenced by environmental values and attitudes.

Table 3.2 Summary of research papers reviewed (Part Two)

Authors reviewed	Synopsis	Relation to Thesis
Schlegelmilch et al. 1996, Butler 2000, Becken 2004, Wight 1993b in Sharpley 2006, Sharpley 2006, Starmer-Smith 2004 in Sharpley 2006, Pleumarom 2007, Forsyth et al. 2007	<ul style="list-style-type: none"> - environmental aware consumer and green purchasing behaviour - increase of green market - rise of green tourism 	<ul style="list-style-type: none"> - implications of environmental awareness for consumerism and tourism - ecotourism growth - implications for aviation
Ajzen and Fishbein 1975, Miller 2003, Uriely et al. 2006, Zografos and Alicroft 2007, Dolnicar et al. 2007	<ul style="list-style-type: none"> - uncertainties prevail what a green tourist is - demographics and pro-environment attitudes - psychographics and consumer preferences - attitudes influence behaviour 	<ul style="list-style-type: none"> - identify knowledge about green tourist - focus on attitudes
Pitts and Woodside 1986, Madrigal 1995, Ateljevic 2000	<ul style="list-style-type: none"> - relations of values to travel style, personality, motivation, perception, travel decision 	<ul style="list-style-type: none"> - tourist values
Akama 1996, Blamey and Braithwaite 1997, Tarrant and Green 1999, Higham and Carr 2002, Wearing et al. 2002, Lee and Moscardo 2005, Fairweather et al. 2005, Winter 2007, Zografos and Alicroft 2007	<ul style="list-style-type: none"> - ecotourism experience influence on values (NZ) - values and response to ecolabels (NZ) - nature-based tourists intrinsic, non-use, spiritual, recreation values - influence of values/attitudes on behaviour - knowledge of values/attitudes can help management 	<ul style="list-style-type: none"> - environmental values - review environmental values research
Kluckhohn 1951, Rokeach 1973, Schwartz and Bilsky 1987, Schwartz 1994, Feather 1996, Rohan 2000, Crick- Furman and Prentice 2000, Schulz et al., 2004 in Dutcher et al. 2007	<ul style="list-style-type: none"> - five dimensions of value definition 	<ul style="list-style-type: none"> - value definition
O'Brien and Gurrier 1995 in Gurrier et al. 1995, Crick-Furman and Prentice 2000	<ul style="list-style-type: none"> - care and responsibility for environment - conceptuality of environmental values 	<ul style="list-style-type: none"> - environmental values definition
Eagly and Chaiken 1993 in Albarracin et al. 2005	<ul style="list-style-type: none"> - concept of attitudes - inferred from and influence behaviour 	<ul style="list-style-type: none"> - define attitudes

Authors reviewed	Synopsis	Relation to Thesis
Weigel 1983, Lundmark 2007	<ul style="list-style-type: none"> - anthropocentrism vs. ecocentrism - instrumental vs. intrinsic values 	<ul style="list-style-type: none"> - define environmental attitudes - understanding of environmental attitudes
Schwartz 1992, Stern 2000, de Groot and Steg 2007	<ul style="list-style-type: none"> - Schwartz value scale (56 items), - de Groot and Steg short version of Schwartz value scale - positive relationship between self-transcendent value orientations, stronger environmental beliefs and pro-environmental behaviour - values influence environmental behaviour indirectly, via behaviour-specific beliefs, attitudes and norms 	<ul style="list-style-type: none"> - understand value theory, measurement techniques
Pirages and Ehrlich 1974, Dunlap and Van Liere 1978, Stern et al. 1993, Uysal et al. 1994, Pelletier 1998, Dunlap et al. 2000, Dunlap et al. 2002, Winter 2007	<ul style="list-style-type: none"> - NEP scale widely used - environmental values affect trip and tourist characteristics 	<ul style="list-style-type: none"> - environmental attitude measurement - focus on NEP scale
Bamberg and Möser 2007	<ul style="list-style-type: none"> - pro-environmental behaviour 	<ul style="list-style-type: none"> - define
Maloney and Ward 1973, Ajzen and Fishbein 1975, Hines et al. 1987, Fishbein and Manfredo 1994, Thapa 1999, Ajzen 2008	<ul style="list-style-type: none"> - attitude and environmental behaviour relationship - knowledge of environmental issues influences attitude and behaviour 	<ul style="list-style-type: none"> - grasp environmental behaviour theory - knowledge, attitude, behaviour relation - Hines model of responsible environmental behaviour, Theory of planned behaviour
Ajzen and Fishbein 1980, Hines 1987, Preisendorfer 1998, Wiidegren 1998, Tarrant and Green 1999, Higham and Carr 2002, Fairweather et al. 2005, Sandve 2007, Kuckartz et al. 2006, Fielding et al. 2008	<ul style="list-style-type: none"> - open ended question to investigate environmental behaviour 	<ul style="list-style-type: none"> - Measurement of pro-environmental behaviour - acknowledgement self-reported behaviour might not represent actual behaviour

Authors reviewed	Synopsis	Relation to Thesis
Loomis 1990, Kealy and Turner 1993, Ciriacy-Wantrup 1947 in Hanemann 1994, 1991 in Bramwell et al. 1998, Hudson and Ritchie 2001, Carson et al. 2001, Kim et al. 2007, Lee and Mjelde 2007	<ul style="list-style-type: none"> - pro and con of CVM - determinants for successful implementation, assuring reliability - open-ended vs. closed ended CVM question, both reliable 	<ul style="list-style-type: none"> - review of Contingent valuation method - implementation
Stern et al. 1995, Spash 1997, Kotchen and Reiling 2000, Rosenberger et al. 2003, Cooper et al. 2004, Dietz et al. 2005, Ojea and Laureiro 2007	<ul style="list-style-type: none"> - environmental attitudes/values related to WTP - environmental attitudes to test validity of WTP - NEP used within CVM Survey - pro-environmental values can lead into higher WTP - relationship between altruistic, egoistic and biospheric values and willingness to pay 	<ul style="list-style-type: none"> - understand link between environmental values, attitudes and WTP (CVM)
Lee 1997, Baht 2003, Lee et al. 1998, Schulz et al. 1998, Machado 2001, Lee and Han 2002, Navrud and Vondolia 2005, Kniivilae 2006, Togridou et al. 2006, Adams et al. 2007, Kim et al. 2007, Lee and Mjelde 2007, Baral et al. 2008	<ul style="list-style-type: none"> - WTP of tourists, examples - WTP higher than most current fees 	<ul style="list-style-type: none"> Link CVM and national park fees Specific cases of CVM Acknowledgement that no research in NZ exists for CVM to NP
Fairweather et al. 2005, Kuckartz et al. 2006	<ul style="list-style-type: none"> - WTP for offsetting emissions created by air travel in German context; - WTP for tree-planting schemes, New Zealand context 	<ul style="list-style-type: none"> - link WTP and carbon offsetting

4 METHOD

4.1 Introduction

The previous chapters outlined the context of this study, reviewing research on tourism and the environment, climate change, sustainable tourism and national park visitor management. Research on tourists' environmental orientation (environmental values, attitude, behaviour) and the use of contingent valuation methods have also been looked at. The following chapter outlines how primary data was obtained using a quantitative research approach. The questionnaire design and content is presented, the sampling technique outlined and the sample size justified. The survey administration will be reviewed and the choice of survey sites reasoned.

4.2 Research Approaches in Tourism

Considerable debate exists concerning methods, research orientations and the most appropriate approach to tourism studies (Veal 1992, Echtner and Jamal 1997, Burns 2000, Fowler 2002, Veal 2006). Authors have used quantitative (Pitts and Woodside 1986, Madrigal and Kahle 1994, Fairweather et al. 2005, Zografos and Alicroft 2007), qualitative (Wearing et al. 2002) and mixed methods (Crick- Furman and Prentice 2000, Higham and Carr 2002) to investigate tourists' environmental values, attitudes and behaviours. Generally, quantitative data is numerical in nature, whereas qualitative investigations rely on narratives (Veal 1992, Burns 2000). Mixed methods use both quantitative and qualitative data where research is mostly based on one, intensified by the other (follow-up mixed method) (Tashakkori and Teddlie 2003, Creswell and Clark 2007). Quantitative methods such as questionnaire based surveys are able to employ larger sample sizes, which increases the reliability of results (Veal 1992). If some conditions are met, sample randomisation allows the generalisation of characteristics to a certain degree of confidence (Burns 2000). Tashakkori and Teddlie (2003) argue that the analysis of quantitative data often remains weak in understanding social processes, such as people's values and attitudes, as answers mostly remain stereotype. Qualitative methods, however investigate on a more

detailed and in-depth level (Jennings 2005). The use of personal interviews, or focus groups, allows respondents to speak for themselves instead of only ticking boxes. However Burns (2000) and Veal (2006) argue, that the analysis of qualitative data can be time consuming and difficult to analyse without introducing researcher bias. Creswell and Clark (2007) and Tashakkori and Teddlie (2003) simultaneously argue, that mixed methods have the advantage of combining strength of both, quantitative and qualitative methods. Johnson and Onwuegbuzi (2004), Onwuegbuzi and Leech (2005) and Creswell and Clark (2007) suggest that quantitative or numerical data can be further supported by qualitative, interpretative data and vice versa. However, Tashakkori and Teddlie (2003) argue that the major disadvantages result in the fact that research is often time consuming, expensive and hard to obtain by single researchers. Creswell and Clark (2007) state that the use of mixed methods can introduce errors when poorly understood. A good understanding of both, quantitative and qualitative techniques is required, to successfully employ mixed methods in a given time and budget frame.

4.3 Quantitative Approach

Considering time, money and personnel restrictions, a quantitative approach was chosen to fulfil the thesis objectives. Fairweather et al. (2005) used a quantitative approach to research environmental values, attitudes and behaviours of international tourists in New Zealand. Machado (2001) quantitatively investigated the willingness to pay for entrance fees to Galapagos national parks and Kuckartz et al. (2006) quantitatively measured people's willingness to pay for offsetting schemes. To reach the thesis aim and objectives a literature review was conducted followed by a four week survey procedure, data analysis, discussion and interpretation. The following table 4.1 outlines the quantitative measurement tools which were used to fulfil the research objectives:

Table 4.1 Measurement tools to fulfil research objectives

Objective	Method	Tool
Measure international tourists' values, environmental attitudes and behaviours	Survey	Dunlap and Van Liere's (1978) NEP scale, Schwartz's (1987) Value Scale, Open-ended question used by Higham and Carr (2002)
Present information about international tourists' perception of New Zealand	Survey	Own Scale, 5-point Likert format
Establish findings towards tourists' willingness to pay for a.) entrance fees to NP b.) offsetting emissions	Survey	Contingent-Valuation Method, WTP question (Machado 2001, Kuckartz et al. 2006)

4.4 Questionnaire Design

To meet the research aims, the questionnaire design was crucial to produce focussed, meaningful, honest and sufficient quantitative data. A self-completed questionnaire was seen as most suitable to minimise researcher bias. Care was taken with its overall layout and design. This was seen as important as potential faults can be difficult to rectify while surveying (Veal 1992). To be able to compare results, questionnaires in English and German were used targeting international and specifically German tourists. The full version of both questionnaires can be found in the Appendix A and B. As long and badly designed questionnaires often lead to a low response rate (Veal 1992, Fowler 2002) a one-page questionnaire was seen as suitable to limit the survey administration. The questionnaire was designed with the respondent in mind: the wording of questions was kept simple, the survey was aimed to be interesting to read and the layout was designed in an appealing manner. Instructions were clearly made which was seen as important for the overall understanding of the questionnaire (Veal 1992).

4.4.1 Type of Questions

As data validity and reliability depends on the design and structure of the questions, (Veal 1992, Saunders et al. 2000) their wording, flow and type needs to be carefully chosen (Kumar 2005). Reading questions were used as they actively communicate issues. Comprehensive guidance was given to avoid confusion on how to provide

answers and to result in clear statements. Two question formats are available: open and closed ended formats. Open-ended questions provide in-depth information and respondents can express themselves freely (Kumar 2005). However, Finn et al. (2000) and Kumar (2005) argue that data analysis is more difficult. Although respondents are restricted to certain responses, closed-ended questions may be easier to answer and analyse. For this study, both open and closed ended question formats were carefully chosen. A detailed list of question formats can be found in table 4.2 :

Table 4.2 Question formats

#	Question format	Data format	Data analysis
1	5-point Likert	Scale	Individual
2	Closed ended, dichotomous choice (yes / no), extended: <i>If yes, please specify</i>	Scale/ nominal	Individual
3	Open ended	Nominal	Grouped
4	5-point Likert	Scale	Individual
5	Trichotomous choice (yes / no / more information wanted) WTP question	Scale	Individual
6	5-point Likert	Scale	Individual
7	Check boxes / multi option variable	Scale	Individual
8	Open ended WTP question, numerical	Scale	Grouped
9	5-point Likert	Scale	Individual
10	Closed ended, dichotomous choice (yes / no)	Scale	Individual
11	Open ended	Nominal	Grouped
12	Open ended, numerical	Scale	Grouped
13	Open ended	Nominal	Grouped
14	Open ended	Nominal	Grouped
15	Open ended, numerical	Scale	Grouped
16	Open ended	Nominal	Grouped
17	Check box	Scale	Grouped
18	Dichotomous choice (male/female)	Scale	Individual
19	Check box	Scale	Individual

Closed ended question formats were used, including 5-point Likert-scales, dichotomous choice and multiple choice questions, checkboxes or multi-variable options (Trochim 2006). One closed ended question was extended to, 'If yes, please specify,' which has also been used by Higham and Carr (2002) and which may provide extended information and test previous responses. Open ended formats have been used in relation to willingness to pay. Respondents were asked to state their maximum amount for entrance fees to national parks. Open ended questions have also been used to allow respondents to speak for themselves and actively consider their response (Machado 2001). This was seen as appropriate, especially in the context of environmental activism as tourists had to actively consider their behaviour.

4.4.2 Questionnaire Content

The questionnaire was divided into four parts. A covering paragraph explained the survey purpose. Confidentiality was assured meaning that data was only to be used in an aggregated form and for the purpose of the thesis only. Information was given on how long it should take to answer the survey. The second part comprised questions about tourists' general values, environmental attitudes, behaviour, environmental concern and willingness to pay to offset emissions and contained six questions: three five-point- Likert-scales, one open ended question and one dichotomous choice - willingness to pay question. The third part focused on tourists' experience of New Zealand's national parks, tourists' willingness to pay for national park entrance fees and their perception of New Zealand as a destination. Furthermore, knowledge of a DOC 'Environmental Care Code' was assessed. This part consisted of four questions: one Likert-scale format, two closed ended questions and one open ended, willingness to pay question. The last part of the questionnaire asked for demographics (country of origin, age, gender, education) and travel data (reason for visit, visit frequency, future intention to visit, overall satisfaction, estimated costs of travel). The questions were mainly adapted from the Ministry of Tourism International Visitor Survey (2007) to be able to compare results. The

following table 4.3 provides an overview of the questionnaire content and its relation to the thesis objectives:

Table 4.3 Questionnaire content and relation to thesis objectives

#	Question	Literature based	Aim
1.	Thinking about the relationship between humans and nature, how do you personally view the following statements?	Dunlap and Van Liere (1978), Higham and Carr (2002)	EO*
2.	Do you belong to any group that is concerned with nature?	Higham and Carr (2002)	EO*
3.	In your everyday life, how do you personally get active towards environmental protection?	Kuckartz et al. (2006)	EO*
4.	Global climate change is one of the most important issues the world is facing today. Highly debated in the media, how do you think climate change will impact you and your family in the future?	Modified after Kuckartz et al. (2006)	EO*
5.	Emissions created by aviation have an impact on our climate. To compensate these emissions there are now options available to pay a voluntary fee additional to your flight-ticket. The money is than invested in e.g. renewable energy projects. In the future, would you pay such an additional fee for your air travel, for example 10NZ\$ for a long haul flight?	Modified after Kuckartz et al. (2006)	WTP*
6.	Regarding your personal values, to what extend do you consider the following as 'guiding principles in your life'?	Schwartz (1992, 1994) Value Scale, modified after De Groot and Steg (2007)	EO*
7.	New Zealand is known for its amazing natural environment. During your travel, which of the following national parks have you visited?	Modified after IVS, Tourism New Zealand (2007)	TH*
8.	Protecting New Zealand's unique environment is cost intensive. If money would be directly invested in conservation projects, how much would you be willing to pay for an entrance fee to a national park?	Willingness to pay question, modified after Machado (2001)	WTP*
9.	Thinking of your holiday in New Zealand, to what extend do you agree or disagree with the following statements?	Developed after Gnoth and Ganglmair (2000)	P*
10.	While travelling in New Zealand, have you come across the DOC 'Environmental Care Code'	Developed	K*
De	Residence, visit frequency, future visit, satisfaction, travel cost estimation, main reason for visit, age, gender, highest educational attainment	Modified after IVS, Tourism NZ (2007)	D*

* Note: EO= Environmental Orientation (Values, Attitudes, Behaviour), WTP= Willingness to Pay, TH= Travel History, D= Demographics, K= Knowledge of Care Code, P= Perception

Overall, a respondent had to consider 19 questions and rank statements of four Likert-scales consisting of 12, 1, 6 and 11 statements. Respondents were thanked for their time, offered to participate in a prize draw and encouraged to write comments.

4.4.3 Limitations and Biases of Questionnaire Content

Although it was aimed to minimise possible bias within the questionnaire, the conditions and nature of the project were likely to introduce some predispositions. Question number three can be regarded as biased towards the assumption that tourists generally act favourably towards the environment, which might not be the case. However, results have shown, that some respondents answered to 'not do anything towards the environment'. Question number four can be regarded as biased towards the stance that global climate change is one of the most important issues the world is facing today. However, the results suggest, that tourists did not necessarily agree with this statement. Question five is biased towards the view that aviation has an impact on our climate. Overall, as with most research projects, some biases have to be acknowledged when interpreting results.

4.4.4 Pre-test

A pre-test was conducted to ensure valid, high quality data. According to Brunt (1997) and Saunders et al. (2000), pre-tests are useful in testing the overall comprehension of the questionnaire, to identify errors in design, to acknowledge possible response bias and to spot possible chances of response fatigue. Questionnaires were handed out to ten post-graduate students and three working professionals, including DOC Wanaka staff. Comments were made and possible alterations discussed. Some adjustments were made in regards to length, wording and amount of questions. The final questionnaire was agreed upon by all parties of the pre-testing procedure.

4.5 Sample

A sample was chosen to meet the thesis' aims and objectives. A sample is generally defined as a selection of subjects from a chosen population (Veal 1992, Burns 2000, Fowler 2002, Veal 2006). The population within this research consisted of international tourists in New Zealand. Visitors were included in the sample when from a country other than New Zealand, and/or from Germany. These criteria allowed sub-sample analysis and the comparison of results with findings of Kuckartz et al. (2006). The survey was divided into 300 English and 100 German questionnaires. A total of 400 questionnaires were handed out to achieve sufficient enough data to arrive at statistically significant results.

4.5.1 Sampling Technique

According to Pizam (1987), two main types of sampling procedures can be found, namely probability and non-probability techniques. Veal (1992) states that within probability sampling, randomness can be achieved, meaning that every member of the population is given an equal chance of being included. Biases may therefore be minimised. Probability sampling include simple random sampling, systematic sampling, stratified sampling and cluster sampling. Fowler (2002) indicates that these research techniques cannot always be employed and vary with the type of survey, aims and objectives of academic work and time and money restrictions. While it is not always possible to obtain a probability sample, non-probability procedures can be used including judgemental or purposive sampling, quota sampling and convenience sampling. According to Pizam (1987) non-probability techniques provide no basis for an estimation of how closely the sample characteristics reflect those from the sample population. Representativeness cannot be claimed, which can be seen as its greatest weakness. However, Kerlinger (1973) states that this problem can partly be overcome by using expertise, knowledge and care during the selection process. As the use of probability techniques was seen as problematic due to time, money and personnel restrictions a non-probability, purposive sampling technique was chosen to reach the thesis aims and objectives. Trochim (2006) points out the

usefulness of the technique for situations where samples need to be reached quickly. However, it has also been found that researchers are likely to over represent subgroups that are more readily accessible. To overcome this problem, strata were defined as 50% male and 50% female, 75% International and 25% German tourists. An on-site survey distribution was considered as the quickest, most efficient and financially feasible method to result in a favourable sample size.

4.5.2 Survey Sites

Different options were considered including the survey administration at airports (Frankfurt, Christchurch), businesses (Monarch Cruises Dunedin, Catlins Wildlife Trackers) and visitor information sites (DOC, I- Site's). After communicating with DOC and I-Site managers, sampling was finally agreed upon at Christchurch and Dunedin I-Site's and at Te Anau and Queenstown DOC Visitor Centres. This was considered as the most suitable option to result in a favourable response rate within the given time frame. Visitor centres play a key role in tourism: Hobbin (1999) for example, found that visitor centres generate a modest net increase in visitor nights and expenditure and facilities generally play an important role in providing local area information. Woods and Moscardo (1996) found that innovative and suitable interpretation of environmental features in visitor centres can help to manage tourism impacts in environmentally sensitive areas.

The selection of four sampling sites (Queenstown, Te Anau, Dunedin, and Christchurch) allowed the comparison between visitor populations and their environmental values, attitudes and behaviours. It was generally assumed, that I-site's cater for a general visitor, whereas DOC visitor centres provide services for more environmentally orientated tourists who are interested in nature experiences. Visitors may hold different environmental values between I- Site's and DOC visitor centres. Berenguer, Corraliza and Martin (2005) found that environmental attitudes differ according to rural or urban settings. The selection of survey sites would further

allow the comparison between commercial and government run visitor centres and urban versus rural settings.

I-Site Visitor Centre Christchurch/Dunedin

Information sites are generally advertised as a first stop for international tourists to seek information. Over 80 information centres can be found throughout New Zealand and tourists are likely to visit one while travelling. Situated in two major hubs in New Zealand's South Island, Christchurch and Dunedin I-sites are frequently visited. Tourists seek information about accommodation, transport, events or purchase maps and souvenirs. A wide range of age and nationalities can be found and people are not necessarily interested in nature based tourism (e.g. hiking, environmental information, whale watching). I-Sites are introduced through tourism business networks and are relatively commercial in nature.

DOC Visitor Centre Te Anau/Queenstown

Unlike New Zealand's commercially orientated I-Sites, DOC Visitor Centres are run by a central government organisation. The Department of Conservation is primarily charged with conserving the natural and historic heritage of New Zealand on behalf and for the benefit of present and future New Zealanders. In addition to this prime concern, DOC is also in charge of more than 30 visitor centres throughout the country. International tourists visit the centres to seek recreation information, weather updates and purchase hut passes and maps which are necessary for most of the multiple day tracks. Displays, videos and staff provide information about the area, including information about flora, fauna and geology. Most people who visit DOC Centres are already interested in nature-tourism and/or conservation issues. It can be argued that these tourists are likely to hold strong environmental values, attitudes and behaviours.

