

A content analysis of ecotourism attributes of New Zealand whale and dolphin watching operators' presence on the Internet

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Attestation of authorship

“I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning”.

Xiaoshu Sun

Abstract

Since the 1980s, ecotourism has experienced a dramatic growth worldwide. Ecotourism comes with a definitional promise to promote responsible travel to natural areas, make a positive contribution to environmental conservation, and enhance the well-being of local communities. Recent years have seen whale watching tourism gaining great popularity, which originally was considered an excellent form of tourism to protect the marine wildlife and a number of benefits to the environment and local communities have since been identified. However, marine experts expressed concerns with regard to the potential negative impacts on the cetaceans and the whole marine system. Whale watching tour operators are one of the most important stakeholders of the local environment and community, which have responsibilities to protect the marine animals and environment, and various principles and legal regulations that they have to comply with. In order to maximize the benefits for the environment, community and tourists' experience, there is a significant need for research on whale watching operators.

This study was designed to examine the operators in the New Zealand context. New Zealand is considered as one of the most popular whale watching countries in the world. In the years since New Zealand progressed from whaling to whale conservation, whale watching tourism has become one of the most important sectors in ecotourism. Websites are a common medium for business operators to introduce and promote themselves by presenting their contributions for environmental conservation and social development. Thus, in order to have a better understanding of the New Zealand whale watching operators' performance in ecotourism, it is necessary to develop detailed insights into the efforts they are making for the local environment, community and the tourists through analysing their websites.

Sixty-four New Zealand whale watching operators who have a website were identified, and a thorough content analysis was employed to study them. The research results revealed that many operators consider themselves as eco-operators. Almost half of the operators presented Qualmarks, which is the New Zealand tourism certification defined by strict environmentally and socially responsible criteria. It was found that various forms of contributions were made for many aspects of ecotourism, which are classified and discussed in different groups respectively.

Whale watching is a significant sector in ecotourism, involving great efforts from all stakeholders. This study shows that although a variety of contributions made for ecotourism are presented by New Zealand operators on their websites, their participation in many of these contributions is relatively low.

Chapter 1 Introduction

1.1 Research context

In 1993, Poon noticed that the global tourism industry was in crisis, as a result of its own rapidly changing nature. The changing consumer behaviour also had significant impact on the crisis. According to Page and Dowling (2002), new tourists are more demanding, independent, and have special interests in non-resort locations. Consequently, there is now little left of the natural environment that has not been exploited or commoditised for tourist consumption. The extension of the so called 'pleasure periphery' into ever more remote and exotic areas has been driven to a significant degree by various forms of tourism (Turner & Ash, 1975). Since the late 1980s, ecotourism has been developing remarkably (Weaver, 1998), particularly attributed to the public becoming tired of the crowds, awakened to the evidence of pollution, and in search of something new (Fennell, 2002; Blamey, 1995). Thus, a more ideal alternative to the unregulated mass tourism was sought in ecotourism. The term "ecotourism" gained substantial attention and interest from governments, industries, academics and communities (Blamey, 1997), as its development provides a tourism experience which is not harmful to the local community and natural environments. Ecotourism has today become an integral part of economic strategy and developmental policy in a great number of regions. Due to the enormous growth of the tourism industry, concerns regarding the detrimental impacts of tourism activities on natural and cultural environments have also arisen (Fennell, 2008).

One of the more significant forms of ecotourism is sustainable wildlife tourism. Various concepts of ecotourism are examined by a large number of researchers, and while a good general understanding of the aims and nature of ecotourism has been gained, researchers are recently exploring more specialized areas of ecotourism. Wildlife ecotourism is one of these specialized areas, currently gained a great amount of attention (Newsome, et al., 2005). It has been widely accepted that wildlife tourism is a growing industry, with a particularly high growth rates in the whale watching tourism sector (Higginbottom, 2004). Whale watching tourism activities have attained great popularity within wildlife tourism, however, marine experts have expressed concerns around the potential negative impacts on the marine life. Therefore, a number of researchers have investigated these aspects in studies on whale watching tourism in many areas around the world (Higham & Lück, 2007).

1.2 Aims and objectives of the research

The over-arching aim of the research is to examine the role of whale watching operators in contributing to ecotourism in New Zealand through studying their websites.

The objectives of the research are to:

- examine if and how they promote their whale watching businesses as ecotourism operators on websites.
- identify actions that whale watching operators take for the conservation of the marine environment.
- identify contributions the whale watching operators make for the development of the local communities.
- contribute to the growing literature on the impacts of the whale watching industry for local environmental conservation and social development in New Zealand.

1.3 Dissertation structure

This study consists of six chapters. Whale watching operators in New Zealand were examined in the context of ecotourism and wildlife tourism. Chapter Two is organised into three main sections, reviewing various literatures pertaining to the discussion around ecotourism, wildlife tourism, and whale watching tourism. The first section provides an overview of the ecotourism development. This is followed by a discussion on defining ecotourism, which demonstrates that there is still no universally accepted definition of ecotourism. Some significant factors influencing these definitions are discussed. Then the potential benefits and costs of ecotourism from various aspects are analysed, and finally, the ecotourism certification programs are introduced.

The second section on wildlife tourism as a specialised sector of ecotourism will illustrate the differences between consumptive and non-consumptive utilisation of wildlife for tourism purposes. Then the significance of wildlife management and the stakeholders of wildlife tourism are discussed.

The third section explores concepts associated with whale watching tourism. A brief introduction of the background from whaling to whale watching is followed by a discussion on the development of this rapidly increasing wildlife tourism activity. Recently, enormous efforts have been made to whale watching research, in order to study the potential benefits and negative effects on various species of marine wildlife. Results of these researches are

analysed, followed by an examination of the management principles of whale watching to conclude this chapter.

Chapter Three provides a general overview of whale watching in New Zealand, including its origin and development. This dissertation focuses on New Zealand, which is a popular country for whale watching tourism, as a case study. Various marine species for whale watching, and the whale watching operators are outlined, followed by an examination of the legal regulations for whale watching tourism in New Zealand.

Chapter Four presents the research methodology and processes of analysis. This research employed a mainly qualitative approach to data collection, and data was analysed in a thematic approach. Through examining the websites, various themes are coded and determined, and according to their features, these themes are categorized and analysed in five groups: purchasing and operation, staff management, education, waste control and conservation work. Finally, the limitations of this research methodology are outlined.

In Chapter Five, the main findings of this research are presented and discussed. The first section provides an analysis of whale watching operators claiming to be eco-operators on their websites. This is followed by an examination of New Zealand whale watching operators with the Qualmark certification. Then, their contributions made for ecotourism are discussed and related to relevant literature.

The concluding chapter starts with an overview of the present study, followed by the main research objectives and the methodology employed in this study. A summary of the research findings is introduced. Finally, recommendations for future research on whale watching operators for ecotourism in New Zealand are discussed.

Chapter 2 Literature Review

2.1 Ecotourism

2.1.1 Overview of ecotourism

Awareness of environmental issues has become increasingly significant worldwide, with “ecotourism” becoming a catchword in the tourism industry since the 1990s (Honey, 1999). Ecotourism is one of the fastest growing sectors in the tourism industry (Wood et al., 2002), and as Western (1993) noted, it “has surged through the travel and conservation world like a tsunami” (p. 7). It has gained substantial attention and interest from governments, industries, academics and communities (Blamey, 1997). According to Weaver (1998), ecotourism is a concept which has evolved over the last few decades in the conservation community, and with local people in natural areas. The tourism industry experienced a rapid increase in nature-based tourism and realized their mutual interest in contributing to its growth. Ecotourism has brought various opportunities to achieve conservation goals and improve the well-being of local communities, promising a significant win-win situation in these areas (Drumm & Moore, 2002).

According to Diamantis (1999), ecotourism has developed rapidly worldwide due to the international acknowledgment of, and reaction to sustainable practices and global ecological practices. In this sense, the nature-based elements of tourism activities accompanied by the increasing awareness to minimise the negative impacts of tourism in the natural environment have contributed to tourists’ demand for ecotourism. This demand is also enhanced due to tourists’ preferences shifting away from mass tourism towards experiences which would be more enriching and individualistic (Blamey, 1995). Moreover, the increasing desires of wealthy Westerners to visit natural environments were also found to be a significant driving force in the remarkable growth of ecotourism (Scheyvens, 2002).

2.1.2 Defining ecotourism

The term “ecotourism” was first coined in the early 1980s by Ceballos-Lascuráin, and has since gained support as well as debate (Weaver, 1998). According to Ceballos-Lascuráin (1987), ecotourism is defined as:

Tourism that involves travelling to relatively undisturbed or uncontaminated natural areas with the specific object of studying, admiring and enjoying the scenery and its wild plants and animals, as well as any existing cultural aspects (both past and present) found in these areas (p. 13).

A large number of researchers have subsequently addressed the concept of ecotourism over the last few decades. However, the opinions are still divided, and there has been no agreement on the definition of ecotourism. According to Fennell (2002), there are at least 85 definitions of ecotourism in circulation. After studying the literature of ecotourism definitions, it was found that several significant aspects were repeatedly mentioned in a number of definitions.

One of the major aspects commonly mentioned is that ecotourism occurs in natural and relatively undisturbed areas (Ceballos-Lascuráin, 1987; Australia Department of Tourism, 1994; Boyd & Butler, 1996; Fennell, 1999; Ross & Wall, 1999; Blamey, 1997 and Weaver, 2008). Secondly, it makes contributions to the conservation in these areas (Boo, 1990; Wight, 1993; Buckley, 1994; McArthur, 1997; Honey, 1999; Fennell, 1999 and Ross & Wall, 1999). The third main aspect of ecotourism is its emphasis on the well-being of local communities: ecotourism should generate incomes and other forms of benefits for the local people (Boo, 1990; Butler, 1990; Honey, 1999; Fennell, 1999 and McArthur, 1997). Moreover, the local cultures and traditions should be respected and preserved (Ceballos-Lascuráin, 1987; Butler, 1990; Wight, 1993; Australia Department of Tourism, 1994; Gilbert, 1997; Honey, 1999). Furthermore, ecotourism enterprises are generally meant to be small in size, in order to minimize negative impacts on the natural environment and local communities (Gilbert, 1997; Jones, 1992; Krippendorf, 1987; Lindberg & McKercher, 1997; Orams, 1995; Fennell, 1999; Gilbert, 1997; Honey, 1999; Lindberg & McKercher, 1997). Finally, education is a significant component (Ceballos-Lascuráin, 1987; Krippendorf, 1987; Boo, 1990; Australia Department of Tourism, 1994; Orams, 1995; Gilbert, 1997; Honey, 1999; Ross & Wall, 1999; Fennell, 1999 and Weaver, 2008).

Ecotourism is considered as equal to nature-based tourism by some researchers. Weaver (2002) observed that ecotourism was often confused or synonymously used with nature based tourism, for example, Holmes (1993) stated that ecotourism is “exploring the natural environment”. In contrast, other researchers such as Blamey (1995), Weaver (2001), and Page and Dowling (2002) highlighted the fundamental differences between nature based tourism and ecotourism, especially in the light of ecotourism accomplishing an educational purpose for tourists and promoting local conservation. Page and Dowling (2002) also draw further attention to another distinctive characteristic of ecotourism; purposefully striving to minimize environmental problems.

2.1.3 Principles of ecotourism

Ecotourism first started as a concept, not a discipline, thus many governments and businesses promoted it with little understanding of its fundamental principles. Then in 1993, the International Ecotourism Society established a set of principles that became nationally and internationally accepted by an increasing constituency of ecotourism stakeholders, which included governments, non-government organisations, private businesses and local communities from many regions and backgrounds.

According to the International Ecotourism Society (1993), the fundamental principles of ecotourism include:

- Minimizing the negative impacts on nature and culture that can damage a destination.
- Educating the traveller on the importance of conservation.
- Stressing the importance of responsible business conduct, which works cooperatively with local authorities and people to meet local needs and deliver conservation benefits.
- Direct revenues to the conservation and management of natural and protected areas.
- Emphasizing the need for regional tourism zoning and for visitor management plans to be designed for either regions or natural areas that are slated to become eco-destinations.
- Emphasizing the use of environmental and social base-line studies, as well as long-term monitoring programs, to assess and minimize impacts.
- Striving to maximize economic benefit for the host country, local businesses and communities, particularly people living in and adjacent to natural and protected areas.
- Seeking to ensure that tourism development does not exceed the social and environmental limits of acceptable change as determined by researchers in cooperation with local residents.
- Relying on infrastructure that has been developed in harmony with the environment, minimizing use of fossil fuels, conserving local plants and wildlife, and blending with the natural and cultural environment (p.13).

2.1.4 Benefits of ecotourism

Ecotourism brings a variety of advantages to the tourism destinations. The potential benefits of ecotourism are mainly from economic, environmental and social-cultural nature. There are some overlaps of them, which means that the impacts of ecotourism based on these three perspectives are not mutually exclusive, and all three beneficial aspects have been extensively studied in a great number of researches worldwide.

Firstly, from an environmental perspective, ecotourism has the potential to significantly contribute to the protection of the natural areas. One of the most important environmental benefits of ecotourism is its incentive value, which is for preserving the natural environments that might otherwise be severely altered or destroyed by more exploitative and profitable

activities, such as mining and logging (Weaver, 1998). In this sense, ecotourism could offer a sustainable and healthy alternative to other environmentally destructive industries, thus promoting the natural conservation and enhancing the positive relationships with local residents (Beeton, 1998). Financial contributions to the establishment or maintenance of natural areas are another prominent potential benefit of ecotourism (Lindberg, 2000), which is capable of generating the funds required for the protection of the natural areas. Ecotourists are major users of the natural environments. With their concerns for the environment and environmental issues, they are more likely to make financial contributions (fees, donations and other resources). Therefore, ecotourism has a great potential to generate the required funds for environmental preservation of natural areas (Weaver, 1998).

There exists a great deal of academic research discussing the various economic benefits brought about by ecotourism. Ecotourism could provide jobs for local people, and also benefit the local related industries and services, such as accommodations, restaurants and transportation. The development of ecotourism could contribute to the upgrading of local infrastructure through its economic revenues (Weaver, 2001). Svoronou and Holden (2005) specified the economic benefits of ecotourism by referring to a project in the Greek villages of Dadia and Lefkimi as an example. An ecotourism project in these two villages provided 50 jobs (both full-time and part-time) for a community with only 1100 residents; it also supported a 34-member women's cooperative that operated a grocery store and a restaurant. Moreover, a great amount of economic benefits of ecotourism could flow on to the local businesses, rather than to the external stakeholders. As tourists have more opportunities consume local products, and local participation is emphasised and encouraged (Beeton, 1998).

The socio-cultural benefits of ecotourism are closely associated with the economic benefits, in terms of the improvement of local public infrastructure, social stability and wellbeing. Successful ecotourism ventures could lead to the empowerment of local people in political, economic, social and psychological aspects (Fennell, 1999). In addition, ecotourism plays an important role in enhancing local ownership, and establishing the local people's confidence, pride and self-worth (Weaver, 1998; Ross & Wall, 1999). Ecotourism enables people to benefit from the great aesthetic qualities of interacting with wildlife, natural and cultural attractions, and the increased public consciousness of environmental and cultural protection

among the tourists and residents could also be regarded as a social and environmental benefit of ecotourism (Weaver, 2008).

2.1.5 Costs of ecotourism

Like all other forms of tourism, ecotourism has both its own benefits and shortcomings. Despite various measures being taken to avoid or minimize the environmental, economic and socio-cultural costs, the negative consequences of ecotourism could still occur (Weaver, 2008).

Local environmental carrying capacities would be inadvertently exceeded by various modifications related to ecotourism, such as construction of tourist accommodation, basic infrastructure and access roads. In some cases, these site modifications could cause negative impacts that are severely detrimental to natural areas (Weaver, 2008). The interaction between humans and wildlife is a precious and unique experience that also has potential for negative environmental impacts. Tourist activities, although well-intended, could lead to various negative consequences in natural areas, in part due to the mobility of tourists who deeply explore the undisturbed natural areas. Such activities could lead to inadvertent diffusion of exotic species, which in turn could be jeopardizing to the local balance of the bio-system (Weaver, 2005). Research conducted over several years suggests that even non-consumptive forms of wildlife based tourism, such as wildlife observation, could lead to negative consequences for protected or targeted species (Higginbottom, 2004).

The major economic costs of ecotourism are the start-up and ongoing expenses (Lindberg, 2000): The start-up expenses include the acquisition of land, the establishment of infrastructure and services like visitor centres and parking facilities; ongoing costs include maintenance of land and facilities, marketing and labour costs. If these funds are insufficient, excessive, inappropriately managed or indicating long-term dependency on donors, then negative consequences are imminent (Weaver, 2008). Additionally, although ecotourism emphasizes the consumption of local products and services, the revenue leakages would still inevitably occur due to the necessity of importing at least some non-local goods and services. According to Lindberg (2000), up to 90 percent of ecotourism revenues in most local communities are lost through leakage. Moreover, ecotourism could lead to revenue uncertainty. For any form of tourism, reduced number of tourists leads to decreased revenue

flows, which might be triggered by various issues, such as political instability, social uncertainty, increased crimes and natural disasters (Weaver, 2008).