4.5.3 Survey Administration

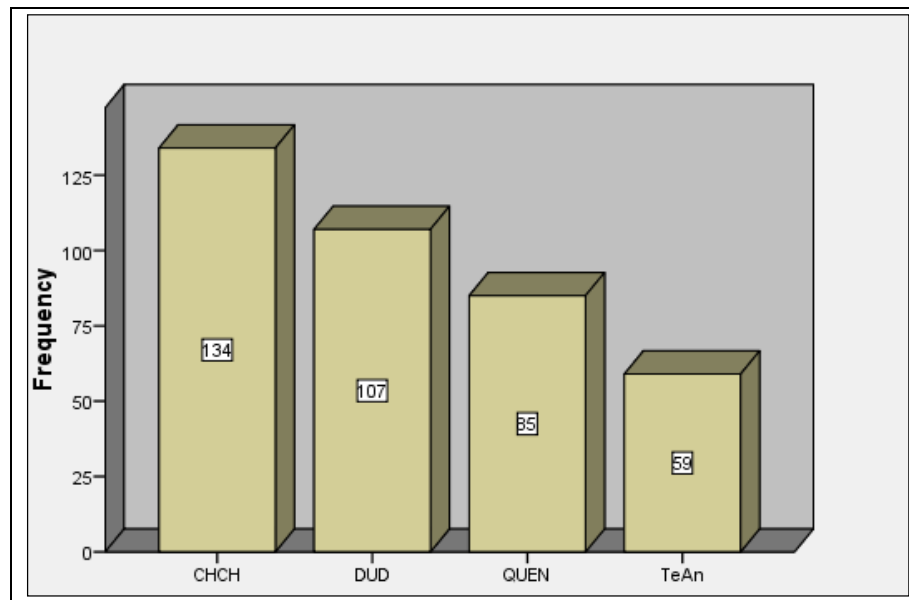
According to Veal (1992), the survey administration is generally dependent on factors such as access to venues, money, time and personnel available, geographical proximity and sufficient visitor numbers. The questionnaire was to be self-completed and handed out via face-to-face contact. This was considered to be a successful method in reaching high response rates (Finn et al. 2000). Lück (2003) and Higham (1996) used a similar approach researching tourists' environmental values, attitudes and behaviours in New Zealand. It was planned to distribute 400 questionnaires. 75 English and 25 German questionnaires were to be handed out at each location. The survey was meant to arrive at 300 international and 100 German questionnaires by the end of the four week survey procedure. The sample was constructed in such a way to ensure that statistical testing was possible, including further sub-sample analyses. The questionnaire was on-site, researcher distributed on three following days (Friday to Sunday) from 9.00 am to 5.00 pm. At all four visitor centres, every second tourist was approached. After the following filter questions 'Are you travelling?'; 'Are you a New Zealander?'; and a short introduction asking if the visitor was asked if he/she would be interested in answering the questionnaire. If the visitor stated to be from New Zealand, not travelling or not interested the researcher briefly explained the intent of approaching them and then thanked them for their time. Otherwise, the questionnaire was handed out and directly answered by the visitor who was provided with a pen and clipboard. No respondent had further questions regarding the answers required, and the questionnaires were collected immediately after completion.

4.5.4 Survey Response

Due to the comprehensible and straightforward character of the questionnaire and its distribution method, a high response rate was achieved. Overall, 385 questionnaires were fully answered, resulting in a 96 percent response rate. 300 questionnaires were answered by international (response rate = 100%) and 85 by German tourists (response rate = 85%). Ten questionnaires were rejected, either due to lack of time,

insufficient understanding of language or lack of interest in the survey. Five questionnaires had to be excluded from the data analysis due to incomplete response. The following figure 4.1 presents an overview of the survey response according to the site of distribution:

Figure 4.1 Survey response and location



Base: International sample, n= 385

The first distribution in Christchurch, on the last weekend in February 2008, resulted in 134 usable questionnaires (32 German, 102 Other International). On the following weekend the distribution at the Dunedin I-Site resulted in 107 questionnaires- 83 Internationals, 21 Germans and three respondents did not state their country of origin. Seven tourists rejected the questionnaire and four did not fully answer questions. The third survey at the Queenstown DOC visitor centre took place on the second weekend in March 2008 and resulted in 84 questionnaires, 70 Internationals and 14 Germans. One respondent did not state his/her country of origin and one did not fully answer the questions. The last survey at the Te Anau DOC visitor centre resulted in a lower response rate as distribution of questionnaires began later in the day, and many visitors turned out to be from New Zealand. As previously discussed

in chapter four, domestic tourists were initially excluded from the sample population. Overall, 47 Internationals and 12 Germans provided information at the Te Anau DOC visitor centre. Three questionnaires were rejected.

4.5.5 Data Preparation

Data was analysed using the Statistical Package for Social Sciences (SPSS, 16.0 for Windows). Variables were defined within a SPSS data file. Closed ended questions included response in nominal, ordinal and interval formats. Open ended response was listed and grouped into categories to ease data analysis. Data of 385 answered questionnaires was entered and double-checked using frequencies and cross-tabulation. Data was explored using descriptives such as frequencies, cross-tabulation, mean, median and standard deviation and visualised using bar and pie charts, line graphs and histograms. Basic non-parametric tests such as the Mann-Whitney (U) test were used to test response for significant differences between groups.

4.6 Summary

Qualitative, quantitative and mixed methods have been used to investigate tourists' values, attitudes and behaviours. Within this thesis, a quantitative approach was used. Different question formats were used, including open, and closed ended formats. The questionnaire content was justified and based on existing literature. A non-probability sampling technique was seen as the best option to sample international and German tourists to be able to compare results with a previous study (Kuckartz et al. 2006). The survey took place at two I-Sites (Christchurch, Dunedin) and two DOC visitor centres (Te Anau, Queenstown) on four following weekends between February and March 2008. The survey was pre-tested and some adjustments were made.

5 RESULTS AND DISCUSSION

5.1 Introduction

Following from the outline of the research method, this chapter presents and analyses primary research findings. Results are described and discussed in relation to thesis aims and objectives, which were stated as follows:

- 1.) to present information about tourists' perception, expectations and satisfaction with New Zealand
- 2.) to measure tourists' values, environmental attitudes and behaviour (including tourists' attitudes towards climate change)
- 3.) to establish findings towards tourists' willingness to pay
 - a. for carbon offsetting schemes
 - b. for entrance fees to national parks
- 4.) to compare results between nationalities

This chapter is organised according to the thesis aims and objectives. Firstly, a profile of the tourist population is presented, followed by a description and analysis of expectation, perception and satisfaction with New Zealand. To meet the second objective, tourists' values, attitudes and environmental behaviour are described and analysed, using frequencies and cross-tabulations. Data is further analysed, using non-parametric tests such as the Mann-Whitney (U). Results are compared to previous literature. Finally, tourists' willingness to pay for offsetting schemes and national park entrance fees are explored and analysed, using mostly frequencies and cross-tabulation. The link between environmental orientation and willingness to pay is looked at and tourists' environmental values, attitudes and behaviours are compared according to their nationality.

5.2 Profile

To gain an overview of the sample it was aimed to focus on tourists' demographics, general travel information and tourists' perception, expectation and satisfaction with New Zealand. Simple frequencies were applied in order to outline key characteristics. A German sub-sample was chosen, to compare results to previous studies (Kuckartz et al. 2006) and to allow further data analysis. Due to the nature of the sampling technique, it needs to be noted that the results cannot be regarded as representative of all international tourists in New Zealand. Time, money and personnel restrictions only allowed sampling of those international tourists travelling on the lower South Island of New Zealand between February and March 2008.

5.2.1 Demographics

Country of origin

Tourists from 34 different countries took part in the survey. Countries were clustered into world regions to ease data analysis (table 5.1):

Table 5.1 Nationalities of respondents

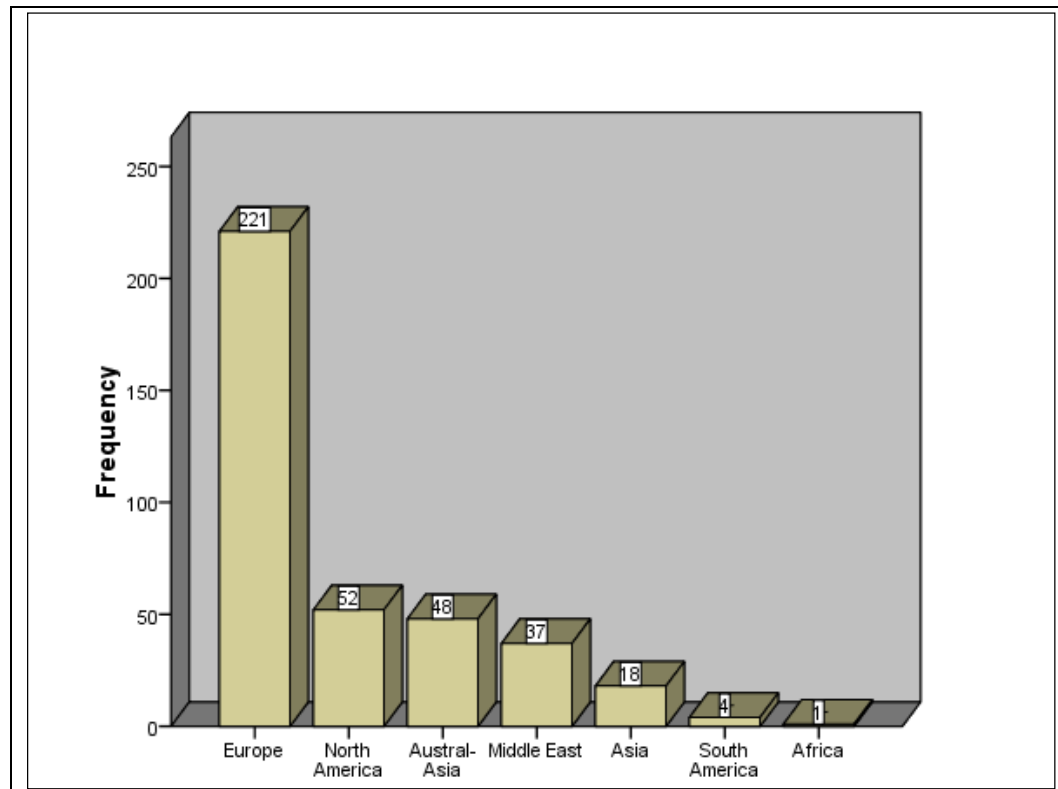
World region	Represented countries
Asia	China, Hong Kong, Taiwan, Malaysia, South Korea, Singapore, Japan, India
Austral – Asia	Australia, Philippines
North America	USA, Canada
South America	Argentina, Mexico, Chile
Africa	South Africa
Middle East	Israel, Saudi Arabia
Europe	UK, Scotland, Ireland, Northern Ireland, Denmark, Sweden, France, Belgium, Netherlands, Spain, Czech Republic, Hungary, Slovakia, Germany, Switzerland, Austria, Italy

(Base: international sample, n= 385)

According to the International Visitor Survey (Ministry of Tourism 2008) most international tourists in New Zealand are from Australia (49.7%), Asia (20.9%) and Europe (14.9%). Within this study, Europe was largely overrepresented (57.4%); firstly due to the focus on a German sub sample and secondly due to a strong

European market (e.g. UK). As indicated before, the German sub-sample was chosen to compare results to the study of Kuckartz et al. (2006). North America was the second most represented region, followed by Austral-Asia and the Middle East. Figure 5.1 below shows respondent frequencies for each region.

Figure 5.1 Respondents according to world regions

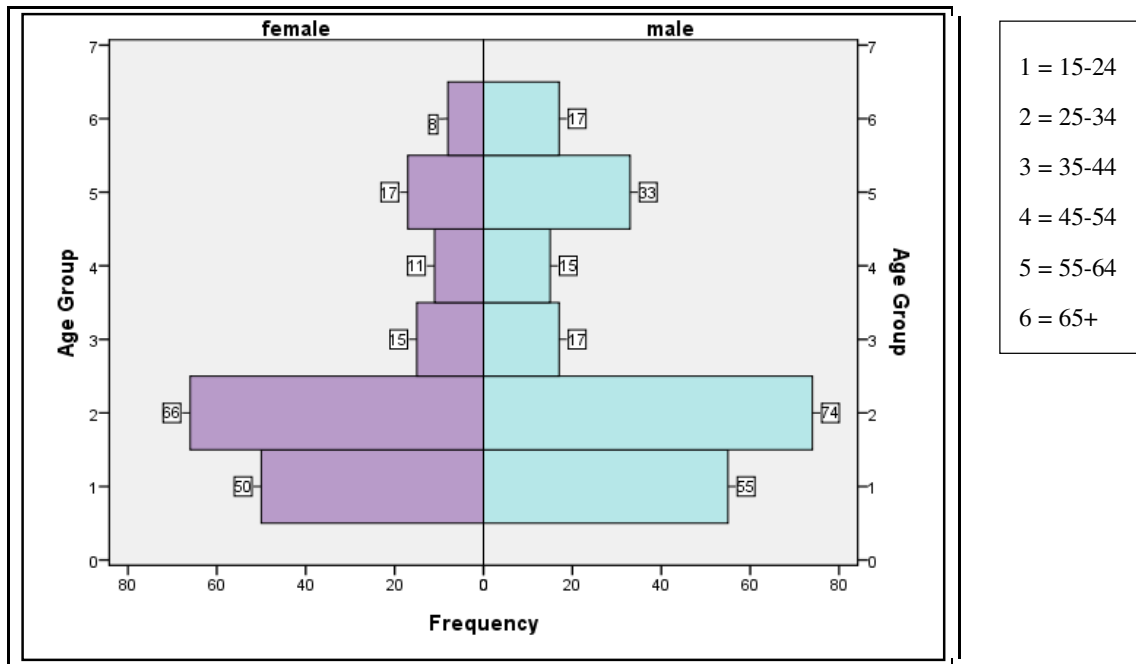


(Base: international sample, n= 385)

Gender and Age

Although it was aimed for an even gender distribution, generally more men (56%) were willing to answer the questionnaire, than women (44%). However, the following population pyramid (Figure 5.2) shows a relatively even gender distribution in four of six age categories. Only in the between 55 - 64 year age group, is the response skewed towards males.

Figure 5.2 Population pyramid



(Base: international sample, n=385)

The largest age-group, 37 percent, were between 25 and 34 years. Another 28 percent were between 15-24 years and 13 percent were over 65 years. A similar age distribution was also found by Lück (2003) when studying ‘swim-with dolphin’ tourists in New Zealand. According to the Ministry of Tourism Sector Profile (2008), the age group between 25 and 34 years is generally most represented in participating in nature based tourism. According to the most represented age category this sample may be a good reflection of nature based tourists in New Zealand.

Level of Education

The majority of tourists appeared to be well educated: 62 percent received tertiary education and 38 percent stated to have received secondary education. Similar education levels have also been found by Russell (2001), Dickey (2003), Lück (2003) and Sandve (2007) while researching the environmental orientations of tourists in New Zealand. Sandve (2007) found that 65 percent of her respondents had received a tertiary education and Lück (2003) found that about 54 percent of his respondents had received a tertiary education.

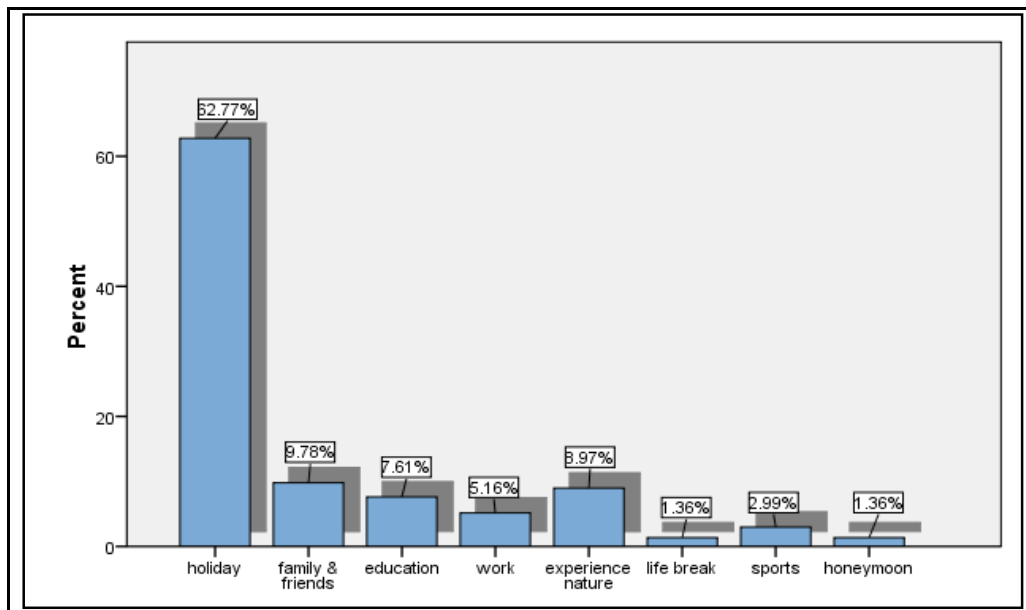
5.2.2 General Travel Information

General travel information was obtained, including tourists' reason to visit, their estimated travel costs, intention to visit New Zealand again, and their national park visits. The questions were partly adapted from the Ministry of Tourism International Visitor Survey (2007) and deemed as useful to obtain a comprehensive profile of the sample studied.

Reason to Visit

Results suggest that over 60 percent of all respondents came to New Zealand for a 'holiday'. The International Visitor Survey (IVS) (2008) indicates similar results, with over 50 percent of all international tourists travelling to New Zealand for the same purpose. Some 10 percent came to visit friends and family and another 9 percent stated to be interested in experiencing nature. Reasons like education and work revealed 8 percent and 5 percent, respectively. Minor reasons were: to take a life break, honeymoon and sports (<5 percent). Figure 5.3 below shows respondents main reason to visit:

Figure 5.3 Reason to visit

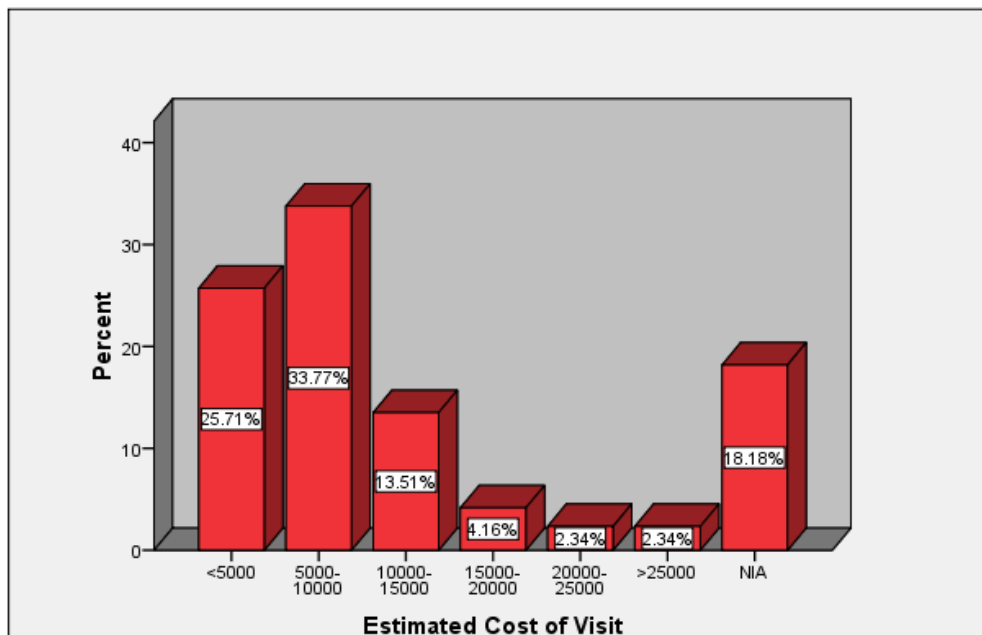


(Base: international sample, n= 385)

Travel Costs

Respondents were asked to estimate their total travel cost to New Zealand, including airfares, accommodation, transport, sightseeing and other expenses. To draw comparisons the question was adapted from the Ministry of Tourism New Zealand International Visitor Survey (IVS) (2007). Results in figure 5.4 indicate, that unrelated to the actual purpose of visit, 34 percent estimated their costs between NZ\$ 5,000 – 10,000 and 26 percent under NZ\$ 5,000. The Ministry of Tourism International Visitor Survey (IVS) suggests, that the average amount of money spent, in the year ending March 2007, ranged between NZ\$ 2,000 - 4,000 per person. The estimates found within this study are just over 50 percent higher which may be due to a different sample population and the research method used. The disproportionately high representation of visitors from Europe may be the reason for the much higher spending estimates as they tend to be higher spenders than visitors from other regions.

Figure 5.4 Estimated cost per visit



(Base: international sample, n= 385)

The high estimates may also be associated with the tourist population. Nature-based tourists generally spend more on their holiday than the average tourist (Tourism Sector Profile 2008). The Ministry of Tourism defines 'nature-based tourists' as international and domestic visitors, aged 15 years and over, who partake in at least one nature-based activity while travelling in New Zealand. Respondents generally fit into this category as most have visited at least one national park while travelling. Many were keen to go on hikes and have stated to spend between NZ\$ 5,000 and NZ\$ 10,000.

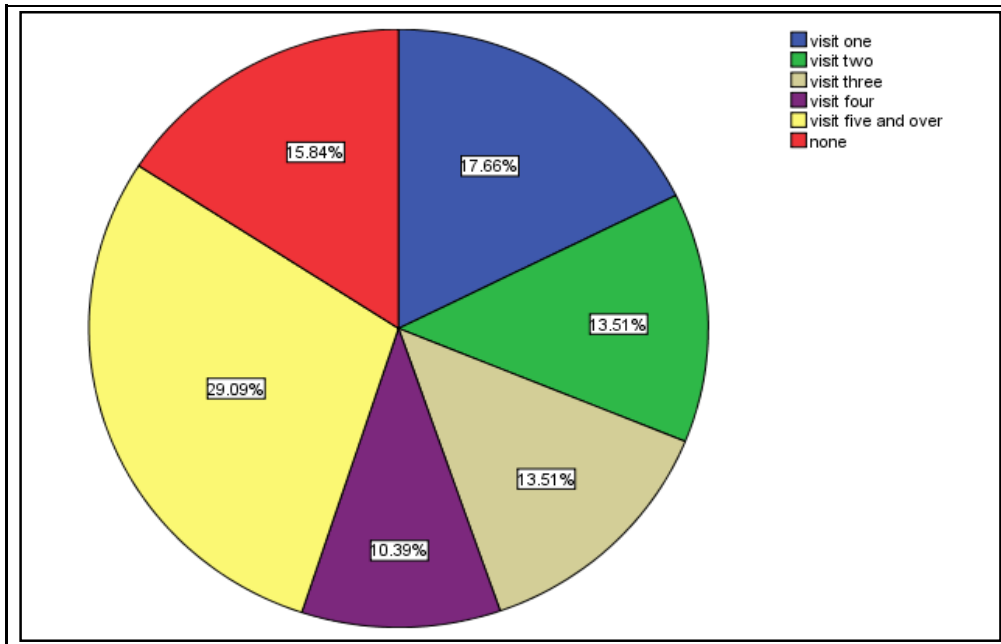
Future Visit

About 60 percent of all 385 respondents stated they would like to visit New Zealand again in the future. Some 31 percent were unsure and nine percent clearly indicated to not want to come to New Zealand again. A cross-tabulation between gender and intention to visit New Zealand in the future revealed that 32 percent of all men were positive about a future visit compared to 27 percent women.

National Park Visitation

Respondents were asked to indicate how many national parks they had visited while travelling in New Zealand. To simplify data analysis, six categories were created ranging from 1= 'none' to 6= 'visit five and over' (Figure 5.5). Over 80 percent of all tourists had visited at least one park and a remarkable 29 percent of all respondents had visited five national parks and over. This finding supports the fact that national parks are exceptionally popular amongst tourists (Ministry of Tourism 2008).

Figure 5.5 National park visits



(Base: international sample, n= 385)

The Ministry of Tourism suggests that 30 percent of all international tourists visited at least one national park while on holiday in 2007 (Ministry of Tourism 2008). In comparison, this research found, that more than 80 percent visited at least one national park. The difference in results between both studies may very well be associated with the methods used. Sampling for this study took place close to national parks and only in the South Island which may bias results. A nationwide survey may have resulted in contrary results. However, this was not possible due to money, personnel and time restrictions.

Results suggest that the most popular park was Fiordland National Park which was visited by over 50 percent of all interviewees. The second most popular park was Mt Cook, followed by Abel Tasman, Arthurs Pass and Tongariro. All other parks, such as Mt Aspiring, Westland, Nelson Lakes, Whanganui, Paparoa, Egmont and Rakirua, received less than 30 percent of all visitors; Te Urewera was least visited (Table 5.2).