Due to the fact that ecotourism penetrates into remote environments, making contact with less modernized cultures is unavoidable. The intimate interaction of eco-tourists could result in inappropriate behaviours and imposition of potentially detrimental alien values (Weaver, 2008). Tourists may intrude into local communities for long periods, thus creating potential for social and cultural disruption. It is sometimes evident, for instance, in ecotourism activities where volunteers reside in a village for long periods of time, especially when they are motivated largely by egotistical considerations (Wearing & Neil, 1999).

Another social and cultural cost is the erosion of local control. Owing to the continued dependency on external assistances and skills, communities become increasingly embedded in the global economy. This dependency could offset the development of social wellbeing, which in turn causes cultural erosion, outward immigration and problems associated with modern lifestyles (Weaver, 2008).

2.1.6 Ecotourism certification

Certification programmes are a significant tool uniquely designed to monitor the current tourism industry. The first modern tourism certification programmes were aimed at measuring quality and cost, the health, hygiene and safety of accommodations, site and attractions or the qualifications of tourism professionals. Then in the 1990s, the rapid growth of ecotourism boosted the development of scores of new certification programmes with the potential to incorporate environmental and social, cultural criteria (Honey, 2002).

The various tourism certification programs can be categorized and analysed by the sectors of tourism: conventional tourism, sustainable tourism and ecotourism. Although the conventional tourism certification programs cover major areas of the tourism industry, they are not robust enough to facilitate long term sustainable development. Successful certification programs like ecotourism (other than the conventional tourism market), could provide an effective tool to balance a variety of stakeholders' interests and concerns, including: environmentalists, the tourism industry, host countries, host communities, consumers and international funding agencies (Honey, 2002).

Ecotourism certification programs cover businesses, services and products that describe themselves (through various media, like websites, brochures) as associated with ecotourism, and are generally in or around natural areas and involved in the preservation of ecosystems (Honey, 2002). Ecotourism certification standards are tailored to the conditions of a particular country, state or a region (which ultimately involves a variety of stakeholders), and seek effective ecotourism mechanisms that can make contributions to conservation in preserved areas and ensure benefits to the local people. Due to the environmental and cultural sensitivity of these areas, the underlying aim of ecotourism certification programs is thus to strive for business improvement with near-zero impact on these natural areas (Font, et al. 2003). Ecotourism certification considers the internal and external impacts of tourism businesses, so sometimes its role in the local community and environmental conservation is more heavily weighted than the internal business operations (Wood & Halpenny, 2001). An ecotourism certification program would likely deem local ownership as important, due to the principle that ecotourism strives to promote sustainable development, partly through economic empowerment within local communities. Ecotourism certification programs must respect the local communities, conservation efforts and help the public distinguish businesses, natural areas and even countries committed to the principles and practices of ecotourism (Font, et al. 2003).

2.2 Wildlife tourism

2.2.1 Overview of wildlife tourism

Tourists seeking more diverse experiences are increasingly attracted to the viewing of (or interacting with) wildlife as an approach to experience a sense of wilderness (Curtin, 2005). In recent decades, the growth of wildlife tourism worldwide can be seen in the increasing number of different types of wildlife watching activities, tourism businesses which provide these activities and the tourists that engage in them (Higginbottom, 2004). According to Newsome et al. (2005), “wildlife tourism is partly nature-based, might involve an element of adventure travel, and shares some of the key characteristics of ecotourism” (p. 19). Wildlife tourism is one type of tourism which is based on encounters with non-domesticated animals, and in recent years has experienced a dramatic increase in popularity. It has become a significant sector of tourism, capable of generating a revenue of US\$ 47 to 155 billion annually (Rodger et al., 2009). According to Higginbottom (2004), about 40 to 60 per cent of all tourists are found to be nature tourists and about 20 to 40 per cent of them are wildlife related tourists.

In many regions, wildlife is a new attraction that helps to diversify tourism and to promote community development. Well-organised wildlife tourism can provide various important opportunities to contribute to local community development, generate income and promote local wildlife conservation (Wilson & Tisdell, 2003). Wildlife tourism is generally regarded as a non-consumptive approach to benefit people with economic incomes, and provide opportunities to protect wildlife. Compared with the most consumptive uses of wildlife which generate small or subsistence incomes, well-managed wildlife tourism could create relatively greater returns (Barnes et al., 1992). According to Higginbottom (2004), it is an important trend that an increasing number of wildlife species are watched in a wide range of environments. This trend helps to place greater value to wild animals in their habitats due to the tourists' increasing awareness of environment conservation and interests in the concept of ecology (Duffus & Wipond, 1992).

2.2.2 Development and problems with wildlife tourism

It is widely accepted that wildlife tourism can greatly contribute to the conservation and welfare of wild animals. However, there is increasing concern that wildlife tourism can also have significant negative effects on the wildlife and their habitats (Higginbottom, 2004). In many instances, the concentration of wild animals is dependent on their seasonal patterns and is related closely to the vital periods of spawning, breeding and migration. During these periods, wild animals are extremely vulnerable to human disturbances, but at the same time, they are most interesting and appealing to wildlife watchers (Kerr, 1991). As Edington and Edington (1986) noted, wildlife visitors could become a detrimental source of disturbance even in protected areas.

2.2.3 Management principles of wildlife tourism

The management of wildlife tourism is so significant that a large amount of research has been conducted to suggest various principles to be considered crucial (Higginbottom, 2004). According to Edington and Edington (1986), the scale of tourism and the kind of tourists should be taken into critical consideration to avoid disturbing or threatening the wildlife. In addition, the revenues generated from wildlife tourism should filter down to the locals, as an incentive to local people to protect wild animals, rather than traditionally using them in consumptive ways. Moreover, in order to avoid wildlife tourism becoming exclusively for the wealthy and foreign tourists, efforts should be made to ensure that a wide range of people have opportunities to access wildlife tourism (Edington & Edington, 1986).

2.2.4 Stakeholders in the management of wildlife tourism

A stakeholder is any individual or group which is involved in or might be affected by the achievement of the organization's objectives (Freeman, 2010), and there can be various groups of stakeholders involved in the management of wildlife tourism. According to Higginbottom (2004), the stakeholders in wildlife tourism could include local communities, wildlife managers in public and private sectors, national and local governments, conservation NGOs (especially wildlife societies which have a role in popularising and raising awareness about wildlife and conservation), the tourism sector (including tour operators, excursion providers, accommodation) and tourists themselves. Each group of stakeholders has diverse interests and responsibilities, so successful wildlife watching tourism should be developed through a participative planning process which involves all relevant stakeholders, supported by good market research.

2.3 Whale watching

2.3.1 Overview of whale watching

Whale watching is generally accepted as feasible, sustainable ecotourism and a more advantageous exploitation of marine mammals than lethally harvesting for products (International Fund for Animal Welfare, 1995). According to Woods-Ballard et al. (2003), whale watching is defined by the IWC (1994) as: “any commercial enterprise which provides for the public to see cetaceans in their natural habitat” (p. 33). Whale watching is one of the most successful forms of ecotourism in the world, which also provides economic revenues, conservation, educational, and research benefits- it could provide maximum benefit to both the tourists and the targeted species (Hoyt, 2007). One of the important goals of high quality whale watching is to be commercially successful and sustainable, and as an essential duty, to educate visitors about the ocean and the demand for conservation (Lück, 2007). Due to the fact that the whale watching industry is resilient to economic and political instability, it has great appeal to foreign tourists from distant areas and has an astonishing adaptability to widely varying cultures (Hoyt, 2007).

High quality whale watching can be classed as ecotourism, being both environmentally and economically sustainable, with benefits for the local community and ecosystem. Hoyt (2007) stated that high quality whale watching must have qualities as follows: firstly, high quality whale watching is a prime recreational and educational experience which motivates tourists to care about the marine wildlife and their habitats and to make contributions to marine

conservation. Secondly, it should offer scientific information with regard to marine wildlife through researchers to managers and the public. Thirdly, it is built around naturalists or nature guides who are able to convey accurate information, help identify the marine wildlife and explain their behaviours, and build the link between the tourists and the oceans. Fourthly, it can be practiced by independent businesses, communities, researchers, conservation organizations, or cooperatives and is well-managed. Fifthly, it seeks to decrease the impacts on the marine animals so that they are watched with leaving minimum “footprints”. Sixthly, it should involve communities so they have a financial and personal interest in whale watching and the conservation of the marine wildlife and the oceanic environments.

2.3.2 From whaling to whale watching

At the beginning of the 20th century, the global whale population experienced a dramatic decline due to the ever increasing lethal harvesting for whale products (Orams & Forestell, 1995). With the new development of whaling technology, such as the power bow harpoon and steam boat, whales became an even easier target to hunt and kill, thus driving some species close to extinction (Lück, 2009). According to The World Conservation Union Red Data Book, the blue whale, humpback whale, fin whale, right whale and Sei whale species are all considered became endangered species (Lück, 2009). For that reason, the International Whaling Commission moratorium on commercial whaling came into effect in 1986, with many countries participating. However, Japan and Norway still continue commercial whaling, in spite of the IWC’s moratorium on commercial whaling, which is seen as exploiting a loophole for “scientific research” (WWF, 2003). According to Ganderton (2014), the Japanese scientific whaling programmes have been declared to be illegal in an international court. Moreover, the court went on to say that Japan must stop issuing permits for this form of whaling. Subsequently, this lethal whaling programme can be deemed unnecessary, as it is detrimental to the health of oceans.

In the years since New Zealand moved on from whaling to whale conservation, whale watching has become one of the most significant activities in ecotourism, and abundant opportunities are now provided for tourists to watch and interact with marine creatures in New Zealand all year round (O'Connor et al., 2009).

2.3.3 The development of whale watching

The first commercial whale watching operators can be traced back to the 1950s, which originated in Baja California, Mexico and Hawaii (Tilt, 1987). Thenceforward, whale watching activities proliferated into boat, land and airborne interactions with 84 species of whales, dolphins and porpoises (Hoyt, 2007). Since the International Whaling Commission's moratorium on whaling in 1986, whale watching has become the most economically viable and sustainable use of cetaceans. In the decades following, commercial whale watching operations increased dramatically worldwide (Hoyt, 2001). For example, since the late 1980s, the whale watching tourism industry has become one of the most significant tourism sectors in New Zealand and Australia (Orams, 1999).

The transformation of hundreds of countries and communities around the world through whale watching has been witnessed over the past few decades (O'Connor et al., 2009). Whale and dolphin watching was offered in only 12 countries in 1983, but by 1995 it had expanded to 295 communities in 65 countries, and by 1998, nearly 500 communities in almost 100 countries or territories were involved in whale watching tourism. Nowadays, whale and dolphin watching activities are taking place in every continent and from countries as diverse as South Africa, Argentina, Norway, Japan, New Zealand and Tonga (Orams, 2000).

2.3.4 Positive impacts of whale watching

Rapid growth of the whale watching tourism industry brings with it a variety of positive impacts on both the communities and the animals, including economic, social, conservation, educational and research benefits. This section will review these benefits of whale watching activities from different aspects.

2.3.4.1 Economic growth of whale watching

Recent years have seen a great increase in numbers of worldwide visitors taking whale watching tours who are enthusiastic to experience the marine wildlife and who take pleasure in the sense of surprise, adventure and camaraderie which occurs during tours (Hoyt, 2007). The whale watching industry has experienced a truly stunning growth (Table 2.1).

Table 2.1 Economic growth of regional whale watching industries

Region	Whale watchers		Regional AAGR	Number of countries		2008 Direct Expenditure millions	2008 Total Expenditure millions
	1998	2008		1998	2008		
Africa and Middle East	1,552,250	1,361,330	-1.3%	13	22	\$31.7	\$163.5
Europe	418,332	828,115	7.1%	18	22	\$32.3	\$97.6
Asia	215,465	1,055,781	17.2%	13	20	\$21.6	\$65.9
Oceania, Pacific Islands and Antarctica	976,063	2,477,200	9.8%	12	17	\$117.2	\$327.9
North America	5,500,654	6,256,277	1.3%	4	4	\$566.2	\$1,192.6
Central America and Caribbean	90,720	301,616	12.8%	19	23	\$19.5	\$53.8
South America	266,712	696,900	10.1%	8	11	\$84.2	\$211.8
GLOBAL TOTAL:	9,020,196	12,977,218	3.7%	87	119	\$872.7	\$2,113.1

Source: O'Connor et al. (2009)

In 1998, the global whale watching industry was already well established. More than nine million whale watchers generated a total expenditure of over US\$1 billion. Over the next decade, the whale watching industry continued to grow dramatically. In 2008, almost 13 million people participated in whale watching, generating over US\$2.1 billion in total expenditure (O'Connor et al., 2009). The global ticket sales for whale watching tours generated US\$870 million (direct expenditure), with indirect expenditure attributed to whale watching generating US\$1.2 billion in 2008 (O'Connor et al., 2009). The economic value of whale watching to the operators is clearly evident in the direct and total expenditure.

2.3.4.2 Social benefits

In many wildlife-based tourism areas, the local economy and employment are greatly dependent on tourism activities (Higginbottom, 2004). Whale watching operations could provide significant improvements in local infrastructure, opportunities of employment and economic development to local communities (Cater & Cater, 2007). The economic benefit for the local community and region is immense, as the direct expenditure spreads through the community and is re-spent (IFAW, 2005). The social benefits of whale watching greatly developing the local communities can be witnessed in many examples throughout New Zealand, Australia, Canada, Norway, Japan, South Africa, and more (Hoyt, 2001).

Lück and Altobelli (2009) provided a study of Kaikoura, New Zealand to demonstrate how regional transformations could be attributed to whale watching. They noted that, prior to the 1980s, Kaikoura was an economically depressed town suffering from an ageing and declining population. In 1987, the first whale watching operator was developed, with one boat and 10 staff; since then, the whale watching industry has been contributing considerably to the local

economy and residents in Kaikoura. Today, two whale watching operators offering wildlife tours are well established, and a great proportion of local people are involved with the tourism industry. The number of tourists increased from about 10,000 in the late 1980s to currently one million per year. Kaikoura developed into a thriving town, making a reputation for itself as the marine wildlife location in New Zealand. This is but one example of how influential whale watching can be in developing local communities (O'Connor et al., 2009).

2.3.4.3 Conservation

According to Hoyt (2011), it is generally accepted that whale watching can be beneficial for the conservation of marine animals and their habitats. The significant economic and social benefits of whale watching could be the incentives for the operators and local communities. In this sense, whale watching would support the conservation of the marine wildlife on which those benefits are based (O'Connor et al., 2009). For example, the conservation for local dolphins and the marine system in Samadai reef, in Egypt was the result of whale watching tourism (O'Connor et al., 2009). In 2001, Samadai reef was a popular whale watching location. However, due to the great pressure from tourists, the dolphins' behaviour was severely disturbed, and they became dispersed, causing a reduction in sightseeing activities. Therefore, the local authorities had to stop all forms of visits to this location until a marine protected area was implemented in 2004, with enforcement strategies and monitoring programmes established and the contribution of more than \$500,000 a year from local government for further conservation and maintenance. This is a significant example of how whale watching tourism can make contributions to the conservation of cetaceans and the marine system.

Over the last few decades, public opinions of the environmental conservation have significantly developed since education for the public to raise their awareness has become more widespread (Dunlap, 1991). The education that tourists gain while participating in a whale watching tour, has the potential to raise their awareness of the current issues faced by the cetaceans and the significance of conserving a marine system. Environmental education is a powerful tool for conservation. Education could complement regulations, with the goal of positively changing whale watching tourists' conduct and attitudes (Andersen & Miller, 2006). Educating visitors would encourage them to play a more active role in conservation efforts for the marine environment (Lück, 2007).

2.3.4.5 Educational benefits

Whale watching is widely believed to have great educational potential, providing opportunities to connect with the natural environments. According to Hoyt (2007), whale watching educates people of different ages and backgrounds about the ocean environment, marine creatures, and the significance of protecting them and their habitats. Through whale watching, opportunities are provided for researchers to gain information and monitor the population of marine wildlife, therefore contributing to marine conservation.