Table 5.2 National park visits

National Park	Percent (%)
Te Urewera	4.4
Tongariro	31.9
Egmont	8.1
Paparoa	9.6
Westland	24.3
Mt Aspiring	29.1
Rakirua (Stewart Island)	7.5
Aoraki/Mt Cook	38.7
Arthurs Pass	33.5
Kahurangi	5.5
Nelson Lakes	24.2
Abel Tasman	35.6
Whanganui	14.5
Fiordland	56.4
One, don't know which	6.0

(Base: international sample, n=385)

As pressure rises on national parks due to increased demand for nature experiences, new management options have to be considered. One option may be to charge entrance fees to national parks to effectively manage visitor numbers and create revenue for conservation. The issue of charging entrance fees to New Zealand's national parks has been controversial over the last twenty years (Kerr 1998). However, no research was found assessing international tourists' willingness to pay for such fees. Therefore, an open ended question was used to assess tourists' maximum willingness to pay.

5.3 Tourists' Expectation, Perception and Satisfaction with New Zealand

In order to assess tourists' expectation, perception and satisfaction, eleven questions were developed. Respondents were asked to indicate their level of agreement with the following statements on a 5 point Likert-scale from 1 = strongly disagree, over 3 = neutral to 5 = strongly agree (Table 5.3).

Table 5.3 Assessment of tourists' expectation, perception and satisfaction

Measurement of	Developed Statement
Expectation	One of my reasons to visit this country is to go on one of the famous tracks I would like to see as much as possible of this country I am interested in New Zealand's animals and plants
Perception	New Zealand's landscape reminds me of my home-country I consider New Zealand's environment as clean and well managed I am surprised about the few animals in the forest
Satisfaction	I am disappointed about the natural forest in this country Nature experiences make my travel truly worthwhile I feel free and in contact with nature when I travel New Zealand does not meet my expectations of being "clean and green" The environment in New Zealand is exactly how I imagined it to be

The table 5.4 below indicates that many were interested in nature experiences. More than 40 percent stated 'being able to hike one of the famous tracks' as one of their main reasons to visit New Zealand (mean = 3.40). More than 70 percent were interested in New Zealand's animals and plants (mean = 4.06) and again more than 70 percent said that nature experiences made their travel worthwhile (mean = 2.03).

Table 5.4 Tourists' expectation, perception and satisfaction

Variable Lst	1	2	3	4	5	mean	SD
	(%)	(%)	(%)	(%)	(%)		
Environment meets expectation	3.0	9.7	16.7	42.5	28.2	3.83	1.038
Interest in NZ's animals and plants	0.8	5.6	18.4	37.2	38.0	4.06	.926
Famous tracks one of main reasons to visit NZ	9.0	16.0	27.4	21.3	26.3	3.40	1.278
Like to see as much as possible	1.3	3.2	9.5	28.9	57.0	4.37	.881
Environment is like home country	20.9	24.3	20.6	22.7	11.5	2.80	1.315
When travel I feel free and in contact with nature	0.5	3.5	24.1	47.7	24.1	3.91	.815
I am disappointed with natural forest in NZ	43.8	26.9	16.3	9.0	4.1	2.03	1.153
NZ's environment is clean and well managed	2.2	6.8	15.4	45.5	30.1	3.95	.960
Nature experience makes my travel truly worthwhile	0.3	1.9	11.4	37.2	49.2	4.33	.773
NZ does not meet my expectation of clean and green	42.0	28.8	17.3	7.8	4.0	2.03	1.128
Surprised how little fauna	7.9	14.5	47.1	18.9	11.5	3.12	1.050

Note: based on a five-point Likert-scale ranging from 1= strongly agree to 5=strongly disagree

(Base: international sample, n= 385)

Respondents perceived New Zealand's environment as positive; over 70 percent viewed it as clean and well managed (mean = 3.95), more than 40 percent considered it as unique and only 30 percent viewed it as being similar to their home country (mean = 2.80). Most tourists were satisfied with their experience of New Zealand's natural environment (mean = 3.83); over 70 percent indicated that their expectations were met (mean = 2.03), many were satisfied with the natural forests (mean = 2.03) and felt in contact with nature while travelling (mean = 3.91). Most respondents had a neutral opinion about little fauna (mean = 3.12). Over 80 percent of all 385 tourists stated they were keen to see as much as possible of the country (mean = 4.37). Even though tourists generally agreed with the positive image of New Zealand's environment, some mentioned critique. One respondent wrote: 'I was somewhat disappointed with how NZ portrays itself and how it really is. Not quite as caring for the environment as I thought. Furthermore-1080! That is absolutely disgusting & disgraceful what it does to the food chain has such far reaching effects- but again, \$ is king- sadly like everywhere else (Respondent Nr. 32; 23.02.2008)'. This statement points towards a reflection on environmental practice in New Zealand. While New Zealand is marketed as a 'clean and green' country, those who value the environment may be disappointed with New Zealand's environmental management and practice as the statement above indicates.

New Zealand is urged to maintain a quality environment and to become more environmentally focussed. As one respondent mentioned: 'I was surprised that some bus & shuttle drivers leave their engine running while stationed for a longer time and that I couldn't find places to properly recycle or environmentally friendly dispose of used batteries (Respondent Nr. 113, 23.02.2008)'. Similarly another respondent stated: 'there is a lot of pollution due to old cars, mostly rental. Buses also produce pollution more than normal (Respondent Nr. 78, 22.02.2008)'. Statements, such as these, indicate that tourists were aware of environmentally unfriendly practices within the tourism industry, which may reflect badly on its overall image. Improvement may be needed within the sector to ensure certain environmental

standards are met. One example is recycling practice within the country. As one respondent wrote: ‘the recycling programs need lots of improvement (Respondent Nr. 271, 08.03.2008)’. And another commented: ‘most people don’t recycle! that’s very shocking for a German! (Respondent Nr. 104, 22.02.2008)’. The selected impressions above call for more sustainable tourism practice in New Zealand and shows that its ‘clean and green’ image may be further scrutinised.

5.3.1 Expectation, Perception, Satisfaction and Gender

The expectation, perception and satisfaction of New Zealand were compared between male and female tourists. Results in table 5.5 suggests, that women agreed significantly stronger with the statement ‘nature makes my travel truly worthwhile’ than men ($Z = -2.416$, $p = .016$). This result supports literature which suggests that women are generally more environmentally orientated than men (Stern et al. 2006). However, all other statements were rated relatively similar. All other significance levels were found above $p = 0.05$.

Table 5.5 Gender and expectation, satisfaction and perception

Variable List	Female		Male		<i>p</i>
	Mean	SD	Mean	SD	
Environment meets expectation	3.85	1.095	3.83	.998	.603
Interest in New Zealand animals and plants	4.15	.867	4.00	.971	.161
Famous tracks one of main reasons to visit	3.41	1.289	3.40	1.280	.941
Would like to see as much as possible	4.42	.868	4.35	.877	.311
Environment like home country	2.80	1.335	2.79	1.310	.963
When travel feel free and in contact with nature	3.95	.802	3.89	.821	.598
Disappointment with natural forest	2.00	1.180	2.03	1.132	.586
NZ’s environment clean and well managed	3.98	.987	3.92	.938	.417
Nature experience makes travel worthwhile	4.45	.715	4.25	.801	.016
NZ does not meet my expectations of clean & green	1.90	1.050	2.11	1.165	.096
Surprised how little fauna	3.04	1.069	3.18	1.038	.359

Note: based on a five-point Likert-scale ranging from 1=strongly disagree to 5= strongly agree

(Base: International sample, n= 385)

5.3.2 Expectation, Perception, Satisfaction and Nationality

While comparing results according to respondents' nationality, differences in means were found in three of eleven cases. Results in table 5.6 suggest that the international sample agreed stronger with the statement, 'I would like to see as much as possible of this country,' than the German sample ($Z = -2.667$, $p = 0.008$). Germans disagreed significantly more with the statement, 'New Zealand's landscape reminds me of my home-country,' ($Z = -2.868$, $p = 0.004$) and with the statement, 'I consider New Zealand's environment as clean and green' ($Z = -2.448$, $p = 0.014$). Results suggest that no differences were found in eight of 11 cases as significance levels were > 0.05 .

Table 5.6 Nationality and expectation, satisfaction, perception

Variable List	German		Other		p
	mean	SD	mean	SD	
Environment meets expectation	3.67	.942	3.85	1.062	.232
Interest in New Zealand animals and plants	3.99	1.019	4.08	.901	.620
Famous tracks one of main reasons to visit	3.35	1.330	3.41	1.265	.831
Would like to see as much as possible	4.09	1.100	4.45	.799	.008
Environment like home country	2.41	1.145	2.90	1.339	.004
When travel feel free and in contact with nature	3.80	.853	3.95	.803	.200
Disappointment with natural forest	1.99	1.191	2.04	1.145	.562
NZ's environment clean and well managed	3.71	1.046	4.01	.927	.014
Nature experience makes travel worthwhile	4.46	.658	4.30	.799	.147
NZ does not meet my expectations of clean & green	1.91	1.130	2.06	1.127	.199
Surprised how little fauna	2.91	1.054	3.17	1.044	.071

(Base 1= 'German' sample; Base 2= 'Other International' sample)

5.3.3 Expectation, Satisfaction Perception and Age

International tourists were grouped into two age categories (1= under 35 and 2= over 35). Statistical significant differences have been found in four of eleven cases ($p < 0.05$). Younger respondents agreed stronger with the statement, 'the environment in New Zealand is exactly how I imagined it to be' ($Z = -2.231, p = .026$), 'I am interested in New Zealand's animals and plants' ($Z = -2.103, p = .036$) and 'one of my reasons to visit this country is to go on one of the famous tracks' ($Z = -2.248, p = .025$). Older respondents seemed to agree more with the statement 'New Zealand's landscape reminds me of my home country' ($Z = -1.996, p = .046$).

5.3.4 Expectation, Satisfaction Perception and Setting Circumstances

To ease data analysis, respondents were grouped into DOC centre and I-Site visitors. Both groups had significantly different opinions to five of eleven statements ($p < 0.05$). The interest in New Zealand's animals and plants differed between respondents ($Z = -3.150, p = .002$); I-Site visitors appeared to be more interested than DOC Visitors whereas I-Site visitors appeared more interested to explore as much as possible ($Z = -1.979, p = .048$). Tourists differed significantly in their opinion towards hiking one of the famous tracks in New Zealand ($Z = -3.784, p = .000$); DOC Centre visitors appeared to be more interested in hiking than I-Site visitors. DOC visitors also appeared less disappointed with the native forest than I-Site visitors ($Z = -3.331, p = .001$) which may be associated with their outdoor experience. The following table provides an overview of expectations, perception and satisfaction of DOC and I-Site Centre visitors (Table 5.7).

Table 5.7 Location and expectation, satisfaction, perception

Variable List	DOC Centre		I-Site Centre		<i>p</i>
	mean	SD	mean	SD	
Environment meets expectation	3.83	1.07	3.84	.994	.786
Interest in NZ's animals and plants	4.18	.862	3.86	.994	.002
Famous tracks one of main reasons to visit	3.21	1.26	3.72	1.24	.000
Would like to see as much as possible	4.45	.817	4.25	.969	.048
Environment like home country	2.87	1.31	2.68	1.32	.171
I feel free and in contact with nature	3.91	.812	3.91	.824	.990
Disappointment with natural forest	2.18	1.2	1.78	1.04	.001
NZ's environment clean and well managed	3.87	1.02	4.07	.845	.080
Nature experience makes travel worthwhile	4.30	.761	4.38	.793	.210
NZ does not meet my expectations of clean and green	2.06	1.18	1.97	1.03	.745
Surprised how little fauna	3.02	1.03	3.27	1.06	.029

Note: based on a five-point Likert-scale ranging from 1=strongly disagree to 5=strongly agree
(Base 1= DOC visitor sample, n= 144; Base 2= I-Site visitor sample, n= 241)

5.4 Tourists' Environmental Values, Attitudes and Behaviour

Environmental values were researched using a short version of Schwartz's (1978) Values Scale which has previously been used by De Groot and Steg (2007). Environmental attitudes were measured using Dunlap's and Van Liere's (1987) NEP Scale (Lück 2003). Similarly to research by Higham and Carr (2002), Dickey (2003), Fairweather et al. (2005) and Sandve (2007), this thesis assesses pro-environmental behaviour by asking respondents about environmental activism and environmental group membership. Furthermore, climate change risk awareness (Kuckartz et al. 2006) and the apparent knowledge of the Department of Conservation 'Environmental Care Code' have been investigated.

5.4.1 Environmental Values

Stern (2000) proposed that egoistic, social-altruistic, and biospheric value orientations may affect environmental attitudes and behaviour. Egoistic values focus on maximising individual outcomes, social-altruistic values reflect concern for the welfare of others and biospheric values emphasise the environment and biosphere. Within this thesis, international tourists' value orientation was measured using a short version of Schwartz's (1992) 'Value Scale'. De Groot and Steg (2007) had previously modified the scale to thirteen values, including two biospheric ones, to be able to evaluate respondents' environmental orientation. To ease data analysis and to keep the questionnaire short, De Groot and Steg's (2007) value scale was further reduced to six value items, reflecting all three value orientations. The following value items were included: protecting the environment, unity with nature (biospheric value orientation), authority, financial wealth (egoistic value orientation), social justice and equality (altruistic value orientation). Respondents were asked to indicate their value orientation on a 5-point Likert-scale ranging from 1= not important, 0= neutral to 5= very important. To reduce respondent fatigue, the order of the different values was randomised.

A five-point Likert-scale was seen as useful to warrant conformity and simplicity within the questionnaire (Davies 2007). Results suggest that 'Social Justice' was regarded by 49 percent of all respondents as most important as a guiding principle in life (mean = 4.31), followed by 'environmental protection' (mean = 4.35), 'equality' (mean = 4.10), 'unity with nature' (mean = 3.99), 'authority' (mean = 3.03) and 'financial wealth' (mean = 3.11). According to table 5.8, support for an egoistic value orientation was relatively low. Financial wealth was regarded by only about 30 percent as important in life. Similarly, just fewer than 30 percent regarded authority as important.

Table 5.8 Tourists' value orientation

Value Orientation	Value Item	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	mean	SD
biospheric	environmental protection	0.3	1.3	8.3	43.8	46.4	4.35	.710
biospheric	unity with nature	0.5	5.5	17.6	47.0	29.4	3.99	.860
egoistic	financial wealth	5.8	18.1	42.8	25.7	7.6	3.11	.982
egoistic	authority	7.3	17.8	46.6	20.7	7.6	3.03	.992
altruistic	equality	1.6	2.6	18.0	39.4	38.4	4.10	.895
altruistic	social justice	0.8	1.3	13.6	34.9	49.3	4.31	.813

Note: Scale from 1= not important, 0= neutral, 5= very important as a principle in life, in percent (Base: International sample, n= 385)

Compared to an egoistic value orientation, stronger support was found for altruistic values; over 80 percent of all respondents regarded values within this category as important. More than 70 percent regarded equality, and more than 80 percent viewed social justice as an important value in their life. More than 90 percent regarded environmental protection as important and over 70 percent regarded unity with nature as important for them as a guiding principle in their lives. The mean value scores indicate that the strongest support can be found for an altruistic (mean scores 4.31 & 4.1) and biospheric value orientation (mean scores 4.35 & 3.99) and lowest support was found for an egoistic value orientation (mean scores 3.11 & 3.03).

In line with Lück (2003) and Fairweather et al. (2005) strong support was found for the existence of pro-environmental tourists in New Zealand. According to their indicated values, attitudes and behaviours, it may be argued, that international tourists value and care for the environment and are aware of environmental issues. This finding may become crucial for the tourism industry in New Zealand as environmentally orientated tourists may actively seek tourism products that effectively incorporate pro-environmental values and attitudes.

5.4.2 Environmental Values and Gender

While comparing female and male tourists' statistical significant differences were found in one of six cases. The value 'protecting the environment' as a guiding principle in life was rated significantly different; woman considered it more important than men ($Z = -2.430$, $p = .015$). All other values were not rated significantly different ($p > 0.05$) as shown in table 5.15 below.

Table 5.9 Gender and personal values

value item	Female		male		<i>p</i>
	mean	SD	mean	SD	
protecting the environment	4.44	.690	4.27	.724	.015
authority	3.01	.966	3.05	1.008	.854
equality	4.20	.823	4.04	.940	.145
unity with nature	4.05	.826	3.94	.891	.219
financial wealth	3.01	.966	3.18	.991	.113
social justice	4.39	.735	4.25	.838	.166

Note: Scale from 1= not important, 0= neutral, 5= very important as a principle in life
(Base: International sample, $n = 385$)

5.4.3 Environmental Values and Nationality

While comparing the response of Germans and other international tourists, significant differences were found in two of six cases ($p < 0.05$). 'Authority', as a guiding principle in life, was rated significantly different. Internationals viewed it as more important ($Z = -3.020$, $p = .003$) than Germans. Furthermore, 'equality' was rated significantly different among respondents ($Z = -2.691$, $p = .007$) with tourists from other nationalities regarding it more important than Germans. The following table (5.10), indicates the mean ratings of six different values; altruistic (equality, social justice), egocentric (authority, financial wealth) and biospheric (protecting the environment, unity with nature).

Table 5.10 Nationality and values

value item	German		Other International		P
	mean	SD	mean	SD	
protecting the environment	4.28	.750	4.36	.699	.404
Authority	2.74	.844	3.11	1.014	.003
Equality	3.86	.957	4.17	.868	.007
unity with nature	3.85	.818	4.03	.868	.058
financial wealth	2.91	1.009	3.17	.969	.055
social justice	4.29	.791	4.31	.820	.807

Note: Scale from 1= not important, 0= neutral, 5= very important as a principle in life
(Base 1= 'German' sample, n= 79; Base 2= 'Other international' sample, n= 306)

5.4.4 Environmental Values and Age

As one of the earliest studies Dunlap and Heffernan (1975) established that younger respondents (<30 years) tend to hold stronger pro-environmental values than respondents over 30 years. Following from this finding, the response of two age groups (< 35 and 35≥) was compared. Results indicate that significant differences can be found in two of six cases. The importance of 'unity with nature' was rated significantly different on a scale from 1= not important to 5= very important as a principle in one's life. Younger respondents rated 'unity with nature' as more important than the older respondents ($Z = -2.363$, $p = .006$). Older respondents regarded 'financial wealth' as more important than younger ones ($Z = -2.363$, $p = .018$).

5.4.5 Environmental Values and Setting Circumstances

Crick-Furman and Prentice (2000) suggest that tourists may express different values according to immediate goals and setting circumstances. However, while testing this assumption, no significant differences were found between DOC and I-Site settings ($p > 0.05$) (table 5.11). It appears that respondents' attitudes were independent from the actual location of survey.

Table 5.11 Setting and values

value item	I-Site		DOC		<i>p</i>
	mean	SD	mean	SD	
protecting the environment	4.35	.709	4.35	.713	.953
authority	3.07	.928	2.98	1.091	.529
equality	4.08	.906	4.14	.877	.572
unity with nature	3.98	.868	4.01	.849	.805
financial wealth	3.08	.973	3.16	.998	.338
social justice	4.28	.817	4.35	.807	.397

Note: Scale from 1= not important, 0= neutral, 5= very important as a principle in life
(Base 1= I-Site visitor sample, n=241; Base 2= DOC visitor sample, n=144)

5.5 Tourists' Environmental Attitudes

To meet the second objective, tourists environmental attitudes were researched using Dunlap and Van Liere's New Environmental Paradigm (1987) scale and Schwartz's Value Scale (1992). As a widely acknowledged and reliable measurement tool (Lundmark 2007), Dunlap and Van Liere's New Environmental Paradigm scale (NEP) (1987) assesses respondents environmental attitudes on a Likert-scale ranging from 1= strongly agree, 3= neutral to 5= strongly disagree. Results in table 5.12 suggest that most tourists supported the statements under 'balance of nature' and 'limits to growth'. Of all 385 respondents, some 62 percent strongly agreed with the statement 'humans must live in harmony with nature in order to survive' (mean = 4.42), forty-seven percent strongly agreed with 'the balance of nature is delicate and easily upset' (mean = 4.24), forty-nine percent agreed with the statement 'humankind is severely abusing the environment' (mean = 4.20), 60 percent strongly agreed with 'the earth has limited room and resources' (mean = 4.39) and 36 percent strongly agreed with 'when humans interfere with nature it often produces disastrous results' (mean = 3.95). Respondents were found to disagree with statements under 'humans

over nature' as fifty-seven percent strongly disagreed with the view that humans are created to rule over nature (mean = 1.87) and another 40 percent disagreed with the statement 'plants and animals primarily exist to be used by humans' (mean = 2.01).

Table 5.12 Tourists' NEP statements

NEP Variables	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	P	SD
balance of nature	1.3	4.7	10.3	36.3	47.4	4.24	.911
approaching the limit	3.7	11.1	24.9	32.0	28.3	3.70	1.106
steady state economy	2.9	6.9	21.5	35.0	33.7	3.90	1.040
harmony with nature	2.6	2.6	6.3	26.8	61.7	4.42	.919
abusing environment	1.6	5.3	13.2	31.3	48.7	4.20	.966
disastrous results	1.8	7.6	20.2	34.6	35.7	3.95	1.014
plants, animals for humans	40.2	32.0	19.0	4.2	4.5	2.01	1.082
nature modify to suit needs	29.5	32.4	25.5	9.7	2.9	2.24	1.070
humans created over nature	57.3	18.5	11.1	6.9	6.3	1.87	1.230
earth has limited room	4.2	3.7	5.2	22.8	64.1	4.39	1.033
humans need not adapt	39.3	29.3	17.9	8.4	5.0	2.11	1.164
limits to growth	3.7	6.4	21.5	34.6	33.8	3.88	1.064

Note: Scale from 1= not important, 0= neutral, 5= very important as a principle in life;

(Base: international sample, n = 385)

5.5.1 Environmental Attitudes and Gender

Uysal et al. (1994), Luzar et al. (1995) and Harper (2001) congruently suggest that women appear more environmentally orientated than men. While testing this assumption it was indeed found, that noteworthy differences in environmental orientation exist. In three of twelve cases, females and males differed significantly in their response ($p < 0.05$). Females agreed stronger with the statement 'humans must live in harmony with nature in order to survive' than males ($Z = -2.682, p = .007$).

Significant differences were also found in the response towards the statement 'humans have the right to modify the natural environment to suit their needs' with female respondents disagreeing more than males ($z = -3.149, p = .002$). Females appeared to disagree significantly more with the statement 'humans need not adapt

to the natural environment because they can remake it to suit their needs' than males ($z = -3.170$, $p = .002$). Table 5.13 details the responses according to gender in relation to the individual NEP statements.

Table 5.13 NEP statements and gender

NEP variables	Female		Male		<i>p</i>
	mean	SD	mean	SD	
balance of nature	4.22	.966	4.24	.872	.814
approaching the limit	3.71	1.065	3.68	1.144	.906
steady state economy	3.92	1.015	3.88	1.051	.831
Harmony with nature	4.52	.932	4.34	.907	.007
abusing the environment	4.25	1.035	4.16	.915	.115
disastrous results	3.96	1.050	3.94	.974	.662
Plants, animals for humans	1.95	1.072	2.05	1.079	.323
nature modify to suit needs	2.05	1.023	2.38	1.080	.002
humans created over nature	1.85	1.260	1.85	1.180	.848
earth has limited room	4.31	1.142	4.45	.935	.360
humans need not adapt	1.93	1.166	2.25	1.144	.002
Limits to growth	3.95	1.055	3.84	1.062	.325

Note: Scale from 1= not important, 0= neutral, 5= very important as a principle in life;

(Base: international sample, $n = 385$)

Overall, it was found that females appeared more pro-environmental than males, generally supporting and Harper's (2001), Luzar et al. (1995) and Uysal et al. (1994) findings.

5.5.2 Environmental Attitudes and Nationality

Harper (2001) found, that nationality plays a role in the environmental orientation. Indeed, significant differences were found in regards to the environmental attitudes of 'German' and 'Other International' tourists (table 5.14).