The educational values of whale watching and the approaches used to educate tourists are widely discussed in recent research. According to IFAW (1997), some educational values of whale watching are identified as follows:

- Whales are emblems for promoting awareness of endangered species and habitat protection.
- Whale watching provides the opportunity for people across all ages and cultures to become familiar with environmental issues and to become involved in conservation efforts on a personal, local, regional, national and international level.
- The development of education programs forges links between the whale watch industry and local communities as well as building bridges between the general public and scientific communities.
- Natural history knowledge gained through whale watching has intrinsic value.
- Whale watching provides an opportunity to observe animals in the wild, thereby transmitting factual information and dispelling myths.
- Whale watching is a model for marine educational programmes in adventure travel and ecotourism.
- Whale watching provides the opportunity for appreciation and understanding of local history, culture and environment.

This IFAW, et al. report (1997) indicated that the marine life and ecosystem that tourists encounter are the most obvious education of whale watching. This education first starts with materials, such as publicity brochures, and continues with the whale watching experience. Moreover, the tour guides also play a significant role in the education during the tour. In addition to information material about marine wildlife species and their behaviours, guides could further educate tourists with other aspects of the environment, such as geographic features of the surrounding areas, other species of wildlife, and coastal cultures and heritages.

Furthermore, tourists can obtain marine environmental conservation management information through regulations or the code of conduct in those areas, which means they can also be educated just from hearing about such conservation and management efforts of marine wildlife and their habitats (Andersen & Miller, 2006).

2.3.4.4 Research values

Much research effort has been invested in whale watching in recent years. Whale watching vessels provide good platforms on which scientists can conduct research. The majority of research is classified under natural science fields, and opportunities also exist for social scientists to collect information from the tourists. A large number of research projects investigating the impacts of whale watching are important for sustainable management, as that research could reveal how whale watching activities affect marine mammals and help identify approaches that minimise disturbances (IFAW, 1995). Tourism management with scientific input is more likely to promote sustainable practices than those disregarding scientific input (Parsons & Scarpaci, 2011). Additionally, in some research projects, attention is paid to the study of whale watching tourists. It is widely accepted that research conducted with regard to tourists' characteristics, motivations and behaviour patterns is significantly important for the development and management of the whale watching industry (Herrera & Hoagland, 2006).

2.3.5 Negative impacts of whale watching

Over the recent decades, more species of marine mammals have been classified as endangered, and the potential for disturbance of their natural behaviour patterns has gained a large amount of research efforts (Orams, 1994). A number of researchers have proven that the close approach taken by tourism boats for watching, or swimming with dolphins and whales, is altering these marine animals' behaviour (Forestell & Kaufman, 1990; Phillips & Baird, 1993). Several studies have recorded changes in cetacean behaviour in response to whale watching, including changes in surfacing, acoustic, and swimming behaviour and changes in direction, group size, and coordination (Constantine et al., 2004). Moreover, it has been suggested that these tourism activities could be detrimental to the marine wildlife (Beach & Weinrich, 1989). These negative impacts of whale watching on the marine animals could come in various forms, and will be discussed in the following sections.

2.3.5.1 Waste and pollution

A pressing problem worldwide in recent years is the issue of marine pollution. Besides the waste from inappropriate coastal and residential waste management, a significant proportion of this waste is derived from the irresponsible practices of whale watching tourists both on a personal level and from poor tourism practices, while in and around the marine environment. (Lück & Higham, 2007).

According to Berghan (1998), plastics (bottles, bags, straws and assorted containers), aluminium cans, cigarette butts, tampons, polystyrene food and drink containers, fishing tackle/nylon lines and assorted rope are the common items found strewn along beaches. From the marine environmental perspective, plastics and styrofoam are a significant problem, due to the fact that they can be windblown, float and be carried by ocean currents over hundreds of miles. A large amount of styrofoam cups, plastic sheeting and plastic bottles have been found even on distant Antarctic beaches. What is worse is that these objects are being swallowed by numerous species of marine mammals and seabirds (Berghan, 1998). Plastic materials are often consumed by marine wildlife such as jellyfish, mistaking these items as food. The ingestion of plastics has become a major problem for threatened and endangered marine wildlife. According to Balazs (1985), a large number of sea turtles slowly starve to death following the ingestion of plastic bags. It is estimated that more than one million seabirds and more than one hundred thousand marine mammals die every year due to ingestion of plastic waste worldwide (Schwartz, 2005).

According to Lück and Higham (2007), damages caused by the irresponsible disposal of tourists' refuse and non-recycled garbage in the marine environment during whale watching activities will continue to drive the morbidity and mortality rates, and consequently contribute to the decline and extinction of various species of marine wildlife.

2.3.5.2 Noise pollution

Noise pollution can have various impacts on animals, such as fetal development (Ozanne, 2001), reproductive success (Kight, & Swaddle, 2011), foraging abilities (Francis & Barber, 2013) and the quality of their habitats (Mace et al., 1999).

Hearing is the primary sensory mode of cetaceans, therefore significant noise pollution can severely impact their livelihood. Motorised vessels contribute to underwater noise, which could reduce the ability of marine mammals to communicate, detect their prey, and navigate (Weilgart, 2007). Whale watching activities could have a considerable impact through noise

pollution on the marine mammals, that are exposed due to the frequent interactions between the tourism platforms and targeted marine species. Noise pollution during tourism interactions is perceived by the marine animals as an increase in ambient noise (Lusseau, 2007). Their acoustic responses to the exposure to these vessel-related noises are to enhance the intensity of the vocalizations they make and repeat these signals more often. As such, in order for their vocalizations to be detected, they have to match or exceed the critical ratio of the species. According to Lusseau (2007), the sources of noise from tourism platforms that contribute differently to the overall sound characteristics of the vessel, are categorised into five types, including: tourists (physical and voice interactions with the vessels are conducted underwater by the hulls), machinery (generators, friction and rotating shafts), propeller singing (resonant vibration of propeller blade when turning), propeller cavitation (the bubble forming and collapsing is the great source of noise, and the size of these bubbles is associated with the speed of rotation and dictate the frequency of noise) and water (hitting the hull could be a considerable source of noise under rough conditions). The impacts of noise pollution on the marine animals can take several forms. For example, the chronic exposure to noise can damage their hearing sensory organs (Erbe, 2002). Noise pollution could cause temporarily masking the sounds produced by the animals, which is a significant problem as it could have fatal consequences for the survival of individuals (Foote, et al., 2004). Moreover, reducing the benefits of the marine habitats for marine mammals is a biologically significant impact of tourism vessel related noise pollution. As the noise impairs the way marine mammals make use of their habitats, tourism induced displacement has been widely found in the whale (Weilgart, 2007) and dolphin populations (Rako et al., 2013).

2.3.5.3 Boat collisions

There are many physical threats to cetaceans from whale watching, but boat collisions is one that poses a serious threat to cetaceans' lives (Vanderlaan & Taggart, 2007). According to Laist et al. (2001), a number of marine mammals have been injured or killed as a result of collisions with whale watching vessels in the past, especially in areas where there is a high intensity of whale watching traffic. Whale watching vessels that have caused injuries to marine mammals on various occasions due to approaching too close to the marine mammals have been documented. Where the whale watching operators attempt to get as close to the marine mammals as possible, there is a risk of making dangerous physical contact with the animals. For instance, in 1997 in the St. Lawrence estuary, Canada, a whale watching vessel tried to approach a site where two other boats were watching a humpback whale, and the

rigid-hulled vessel struck the whale when it suddenly surfaced in front of the boat. Then the whale observed appeared injured and became less active (Laist et al., 2001).

Bow riding is a behaviour where marine animals follow boats and swim either in the wake, or the wave that forms around the bow of boats, and has been recorded in a number of species of dolphins. When bow riding, it is common for dolphins to jump out of the water and perform turns, twists, and other acrobatics, making it a popular tourism attraction. However, it was found that dolphins frequently bow riding around the whale watching vessels could put them at a greater risk of boat strikes (Neumann & Orams, 2005).

2.3.6 Management of whale watching

According to Wall (1997), the management of whale watching must focus on the future of one of the most important resources: the targeted marine wildlife. A comprehensive system of managing natural resources not only involves deciding what management actions are suitable and implementing them, but also an ongoing system of monitoring and evaluation to determine whether activities are being performed on schedule. It should include considerations incorporating the perspectives of different stakeholders, since management works in a social-political environment and does not operate in isolation (Krause & Weir, 2009). In a variety of ecotourism projects worldwide, it is of significance for all stakeholders to maintain a long-term vision with regard to whale watching tourism (Wall, 1997). According to Yaffee (1997), it has been proven that some short-term solutions could cause various unsustainable problems in the long term. In 2002, Howie asserted that the relationship among the tourists, tourism operators, and the wildlife should be symbiotic in nature rather than parasitic or coexistent. As such, management regimes can be formed through the interaction of all whale watching operators, who are considered the most important stakeholders of tourism (Twiss, Reeves & Montgomery, 1999).

Chapter 3 New Zealand whale watch industry

3.1 Overview of whale watching in New Zealand

Since the first commercial operation began at Kaikoura in 1987 with a single six-meter vessel taking commercial tours to watch sperm whales (*Physeter macrocephalus*), New Zealand has witnessed significant growth in whale watching visitor participation numbers (Lück & Altobelli, 2009). As Constantine (1999) asserted, the opportunities to watch cetaceans is a great motivation for a large number of New Zealand's visitors.

According to O'Connor et al. (2009), in 1998 there were 230,000 sea and land-based whale watching tourists in New Zealand. In 2008, the domestic and international tourists made more than 546,445 visits for whale watching, which is more than double the number of whale watching tourists in 1998. Most whale watching visitors are international tourists, as opposed to local New Zealanders. The whale watching industry in New Zealand has also experienced a rapid increase in sales due to rising visitors' demand.

The direct expenditures on whale watching tours in New Zealand grew with an average rate of 16.3% per annum over the decade from 1998 to 2008. This was a vast sale outcome for tourism, making whale watching industry one of the fastest growing business sectors in New Zealand. The estimated direct expenditure on whale watching tourism in 2008 (\$US 34 million) was over five times more than in 1998 (\$US 7.5 million). The estimated total expenditure (both direct and indirect) on whale watching tourism in 2008 was almost \$81 million (Table 3.1).

Table 3.1 Growth of whale watching industry in New Zealand

Year	Number of whale watchers	AAGR	Number of operators	Direct expenditure	Indirect expenditure	Total expenditure
1994	90,000	31%	N/A	\$3,900,000	\$8,600,000	\$12,500,000
1998	230,000	27%	>50	\$7,503,000	\$41,233,000	\$48,736,000
2004	425,432	11%	90	\$22,477,154	\$51,861,003	\$72,338,157
2008	546,445	9% ⁵⁵	86	\$34,058,744	\$46,859,797	\$80,918,541

Source: O'Connor et al. (2009)

According to Constantine (1999), in New Zealand, tourists are provided with opportunities on a regular basis to watch or swim with six species of whales, five species of dolphins and two species of pinnipeds.

The nine marine mammal species in Table 3.1 could be regularly encountered in New Zealand.

Table 3.1 Cetaceans regularly be encountered

Common Name	ScientificName
Dusky dolphins	<i>Lagenorhynchus obscaures</i>
Common dolphins	<i>Delphinus delphis</i>
Bottlenose dolphins	<i>Tursiops truncates</i>
Hector's dolphins	<i>(Cephalorhynchus hectori</i>
Killer whales	<i>(Orcinus orca</i>
Sperm whales	<i>Physeter macrocephalus</i>
Bryde's whales	<i>Balaenoptera edeni</i>
New Zealand fur seals	<i>Arctocephalus forsteri</i>
New Zealand (Hooker's) sea lions	<i>Phocarctos hookeri</i>

Source: Constantine (1999)

The four marine mammal species in Table 3.2 could be occasionally encountered in New Zealand.

Table 3.2 Cetaceans occasionally be encountered

Common Name	ScientificName
Pilot whales	<i>Globicephala melas</i>
Southern right whale dolphins	<i>Lissodelphis peronii</i>
False killer whales	<i>Pseudorca crassidens</i>
Minke whales	<i>Balaenoptera acutorostrata</i>

Source: Constantine (1999)

3.2 Legislation of whale watching in New Zealand

In New Zealand, a strict legal framework was set up for the whale watching tourism activities, causing operators and tourist behaviours to be limited by regulations. The Resource Management Act (RMA) was passed by the New Zealand government in 1991, which is for the management of resources and the legislation related to their management in New Zealand. The RMA has identified five types of resource consent: land use consents, subdivision

consents, coastal permits, water permits, and discharge permits (Collier, 1994). In addition to the RMA, there are a number of other rigorous regulations for the management of any use of marine mammals in New Zealand.

According to Lück (2009), management of marine mammals in New Zealand is based on two main parts of legislation: the Marine Mammals Protection Act (1978) and the Marine Mammals Protection Regulations (1992). Management of the Marine Mammals Protection Act and Marine Mammals Protection Regulations is administered by the Department of Conservation, a government agency which is responsible for the welfare of marine mammals in New Zealand (Baxter, 1993). According to the Marine Mammals Protection Act, all commercial companies operating within conservation estate in New Zealand are required to have permits which are issued by the Department of Conservation.

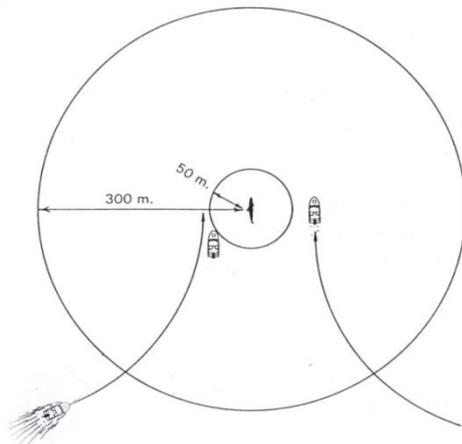
The Marine Mammals Protection Regulations were passed in 1992, owing to the rapidly increasing demand of watching and interacting with marine wildlife in New Zealand (Baxter, 1993). The Regulations control the requirements with regard to permits, suspension, revocation, restriction or amendment of permits, behaviour around marine mammals, and other miscellaneous provisions (Lück, 2009).

According to the Marine Mammals Protection Regulations, no commercial operation is to be carried out without a permit. The requirements to hold a permit from the Department of Conservation are multi-faceted, and applications are assessed carefully (Lück, 2009). There are a number of criteria for permits to be issued: Firstly, permits should not be contrary to any conservation management strategies or plans. Secondly, they should not have any significant adverse effect on the species targeted. Thirdly, they should be in the interests of the conservation, management or protection of marine mammals. Fourthly, the operators and staff should have sufficient experience with marine mammals and the local area, and should have no convictions for offences involving the mistreatment of animals. Fifthly, the commercial operation should have sufficient educational value (Constantine, 1999).

The Marine Mammals Protection Regulations control the behaviour and operations around the marine mammals (Figures 3.1, 3.2 and 3.3). Moreover, various requirements are set for whale watching operators' operations in Part 3, for instance, in order to preserve the marine habitat, and no rubbish is to be thrown overboard near a marine mammal. With the purpose of

protecting their routes, no person, vehicle, or vessel shall cut off the path of a marine mammal or prevent a marine mammal from leaving the vicinity of any person, vehicle, or vessel. Where a vessel stops to enable the passengers to watch any marine mammal, the engines must either be placed in neutral or be switched off within a minute of the vessel stopping, so as to minimize the vessels' noise disturbance.

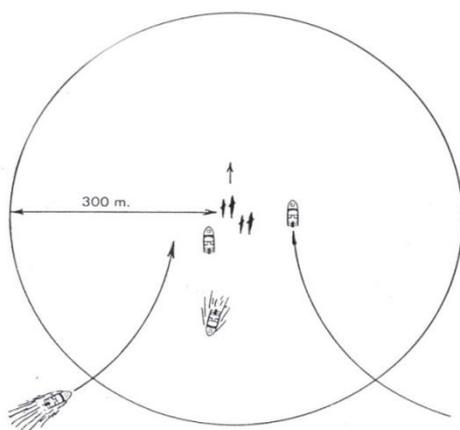
Figure 3.1 Regulations for behaviour around whales



- Minimum approach distance of 50 metres
- "No wake" speed within 300 m.
- Approach from behind and parallel to Whales.
- No more than 3 vessels within 300 m.
- Path of Whale(s) not to be obstructed.

Source: Marine Mammals Protection Regulations (1992), Part 3: Behaviour around marine mammals.