Table 5.14 NEP statements and nationality

NEP Statement	German		Other International		p
	mean	SD	mean	SD	
balance of nature	4.54	.658	4.16	.951	.001
approaching the limit	3.87	1.121	3.66	1.100	.068
steady state economy	3.96	1.025	3.88	1.045	.549
harmony with nature	4.34	.918	4.44	.920	.188
abusing the environment	4.12	.953	4.23	.969	.263
disastrous results	3.96	1.074	3.94	1.000	.634
plants, animals for humans	2.06	1.090	1.99	1.081	.518
nature modify to suit needs	2.14	.977	2.27	1.093	.515
humans created over nature	1.58	1.051	1.94	1.263	.011
earth has limited room	4.72	.767	4.30	1.077	.000
humans need not adapt	1.83	1.074	2.18	1.177	.009
limits to growth	4.10	1.081	3.82	1.054	.014

Note: Scale from 1= not important, 0= neutral, 5= very important as a principle in life;

(Base 1= 'German' sample, n=79; Base 2='Other international' sample, n= 306)

The response differed significantly in five of twelve cases ($p < 0.05$). Germans appeared to agree stronger with the statement 'the balance of nature is easily upset' than other international tourists ($Z = -3.281$, $p = .001$).

Mean ratings indicate that 'Germans' rated the statements of 'humans were created to rule over the rest of nature' ($Z = -2.552$, $p = 0.011$), 'humans need not adapt to the natural environment because they can remake it to suit their needs' ($Z = -2.609$, $p = 0.009$), the 'earth has limited room' ($z = -3.899$, $p = .000$) and 'limits to growth' ($z = -2.457$, $p = .014$) as more important than 'other international' tourists. It can be concluded that 'Germans' approve the statements under the NEP more than 'Other International' tourists generally supporting Lück's (2003) findings.

5.5.3 Environmental Attitudes and Age

To ease data analysis two age groups were defined (group one <35, group two ≥35). In three of 12 cases, significant differences were found. The following statements were rated significantly different: 'balance of nature easily upset' ($z = -2.539$, $p = .011$), 'when humans interfere with nature it produces disastrous results' ($z = -2.420$, $p = .016$) and 'the earth has limited room' ($z = -2.903$, $p = .004$). Younger individuals valued the natural environment more than older respondents generally supporting findings of Luzar et al. (1995).

5.5.4 Environmental Attitudes and Setting Circumstances

Previous research supports the view that values and attitudes are transitional and may change according to the settings within which respondents locate (Crick-Furman and Prentice 2000). Dickey (2003) suggests that tourists who participate in outdoor experiences were more environmentally conscious than in their everyday life. However, while testing the NEP response according to location of survey (DOC Visitor Centre / I-Site Visitor Centre), no significant differences were found (Table 5.15). This is in congruence with there being no significant differences in environmental values between the two settings. It can be concluded that tourists attitudes did not significantly differ depending on where they answered the survey ($p > 0.05$).

Table 5.15 NEP statements and setting

NEP Variables	I-Site		DOC		P
	mean	SD	mean	SD	
balance of nature	4.26	.891	4.20	.946	.672
approaching the limit	3.74	1.106	3.63	1.108	.317
steady state economy	3.89	1.082	3.90	.969	.697
harmony with nature	4.44	.956	4.40	.857	.251
abusing the environment	4.18	.975	4.24	.951	.551
disastrous results	3.97	1.045	3.92	.964	.436
plants, animals for humans	2.05	1.073	1.94	1.097	.234
nature modify to suit needs	2.21	1.074	2.30	1.064	.384
humans created over nature	1.91	1.240	1.79	1.215	.298
earth has limited room	4.37	1.080	4.42	.952	.791
humans need not adapt	2.11	1.158	2.11	1.177	.967
limits to growth	3.87	1.142	3.91	.925	.671

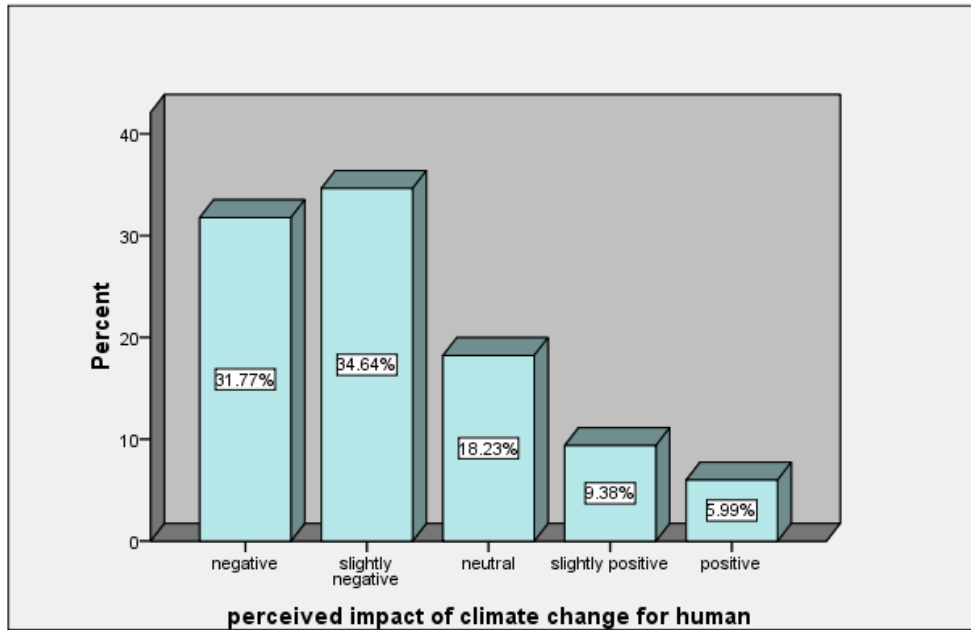
Note: Scale from 1= not important, 0= neutral, 5= very important as a principle in life (Base1 = I-site visitor sample, n= 241; Base 2 = DOC visitor sample, n= 144)

5.6 Attitudes towards Climate Change

Climate Change is often regarded as one of the most serious issues today (UNEP 2008), which may lead to consequences for different aspects of the tourism industry including long haul travel (Becken and Hay 2007, Forsyth et al. 2007, Hall and Gössling 2007). Research shows that different parts of the world will be negatively affected by droughts, floods, heat waves, storms and extreme weather patterns, which will consequently affect the tourism industry in these areas (Friends of the Earth 2007). How concerned are tourists with climate change while travelling? Respondents were asked to indicate how climate change will affect them and their families in the future on a scale from one (positive) to five (negative). Results show,

that over 60 percent of all 385 respondents perceived climate change as negative for themselves and their family in the future. Only 18 percent viewed the future impacts of climate change as neutral and 15 percent viewed it as slightly positive or positive. Findings point towards a considerably high concern and risk awareness (Figure 5.6).

Figure 5.6 Perceived impact of climate change



(Base= international sample, n=385)

Similarly to the findings within this thesis, Sandve (2007) found that over 80 percent of 245 skiers and snowboarders in New Zealand were concerned with climate change. Becken (2007, p.357) found in her qualitative study, that some tourists' perceived climate change as 'a massive problem' which is 'happening now' with some viewing it as 'at the top of our list' in terms of global problems. It can be concluded that some tourists are aware of and concerned with climate change.

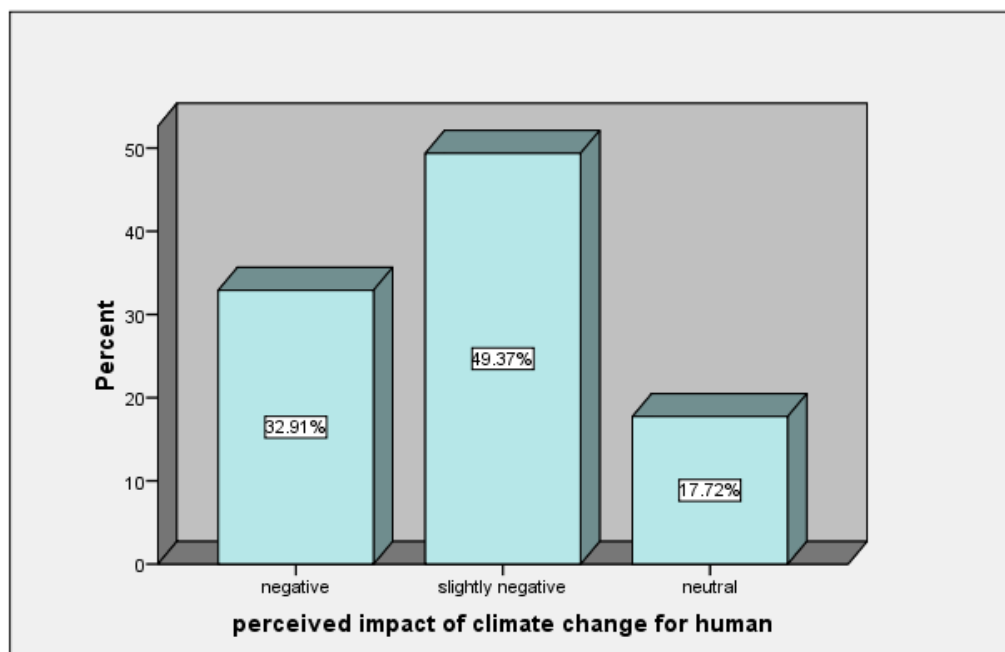
5.6.1 Climate Change, Attitudes and Gender

While tourists have been found to view climate change as generally negative for themselves and their family in the future, the response was compared between male and female tourists. Significant differences were found, with females being more often concerned with the negative impacts than males ($z = -2.587$, $p = .01$). Findings therefore support the study of Stern et al. (2006).

5.6.2 Climate Change Attitudes and Nationality

The response of 'Germans' and 'Other Internationals' in regards to climate change was found to differ significantly. 'Germans' perceived climate change as more negative than 'Other international' tourists ($z = -2.643$, $p = .008$). Over 80 percent of all interviewed 'Germans' perceived climate change as negative, and only 18 percent as neutral. Lück (2003) indicates that Germans tend to hold pro-environmental attitudes and are generally environmentally aware. Kuckartz et al. (2006) found that Germans are highly alert towards Climate Change risks with almost every second perceiving it as a threat for themselves and their families in the future.

Figure 5.7 German Climate Change perception



(Base: German sample, $n = 79$)

5.6.3 Climate Change Attitudes, Age and Setting Circumstances

While testing the response according to age of tourists, it was found that younger respondents viewed climate change as more negative than respondents over 35 years of age ($z = -3.142$, $p = .002$). The response between DOC and I-Site visitors was not significantly different ($p > 0.05$).

5.7 Tourists' Environmental Behaviour

Respondents gave numerous examples of pro-environmental behaviour; a detailed list of response can be found in the Appendix E. To simplify analysis, only the first activity mentioned was taken into account. Based on frequencies, response was clustered into eleven categories:

1. limit resource use
2. purchase organic products
3. donate to environmental groups
4. use solar energy
5. member of green party
6. limit car use
7. compost
8. recycle
9. create awareness
10. other
11. nothing

Subsequently, simple frequency analysis was obtained. Results are presented in the following table 5.16:

Table 5.16 Pro-environmental behaviour

Categories	Percent
limit resource use	11
recycle	48
limit car use	9

(Base= international sample, n=385)

Results suggest that 48 percent of all respondents actively recycle. Sandve (2007) and Lück's (2003) suggest similar results as both found that most of their interviewees committed to such pro-environmental behaviour. It was found that 11 percent stated to limit resources and nine percent mentioned to limit their car use. Some tourists

hold pro-environmental views and do act in an environmentally friendly way, but are these pro-environmental attitudes and behaviours also complimented by a commitment to local, regional or global environmental groups?

5.7.1 Environmental Group Membership

Environmental group membership was assessed using a dichotomous choice question. If the respondent stated to be a member, he/she was asked to specify the group. Examples were provided, such as Greenpeace, WWF and Royal Society for the Protection of Birds (RSPB) to avoid confusion regarding the question. However, bias may be associated with providing examples as these groups may be likely to be mentioned. Results indicate that only about 20 percent of all 385 respondents were member of an environmental group.

While comparing the results between men and women, it was found that more women were members of an environmental group than men. Respondents mentioned over 30 different local and regional organisations (Appendix E) with Greenpeace, WWF and RSPB being the most frequently mentioned. Almost 36 percent claimed to be a member of Greenpeace, some 11 percent indicated to be a member of WWF and a little fewer than 8 percent stated to be a member of the RSPB. The following table (5.17) compares results with data obtained by Lück (2003):

Table 5.17 Comparison of environmental group membership

Organisation	Sample Henniges; n=385	Sample Lück; n= unknown
Greenpeace	7.3 %	8.6%
WWF	2.3%	9.1%
RSPB	1.6%	1.1%
Other	9.1%	5.6 %
Total of Sample	20.3%	24.4%

Although some support was found for environmental groups, over 70 percent of all respondents stated to not be a member. Previous research found that members of an environmental organization were more likely to support the New Environmental Paradigm than non-members (Dunlap and Van Liere 1978, Lück 2003). As only minor support can be found for environmental groups it appears that even though tourists seem to support ecocentric views, this is often not reflected in commitment to these attitudes in form of an environmental group membership. This finding generally supports research by Fairweather et al. (2005).

5.7.2 Knowledge of DOC Environmental Care Code

The ‘Environmental Care Code’ is one of three Department of Conservation codes which provide advice on how to maintain a pristine environment, to preserve historic relics, respect cultural values and the rights of other people who enjoy the same environment (DOC 2008). The following list of advice is given to tourists:

Table 5.18 Environmental care code (DOC 2008)

protect plants and animals	camp carefully
remove rubbish	keep to the track
bury toilet waste	consider others
keep streams and lakes clean	respect our cultural heritage
take care with fires	enjoy your visit

Note: For the full version of the environmental care code refer to the Appendix D.

It has been suggested that knowledge plays an important role in attitude formation, which may lead to behaviour intention and actual behaviour (Ajzen and Fishbein 1975, Hines et al. 1987). To assess tourists’ knowledge of an environmental care code, a dichotomous (yes/no) question was used. Data suggests that some 32 percent of all tourists had known the code and over 68 percent had not heard of it before. It was assumed that visitors to DOC centres were more likely to know about the code than

I-Site visitors. DOC visitors may actively seek outdoor experiences, whereas I-Site visitors may likely be interested in a different range of activities.

Table 5.19 Knowledge of DOC care code

Visitor Centre	Care Code Knowledge	
	Yes (%)	No (%)
I-Site	15.1	47.3
DOC	16.8	20.8

(Base: International sample, n= 385)

Indeed, the cross-tabulation of respondents who indicated yes/no shows that over 40 percent of all I-site visitors had not come across the code compared to 20 percent at the DOC centres. According to the results obtained through a Mann-Whitney (U) test, the difference in knowledge was statistically significant ($z = -4.064$, $p = .000$).

5.8 Willingness to Pay (WTP)

5.8.1 WTP for Carbon Offsetting Schemes

Respondents were asked if they would be willing to pay NZ\$ 10.00 to offset emissions created by a long haul flight. The question was based on the hypothetical market scenario that the money would be invested in renewable energy projects. The monetary value of NZ\$ 10.00 was considerably low compared to fees suggested by most offsetting businesses and organisations which have recently been researched by Gössling et al. (2007).

However, the intent was to include a fee which would not provoke a rejection of the questionnaire. Results indicate that a general tendency towards willingness to pay exists. Overall, 50 percent of all tourists were willing to offset some emissions via NZ\$ 10.00. Only 16 percent stated they would not be willing to pay and another 34 percent said they would want more information on offsetting schemes (table 5.20).

Table 5.20 Willingness to pay to offset emissions

Willingness to pay	Percent
yes, I would	50
no, I would not	16
I want more info	34

(Base: International Sample, n= 385)

Similarly, Fairweather et al. (2005) asked tourists in New Zealand if they would be willing to pay \$15.00 to offset emissions via a tree planting scheme. Results suggest, that 43 percent wanted to offset their emissions, 25 percent rejected and 32 percent were unsure. Within this thesis, support for offsetting schemes was generally higher, which may well be associated with a lower offsetting fee, but may also be due to increased climate change awareness amongst tourists.

Negative Climate Change Perception and WTP to offset

As indicated in section 5.6, over 60 percent of all 385 tourists perceived climate change as either slightly negative or negative. Of those tourists 57 percent were willing to pay a NZ\$ 10.00 fee to offset some of their emissions created by their long haul flight. It can be assumed, that a correlation exists between climate change awareness and the willingness to pay for offsetting schemes. Further correlation analysis is however beyond the scope of a master's thesis.

German WTP to Offset

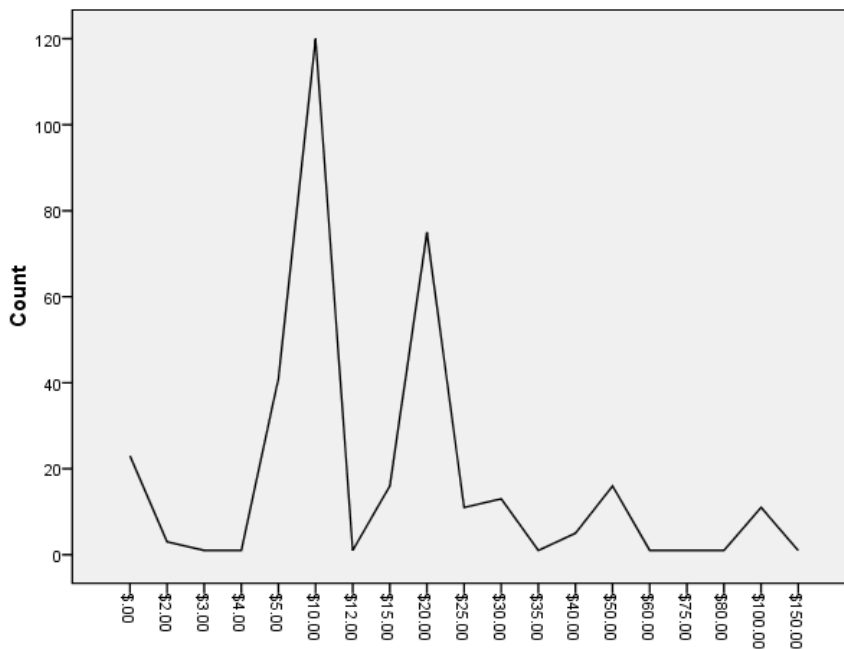
Respondents were grouped into 'German' and 'Other Internationals' to be able to compare results to a previous study by Kuckartz (2006) who researched German's willingness to offset emissions created by air travel under a hypothetical market scenario. The author found that 25 percent of all interviewed respondents would want to offset their emissions. Results within this thesis suggest that 40 percent of all Germans were willing to offset their emissions through a NZ\$ 10.00 fee. Even though results are not directly comparable due to different samples and research methods, a

general tendency towards willingness to pay for offsetting schemes was found in both studies.

5.8.2 WTP for National Park Entrance Fees

Overall, most respondents were willing to pay an entrance fee of NZ\$ 10.00 under the hypothetical scenario that money would be directly invested in environmental projects of the parks. A descriptive analysis of cases revealed a mean of NZ\$ 18.52 and median of NZ\$ 10.00. Figure 5.8 shows the distribution of people’s willingness to pay in absolute numbers.

Figure 5.8 Willingness to pay



(Base= international sample, n= 385)

The above figure indicates that the maximum willingness to pay ranged from NZ\$ 0.00 to NZ\$ 150.00. The extreme differences may be due to the different interpretation of the question, often found to be an issue in CVM creating difficulties in question reliability. Limitations and difficulties of CVM have been addressed within the method section (chapter 4). It can be found, however, that 35 percent of all 385 tourists were willing to pay NZ\$ 10.00, some 20 percent were willing to pay NZ\$

20.00 and about 12 percent would consider an amount of NZ\$ 5.00. Some respondents considered an amount of NZ\$ 100.00 but commented that this should apply to a concession card valid for every of the 14 national park's over a period of one year. Machado's (2001) study suggests that respondents were willing to pay higher entrance fees if money would be invested into the parks conservation practice. A direct comparison to Machado's (2001) results is difficult, as the author used three different WTP options for the respondents to consider, whereas in this thesis the respondents only had to consider how much they would be willing to pay in general. Baral et al. (2008) used the CVM to estimate the willingness to pay of tourists to the Annapurna Conservation Area, Nepal. Their results suggest that most visitors would be willing to pay a higher entry fee than the current fee of US\$ 27.00. The mean and median WTP were US\$ 69.20 and US\$ 74.30. The authors recommended an increase to US\$ 50.00. They also found that the most common explanation for WTP by respondents was the desire to protect the environment more efficiently.

5.8.3 WTP and Environmental Values/Attitudes

Kotchen and Reiling (2000) suggest that a positive relation exists between respondents' pro-environmental attitudes and their willingness to pay for conservation. After Ajzen and Fishbein's (1975) 'Theory of Planned Behaviour,' attitudes can lead to intention and actual behaviour if certain underlying conditions are met (Hines et al. 1987, Dunlap Van Liere 1978). Some authors have combined both, CVM and NEP, to explain the response. Kotchen and Reiling (2000) used an updated version of the NEP and found that attitudes are a significant explanatory variable for general WTP statements and also for the amount respondents are willing to pay. Both CVM and NEP have been used in this research. Environmental attitudes have been measured using Dunlap and Van Liere's (1987) NEP scale and respondents' willingness to pay was assessed using an open ended CVM question. Tourists were asked to state their maximum willingness to pay for an entrance fee to national parks in New Zealand. In order to analyse results, simple cross-tabulation was used. Overall, it was found that some support exists that stronger environmental

attitudes relate to higher willingness to pay. Over 12 percent of those respondents who strongly agreed with the statement, 'humans must live in harmony with nature in order to survive', were willing to pay over NZ\$ 30.00 for an entrance fee.

5.9 Summary

This chapter presented information about international tourists' perception, expectation and satisfaction with New Zealand as a holiday destination. Primary research findings were analysed in regards to tourists' values, environmental attitudes and behaviours. Findings towards tourists' willingness to pay for offsetting schemes and national park entrance fees have been established. Overall, the sample reflects a young, well educated European tourist population. Interviewees were generally willing to spend on their holiday and would revisit the country. More than 70 percent of all tourists were interested in New Zealand's animals and plants and nature experiences made their travel worthwhile.

Most tourists perceived the environment as 'clean and green' with over 80 percent being satisfied with New Zealand's natural forests. Women were generally more environmentally orientated than men. Germans were found to approve the NEP scale more than other international tourists. It was further found that over 60 percent of all interviewed tourists regarded climate change as negative and half of all interviewees were willing to pay NZ\$ 10.00 to offset carbon emissions created by their own travel. If entrance fees to national parks would be directly invested in environmental projects, over 35 percent would pay a maximum fee of NZ\$ 10.00 and 20 percent would consider a fee of NZ\$ 20.00. The next chapter will draw conclusions and provide recommendations towards tourism and conservation policy in New Zealand.

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

In this chapter conclusions are drawn according to the thesis objectives. Key results are presented in direct relation to the literature and wider implications are discussed. Recommendations are made for further research directions. Findings are important, as the way how people think about the environment may very well influence the tourism industry in the future.

6.2 Key Findings in Relation to Objectives

To gain insight into international tourists' environmental values, attitudes and behaviour sampling took place at two I-Site (Dunedin, Christchurch) and two DOC visitor centres (Queenstown, Te Anau) on the lower South Island of New Zealand in February and March 2008. 100 German and 300 English questionnaires were researcher distributed on three following days from Friday to Sunday. A German sample was seen as useful to allow sub-sample analysis and to be able to compare results with findings of Kuckartz et al. (2006). Overall, 385 questionnaires were fully answered resulting in a response rate of 95 percent. Respondents from all prominent nationalities were sampled. Over 50 percent of all interviewees came from Europe. The gender and age distribution revealed that slightly more men were interviewed than women. The largest age group was between 25 and 34 years which is generally most represented in New Zealand according to the Ministry of Tourism (2008). Tourists sampled were mostly young, highly educated, interested in nature experiences in New Zealand and willing to spend for conservation and offsetting schemes. Germans were found to be slightly more environmentally aware than other Internationals.

Objective 1.) Tourists' perception, expectation, satisfaction

While New Zealand is marketed as 'clean and green', not all tourists necessarily agree with this image. With regards to the experience of nature, respondents were asked to indicate their perceptions. Even though some criticised New Zealand's image, the majority agreed with it. Findings indicate that nature plays a key role in destination choice. Many were keen to walk one of New Zealand's famous tracks. Interviewees generally felt in contact with nature while travelling and were mostly satisfied with the natural forests. Around 30 percent visited more than 5 national parks which highlights the popularity of protected areas for tourism. While New Zealand's environment was perceived by most as being well managed, some mentioned the lack of recycling systems, lack of public transport or felt disturbed by increased tourism activity in national parks (e.g. heli-skiing). It can therefore be assumed that New Zealand's 'clean and green' image is increasingly scrutinised by international tourists.