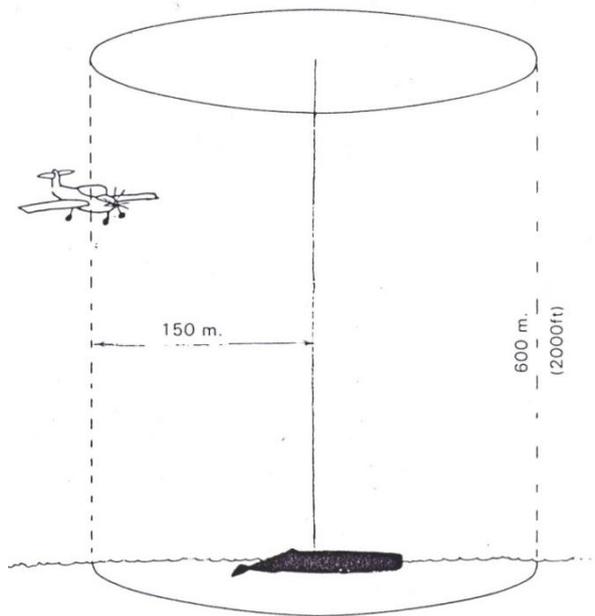
Figure 3.2 Regulations for behaviour around dolphins



- "No wake" speed within 300 m.;
On departure greater speeds can be used to outdistance dolphins.
- Approach from behind and parallel to Dolphins.
- No more than 3 vessels within 300 m.
- Path of Dolphins not to be obstructed.

Source: Marine Mammals Protection Regulations (1992), Part 3: Behaviour around marine mammals.

Figure 3.3 Regulations for the whale watching operators' aerial whale watching activities.



Source: Marine Mammals Protection Regulations (1992), Part 3: Behaviour around marine mammals.

3.3 Whale watching operators in New Zealand

In the years since New Zealand moved from whaling to whale conservation, the whalewatching industry has become one of the most important sectors of ecotourism (O'Connor et al., 2009). Whale watching tourism in New Zealand has a wide range, with an increasing demand for permits from boat, land and airborne platforms. Currently, there are 72 permits issued by the Department of Conservation from the far north to Stewart Island (Department of Conservation, 2014), with the most famous region of whale watching in New Zealand being Kaikoura. In addition to whale watching activities, a number of these operators also provide other tourism services, such as pelagic bird watching and harbor cruises.

There are a variety of permits for commercial whale watching tourism issued by Department of Conservation, including watching all types of marine mammals and swimming with dolphins (e.g., in Northland), only watching marine mammals (e.g., in Bay of Plenty),

interacting with dolphins and killer whales (e.g., in Kaikoura), only watching dolphins (e.g., in Southland), and so on.

Chapter 4 Methodology

4.1 Methodological approach

According to Bryman and Bell (2011), methodology is the way of thinking or planning of actions behind the choice of particular methods for research, and leads the selection of the methods to the research findings. The definition of methodology is subject to the philosophical foundations for providing the context and theory in the research process, with regard to the position of ontology and epistemology. Ontology is the nature of realities that researchers investigate, and epistemology is the relationship between the researchers and the realities being investigated (Denzin & Lincoln, 1998).

There are two opposing positions that restrict the methodology when approaching ontology and epistemology, which are known as paradigms. Bryman (2012) identified the two paradigms: a positivist tradition of research, and an interpretive or constructivist tradition of research. A positivist tradition of research views behaviours based on realities, and observations based on theories (Neuman, 2006; Simth, 2010). Researches within this framework consider phenomena from the independence of context and the researchers are supposed to be completely neutral, and value-free (Finn, Elliot-White, & Walton, 2000). The data is collected in a deductive way and principally based on quantitative results. An interpretive research paradigm attempts to understand realities from an emic perspective. It is relatively flexible and focuses more on the perspectives of the subjects being researched. The aim of theory building in the interpretive paradigm is to generate descriptions, insights and explanations; findings are then achieved in a collaborative and value-laden approach between the researchers and those being studied (Veal, 2006).

According to Bryman (2012), each of the paradigms will determine the research subject purpose and methods of research. Considering the researcher's ontological, epistemological and axiological positions, this study employs an interpretive research paradigm and a qualitative method to investigate the contributions made by whale watching operators in New Zealand for ecotourism through their websites.

The qualitative research method as an alternative methodological approach has gained popularity in various fields, such as anthropology, sociology, education, and tourism (Riley &

Love, 2000). Phillimore and Goodson (2004) claimed that qualitative research approach in the tourism field is considered as a set of methods to gather data concerned with various social phenomena. According to Veal (2006), leisure is a qualitative phenomenon and therefore, a qualitative approach is the most appropriate method for leisure and tourism research. Riley and Love (2000) asserted that although tourism studies have a need for quantification, mainly owing to the economically driven nature of the industry, qualitative research could provide a significant perspective to observe and analyse the phenomena. Qualitative research produces findings not arrived at by statistical procedures or other means of quantification. It can refer to research about people's lives, lived experiences, behaviours, emotions and feelings, as well as about organizational functioning, social movements, and cultural phenomena. The greatest strength of qualitative methods lie in their ability to analyse what actually happens in naturally occurring settings (Silverman, 2001). Crang (2002) emphasises that qualitative methods have enabled the study, and emphasised the importance of seeing, economic activity as a set of lived practices, assumptions and codes of behaviours. Additionally, qualitative research methods can yield holistic and rich data with the potential for exposing more complex or hidden issues, in other words, it goes beyond discovering 'what' or 'how many', to understanding 'how' and 'why' things occur (Neuman, 2006). Qualitative methods emphasize on understanding, interpretation, observations in natural settings and closeness to data with a sort of insider view (Crang, 2002). They are therefore best used for research problems requiring depth of insight and understanding, especially when dealing with explanatory concepts.

In contrast to quantitative research where representations of the world are presented numerically, qualitative researches offer representations of the world which are primarily linguistic (Heppner, et al., 1999). As such, qualitative researchers would "study behaviour in context and might even go so far as to contend that it is the interpretation of the context that is the essential process to be studied" (Heppner et al., 1999, p. 246). A qualitative approach would be most suitable to fulfil the purpose of this research, since this dissertation is based on studying the role of New Zealand whale watching operators in ecotourism through analysing their websites. As an information-intensive industry, tourism gains significant synergies from the use of the Internet (Pérez-Amaral & Garín-Muñoz, 2011). Websites have become a suitable medium for tourism operators to conduct marketing and promotion for their businesses, as a tourism website enables users to quickly access information of interest. Therefore, various attractions about their businesses should be designed and presented on

websites in appropriate forms to appeal to potential customers (Bisht et al., 2010). According to Idowu et al. (2011), the contributions made for environmental conservation and social development is a great merit, expressing a company's social responsibility to the public, which is beneficial to establish a good reputation in the tourism area and attract more tourists. Presenting these efforts on their website is a good way to promote themselves. Therefore, it is of significance to thoroughly investigate the information on these whale watching companies' websites, using qualitative methods, in order to understand their opinions and efforts towards ecotourism in New Zealand.

4.2 Content analysis

Content analysis is an approach for the analysis of documents and texts, which seek to quantify content in terms of predetermined categories and in a systematic and replicable matter (Bryman, 2012). Typically, the content analysis is performed on various forms of human communications, which might include diverse permutations of written documents, photographs and motion pictures. The content analysis method enables non-statistical data to be researched in a systematic way. As Finn, Elliot-White and Walton (2000) stated, "content analysis is thus a quantitative means of analysing qualitative data" (p. 134). Both quantitative and qualitative approaches of content analysis could be utilized, which is depending on the purpose of the research. It enables data to be studied and presented in either a statistical or an interpretive approach (Neuman, 2006). Qualitative content analysis is identified as a detailed, systematic, and rule-guided interpretation and examination of a particular body of material. The content can be words, symbols, images and pictures, or any other communicated or informational message (Neuman, 2006). According to Dey (1993), qualitative content analysis involves finding a focus for the analysis, reading and annotating the data, and creating a set of categories. Qualitative content analysis goes beyond simply counting words to examining language with the purpose of classifying a great amount of text into a number of categories which represent similar meanings (Weber, 1990). The significance of these categories is further evaluated and assessed, resulting in primary concepts through which is understood or interpreted the data.

According to Babbie (1995), qualitative content analysis could either code the manifest or the latent content of the investigated material. Manifest content is the literal or surface meaning of the message being conveyed, whereas latent content is the underlying or implied meaning (Berg, 2004). This study focuses on the manifest content of the respective websites of whale watching operators in New Zealand.

Currently, there are three different approaches in the applications of content analysis, including: conventional, directed or summative (Weber, 1990). The conventional approach is deemed a suitable application of content analysis in this research. In a conventional content analysis, the coding categories are directly derived from the text information, which is commonly utilized in research designed or aimed at describing a phenomenon. By utilizing this approach, the author could avoid introducing preconceived ideas and categories, and allow the categories and names of categories to come directly from the research data.