Objective 2.) Tourists' environmental values, attitudes, behaviour

Higham and Carr (2002), Lück (2003) and Fairweather et al. (2004) found that tourists in New Zealand tend to ecocentric, rather than anthropocentric values and attitudes. Overall, findings of this thesis were congruent with previous research, suggesting that tourists tend to biocentrism and pro-environmental attitudes. As may be expected, visitors at DOC centres expressed stronger environmental views than those interviewed at I-sites. DOC centre visitors were also found to be generally more aware of the environmental care code than I-site visitors. When assessing the willingness to offset emissions via voluntary fees, German tourists were found to be more willing to pay. Significant differences in environmental attitudes could be found between German and other international tourists. Germans showed stronger support for ecocentrism. Although tourists who expressed pro-environmental attitudes not necessarily engaged in pro-environmental behaviours, many mentioned to recycle or to limit their resource use. Similar findings have also been suggested by Lück (2003) and Sandve (2007).

Objective 3.) a.) Tourists' willingness to pay for entrance fees

Although a significant amount of research exists on tourists' environmental values, attitudes, behaviours and willingness to pay, there is a lack of information on tourists' environmental orientation and willingness to pay for entrance fees to national parks in New Zealand. As tourism activities increase and pressure on the environment rises increased efforts have to be made to effectively manage high visitor numbers. Charging entrance fees to national parks could be a possible option. Even though charging visitor fees is a sound practice overseas (Barrow 2006), the persistence of many government officials in New Zealand prevented an implementation of visitor fees to date (Kerr 1998). This research found that tourists are generally willing to pay national park entrance fees. Most tourists were willing to pay between NZ\$ 10.00 - NZ\$ 20.00 if money would be directly invested into environmental protection projects. This result should ideally be considered when drafting a new resource management plan for New Zealand's national parks.

Objective 3.) b.) Tourists' willingness to pay to offset emissions

The researcher was interested in tourists' willingness to pay for offsetting schemes. Results were compared with research by Kuckartz et al. (2006) and findings suggested that over 50 percent of all tourists were willing to pay NZ\$ 10.00 to offset their emissions. Many would want more information on offsetting schemes and some would not want to offset.

6.3 Summary

Overall, most respondents were European, males slightly outnumbered females and the biggest age group was found within the mid 20s. Respondents were well educated and relatively high spenders while on holiday. Most of those respondents were interested in and satisfied with their experience of the natural environment which was for many the main factor influencing destination choice. Overall, support was found for the existence of environmentally orientated tourist in New Zealand. Most tourists expressed an altruistic value orientation, rating 'social justice' and

'environmental protection' as important in their lives. Some indicated to be member of environmental organisations with Greenpeace and WWF being the most popular. Many said to engage in pro-environmental behaviours, such as recycling and limiting resource use. Most respondents regarded climate change as negative for themselves and their family in the future. German respondents often regarded climate change as more negative than other nationalities. Offsetting schemes to limit GHG emissions created by air travel was regarded by 50 percent of all respondents as positive and support was found for a NZ\$ 10.00 voluntary fee. Over 35 percent of all respondents would consider a NZ\$ 10.00 entrance fee to national parks if money would be directly invested into environmental projects.

6.4 Implications

Following from previous results, the following section provides implications for tourism and resource management in New Zealand. Over 80 percent of all 385 tourists interviewed have visited at least one national park while in New Zealand. Most international tourists were willing to pay an entrance fee to national parks (NZ\$ 10.00 – NZ\$ 20.00), therefore charging visitor fees should be considered as a management option. With rising visitor numbers and popularity of national park's charging visitor fees may become crucial. New Zealand's distinct and fragile natural environments should be maintained and protected in a way that ensures its existence and quality in the future. Even though, free entrance is embedded within the New Zealand 'way of life', the old way of doing things may well jeopardise New Zealand's major draw card for tourism, namely the quality of its natural environment. This research found that international tourists in New Zealand are supportive of entrance fees to national parks if money would be directly invested in environmental protection projects. Over 50 percent of all 385 tourists interviewed were willing to pay between NZ\$ 10.00 and NZ\$ 20.00. Even though some limitations and biases are eminent within this research, such as that it is not clear if the fee was considered for a night, day, half a day or week, tourists are generally not against this

management option. Charging visitor fees may therefore be regarded as a realistic and feasible management option.

Over 50 percent of tourists surveyed were willing to offset emissions created by air-travel, with a fee of NZ\$ 10.00. To be able to sustain a 'clean and green' image for destination New Zealand, greater emphasis should be placed on offsetting schemes. Results within this thesis suggest that many tourists perceive climate change as negative for themselves and their families in the future. As tourists may become more aware of the impacts of aviation on the global climate in the near future, travelling by air may well be perceived as unacceptable. Voluntary offsetting schemes may ease negative perceptions. Therefore, offsetting schemes should be one of the obligations within the aviation industry to mitigate GHG emissions and the negative impact on the global climate.

Tourists within this thesis expressed a tendency towards altruistic and biospheric values and attitudes. In congruence with Fairweather et al. (2005) the results within this thesis supports the presence of a 'green' or environmentally orientated tourist in New Zealand. While acknowledging this value and attitude orientation, tourism managers should place an increased effort on meeting environmental standards within the multiple tourism sectors, as they may increasingly be scrutinised by their customers.

6.5 Further Research Suggestions

To gain additional insight into the relationship between tourism, the environment, and tourists' environmental orientation, it is necessary to understand the relationship more clearly in a variety of settings and for a variety of forms of tourism (Butler 2000).

The following questions are suggested for further research:

- 1.) Tourist awareness of tourism related impacts on the environment. Qualitative research would be suited as respondents would not be restricted in their answers. A follow up quantitative survey could be used to generalise findings.
- 2.) Tourism stakeholder's willingness to contribute to environmental projects. Quantitative methods would be suited to generalise findings. However, qualitative focus groups may have the advantage to actively discuss issues and consequently raise awareness.
- 3.) Feasibility studies of visitor entrance fees to New Zealand's national parks. With the background of this thesis, an amount of NZ\$ 10.00 is suggested. With interest and support of resource managers an active debate of entrance fees would be ideal. Qualitative focus groups could be used.
- 4.) The survey used within this thesis could be modified and applied to a sample of domestic tourists allowing a comparison of results.

Infinite research questions and approaches are possible. Research within the broad area of tourism-environment relationships and tourists' perception and experiences of destinations is needed. Furthermore, research about tourists' awareness of climate change can aid in decision making within the tourism industry and political arena.

6.6 Suggestions for Research Advancement

It is believed that the methods applied within this thesis were most suitable to reach aims and objectives in a given time and resource frame. Alternatives have been widely evaluated and discussed. For further research the following advancements are recommended:

- 1.) Surveying nationwide; as quantitative research tries to generalise findings a survey based on a representative population would be ideal. However, due to cost and time restrictions a representative sample is hard to obtain by a single researcher.

- 2.) Using an updated version of the NEP; the NEP scale employed for this study was constructed in the late 1970s. Even though the core principles are still eminent within a newer version published in 2000, some language is outdated and some attitudes are generally accepted. A newer version of the NEP would offer a more up to date assessment technique. Lundmark (2007) for example recently discussed the actuality of the New Environmental Paradigm.
- 3.) Using the full version of Schwartz's values scale; the scale was reduced to only 6 value items which bears errors. A full version of Schwartz's Value Scale including all 46 items can possibly obtain a more realistic reflection of people's values. However, the full use of the scale would most likely involve a different research method. Due to response fatigue a quantitative survey would perhaps result in a low response rate. Therefore, focus group interviews incorporating the value scale would be suitable.
- 4.) Using a follow-up mixed method with a first stage of a quantitative survey and second stage of in depth- focus group research to gain further insight into climate change risk awareness, use of offsetting schemes and possible best practice for sustainable tourism.

6.7 Concluding Remarks

How people perceive and care for the environment has received research interest in the past and will be likely to continue in the future with hopefully more research focusing on the interrelation of climate change and tourism. There are however ongoing needs to raise awareness about impacts of the tourism industry amongst tourism stakeholders and consumers. Action is required to address environmental issues associated with the tourism industry on a local, regional and global level.

BIBLIOGRAPHY

- Adams, C. et al. 2008, 'The use of contingent valuation for evaluating protected areas in the developing world: Economic valuation of Morro do Diabo State Park, Atlantic Rainforest, São Paulo State (Brazil)', *Ecological Economics* vol.66 no.2-3, 359-370.
- Ajzen, I. 1991, 'The Theory of Planned Behaviour', *Organizational Behaviour and Human Decision Processes*, vol.50, 179-211.
- Ajzen, I. and Driver, B.L. 1992, 'Contingent Value Measurement: On the Nature and Meaning of Willingness to Pay', *Journal of Consumer Psychology*, vol.1, no.4, 297-316.
- Ajzen, I. and Fishbein, M. 1975, *Belief, Attitude, Intention and Behaviour: An Introduction to Theory and Research*, London, Addison-Wesley Publishing Company.
- Ajzen, I. and Fishbein, M. 1980, *Understanding Attitudes and Predicting Social Behaviour*, London, Prentice-Hall International Inc.
- Akama, J. S. 1996, 'Western environmental values and nature-based tourism in Kenya', *Tourism Management*, vol.17, no.8, 567-574.
- Albarracin, D. et al. 2005, 'Attitudes: Introduction and Scope', pp. 3-19 in Albarracin, D. et al., (eds), *The Handbook of Attitudes*, Lawrence Erlbaum Associates, Inc.
- Albarracin, D. et al., (eds), 2005, *The Handbook of Attitudes*. Lawrence Erlbaum Associates, Inc.
- Albrecht, D. et al., 1982, 'The New Environmental Paradigm', *The Journal of Environmental Education*, vol.13, no.3, 39-43.
- Altfield, R. and Dell, K. (eds) 1996, *Values, Conflict and the Environment*, Avebury series in philosophy, Aldershot; Brookfield, USA.
- Ateljevic, I. 2000, 'Tourist Motivation, Values and Perceptions', pp. 167-177 in A.G. Woodside et al. *Consumer Psychology of Tourism, Hospitality and Leisure*, CABI, Oxon, UK.
- Ateljevic, I. 2001, 'Searching for Nature and Imagining New Zealand', *Journal of Travel & Tourism Marketing*, vol.10, no.1, 115-122.
- Ateljevic, I. and S. Doorne 2002, 'Representing New Zealand. Tourism Imagery and Ideology', *Annals of Tourism Research*, vol.29, no.5, 648-667.
- Balmford, A. et al., 2002, 'Economic Reasons for Conserving Wild Nature', *Science*, vol.297, 950-953.
- Bamberg, S. 2003, 'How does environmental concern influence specific environmentally related behaviours? A new answer to an old question', *Journal of Environmental Psychology* vol.23, 21-32.
- Bamberg, S. and G. Möser 2007, 'Twenty years after Hines, Hungerford, and Tomera: A new meta-analysis of psycho-social determinants of pro-environmental behaviour', *Journal of Environmental Psychology* vol.27, 14-25.
- Baral, N., M.J. Stern and R. Bhattarai 2008, 'Contingent valuation of ecotourism in Annapurna conservation area, Nepal: Implications for sustainable park finance and local development', *Ecological Economics* vol.66, no.2-3, 218-227.
- Barrow, C.J. 2006, *Environmental management for sustainable development*, London, New York, Routledge.

- Beaumont, N. 2001, 'Ecotourism and the Conservation Ethic: Recruiting the Uninitiated or Preaching to the converted?', *Journal of Sustainable Tourism* vol.9, no.4, 317-41.
- Becken, S. 2004, 'How Tourists and Tourism Experts Perceive Climate Change and Carbon-offsetting Schemes', *Journal of Sustainable Tourism*, vol.12, no.4, 332-345.
- Becken, S. 2007, 'Tourists' Perception of International Air Travel's Impact on the Global Climate and Potential Climate Change Policies', *Journal of Sustainable Tourism*, vol.15, no.4, 351-318.
- Becken, S. and J.E. Hay 2007, *Tourism and climate change: risks and opportunities*, Channel View Publications, Clevedon, UK.
- Becken, S. and P. Hart 2004, 'Tourism stakeholders' perspectives on climate change policy in New Zealand', pp.199-207 in A. Matzarakis, C. R. de Freitas and D. Scott (eds.) *Advances in tourism climatology. Ber. Meteor. Inst. Univ. Freiburg*, vol.12.
- Beder, S. 2006, *Environmental Principles and Policies. An Interdisciplinary Introduction*, Earthscan.
- Berenguer, J., Corraliza, J.A. and R. Martin 2005, 'Rural-Urban Differences in Environmental Concern, Attitudes, and Actions', *European Journal of Psychological Assessment*, vol.21, no.2, 128-138.
- Bigano, A., Hamilton, J.M. and R.S.T. Tol 2006, 'The Impact of Climate on Holiday Destination Choice', *Climatic Change*, vol.76, no.3-4, 389-406.
- Björk, P. 2000, 'Ecotourism from a Conceptual Perspective, an Extended Definition of a Unique Tourism Form', *International Journal of Tourism Research* vol.2, 189-202.
- Blamey, R.K. 2000, Principles of Ecotourism, pp. 5-23 in D. Weaver *The Encyclopaedia of Ecotourism*, CABI Publishing.
- Blamey, R.K. and V.A. Braithwaite 1997, 'A Social Values Segmentation of the Potential Ecotourism Market', *Journal of Sustainable Tourism*, vol.5, no.1, 29-45.
- Bostrom, A. et al. 2006, 'Environmental Concerns and the New Environmental Paradigm in Bulgaria', *The Journal of Environmental Education*, vol.37, no.3, 25-38.
- Bramwell, B. et al. 1998, A Framework for Understanding Sustainable Tourism Management, pp. 23-73 in B. Bramwell, *Sustainable Tourism Management: Principles and Practice*, European Association for Tourism and Leisure Education (ATLAS).
- Brannen, J. 2005, 'Mixing Methods: The Entry of Qualitative and Quantitative Approaches into the Research Process', *International Journal of Social Research Methodology*, vol.8, no.3, 173-184.
- Brosthaus, J. et al. 2000, *Massnahmen zur verursacherbezogenen Schadstoffreduzierung des zivilen Flugverkehrs*, UBA Texte 17/01, Bundesministerium fuer Umwelt, Naturschutz und Reaktorsicherheit (BMU), Berlin.
- Brunt, P. 1997, *Market research in travel and tourism*, Butterworth-Heinemann.
- Bryman, A. 2004, *Social Research Methods*. Oxford.
- Bryman, A. 2006, 'Integrating quantitative and qualitative research: how is it done?', *Qualitative Research*, vol.6, no.1, 97-113.
- Bryman, A. 2007, 'Barriers to Integrating Quantitative and Qualitative Research', *Journal of Mixed Methods Research*, vol.1, no.8, 8-22.

- Buckley, R.C., Witting, N. and Guest, M. 2003, Visitor Fees, Tour Permits and Asset and Risk Management by Parks Agencies: Australian Case Study, pp. 51-69 in C. Pickering and Weaver, D.B. (eds.) *Nature-Based Tourism, Environment and Land Management*, CAB International, Oxford.
- Bürki, R., Elsasser, H. and B. Abegg 2003, 'Climate Change - Impacts on the Tourism Industry in Mountain Areas', 1st International Conference on Climate Change and Tourism, Djerba.
- Burns, R.B. 2000, *Introduction to research methods*, Pearson Education Australia.
- Bushell, R. and P.F.J. Eagles, (eds.) 2007, *Tourism and Protected Areas: Benefits beyond Boundaries*, CAB International.
- Butler, R.W. 2004, 'Geographical Research on Tourism, Recreation and Leisure: Origins, Eras and Directions', *Tourism Geographies*, vol.6, no.2, 143-162.
- Butler, R.W. 2000, 'Tourism and the environment: a geographical perspective', *Tourism Geographies*, vol.2, no.3, 337-358.
- Buultjens, J. et al. 2007, *Climate Change and Australian Tourism. A Scoping Study*, Sustainable Tourism Cooperative Research Centre, Australia.
- Carson, R. 1962, *Silent Spring*, Houghton Mifflin, Boston.
- Carson, R.T., N.E. Flores and N.F. Maede 2001, 'Contingent Valuation: Controversies and Evidence', *Environmental and Resource Economics*, vol.19, 173-210.
- Castro, C.J. 2004, 'Sustainable Development: Mainstream and Critical Perspectives', *Organization Environment*, vol.17, no.2, 195-225.
- Chapman, R. 2001, 'Valuing New Zealand's Clean Green Image', Ministry for the Environment (New Zealand).
- Coakes, S.J. and L.G. Steed 2001, *SPSS. Analysis without Anguish*, John Wiley & Sons Australia, Ltd.
- Cohen, E. 1978, 'The Impact of Tourism on the Physical Environment' *Annals of Tourism Research*, vol.5, no.2, 215-237.
- Colberts, M.J. 2003, A cultural theory of German ecotourism in New Zealand, Masters of Arts in German, University of Canterbury, Christchurch.
- Collier, A. 2006, *Principles of Tourism. A New Zealand Perspective*, Auckland, Pearson Hospitality Press.
- Craig-Smith, S. and L. Ruhanen 2005, Implications of Climate Change on Tourism in Oceania, pp. 181- 191 in M.C. Hall *Tourism, Recreation and Climate Change*. Channel View Publications.
- Craswell, G. 2005, *Writing for Academic Success. A Postgraduate Guide*, Sage Publications Ltd.
- Creswell, J.W. and V.P. Clark 2007, *Designing and Conducting Mixed Methods Research*, Sage Publications.
- Crick-Furman, D. and R. Prentice 2000, 'Modelling Tourists' Multiple Values', *Annals of Tourism Research*, vol.27, no.1, 69-92.
- Curry, P. 2006, *Ecological Ethics: An Introduction*, Polity Press, Cambridge.
- Davies, M.B. 2007, *Doing a Successful Research Project. Using Qualitative or Quantitative Methods*, Palgrave MacMillan.

- Dawson, J. (2003). Environmental values of consumptive and non consumptive marine tourists in the South Island of New Zealand, Masters of Tourism, Department of Tourism, University of Otago, Dunedin.
- De Freitas, C.R. 2001, *Theory, Concepts and Methods in Tourism Climate Research*, University of Auckland, New Zealand, http://www.mif.uni-freiburg.de/ISB/ws/papers/01_defreitas.pdf (Accessed 14 October 2007).
- De Groot, J.I.M. and L. Steg 2007, 'Value Orientations and Environmental Beliefs in Five Countries: Validity of an Instrument to Measure Egoistic, Altruistic and Biospheric Value Orientations', *Journal of Cross-Cultural Psychology*, vol.38, no.3, 318-332.
- Department of Conservation (New Zealand) 2004, *Mt Cook National Park Management Plan*, <http://www.doc.govt.nz/templates/MultiPageDocumentTOC.aspx?id=42705> (Accessed 10. October 2007).
- Department of Conservation (New Zealand) 2005, *General Policy for National Parks*, <http://www.doc.govt.nz/publications/about-doc/role/policies-and-plans/general-policy-for-national-parks> (Accessed 2. September 2007).
- Department of Conservation (New Zealand) 2003, *Visitor Strategy*, <http://www.doc.govt.nz/upload/documents/about-doc/role/policies-and-plans/visitor-strategy.pdf> (Accessed 13. April 2007).
- Department of Conservation (New Zealand) 2007, *Fiordland Management Plan*, <http://www.doc.govt.nz/templates/MultiPageDocumentTOC.aspx?id=44161> (Accessed 3. February 2008).
- Department of Conservation (New Zealand) 2008, *Environmental Care Code*, <http://www.doc.govt.nz/upload/documents/parks-and-recreation/plan-and-prepare/environmental-care-code/environmental-care-code-checklist.pdf> (Accessed 20. August 2007).
- Dharmarantne, G.S. et al. 2000, 'Tourism Potentials for Financing Protected Areas', *Annals of Tourism Research*, vol.27, no.3, 590-610.
- Diamantis, D. 2004, *Ecotourism: Management and Assessment*, Thomson learning.
- Diekman, A. and P. Preisendorfer 1998, 'Environmental behaviour: discrepancies between aspirations and reality', *Rationality and Society*, vol.10, no.11, 79-102.
- Dickey, A. 2005, The development of commercial New Zealand ecotourism: a longitudinal study (1999-2004). Masters in Tourism, Department of Tourism, University of Otago, Dunedin.
- Dietz, T., A. Fitzgerald and R. Shwom 2005, 'Environmental Values', *Annual Review of Environmental Resources*, vol.30, 335-372.
- Dolnicar, S. et al. 2008, 'Environment-Friendly Tourists: What do we really know about them?', *Journal of Sustainable Tourism*, vol.16, no.2, 1-14.
- Dredge, D. and J. Jenkins 2007, *Tourism Planning and Policy*, J. Wiley & Sons Australia, Ltd.
- Drumm, A. 2007, Tourism-based Revenue Generation for Conservation, pp. 192-209 in Bushell, R. and P.F.J. Eagles *Tourism and Protected Areas. Benefits Beyond Boundaries*, CABI International.

- Dunlap, R.E. and R.B. Heffernan 1975, 'Outdoor recreation and environmental concern: an empirical examination', *Rural Sociology*, vol.40, no.1, 18-30.
- Dunlap, R.E. et al. 2000, 'Measuring Endorsement of the New Ecological Paradigm: A Revised NEP scale', *Journal of Social Issues*, vol.56, no.3, 425-442.
- Dunlap, R.E. and K.D. Van Liere 1978, 'The New Environmental Paradigm', *The Journal of Environmental Education*, vol.9, no.4, 10-19.
- Dutcher, D.D. et al. 2007, 'Connectivity with Nature as a Measure of Environmental Values', *Environment and Behaviour*, vol.39, no.4, 474-493.
- Eagles, P.F.J. and S.F. McCool 2002, *Tourism in National Parks and Protected Areas*, CABI Publishing.
- Eagly, A.H. and S. Chaiken 2005, Attitude Research in the 21st Century: The Current State of Knowledge, pp. 743-769 in Albarracin, D. et al. (eds.). *The Handbook of Attitudes*.
- Echtner, C. and T. Jamal 1997, 'The Disciplinary Dilemma of Tourism Studies', *Annals of Tourism Research*, vol.24, no.4, 868-883.
- Fairweather, J.R., C. Maslin and D.G. Simmons 2005, 'Environmental Values and Response to Ecolabels among International Visitors to New Zealand', *Journal of Sustainable Tourism*, vol.13, no.1, 82-98.
- Farsari, Y. and P. Prastacos 2003, 'Towards a framework for establishing policy goals for sustainable tourism in Mediterranean popular destinations', *Sustainable Planning & Development*, vol.4, 441-451.
- Feather, N. 1975, *Values in Education and Society*, Macmillan Pub. Co., Inc.
- Fennell, D.A. 2003, *Ecotourism. An Introduction*, Routledge, London, New York.
- Field, A. 2005, *Discovering Statistics Using SPSS*, Thousand Oaks, London.
- Finn, M. et al. 2000, *Tourism and Leisure Research Methods. Data Collection, Analysis and Interpretation*, Pearson Education Limited.
- Forsyth, P. et al. 2007, *Climate Change Policies and Australian Tourism*, Sustainable Tourism Cooperative Research Centre (STCRC).
- Fowler, F.J. 2002, *Survey Research Methods*, Sage Publications Ltd.
- Fransson, N. and T. Gärling 1999, 'Environmental Concern: Conceptual Definitions, Measurement Methods, and Research Findings', *Journal of Environmental Psychology*, vol.19, 369-382.
- Friends of the Earth, International 2007, *Climate Change. Voices from communities affected by climate change*, <http://www.foei.org/en/publications/pdfs/climate-testimonies> (Accessed 12. July 2007).
- Friends of the Earth, UK 1999, *Aviation and global climate change*, http://www.foe.co.uk/resource/reports/aviation_climate_change.pdf (Accessed 3.November 2007).
- Georges, R. and M. Jones 2001, The Human Element in Fieldwork, pp. 384-385 in A. Giddens, *Sociology: Introductory readings*. Cambridge.
- Gnoth, J. and A., Ganglmair 2000, 'The German Tourist Market to New Zealand', *PGSF Research Report*, Department of Marketing, University of Otago Dunedin.
- Gössling, S. 1999, 'Ecotourism: a means to safeguard biodiversity and ecosystem functions?', *Ecological Economics*, vol. 29, 303-320.

- Gössling, S. 2000, 'Tourism-sustainable development option?', *Environmental Conservation*, vol.27, no.3, 223-224.
- Gössling, S. 2002, 'Global Environmental Consequences of tourism', *Global Environmental Change*, vol.12, no.4, 283-302.
- Gössling, S. and C.M. Hall 2006, 'Conclusion: Wake up... this is serious', pp. 305-320 in Gössling, S. and C.M. Hall (eds.) *Tourism and Global Environmental Change. Ecological, Social, Economic and Political Interrelationships*, Routledge, London.
- Gössling, S. and M.C. Hall (eds.) 2006, *Tourism and Global Environmental Change: Ecological, Social, Economic, and Political Interrelationships*, Routledge, London.
- Gössling, S. and P. Peeters 2007, 'It Does Not Harm the Environment!' An Analysis of Industry Discourses on Tourism, Air Travel and the Environment', *Journal of Sustainable Tourism*, vol.15, no.4, 402-417.
- Gössling, S. et al. 2006, 'Tourist Perceptions of Climate Change: A Study of International Tourists in Zanzibar', *Current Issues in Tourism*, vol.9, no.4&5, 419-435.
- Gössling, S. et al. 2007, 'Voluntary Carbon Offsetting Schemes for Aviation: Efficiency, Credibility and Sustainable Tourism', *Journal of Sustainable Tourism*, vol. 15, no.3, 223-226.
- Gössling, S. et al. 2008, 'The Helsingborg Statement on Sustainable Tourism', *Journal of Sustainable Tourism*, vol. 16, no.1, 122-124.
- Goodwin, H. 1996, 'In pursuit of ecotourism', *Biodiversity and Conservation*, vol.5, 277-291.
- Guerrier, Y. et al. 1995, *Values and the Environment: a Social Science Perspective*, Wiley&Sons Ltd.
- Hall, C.M. 2005, *Tourism: Rethinking the Social Science of Mobility*, Prentice Hall.
- Hall, C.M. and G. Kearsley 2001, *Tourism in New Zealand. An Introduction*, University Press, Oxford.
- Hall, M.C. 2005, 'Reconsidering the Geography of Tourism and Contemporary Mobility', *Geographical Research*, vol.43, no.2, 125-139.
- Hall, M.C. 2006, 'New Zealand tourism entrepreneur attitudes and behaviours with respect to climate change and mitigation', *International Journal of Innovation and Sustainable Development*, vol.1, no.3, 229-237.
- Hall, M.C. and J. Higham (eds.) 2005, *Tourism, Recreation and Climate Change*, Channel View Publications.
- Hamilton, J. M. 2004, 'Climate and the Destination Choice of German Tourists' http://papers.ssrn.com/sol3/papers.cfm?abstract_id=504362 (Accessed 12. October 2007).
- Hamilton, J. M. et al. 2005, 'Effect of climate change on international tourism', *Climate Research*, vol.29, 245-254.
- Hamilton, J.M. and R.S.J. Tol 2000, 'The Impact of Climate Change on Tourism and Recreation', *Research Unit Sustainability and Global Change*, 1- 27.
- Hanemann, W.H. 1994, 'Valuing the Environment through Contingent Valuation', *Journal of Economic Perspectives*, vol.8, no.4, 19-43.

- Hart, P., Becken, S. and I. Turney 2004, 'Offsetting Carbon Dioxide Emissions from Tourism', *Advances in Tourism Climatology*, <http://www.urbanclimate.net/cctr/ws2/report/hartbeckenturney.pdf> (Accessed 3. September 2007).
- Harper, C.L. 2001, *Environment and Society: Human Perspectives on Environmental Issues*, Prentice-Hall Inc., New Jersey.
- Higham et al. 2001, 'Ecotourism in New Zealand: Profiling visitors to New Zealand Ecotourism Operations', Research Paper Number Ten, Department of Tourism, University of Otago, Dunedin.
- Higham, J. and A. Carr 2002, 'Ecotourism Visitor Experiences in Aotearoa/New Zealand: Challenging the Environmental Values of Visitors in Pursuit of Pro-environmental Behaviour', *Journal of Sustainable Tourism*, vol.10, no.4, 277-294.
- Higham, J. 1996, Wilderness perceptions of international visitors to New Zealand: the perceptual approach to the management of international tourists visiting wilderness areas within New Zealand's conservation estate, Doctor of Philosophy, Department of Tourism, University of Otago, Dunedin.
- Higham, J. and M. Lück 2007, 'Ecotourism: Pondering the Paradoxes', pp. 117-135 in J. Higham (eds.) *Critical Issues in Ecotourism: Understanding a complex tourism phenomenon*, Elsevier Butterworth Heinemann, Oxford, UK.
- Hines, J.M. et al. 1987, 'Analysis and Synthesis of Research on Responsible Environmental Behaviour: A Meta-Analysis', *Journal of Environmental Education*, vol. 18, 1-18.
- Hjalager, A.M. 1996, 'Tourism and the Environment: The Innovation Connection', *Journal of Sustainable Tourism*, vol. 4, no.4, 201-218.
- Hobbin, S. 1999, 'Accreditation of Queensland Visitor Information Centres: A consumer-based perspective', *Journal of Vacation Marketing*, vol. 5, no.4, 387-399.
- Holden, A. 2000, *Environment and Tourism*, Routledge, London, New York.
- Holden, A. 2003, 'In need of new environmental ethics for tourism?', *Annals of Tourism Research*, vol.30, no.1, 94-108.
- Holden, A. 2005, *Tourism Studies and the Social Sciences*, Routledge, London.
- Holden, A. 2008, *Environment and Tourism*, Routledge, London, New York.
- Hudson, S.B.R. 2001, 'Tourist Attitudes towards the Environment: A Critique of the Contingent Valuation Method as a Research Tool for Measuring Willingness to Pay', *Journal of Teaching in Travel & Tourism*, vol.1, no.4, 1-18.
- Hughes, G. 1995, 'The cultural construction of sustainable tourism', *Tourism Management*, vol. 16, no.1, 49-59.
- Hunter, C. and H. Green 1995, *Tourism and the Environment: a Sustainable Relationship?*, Routledge, London, New York.
- Hunter, L.M. and J.M. Brehm 2004, 'A Qualitative Examination of Value Orientations toward Wildlife and Biodiversity by Rural Residents of the Intermountain Region', *Human Ecology Review*, vol.11, no.1, 13-26.
- Huybers, T. and J. Bennet 2002, *Environmental management and the competitiveness of nature-based tourism destinations*, Edward Elgar Pub., Cheltenham, UK.

- Intergovernmental Panel on Climate Change 2007, *Climate Change 2007: Synthesis Report. Summary for Policymakers*, http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_spm.pdf (Accessed 4. June 2007).
- Jaworowski, Z. 2007, 'CO2: The Greatest Scientific Scandal of Our Time', EIR Science, www.21stcenturysciencetech.com/Articles%202007/20_1-2_CO2_Scandal.pdf (Accessed 23 February 2008).
- Jennings, G. R. 2005, Interviewing: a Focus on Qualitative Techniques, pp. 99-116 in B. Ritchie et al. *Tourism Research Methods*, CABI International.
- Johnson, B. and J. Onwuegbuzi 2004, 'Mixed Methods Research: A Research Paradigm Whose Time Has Come', *Educational Researcher*, vol.33, no.7, 14-26.
- Johnston, R.J. et al. (eds.) 2000, *The Dictionary of Human Geography*, Blackwell.
- Kahle, L.R. and S.G. Timmer 1983, A Theory and a Method for Studying Values, pp. 43-59 in Kahle, L.R. et al. *Social Values and Social Change- Adaptation to Life in America*, Praeger Pub., New York.
- Kaiser, F.G., Wölfing S. and U. Fuhrer 1998, 'Environmental Attitude and Ecological Behaviour', *Journal of Environmental Psychology*, vol. 19, no.1, 1-19.
- Kalof, L. and T. Satterfield (eds.) 2005, *The Earthscan Reader in Environmental Values*, Earthscan, London.
- Karp, D.G. 1996, 'Values and their Effect on Pro-Environmental Behaviour', *Environment and Behaviour*, vol. 28, no.111, 111-133.
- Karp, D.R. 2000, 'Values Theory and Research', pp.1012-1020 in Borgatta, E. and R. Montgomery (eds.), *Encyclopaedia of Sociology*, Macmillan Reference.
- Kealy, M.J. and R.W. Turner 1993, 'A Test of the Equality of Closed-Ended and Open-Ended Contingent Valuations', *American Journal of Agricultural Economics*, vol.75, 321-331.
- Kerlinger, F. N. 1973, *Foundations of Behavioural Research*, Holt, Rinehart and Winston.
- Kerr, R. 1998, 'Market Mechanisms and Conservation', *Conference on Environmental Justice and Market Mechanisms*, Faculty of Law, University of Auckland. www.nzbr.org.nz/documents/speeches/speeches-98/market-mechanisms-and-conservation.pdf (Accessed 3 December 2006).
- Kim, S.S. et al. 2007, 'Assessing the Economic Value of a World Heritage Site and Willingness-to-Pay Determinants: A Case of Changdeok Palace', *Tourism Management*, vol.28, 317-322.
- Kirstges, T. 2002, 'Basic Questions of 'Sustainable Tourism': Does Ecological and Socially Acceptable Tourism Have a Chance?', *Current Issues in Tourism*, vol. 3, no.3&4, 173-192.
- Kliskey, A.D. and G.W. Kearsley 1993, 'Mapping Multiple Perceptions of Wilderness in Southern New Zealand', *Applied Geography*, vol. 13, 203-223.
- Kluckhohn, C. 1951, 'Value and Value Orientations in the Theory of Action', pp.63-90 in Parsons, T. and E. Shils (eds.) *Toward a General Theory of Action*, Harvard University Press, Cambridge.
- Kniivilä, M. 2006, 'Users and Non-Users of Conservation Areas: Are there Differences in WTP, Motives and the Validity of Responses in CVM Surveys?' *Ecological Economics*, vol. 59, 530-539.

- Knoepfel, P. 2007, *Environmental Policy Analysis*, Springer.
- Kollmus, A. and J. Agyeman 2002, 'Mind the Gap: Why do People act Environmentally and what are the Barriers to Pro-Environmental Behaviour?', *Environmental Education Research*, vol. 8, no.3, 239-260.
- Kotchen, M.J. and S.D. Reiling 2000, 'Environmental Attitudes, Motivations, and Contingent Valuations of non-use Values: a Case Study involving Endangered Species', *Ecological Economics*, vol.32, 93-107.
- Krüger, O. 2005, 'The role of Ecotourism in Conservation: Panacea or Pandora's Box?', *Biodiversity and Conservation*, vol.14, 579-600.
- Krosnick, J.A. et al. 2005, 'The Measurement of Attitudes', pp. 21-79 in Albarracín, D. et al. (eds.), *The Handbook of Attitudes*.
- Kuckartz, U. et al. 2006, *Repräsentativumfrage zu Umweltbewusstsein und Umweltverhalten im Jahr 2006*, Bundesministerium fuer Umwelt, Naturschutz und Reaktorsicherheit, Bonifatius, Paderborn.
- Kumar, R. 2005, *Research Methodology. A Step-by-Step Guide for Beginners*, Sage Publications Ltd.
- La Trobe, H. and T. Acott 2000, 'A Modified NEP/DSP Environmental Attitudes Scale', *The Journal of Environmental Education*, vol. 32, no.1, 12-20.
- Lee, C.-K. et al. 1998, 'Measuring the Economic Value of Ecotourism Resources: The Case of South Korea', *Journal of Travel Research*, vol. 36, no.4, 40-46.
- Lee, C.-K. 1997, 'Valuation of nature-based tourism resources using dichotomous choice contingent valuation method', *Tourism Management*, vol. 18, no.8, 587-591.
- Lee, C.-K. and S.-Y. Han 2002, 'Estimating the use and preservation values of national parks' tourism resources using a contingent valuation method', *Tourism Management*, vol. 23, no.5, 531-540.
- Lee, C.-K. and J.W. Mjelde 2007, 'Valuation of ecotourism resources using a contingent valuation method: The case of the Korean DMZ', *Ecological Economics*, vol.63, no.2-3, 511-520.
- Lee, W.H. and G. Moscardo 2005, 'Understanding the Impact of Ecotourism Resort Experiences on Tourists' Environmental Attitudes and Behavioural Intentions', *Journal of Sustainable Tourism*, vol.13, no.6, 546-565.
- Lester, B. 2007, 'Offsets: Worth the Price of Emission?' *Science*, vol. 318, 37.
- Linke, J. 2007, 'Kyotos grösster Feind'. *Die Zeit*. Hamburg, Zeitverlag Gerd Bucerius GmbH & Co. KG.
- Liu, Z. 2003, 'Sustainable Tourism Development: A critique', *Journal of Sustainable Tourism*, vol.10, no.6, 459-475.
- Lombørg, B., (eds.) 2004, *Global Crisis, Global Solutions*, Cambridge University Press.
- Loomis, J.B. 1990, 'Comparative Reliability of the Dichotomous Choice and Open-Ended Contingent Valuation Techniques', *Journal of Environmental Economics and Management*, vol.18, 78-85.
- Lubbadeh, J. 2007, 'Luftbuchungen vom Lufthansa-Chef', *Der Spiegel*. September 2007.

- Lück, M. 2003, Environmentalism and on-tour experiences of tourists on wildlife watch tours in New Zealand: a study of visitors watching and/or swimming with wild dolphins, Doctor of Philosophy, Department of Tourism, University of Otago, Dunedin.
- Lück, M. 2003, 'The 'New Environmental Paradigm': is the scale of Dunlap and Van Liere applicable in a tourism context?', *Tourism Geographies*, vol.5, no.2, 228-240.
- Lundmark, C. 2007, 'The New Environmental Paradigm revisited: Anchoring the NEP Scale in Environmental Ethics', *Environmental Education Research*, vol.13, no.3, 329-347.
- Luzar, E.J. et al. 1998, 'Profiling the Nature-Based Tourist: A Multinomial Logit Approach', *Journal of Travel Research*, vol.37, 48-55.
- Luzar, E.J. et al. 1995, 'Evaluating Nature Based Tourism using the New Environmental Paradigm', *Journal of Agriculture and Applied Economics*, vol. 27, no.4, 255-263.
- Macbeth, J. 2005, 'Towards an Ethics Platform for Tourism', *Annals of Tourism Research*, vol.32, no.4, 962-984.
- Machado, K.B. 2001, 'Ecotourism: Funding Conservation Programs through Entrance Fees. The Case of the Galapagos National Park', pp 153-169 in Rhoades, R.W. and J. Stallings *Integrated Conservation and Development in Tropical America* <http://www.oired.vt.edu/sanremcrsp/UGA/My%20Web%20Sites/SANREM%20UGA/www.sanrem.uga.edu/sanrem/database/pdf/icdtaFull.pdf> (Accessed 2. June 2007).
- Madrigal, R. 1995, 'Personal Values, Traveller Personality Type, and Leisure Travel Style', *Journal of Leisure Research*, vol. 27, no.2, 125-142.
- Madrigal, R.K. and L.R. Kahle 1994, 'Predicting Vacation Activity Preferences on the Basis of Value-System Segmentation', *Journal of Travel Research*, vol. 32, no.4, 22-28.
- Maloney, M.P. and M.P. Ward 1973, 'Ecology: let's hear from the people. An objective scale for the measurement of ecological attitudes and knowledge', *American Psychologist*, vol. 28, 583-586.
- Manalo, E. and J. Trafford 2004, *Thinking to Thesis*, Pearson Education, New Zealand.
- Manfredo, M. 1994, 'Influencing Human Behaviour: Theory and Applications in Recreation, Tourism and Natural Resources Management', *Journal of Leisure Research*, vol. 26, no.2, 189.
- Manne, A.S. 2004, Perspective Paper 1.2., pp. 34-50 in B. Lombørg *Global Crisis, Global Solutions*, Cambridge University Press.
- Meehl, G.A. et al. 2007, 'Climate Change 2007: The Physical Science Basis', Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge University Press.
- Mendelsohn, R. 2004, Perspective Paper 1.1., pp. 44-48 in B. Lombørg *Global Crisis, Global Solutions*, Cambridge University Press.

- Meyerhoff, J. 2005, 'Non-use values and attitudes. Wetlands threatened by climate change.', pp. 51-69 in M. Getzner, C.L. Spash and S. Stagl *Alternatives for Environmental Valuation*, Routledge, London.
- Miller, G.A. 2003, 'Consumerism in Sustainable Tourism: A Survey of UK Consumers', *Journal of Sustainable Tourism*, vol. 11, no.1, 17-23.
- Ministry of Tourism (New Zealand) 2007, *International Visitor Survey*, Wellington.
- Ministry of Tourism (New Zealand) 2008, *International Visitor Survey. Key Data*, Wellington, <http://www.tourismresearch.govt.nz/Documents/IVA/Key%20Data/SumSept08.xls> (Accessed 1.September 2008).
- Ministry for the Environment (New Zealand) 2001, *Valuing New Zealand's Clean Green Image*, <http://www.mfe.govt.nz/publications/sus-dev/clean-green-image-value-aug01/chapter-1-aug01.pdf> (Accessed 26. January 2007).
- Morgan, N. et al. 2002, 'New Zealand, 100% Pure. The creation of a powerful niche destination brand', *Brand Management*, vol. 9, no. 4+5, 335-354.
- Neto, F. 2003, 'A new approach to sustainable tourism development: Moving beyond environmental protection', *Natural Resources Forum*, vol. 27, 212-222.
- Nooney, J. G. et al. 2003, 'Environmental Worldview and Behaviour. Consequences of Dimensionality in a Survey of North Carolinians', *Environment and Behaviour*, vol. 35, no. 6, 763-783.
- Norton, A. 1996, 'Experiencing nature: The reproduction of environmental discourse through safari tourism in East Africa', *Geoforum*, vol. 27, no.3, 355-373.
- Ojea, E. and M. Loureiro 2007, 'Altruistic, Egoistic and Biospheric Values in Willingness to Pay (WTP) for Wildlife', *Ecological Economics*, vol. 63, 807-814.
- Onwuegbuzi, A.J. and N.L. Leech 2005, 'On Becoming a Pragmatic Researcher: The Importance of Combining Quantitative and Qualitative Research', *International Journal of Social Research Methodology*, vol. 8, no.5, 375-387.
- Oppermann, M. 1993, 'German Tourists in New Zealand', *New Zealand Geographer*, vol. 49, no.1, 30-34.
- Oppermann, M. 1993, 'Regional Aspects of Tourism in New Zealand', *Regional Studies*, vol. 28, no.2, 155-167.
- Orams, M.B. 1995, 'Towards a More Desirable Form of Ecotourism', *Tourism Management*, vol.16, no.1, 3-8.
- Orams, M.B. 2000, 'Types of Ecotourism', pp. 23-37 in D. Weaver *The Encyclopaedia of Ecotourism*, CABI Publishing.
- Page, S.J. and K. Thorn 2002, 'Towards Sustainable Tourism Development and Planning in New Zealand: The Public Sector Response Revisited', *Journal of Sustainable Tourism*, vol. 10, no.3, 222-238.
- Paavola, J. and I. Lowe 2005, *Environmental Values in a Globalising World: Nature, Justice, and Governance*, Routledge, Oxford.
- Patterson, M. (unknown), 'Environmental Performance and Eco-Efficiency of the New Zealand Tourism Sector', http://www.nzcee.org.nz/adobefiles/wordAM2_1_Patterson.pdf (Accessed 16. February 2008).

- Peeters, P. et al. 2006, 'Innovation towards tourism sustainability: climate change and aviation', *International Journal of Innovation and Sustainable Development*, vol.1, no.3, 184-200.
- Penner, J.E. et al. (eds.) 1999, *Aviation and the Global Atmosphere. An IPCC Special Report*, Cambridge University Press, <http://www.ipcc.ch/ipccreports/sres/aviation/index.htm> (Accessed 12.March 2007).
- Pitts, R. and A.G. Woodside 1986, 'Personal Values and Travel Decisions', *Journal of Travel Research*, vol. 25, no. 20, 20-25.
- Pizam, A. 1987, Planning a Tourism Research Investigation, pp. 120-131 in B. Ritchie (eds.) *Travel, Tourism, and Hospitality Research*, John Wiley & Sons.
- Pleumarom, A. 2007, 'Tourism feels the Heat of Global Warming', *Third World Resurgence*, 29-33, [http://www.twinside.org.sg/title2/ttcd/Anita-Climate%20change-FINAL\(oct07\).doc](http://www.twinside.org.sg/title2/ttcd/Anita-Climate%20change-FINAL(oct07).doc) (Accessed 10 July 2007).
- Poortinga, W. et al. 2004, 'Values, Environmental Concern, and Environmental Behaviour: A Study into Household Energy Use', *Environment and Behaviour*, vol. 36, no. 70.
- Prato, T. and D. Fagre 2005, *National Parks and Protected Areas: Approaches for Balancing Social, Economic, and Ecological Values*, Blackwell Publishing Ltd.
- Prebensen, N.K. et al. 2003, 'I'm Not a Typical Tourist: German Tourists' Self-Perception, Activities, and Motivations', *Journal of Travel Research*, Vol. 41 (May), 416-420.
- Purdie, D.W. 2006, *Towards best practice in mediating the ecotourism-environment relationship. A report for the New Zealand tourism industry*, University of Otago, Dunedin, <http://www.trcnz.govt.nz/Documents/Scholarships/DavidPurdieMediatingtheecotourismenvironmentrelati.pdf> (Accessed 03 of December 2006).
- Reid, H., et al. 2007, 'The Economic Impact of Climate Change in Namibia: How Climate Change will Affect the Contribution of Namibia's Natural Resources to its Economy', *Environmental Economics Programme Discussion Paper 07-02*, International Institute for Environment and Development, London.
- Reinius, S.W. and P. Fredman 2007, 'Protected Areas as Attractions', *Annals of Tourism Research*, vol. 34, no.4, 839-854.
- Reynisdottir, M. et al. 2008, 'Willingness to Pay Entrance Fees to Natural Attractions: An Icelandic case study', *Tourism Management* (Article in Press).
- Richardson, R.B. and J.B. Loomis 2004, 'Adaptive Recreation Planning and Climate Change: a Contingent Visitation Approach', *Ecological Economics*, vol. 50, no. 1-2, 83-99.
- Riley, R.W. and L.L. Love 2000, 'The State of Qualitative Tourism Research', *Annals of Tourism Research*, vol. 27, no. 1, 164-187.
- Ritchie, B. and C. Goeldner (eds.) 1987, *Travel, Tourism, and Hospitality Research. A Handbook for Managers and Researchers*, John Wiley&Sons, New York.
- Ritchie, B.W. et al. (eds.) 2005, *Tourism Research Methods. Integrating Theory with Practice*, CABI, Wallingford, Oxfordshire.

- Roberts, J.A. and D.R. Bacon 1997, 'Exploring the Subtle Relationship between Environmental Concern and Ecologically Conscious Consumer Behaviour', *Journal of Business Research*, vol. 40, 79-89.
- Rokeach, M. 1973, *The Nature of Human Values*, Free Press, New York.
- Rohan, M.J. 2000, 'A Rose by Any Name? The Values Construct', *Personality and Social Psychological Review*, vol. 4, no.3, 255-277.
- Russell, S.M. 2001, Environmental values, attitudes and behaviours: issues of sustainability for New Zealand's international backpacker market, Masters in Tourism, Department of Tourism, University of Otago, Dunedin.
- Saarinen, J. 2006, 'Traditions of sustainability in tourism studies', *Annals of Tourism Research*, vol. 33, no.4, 1121-1140.
- Saarinen, J. and K. Tervo 2006, 'Perceptions and Adaptation Strategies of the Tourism Industry to Climate Change: the Case of Finnish Nature-based Tourism Entrepreneurs', *International Journal of Innovation and Sustainable Development*, vol. 1, no.3, 214-228.
- Sandve, A. 2007, Skiers and Snowboarders Environmental Attitudes and Behaviour, unpublished dissertation, Department of Tourism, University of Otago, Dunedin.
- Saunders, M. et al. 2000, *Research Methods for Business Students*, Prentice Hall, London.
- Schlegelmilch, B.B. et al. 1996, 'The link between green purchasing decisions and measures of environmental consciousness', *European Journal of Marketing*, vol. 30, no. 5, 35-55.
- Schultz, P.W. et al. 2004, 'Implicit Connections with Nature', *Journal of Environmental Psychology*, vol. 24, 31-42.
- Schultz, P.W. et al. 2005, 'Values and their Relationship to Environmental Concern and Conservation Behaviour', *Journal of Cross-Cultural Psychology*, vol. 36, no.4, 457-475.
- Schultz, W.P. and L. Zelezny 1999, 'Values as Predictors of Environmental Attitudes: Evidence for Consistency across 14 Countries', *Journal of Environmental Psychology*, vol.19, 255-265.
- Schwartz, S.H. and W. Bilsky 1987, 'Toward A Universal Psychological Structure of Human Values', *Journal of Personality and Social Psychology*, vol. 53, no.3, 350-562.
- Schwartz, S.H. 1992, 'Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries', pp. 1-65 in M. Zanna (eds.) *Advances in Experimental Social Psychology*, vol. 25.
- Schwartz, S.H. 1994, 'Are there Universal Aspects in the Content and Structure of Values?', *Journal of Social Issues*, vol. 50, 19-45.
- Schwartz, S.H. et al. 2001, 'Extending the Cross-Cultural Validity of the Theory of Basic Human Values with a Different Method of Measurement', *Journal of Cross-Cultural Psychology*, vol. 32.
- Scott, D. and F.K. Willits 1994, 'Environmental Attitudes and Behaviour: A Pennsylvania Survey', *Environment and Behaviour*, vol. 26, no.2, 239-260.
- Sharpley, R. 2006, 'Ecotourism: A Consumption Perspective', *Journal of Ecotourism*, vol. 5, no.1 & 2, 7-22.

- Shaw, J. and P. Williams 2000, *Critical Issues in Tourism. A Geographical Perspective*, Blackwell Publishers, Oxford, UK, Cambridge.
- Smith, I.J. and C.J. Rodger 2007, *Carbon Emission Offsets for International Transport to and from New Zealand*, NERI Conference 2007, Auckland.
- Solomon, S. et al. (eds.) 2007, *Climate Change 2007: The Physical Science Basis*, Cambridge Univ. Press, Cambridge, United Kingdom.
- Solow, R. 1993, 'An almost Practical Step towards Sustainability', *Resources Policy*, vol. 19, no.3, 162-72.
- Starmer-Smith, C. 2004, 'Eco-friendly tourism on the rise', p.4 in *Daily Telegraph Travel*, 6 November 2004, <http://www.telegraph.co.uk/travel/731611/Eco-friendly-tourism-on-the-rise.html> (Accessed 4 July 2007).
- Stern, P.C. 2000, 'Toward a Coherent Theory of Environmentally Significant Behaviour', *Journal of Social Issues*, vol. 56, no. 3, 407-424.
- Stern, P.C. et al. 2005, 'Value orientations, gender and environmental concern', pp. 24-36 in T.S. Kalof et al. (eds.) *The Earthscan Reader in Environmental Values*, Earthscan, London.
- Swarbrooke, J. and S. Horner 1989, *Consumer Behaviour in Tourism*, Butterworth & Heinemann.
- Taiyab, N. 2005, *The Market for Voluntary Carbon Offsets: A New Tool for Sustainable Development?* Gatekeeper Series, International Institute for Environment and Development, <http://www.iied.org/pubs/pdfs/14513IIED.pdf> (Accessed 12 September 2008).
- Tarrant, M. and G. Green 1999, 'Outdoor Recreation and the Predictive Validity of Environmental Attitudes', *Leisure Sciences*, vol. 21, 17-30.
- Tashakkori, A. and C. Teddlie 2003, *Handbook of Mixed Methods in Social and Behavioural Research*, Sage Publications.
- Thapa, B. 1999, 'Environmentalism: The Relation of Environmental Attitudes and Environmentally Responsible Behaviours among Undergraduate Students', *Bulletin of Science Technology Society*, vol. 19, no.5, 426-438.
- Togridou, A., Hovardas, T. and J. Pantis 2006, 'Determinants of visitors' willingness to pay for the National Marine Park of Zakynthos, Greece', *Ecological Economics*, vol. 60, 308-319.
- Tourism New Zealand and New Zealand Trade and Enterprise 2008, '100% Pure New Zealand', <http://www.newzealand.com/International> (Accessed 20. March 2008).
- Tribe, J. 2001, 'Research Paradigms and the Tourism Curriculum', *Journal of Travel Research*, vol. 39(May), 442-448.
- Tribe, J. 2005, 'New Tourism Research', *Tourism Recreation Research*, vol. 30, no.2, 5-8.
- Tribe, J. (2005). 'The Truth about Tourism', *Annals of Tourism Research*, vol. 33, no. 2, 360-381.
- Trochim, W.M. 2006, *Web Centre for Social Research Methods* <http://www.socialresearchmethods.net> (Accessed on 11. January 2008)
- Turner, R.K. et al. 2003, 'Valuing Nature: Lessons Learned and Future Research Directions', *Ecological Economics*, vol. 46, 493-510.

- United Nations Environment Programme (UNEP) 2002, *Global Environmental Outlook 3. Past, Present and Future Perspectives*, Earthscan.
- United Nations Environment Programme (UNEP) and United Nations World Tourism Organisation (UNWTO) 2008, '*Climate Change and Tourism- Responding to Global Challenges*', www.unwto.org/media/news/en/pdf/davos_rep_advan_summ_26_09.pdf. (Accessed 13.February 2008).
- United Nations World Tourism Organisation (UNWTO) 2001, *Tourism 2020 Vision*, UNWTO, Madrid.
- United Nations World Tourism Organisation (UNWTO) 2006, *World Tourism Barometer*, UNWTO, Madrid.
- United Nations World Tourism Organisation (UNWTO) 2008, <http://www.unwto.org/sdt/> (Accessed 13.February 2008).
- Uriely, N. et al. 2006, 'Ecological orientation of tourists: An empirical investigation', *Tourism and Hospitality Research*, vol. 7, no.3/4, 161-175.
- Uyarra, M.C. et al. 2005, 'Island-specific preferences of tourists for environmental features: implications of climate change for tourism-dependent states', *Environmental Conservation*, vol. 32, no.1, 11-19.
- Uysal, M. et al. 1994, 'Environmental Attitude by Trip and Visitor Characteristics', *Tourism Management*, vol. 15, no. 4, 284-294.
- Veal, A.J. 1992, *Research Methods for Leisure and Tourism: a Practical Guide*, Pearson Education Limited, Harlow, Essex.
- Veal, A.J. 2006, *Research Methods for Leisure and Tourism. A Practical Guide*, Pearson Education Limited, Harlow, Essex.
- Viner, D. and M. Agnew 1999, *Climate Change and Its Impacts on Tourism*, Climatic Research Unit University of East Anglia, Norwich, UK.
- Vinson, D.E. et al. 1977, 'The Role of Personal Values in Marketing and Consumer Behaviour. Can Personal Values be used to assist marketers in determining consumer choice behaviour?', *Journal of Marketing*, vol. 41, no.2, 44-50.
- Wall, G. 1997, 'Is Ecotourism Sustainable?', *Environmental Management*, vol. 21, no.4, 483-491.
- Walle, A. 1997, 'Quantitative versus Qualitative Tourism Research', *Annals of Tourism Research*, vol. 24, no.3, 524-536.
- Wearing, S., et al. 2002, 'Converting Environmental Concern into Ecotourism Purchase: A Qualitative Evaluation of International Backpackers in Australia', *Journal of Ecotourism*, vol. 1, no. 2&3, 133-148.
- Weaver, D. 2000, 'Ecotourism in the Context of Other Tourism Types', pp. 73-85 in D. Weaver *The Encyclopaedia of Ecotourism*, CABI Publishing.
- Weaver, D. 2001, *Ecotourism*, John Wiley & Sons Australia, Ltd.
- Weaver, D. and L. Lawton 2006, *Tourism Management*, J. Wiley & Sons Australia, Ltd.
- Welford, R. et al. 1999, 'Tourism and sustainable development: an analysis of policy and guidelines for managing provision and consumption', *Sustainable development*, vol. 7, no. 4, 165-177.

- Weigel, R.H. 1983, 'Environmental Attitudes and the Prediction of Behaviour', pp. 217-285 in N.R. Feinmer and E.S. Geller *Environmental Psychology: Directions and Perspectives*, Praeger, New York.
- Wight, P.A. 1993, 'Ecotourism: Ethics or eco-sell?', *Journal of Travel Research*, vol. 31, no.3, 4-14.
- Wight, P.A. 2000, 'Ecotourist: Not a Homogeneous Market Segment', pp. 37-63 in D. Weaver *The Encyclopaedia of Ecotourism*, CABI Publishing.
- Wiidegren, O. 1998, 'The New Environmental Paradigm and Personal Norms', *Environment and Behaviour*, vol. 30, 75-100.
- Winter, C. 2007, 'The Intrinsic, Instrumental and Spiritual Values of Natural Area Visitors and the General Public: A Comparative Study', *Journal of Sustainable Tourism*, vol, 15, no. 6, 599-616.
- World Tourism Organisation (WTO) 2001, *The German Ecotourism Market*, Market Intelligence and Promotion Section, Sustainable Development of Tourism Section, Madrid.
- World Wide Fund for Nature (WWF) 1999, *Climate Change and its Impacts on Tourism*, www.wwf.org.uk/filelibrary/pdf/tourism_and_climate_change.pdf (Accessed 5. May 2007).
- Yao, R. and P. Kaval 2007, *Non Market Valuation in New Zealand: 1974 through 2005*, Economics Department, University of Waikato.
- Zografos, C. and D. Allcroft 2007, 'The Environmental Values of Potential Ecotourists: a Segmentation Study', *Journal of Sustainable Tourism*, vol. 15, no.1, 44-66.

APPENDIX A

QUESTIONNAIRE (ENGLISH)



Thank you for your interest!

This survey is part of a Masters Thesis by Jennifer Diana Henniges, a student in the Department of Tourism, University of Otago, Dunedin. It seeks information about international visitors experience with nature and their general views regarding the environment. This research has been approved by the Department of Tourism (University of Otago) Ethics Committee. Information will be kept strictly confidential and no individual statements will be identified. Data will be used in an aggregate form and for the purpose of this research only. Answering the questionnaire should take less than 10 minutes. Your help is greatly appreciated ☺ ! Please provide your details in the end to win one of five unique nature guides about New Zealand. Good luck!

Section one: Environmental Attitudes

1. Thinking about the relationship between humans and nature, how do you personally view the following statements? Please indicate to what extent you agree or disagree with each statement, using the scale provided

	strongly disagree	1	2	3	4	5	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 produced 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		

2. Do you belong to any group that is concerned with nature? (e.g. Greenpeace, WWF, Royal Bird Society)

Yes No If yes, please specify _____

3. In your everyday life, how do you personally get active towards environmental protection? Please provide examples

4. Global climate change is one of the most important issues the world is facing today. Highly debated in the media, how do you think climate change will impact you and your family in the future? Please indicate

negative	1	2	3	4	5	positive

5. Emissions created by aviation have an impact on our climate. To compensate these emissions there are now options available to pay a voluntary fee additional to your flight-ticket. The money is then invested in e.g. renewable energy projects. In the future, would you pay such an additional fee for your air travel, for example 10NZ\$ for a long haul flight?

- Yes, I would pay a voluntary fee to offset emissions
- No, I would not pay a voluntary fee to offset emissions
- I would want more information on this

6. Regarding your personal values, to what extent do you consider the following as 'guiding principles in your life'?

Indicate on a scale from 1 = not important to 5= very important. Circle just only one value as very important. Please vary!

	1	2	3	4	5
a) Protecting the environment	1	2	3	4	5
b) Authority	1	2	3	4	5
c) Equality	1	2	3	4	5
d) Unity with nature	1	2	3	4	5
e) Financial wealth	1	2	3	4	5
f) Social justice	1	2	3	4	5

Section two: Nature Travel Experience

7. New Zealand is known for its amazing natural environment. During your travel, which of the following national parks have you visited? *Please tick more than one box if needed. If you have not visited one, please skip this question.*

- Te Urewera Paparoa Rakirua (Steward Island) Kahurangi Whanganui
 Tongariro Westland Aoraki/Mt Cook Nelson Lakes Fjordland
 Egmont Mt Aspiring Arthurs Pass Abel Tasman One, but don't know which

8. Protecting New Zealand's unique environment is cost intensive. If money would be directly invested in conservation projects, how much would you be willing to pay for an entrance fee to a national park?

Maximum NZ\$ _____

9. Thinking of your holiday in New Zealand, to what extent do you agree or disagree with the following statements?

Please circle only one number at a time. 1= strongly disagree, 5=strongly agree

		strongly disagree		neutral		strongly agree
a)	The environment in New Zealand is exactly how I imagined it to be	1	2	3	4	5
b)	I am interested in New Zealand's animals and plants	1	2	3	4	5
c)	One of my reasons to visit this country is to go on one of the famous tracks	1	2	3	4	5
d)	I would like to see as much as possible of this country	1	2	3	4	5
e)	New Zealand's landscape reminds me of my home-country	1	2	3	4	5
f)	I feel free and in contact with nature when I travel	1	2	3	4	5
g)	I am disappointed about the natural forest in this country	1	2	3	4	5
h)	I consider New Zealand's environment as clean and well managed	1	2	3	4	5
i)	Nature experiences make my travel truly worthwhile	1	2	3	4	5
j)	New Zealand does not meet my expectations of being "clean and green"	1	2	3	4	5
k)	I am surprised about the few animals in the forest	1	2	3	4	5

10. *Please answer this last question:* While traveling in New Zealand, have you come across the DOC 'Environmental Care Code'?

- Yes No

General Data

- A. Your country of residence is: _____
 B. How often have you visited New Zealand, including this visit? _____
 C. Will you visit New Zealand again in the future? _____
 D. Overall, how satisfied are you with your travel in New Zealand? _____
 E. Could you please estimate the total cost of your visit - please include all costs like airfares, accommodation, transport, sightseeing and other expenses. _____
 F. What is the main reason for your visit? (e.g. friends/family, education, holiday) _____

G. Please indicate your age-bracket:

- 15-19 25-29 35-39 45-49 55-59 65+
 20-24 30-34 40-44 50-54 60-64

G. You are female male

H. Please indicate your highest educational attainment

- Primary School Secondary High School Tertiary education

Your comments: _____

☺ THANK YOU FOR YOUR HELP!!! ☺

WIN ONE OF FIVE EXCLUSIVE NATURE GUIDES ABOUT NEW ZEALAND!!! GOOD LUCK & HAVE A NICE HOLIDAY!!!

NAME: _____

PERMANENT ADDRESS: _____

APPENDIX B

QUESTIONNAIRE (GERMAN)



Vielen Dank fuer ihr Interesse!

Diese Befragung ist Teil der Master-Arbeit von Jennifer Diana Henniges, Tourismus Studentin and der Universitaet Otago. Es wird versucht, Information ueber das Umweltbewusstsein internationaler Reisender in Neuseeland zu gewinnen. Ergebnisse sollen der Planung von Natur-Tourismus Ressourcen dienen. Die Informationen werden vertraulich behandelt und persoenlichen Aussagen koennen nicht identifiziert werden. Die erhobenen Daten werden nur fuer den Zweck dieser Arbeit verwendet. Die Teilnahme dauert weniger als 10 Minuten. Am Ende koennen sie einen von funf einzigartigen Naturfuhrern ueber Neuseeland gewinnen!! Bitte schreiben sie dafuer ihren Namen und ihre permanente Adresse auf die letzte Seite. Viel Glueck!

Erster Teil: Umwelteinstellung

1. Im Folgenden geht es um ihre generelle Einstellung zur Umwelt. Bitte markieren sie auf der angegebenen Skala inwiefern sie den Aussagen gar nicht zustimmen= 1 bis voll zustimmen= 5. Markieren sie jeweils nur eine Nummer pro Aussage

	Stimme ich nicht zu	1	2	3	4	5	Stimme ich voll zu
a) Das Gleichgewicht der Natur ist sehr empfindlich und kann einfach gestoert werden	1	2	3	4	5		
b) Die Menge an Menschen die die Welt tragen und ernaehren kann ist bald erreicht	1	2	3	4	5		
c) Um eine gesunde Wirtschaft zu erhalten muessen wir eine Wirtschaft entwickeln in der das industrielle Wachstum kontrolliert ist	1	2	3	4	5		
d) Um zu ueberleben muessen die Menschen in Harmonie mit der Natur leben	1	2	3	4	5		
e) Die Menschheit missbraucht die Natur	1	2	3	4	5		
f) Wenn Menschen in die Natur eingreifen endet dies oft katastrophal	1	2	3	4	5		
g) Pflanzen und Tiere sind dazu da um von Menschen benutzt zu werden	1	2	3	4	5		
h) Die Menschen haben das Recht die natuerliche Umwelt zu ihren Gunsten umzugestalten	1	2	3	4	5		
i) Die Menschen wurden dazu geschaffen ueber den Rest der Natur zu regieren	1	2	3	4	5		
j) Die Erde hat begrenzten Raum und Ressourcen	1	2	3	4	5		
k) Die Menschen muessen sich nicht der Umwelt anpassen, da sie die natuerliche Umwelt zu ihren Gunsten veraendern koennen	1	2	3	4	5		
l) Es bestehen Grenzen des Wachstums die unsere industrialisierte Gesellschaft nicht ueberschreiten kann	1	2	3	4	5		

2. Sind sie persoenlich Mitglied einer Umweltschutzorganisation? (z.B. Greenpeace, WWF, NABU)

Ja Nein *Wenn ja, geben sie bitte an welche _____*

3. Tun sie persoenlich etwas fuer den Umweltschutz? *Wenn ja, bitte nennen sie kurz ein paar Stichworte*

4. Der globale Klimawandel ist eines der groessten Herausforderungen unserer Zeit. In den Medien wird dies zur Zeit stark diskutiert. Wie denken sie, wird sich der Klimawandel auf sie und ihre Familie in Zukunft auswirken?

negative	neutral	positive
1	2	3
4	5	

5. Der internationale Flugverkehr traegt wesentlich zum Klimawandel bei. Um Umweltbelastungen zu kompensieren, gibt es neuerdings die Moeglichkeit, zusaetzlich zum Ticketpreis freiwillig eine Gebuehr zu bezahlen, welche fuer Ausgleichmassnahmen, z.B. Modellprojekte fuer Energieeffizienz, benutzt wird. Wuerden sie eine solche freiwillige Gebuehr, z.B. in Hoehe von 10 NZ \$ fuer einen Langstreckenflug, bezahlen?

- Ja, ich wuerde eine freiwillige Gebuehr bezahlen
- Nein, ich wuerde keine freiwillige Gebuehr bezahlen
- Ich moechte mich lieber erstmal mehr infomieren

6. Ihre generelle Einstellung betreffend: Inwieweit bewerten sie die genannten Werte als "leitend in ihrem Leben"? *Kennzeichnen sie jeweils nur eine Nummer. Bitte markieren sie nur eine n als sehr wichtig. Variieren sie moeglichst viel*

	Nicht wichtig	neutral	Sehr wichtig
a.) Umweltschutz	1	2	3
b.) Autoritaet	1	2	3
c.) Gleichheit	1	2	3
d.) Einheit mit der Natur	1	2	3
e.) Finanzieller Reichtum	1	2	3
f.) Soziale Gerechtigkeit	1	2	3

Zweiter Teil: Naturerlebnisse in Neuseeland

7. Neuseeland steht allgemein fuer unberuehrte Natur und atemberaubende Landschaften. Ein Grossteil des Landes ist als Nationalpark ausgewiesen. Welchen der folgenden Nationalparke haben sie waehrend ihrer Reise besucht?

- | | | | | | | | |
|------------|--------------------------|-------------|--------------------------|--------------------------|--------------------------|---|--------------------------|
| Te Urewera | <input type="checkbox"/> | Paparoa | <input type="checkbox"/> | Rakiura (Steward Island) | <input type="checkbox"/> | Kahurangi | <input type="checkbox"/> |
| Tongariro | <input type="checkbox"/> | Westland | <input type="checkbox"/> | Aoraki/Mt Cook | <input type="checkbox"/> | Nelson Lakes | <input type="checkbox"/> |
| Egmont | <input type="checkbox"/> | Mt Aspiring | <input type="checkbox"/> | Arthurs Pass | <input type="checkbox"/> | Einen dieser, den Namen weiss ich nicht | <input type="checkbox"/> |
| Whanganui | <input type="checkbox"/> | Fjordland | <input type="checkbox"/> | Abel Tasman | <input type="checkbox"/> | | |

8. Wie hoch duerfte ihrer Meinung nach eine Eintritts-Gebuehr zu einem Nationalpark sein, wenn das Geld direkt in Naturschutzprojekte fliessen wuerde? *Bitte schreiben sie eine maximale Summe in das angegebene Feld*

Maximal NZ \$ _____

9. Wenn sie allgemein an ihre Reise in Neuseeland denken: Inwiefern stimmen sie den folgenden Aussagen zu? *Markieren sie bitte jeweils nur eine Nummer von 1= stimme gar nicht zu bis 5= stimme voll zu*

		Stimme nicht zu		Neutral		Stimme voll zu
a)	Die Umwelt und Natur in Neuseeland ist genau wie ich sie mir vorgestellt habe	1	2	3	4	5
b)	Ich bin interessiert an Neuseelands urspruenglichen Pflanzen und Tieren	1	2	3	4	5
c)	Einen der Tracks zu wandern ist einer der Hauptgruende dieses Land zu besuchen	1	2	3	4	5
d)	Ich moechte soviel von Neuseeland sehen wie moeglich	1	2	3	4	5
e)	Die Landschaft Neuseelands erinnert mich an meine Heimat	1	2	3	4	5
f)	In Neuseeland fuehle ich mich frei und im Kontakt mit der Natur	1	2	3	4	5
g)	Ich bin enttaescht ueber die urspruenglichen Waelder in diesem Land	1	2	3	4	5
h)	Neuseelands Umwelt ist meiner Meinung nach sauber und gut gemanaged	1	2	3	4	5
i)	Die Natur-Erlebnisse machen meinen Neuseeland Urlaub einzigartig	1	2	3	4	5
j)	Neuseeland trifft nicht auf meine Erwartungen von einem 'gruenen, sauberen' Land	1	2	3	4	5
k)	Ich wundere mich ueber die wenigen Tiere im Wald	1	2	3	4	5

10. Haben sie waehrend ihrer Reise den 'Environmental Care Code' kennengelernt?

- Ja Nein

Allgemeine Daten

- A. Sie wohnen in welchem Land? _____
- B. Wie oft waren sie bereits Neuseeland, incl. diesem Besuch? _____
- C. Werden sie Neuseeland wieder besuchen? _____
- D. Wie zufrieden sind sie insgesamt mit ihrer Neuseeland-Reise? _____
- E. Wenn sie die Gesamtkosten der Reise ueberschlagen (incl. Flug, Unterkunft, Aktivitaeten) wie viel kostet ihnen diese Reise? _____
- F. Was ist der wichtigste Grund ihres Neuseeland- Besuchs (Freunde/Familie, Bildung, Urlaub etc.) ? _____
- G. Ihre Altersklasse ist

- | | | | | | | | | | | | |
|-------|--------------------------|-------|--------------------------|-------|--------------------------|-------|--------------------------|-------|--------------------------|-----|--------------------------|
| 15-19 | <input type="checkbox"/> | 25-29 | <input type="checkbox"/> | 35-39 | <input type="checkbox"/> | 45-49 | <input type="checkbox"/> | 55-59 | <input type="checkbox"/> | 65+ | <input type="checkbox"/> |
| 20-24 | <input type="checkbox"/> | 30-34 | <input type="checkbox"/> | 40-44 | <input type="checkbox"/> | 50-54 | <input type="checkbox"/> | 60-64 | <input type="checkbox"/> | | |

- G. Sie sind weiblich maennlich
- H. Ihr hoechster Schulabschluss ist
 Grundschule Hauptschule Realschule Abitur

Ihre Kommentare:

☺ VIELEN DANK FUER IHRE TEILNAHME ! ☺

GEWINNEN SIE EINEN VON FUENF EXCLUSIVEN NATURFUHRERN UEBER NEUSEELAND !!!!! VIEL GLUECK

IHR NAME:

IHRE PERMANENTE ADRESSE:

APPENDIX C

ETHICAL APPROVAL (CATEGORY B)



Form devised May 1995; updated May 1997; June 1998; May 1999, Dec 2000, June 2002

**ETHICAL APPROVAL AT DEPARTMENTAL LEVEL OF A
PROPOSAL INVOLVING HUMAN PARTICIPANTS (CATEGORY B)**

NAME OF DEPARTMENT: DEPARTMENT OF TOURISM

TITLE OF PROJECT: Environmental values, attitudes and behaviour held by international tourists': Implications for New Zealand's tourism and conservation policy

PROJECTED START DATE OF PROJECT: 21.02/2008

STAFF MEMBER RESPONSIBLE FOR PROJECT: David T. Duval

BRIEF DESCRIPTION OF THE PROJECT: New Zealand's tourism industry relies heavily on its natural environment. International tourists' are attracted by a 'clean and green' and '100% pure' destination image. High expectations regarding the environmental performance need to be fulfilled by the industry to guarantee its sustainability. This research aims to provide findings towards international tourists' views about environmental issues. It seeks to answer one question that can be stated as: How environmentally aware is the international tourist in New Zealand?

The aims and objectives of this research are stated as:

- 1.) measure general values and more specific environmental attitudes held by international tourists' in New Zealand
- 2.) present information about international tourists' perception of New Zealand's environment
- 3.) provide findings towards international tourists' environmental behaviour
- 4.) establish findings towards international tourists' willingness to pay for:
 - a. an entrance fee to New Zealand's National Parks
 - b. to offset emissions created by air-travel

After careful consideration of research methods available data will be gathered quantitatively. Self-completed questionnaires will be researcher distributed to international tourists' aged over 15 at four major tourist information sites on the South Island of New Zealand. The following sites were chosen: I-Site Dunedin, I-Site Christchurch, Department of Conservation Visitor Centre Fiordland and Department of Conservation Visitor Centre Queenstown. A large sample of 480 questionnaires will be used to achieve statistically significant results. At each site 100 questionnaires in English and 20 questionnaires in German will be distributed. A German sub-sample of overall 80 questionnaires was chosen to compare results with a representative study conducted by the Ministry of Environment (Germany) in 2006, assessing environmental values held by the German public.

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The questionnaire consists of two pages (one leaf). Mostly closed ended questions and a few open-ended questions are used which include 5-point Likert-scales, yes- or no responses and multiple-choice formats with specified responses. Each survey form includes a number and the code for the specific site of where it is distributed (Christchurch: CHCH, Dunedin: DUD, Te Anau: TEAN, Queenstown: QUE). The survey will be conducted on four following weekends.

DETAILS OF ETHICAL ISSUES INVOLVED AND RESPOND TO IT:

Issues regarding operators:

- 1) Provide informed consent of the research project, operators role and what they are asked to do
- 2) Minimize work effort of operators staff
- 3) Ensure minimal disruption of visitors
- 4) Ensure optimization of the project should there be complaints
- 5) Inform operator about outcomes of this research

Response regarding operators:

- 1) Informed consent has been given via email. Operators have been made aware of the research project and have been given the questionnaire for revision. Operators have replied via email confirming the grant of access to conduct the survey on their premises. The operator staff may be asked to encourage their clients to take part in the survey.
- 2) Operators are not asked to display, collect or distribute questionnaires. The researchers' distribution of the questionnaires minimizes the work effort for operator staff.
- 3) Visitors will not be disrupted during their visit to either Doc Visitor Centres or I-Sites as they will only be approached when leaving the revenue.
- 4) As the researcher will be on site, possible optimizations of the project can be made.
- 5) A research report will be offered to the operator once the thesis is completed successfully.

Issues regarding respondent:

- 1) Provide informed consent
- 2) Protect confidentiality
- 3) Ensure participation is voluntary
- 4) Give opportunity to request outcomes of this research

Response regarding respondent:

- 1) Informed consent will be given via an introductory paragraph on the front of the questionnaire. Informed consent can also be given by the researcher.
- 2) Confidentiality will be protected as data will only be used in an aggregate form. No personal statements will be identified. Data will be handled strictly confidential and for the purpose of this research only.
- 3) The respondent's participation in this survey is voluntary. Shall he/she decide not to fill out the questionnaire there will be no disadvantage to him/her of any kind.
- 4) The outcomes of the research can be requested through the researchers details provided on a separate card.

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ACTION TAKEN

- | | |
|---|--|
| <input type="checkbox"/> Approved by Head of Department | <input type="checkbox"/> Approved by Departmental Committee |
| <input type="checkbox"/> Referred to University of Otago Human Ethics Committee | <input type="checkbox"/> Referred to another Ethics Committee
Please specify: |

.....

DATE OF CONSIDERATION:

Signed (Head of Department):



APPENDIX D

DOC ENVIRONMENTAL CARE CODE



10 POINT CHECKLIST

Protect plants and animals

Treat New Zealand's forests and birds with care and respect. They are unique and often rare.

Remove rubbish

Litter is unattractive, harmful to wildlife and can increase vermin and disease. Plan your visits to reduce rubbish, and carry out what you carry in.

Bury toilet waste

In areas without toilet facilities, bury your toilet waste in a shallow hole well away from waterways, tracks, campsites, and huts.

Keep streams and lakes clean

When cleaning and washing, take the water and wash well away from the water source. Because soaps and detergents are harmful to water-life, drain used water into the soil to allow it to be filtered. If you suspect the water may be contaminated, either boil it for at least 3 minutes, or filter it, or chemically treat it.

Take care with fires

Portable fuel stoves are less harmful to the environment and are more efficient than fires. If you do use a fire, keep it small, use only dead wood and make sure it is out by dousing it with water and checking the ashes before leaving.

Camp carefully

When camping, leave no trace of your visit.

Keep to the track

By keeping to the track, where one exists, you lessen the chance of damaging fragile plants.

Consider others

People visit the back country and rural areas for many reasons. Be considerate of other visitors who also have a right to enjoy the natural environment.

Respect our cultural heritage

Many places in New Zealand have a spiritual and historical significance. Treat these places with consideration and respect.

Enjoy your visit

Enjoy your outdoor experience. Take a last look before leaving an area; will the next visitor know that you have been there?

Protect the environment for your own sake, for the sake of those who come after you, and for the environment itself.

*Toitū te whenua
(Leave the land undisturbed)*



Department of Conservation
Te Papa Atawhai

APPENDIX E

QUALITATIVE DATA

Environmental Groups mentioned

1% for planet (????)
Area Wildlife Group (UK)
Australian Conservation Society
Botanical gardens/ Scottish national trust
BUND
Bush care group in local area (Sydney Australia)
Calm
Chicago Wilderness
Clean up Australia
creation cure student program, earth keepers
creation cure study program (university student program)
Czech nature protection corps
Defenders of Wildlife
Deutscher Tierschutz Bund
DOC Volunteer
EAU Secours (Quebec, Canada)
Fish & Game Association for cheetah
Friends of the Bosque del Apache (USA)
Green Party
Green Party (Australia), CSIRO Marine and Atmospheric Research
Greenpeace
Greenpeace, and the environmental party in Israel
Greenpeace, Friends of the Earth (BUND)
Greenpeace, in Holland etc.
Greenpeace, movement against nuclear power
Greenpeace, NABU
Greenpeace, Sierra Club
Greenpeace, the group in Israel
Greenpeace, WSPA
Greenpeace, WWF
Greenpeace, WWF, Local Groups
Greenpeace, WWF, Miliendefensie

1% for planet (????)
Greenpeace, WWF, UNESCO
Greenpeace, WWF, Wilderness Society
Leadership in energy and environmental design (architectural organization/ I am a leader accredited
local nature & conservation group
NABU, Greenpeace
National Geographic Australia
National Trust
Natur Fund
Nature Trust (?) + botanic soc. (??)
nothing specific, but I often think I should become more creative
Royal Society for the Protection of Birds (RSPB) (UK)
Royal Society for the Protection of Birds (RSPB) UK
RSPB
RSPB National Trust
RSPB, Wetlands+Wildlife Trust (UK)
SCI
Scouts
Scouts, Germany
Shark trust
Sierra Club
Socialist
Wildlife organisation in Scotland
WWF
WWF, Greenpeace
WWF, Nature Conservancy of Canada A local Eco Trust Foundation
WWF, RSPB, NT
WWF, The nature conservancy of Canada

Environmental Activity, Everyday

active recycling, becoming more sensitive to resource use (Oil, water)
actively recycle and reduced consumerism. Walk and or bike to work/stores.
Activism, donations, being as environmentally friendly as possible (riding bus, limit power usage etc.)
advocate caring for the environment with students, quittances
advocate environmental concerns among friends acquaintances
as we are farmers we do look after the ranch
at the moment volunteer work in bird sanctuary
avoid producing rubbish, save energy and water
awareness, recycling, limiting the use of car
being aware of environmental problems and 'thinking' green, waste recycling
bike, walk, recycle, use as little as possible
board member of Cape Island sea reserve (MA USA)
buy less plastic products, better food
Buy regional products, recycle, and use public transport system, live without car, short showers, less flights...
garbage control
code of tramping, recycling
collect the rubbish after myself when camping, staying away from wildlife, recycling
compost, recycle, environmental ed, local sourcing, natural products (organic) etc.
composting, recycling, reduce consumption, buying organic, fair trade foods and products, taking public transport or riding a bike
conscious of products we use e.g. plastic bags, conserve energy
conservation, recycle, don't drive, reduce, reuse
conserve, pick up trash, live simple, mentor others, make local purchases
controlled use of resources e.g. water
cut down on 'garbage', use reusable cloth bags, recycle clothes
cycle to work
Cycling
cycling, food choices, recycling
design sustainable buildings, recycle, compost, drive only a scooter, commute to work by bike, buy local produce, grow our own food, reduce consumerism

active recycling, becoming more sensitive to resource use (Oil, water)
do not consume, or less as possible
don't litter and cycling round
don't throw rubbish on side of road
drive less
eat food from organic farms, reduce waste
eco friendly chemicals, recycling
feed garden birds, recycle packaging etc.
fight against buildings speculation and industrialisation
going by bicycle instead of using car, buying local products, organic food, bring my own bag, not use plastic bags
green energy subscriber
have as little impact on environment as possible
have no car, save electricity, low energy lamps and fridge etc., no batteries, only accuse save water
haven't done too much, just walk and observe
heating based on renewable resources (Heizen aus nachwachsenden rohstoffen)
hybrid car, recycling
I am a teacher and pass on to my pupils how to dispose garbage environmentally friendly, how to save energy, water and natural resources, and how to avoid unnecessary packaging of products
I am vegetarian and try to recycle everything
I cant drive I cycle use public transport, recycle, I work for a manufacturer using Chinese factories which I inspect
i do not dumb rubbish, worm farm
i don't
I don't drive a vehicle to work everyday. I run or bike each day
i don't have a car
I don't own a car, don't litter waste, try to buy local products
I give a minor effort to separate garbage types
I give respect to planet earth!!
I have no car, try to reduce use of energy, water etc. try not to buy made in china (they don't respect environment in their industry)
I have no car, use mainly bike, train etc., save electricity, no TV, use of renewable energy, prefer food from local farms, org. food

active recycling, becoming more sensitive to resource use (Oil, water)
I pick up litter
I recycle
i recycle, don't just throw away my rubbish, and watch friends do it as well
i recycle!
I ride a bicycle
I take the bike and not the car
I try to give more than I take
I try to recycle, making compost
I use biodegradable products only, products not tested on animals, organic food mostly, recycle all I can do, I am buying stuff/ product recycle only... or almost when possible
I volunteer in a Greenpeace in Israel and make very high effort in order to clean the air pollution
I'm not doing anything special, just taking care to my surrounding
inform ppl., ask them to save resources, I try not to waste energy & water, pay to co2 neutralization projects for my flights
joined the greens
keen gardener
less waste, unnecessary use of plastics
lightening/heating/water
limit water and power usage
live a simple life, limit fossil fuel consumption, shop conscientiously
live environmentally aware
Live responsible in and where I live
local land care
look out what I am using
minimize use of resources, low energy light bulbs, restrict water use, drive car with low fuel use
my scouting supports conservation, preservation etc.
No
no bags (if isn't needed), selective bin
no car
no car, I use public transport and bike, buy organic products, try to avoid trash
no car, public transport, recycle, reduce garbage, save energy

active recycling, becoming more sensitive to resource use (Oil, water)
no car, recycling, reduce garbage, energy saving light bulbs, public transport, warm clothing instead of heating, akkus, rechargeable batteries, no short holiday flights, try to encourage others to life environmentally friendly
non specific way
None
not enough unfortunately
not enough, mostly recycling when possible
not much
not throwing garbage, and picking up other peoples garbage, recycling
not too much. I try to recycle
on the farm we have to respect many new rules to protect it
only recycle waste
organic products, reduce water usage
ozone friendly products, protest and use products that weren't tested on animals, don't eat meat
pick up other peoples trash when tramping
pick up plastic bags and bottles etc.
pick up rubbish, walk
plant native plants in native areas, purchase recycled or environmental friendly products
planting trees
promote walking and biking and using public transport
public transport, solar power
public transportation (when available), donations
public transportation, lights off, reusable bags, recycle, national park maintenance
Recycle
recycle all material, reduced
recycle and walk instead of using cars and busses
recycle as much as i can, buy organic goods
recycle as much as possible
recycle bottles, paper etc. do not waste water
recycle garbage disposal
recycle household goods
recycle paper and aluminium cans, bottles etc. bicycle to work

active recycling, becoming more sensitive to resource use (Oil, water)
recycle waste
recycle waste, household rubbish and garden rubbish
recycle, active native watcher
recycle, compost
recycle, drive gas powered car, use fluro lights
recycle, eat vegetarian diet
recycle, household energy conservation, public transport, cycle, minimise environmental impact when hiking, climbing
recycle, i do not litter the earth
recycle, leave car
recycle, limit electricity use
recycle, minimal impact
recycle, no pesticides, protect plant life, stay on path
recycle, positive choice in buying goods, environmental friendly
recycle, public transport
recycle, public transport, buy organic food at home
recycle, public transport, ride bike
recycle, reduce amount of crap i buy+power I use
recycle, reduce fuel, bio-products
recycle, ride my bike
recycle, ride to work, take the bus, buy local (try!)
recycle, save energy, electricity, travel by train in Germany
recycle, save oil for heating, use bike for short routes
recycle, studying ecology, turning off lights, walking whenever possible
recycle, talks on conservation, discuss with teachers and friends
recycle, took part in 1st rights campaign 2007 Sydney, Limit consumption of goods, public transport
recycle, try to reduce water and electricity use
Recycle; try to use less water, (even less flights??)
recycle, use less car, save energy water, environmental protection projects involved
recycle, use public transport
recycle, using public transport or bike
recycle, vegetarian family

active recycling, becoming more sensitive to resource use (Oil, water)
recycle, walk instead of drive
recycle, walk or use public transport
recycle, water conservation
recycle reuse household items/ mulch + compost + ride the public when possible
Recycling
recycling etc.
recycling trash, limit energy consumption
recycling trash, no littering, save energy
recycling where possible
recycling-public transport only
recycling, biking instead of taking a car! no TV because TV makes stupid
recycling, bird feeding
recycling, composting, (???)
recycling, conserve energy, etc...
recycling, control limit speed, using public transport
recycling, cycling as form of transport
recycling, donate to the above mentioned, minimize water use generally try to reduce carbon footprint, minimize waste (compost etc)
recycling, don't litter
recycling, don't waste natural resources
recycling, eco car, walking, conserving electric usage
recycling, energy efficient resources, walking, think local
recycling, everything possible, try and use public transport
recycling, job in this sector, riding a bike
recycling, low use of energy (turn off lights), try not to waste water and energy in general
recycling, low-key lifestyle
Recycling, no car (Biking instead)
recycling, not drinking bottled water, vegan
recycling, not littering
recycling, not littering, reusing materials
recycling, not owning a car, limiting my waste/rubbish
recycling, organic gardening

active recycling, becoming more sensitive to resource use (Oil, water)
recycling, organic products
recycling, purchase organic products, Fruit and Veggie from own country
recycling, restricted water use
recycling, reuse shopping bags
recycling, reusing
recycling, separating garbage
recycling, trail maintenance volunteering, eco products, etc.
recycling, trying to live simple, driving as little as possible
recycling, use bike instead of car when possible, encourage my office to use less paper, there is so much waste there
recycling, use public transport
recycling, using bicycle
recycling, using public transport
Recycling, using water wisely, and being aware!
recycling, walking using public transport
recycling, walking, stuff like that
recycling, walking, using public transport
reduce energy use
reduce fuel use, save energy
reuse plastic bags
reuse, recycle
ride bicycle
ride bike, take public transport
ride my bike, garden (compost, limit usage of water) renewable resources
save energy, less driving car, reduce amount of garbage, recycle
save energy, recycle
save energy, recycling, educate children towards environmental awareness
save water
save water and electricity
save water, avoid to produce a lot of waste not to use plastic bags etc. use my bike or walk instead of using car
save water, recycling, no plastic bags
save water, ride bike

active recycling, becoming more sensitive to resource use (Oil, water)
saving electricity, switch off light after leaving the room, using glass bottles which can be recycled instead of plastic bottles
saving water, not littering
separate garbage, use public transport
separate garbage, water savings, buying local products
separate litter (glass/etc.), use energy saving lights, be aware of take a bike instead of car, showering times, turn of lights etc.
separate waste, buy organic products, spare water and energy
separation of waste, organic food
short showers, turn the lights off, take the bike if its possible
solar energy
solar energy, energy saving light bulbs, usage of rain water
sort my rubbish, turn off the light, machines when i don't use them, try to limit use of water
sort rubbish
sort trash, use minimal water and such. nothing special
sort waste, rain water tank
studying biology, working on research projects, recycle, don't litter, save water, power etc.
support conservation bodies see above
support green politics
switch off electricity where not needed, water etc.
take a bus, cycle
there are some spots that I present ride by a bike
think what you do and use
through my work at a consulting firm working with corporate clients to integrate sustainable practices into their core business model
through subscriptions
throw stuff in the garbage instead of the street
total recycle
tree planting, organic productions, a few acres of ground that is protected
try not to leave a carbon footprint, reduce waste of energy and resources
try not to waste water/energy, recycling, get around on foot, bike, public transport
try to avoid driving car if not necessary, control heating etc.

active recycling, becoming more sensitive to resource use (Oil, water)
try to be economical in my private daily life
try to buy organic, make as little litter as possible etc
try to minimize eco footprint
try to recycle. office has now established environmental committee
try to reduce garbage, ride bike instead of car, buy local produce
try to save energy
try to save petrol, electricity
try to use as little resources as possible (e.g. petrol, electricity etc.)
trying to recycle and minimize the use of energy
turning off lights
use environmentally 'friendly' products, minimise waste/consumption/fuel use etc.
use less water, heating, petrol, less paper
use litter bin
use of nature products, no fast food, hiking, walking etc.
use only products that haven't tested on animals
using recycle bins, avoid usage of more paper, public transport
walk cycle, car share, use public transport
walk instead of using car, recycle
walk or take the bike instead of car
walk, recycle
walk, save energy, no TV, no dryer, no microwave
walking as much possible, leave car, save energy
walking, not using plastic bags, sorting garbage
waste management
waste recycling
waste reduction, recycling, reduce driving, reduction in energy use
waste separation
water and energy saving
water consumption
water saving, recycle
we act as environment and energy consultants. we also develop instruments aimed at environmental awareness
we keep papers for scrap

active recycling, becoming more sensitive to resource use (Oil, water)

we live in the countryside and have about 2 1/2 acres of work land

we practice what many of these organisations promote; use cloth bags, recycle, give away things to be used (clothes)

will recycle

work in media- on environmental issues

yes, I clean my house

yes, I put plastic bottles in recycling bin

yes, I studied agriculture and environmental science

yes, recycle garbage

yes, recycling

yes, at work

Comments

@8.) money should only be used to maintain the tracks and NPs

a wonderful, friendly country

after the Americas cup NZ is changing

Beautiful Country

because of the costs of the holiday I would not want to pay for entry to the national parks, I think its NZ government

Christchurch is truly garden city of the world

Clear cutting!

DOC doing a great job!! But in general more environmental conscience (needed) collect batteries, insulation, heating

Don't let nz get spoiled, keep it as it is!

enjoyed NZ so far after Milford Track and a few days in New Zealand

first visit, 2nd day 15 days to go, 1st impression excellent

friendly people, healthy environment

from a tourist's perspective, NZ is a very well managed and conservation minded country

general excellent & awesome

global warming is periodic- cannot be altered by man

have only been in nz 6 days and they have been positive. Happy to see so much recycling everywhere, clean water and no litter

have really enjoyed the first 2 1/2 weeks of travel on the s. island hope the north is as good weather is better

hope I helped a bit to improve NZ

hope it will answer all of my expectations. Just arrived in New Zealand

hope that when i come back in the future nz is still amazing!

I have been here 2 days, Christchurch is a lovely city

I like this country

I think nature should be top of the list. For investment in conservation

I think you still have to do a lot for saving your nature! Most people don't recycle! That's very shocking for a German! watch out for that!

I was somewhat disappointed with how NZ portrays itself and how it really is. Not quite as caring for the environment as i thought. Furthermore-1080! That is absolutely disgusting & disgraceful what it does to the food chain has such far reaching effects- but again, \$ is king- sadly like everywhere else.

@8.) money should only be used to maintain the tracks and NPs

I was surprised that some bus & shuttle drivers leave their engine running while stationed for a longer time and that I couldn't find places to properly recycle or environmentally friendly dispose of used batteries

I'm disappointed with NZ landscape. There are some real beautiful places, but you must travel very far. Farmland dominates. I miss the forests! This is never advertised!

I'm going to Akaro and Hanmer. Hope they gonna be as beautiful as advertised

I'm looking forward to seeing NZ- here for 14 days

Its a lovely country

just arrived two days ago

keep it green!

keep protecting the environment!

keep the green!

keep up the good work!! (to DOC???)

keep your country clean and protect the environment!

Lots of tourism don't like all the heli and stuff

love nz!

love this country, please keep the nature!

Love this country!

New Zealand is a good place for tourists

New Zealand is beautiful!

New Zealand is great!

New Zealand is very beautiful

New Zealand should be more careful with their parks (no/less heliflights and adventures!)

NZ is beautiful

NZ public transport is not as developed as I expected- lots of people use private transport!

NZ such a great country hope you can go on by keeping "clean and green" and control possums/ferrets etc.

only been here for a few days but very pleased so far

PhD, Doc does an impressive job

please protect your beautiful land!

really great experience

@8.) money should only be used to maintain the tracks and NPs

Regarding 9a: so much cleaner than expected! 9g: it is disappointing that it is necessary to farm so much pine. 9k: the stoat/bird thing is awful. I hope that you guys get them!!

some of my responses would be different if there was a different option for N. or S. Island

stop 10/80 drops!

the people are friendly and you can drink the water

The planted forests (Douglas trees) are ugly!

The recycling programs need lots of improvement

there is a lot of pollution due to old cars mostly rental somewhere buses also produce pollution more than normal

very interesting and important topic!

we need more people like you to make people more conscious about protection your environment and our relation with mother nature... good luck in your study

We'd like to have DOC in Italy

What's up with these dairy farms? 97% of the marshland is gone!