4.3 Data collection

In terms of the purpose of this research, all websites of whale watching operators in New Zealand would be studied. In April 2014, with the help of the Department of Conservation, a document of the whale watching operators registered in New Zealand was obtained. The Department of Conservation holds the latest and most accurate information of the national whale watching businesses, due to the fact that all commercial companies operating within a conservation estate in New Zealand are required to have permits which are issued by the Department of Conservation (Constantine, 1999). According to this document, there are seventy-two operators providing various whale watching activities in New Zealand, most of whom (sixty-four operators) have their own websites (provided in Appendix 2). These sixty-four websites are the objects of research in this study. The primary data that underpins this research will be collected through these websites.

4.4 Data analysis

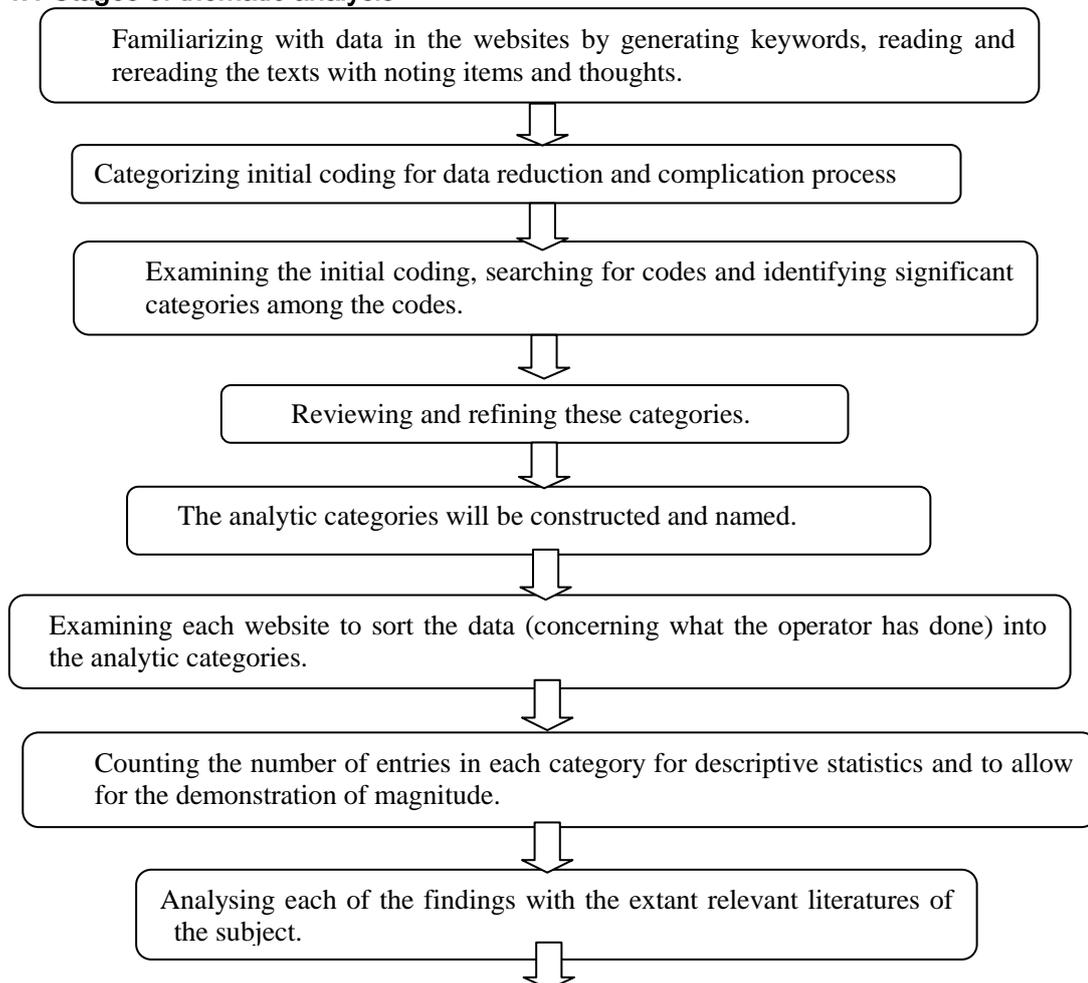
After data sampling and primary data collection, the data from the websites will be utilized for referencing, coding, examining and extracting the core findings of the study. According to Krippendorff (2013), the data needs to be further classified, sorted, abstracted and refined in the next step of data analysis through the appropriate content analytical approach.

Data were analysed by thematic analysis, which is one of the most common methods utilized in qualitative analysis (Mutch, 2005). Thematic analysis is a type of qualitative analysis method utilized to analyse the present themes and classifications which are related to the data, then minimally organises and describes the data set in detail (Boyatzis, 1998). Thematic analysis offers a systematic element in the data analysis, which enables researchers to associate an analysis of the frequency of a theme with one in the whole content, which could confer accuracy and improve the whole meaning of the research. Understanding and

collecting various aspects of data is required in the qualitative content analysis. The thematic analysis suitably provides an opportunity for researchers to more broadly understand the potential issues and themes (Marks&Yardley, 2004). According to Boyatzis (1998), thematic analysis allows the researchers to perceive, compare, contrast and aggregate data, as well as establish relationships and linkages between them.

The aim of the research is to examine the role of whale watching operators in contributing to ecotourism in New Zealand through examining their websites. The key objectives of the research are to identify actions that whale watching operators take for the conservation of the marine environment and contributions they make for the development of local communities. The process of thematic analysis consists of nine stages (Figure 4.1). It is a strict step-by-step inductive procedure (Berg, 2004). The data collected from all the websites of whale watching operators in New Zealand will be analysed through these nine steps, after which a number of imperative findings will finally be revealed to answer the questions of this research.

Figure 4.1 Stages of thematic analysis



Making a conclusion of the research.

*Source:*Berg (2004)

As mentioned, the process of analysing the data on the whale watching websites is a rigorous qualitative approach. By studying the sixty-four New Zealand whale watching operators' websites, a variety of contributions for ecotourism are introduced. Some operators just mention these measures, whereas others post detailed information about these measures on their websites. Accordingly, the data from the websites is gathered and converted into text, and codes are inductively identified in the data, then transformed into the categorical themes. After examining and refining these themes about the contributions for ecotourism, nineteen analytic categories were identified and established, which includes eco-operator, Qualmark, purchasing local products, using environmental friendly products, using renewable energy, promoting energy efficiency, monitoring, hiring local staff, staff training, wildlife introduction, education during tours, waste reduction, reuse, recycling, cultural respect and preservation, donations, cleaning up beaches, planting trees and introducing conservation programmes. Then, each of the websites was examined to sort the data concerned with what the operator has presented on their website, into the nineteen analytic categories. According to these features, the nineteen categories were classified into five groups for further discussion. Through these steps, the analytic results were achieved and are presented in Table 4.1.

Table 4.1: Contributions of New Zealand whale watching operators for ecotourism presented on websites

Contributions Whale Watching Operators	Eco-operator	Qualmark	Purchasing and Operation					Staff Management		Education		Waste Control			Conservation Work		
			Purchasing local products	Using environmentally friendly products	Using renewable energy	Promoting energy efficiency	Monitoring	Hiring local staff	Staff training	Wildlife introduction	Education during tours	Waste reduction	Reusing	Recycling	Cultural respect and preservation	Donations	Cleaning up shores
1 Abel Tasman Sea Shuttle Limited		✓	✓							✓							
2 Abel Tasman Wilson's Experiences	✓	✓	✓			✓		✓	✓		✓		✓		✓		✓
3 Active New Zealand Limited		✓		✓						✓			✓				
4 Rugged Range Wilderness Experience	✓	✓		✓		✓				✓	✓		✓		✓		
5 Dolphin Blue		✓		✓						✓		✓	✓		✓		✓
6 Akaroa Dolphins Limited		✓								✓							
7 Auckland Dolphin & Whale Safari(2005)										✓							
8 Back to Nature Tours New Zealand Ltd	✓	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
9 Beachcomber Cruises(2006) Limited		✓								✓	✓						
10 Black Cat Group 2007 Limited	✓	✓								✓	✓						
11 Dolphin Encounter		✓								✓						✓	
12 Capital Adventure Tours										✓							
13 Carino Sailing & Dolphin Adventures		✓	✓		✓			✓		✓	✓		✓	✓		✓	✓
14 Seal Swim Kairoura										✓						✓	
15 Collingwood Safari Tours Limited	✓									✓							
16 Crusing Milford Sound Limited		✓								✓							
17 Dive! Tutukaka Limited	✓	✓		✓		✓	✓			✓	✓	✓	✓		✓		✓
18 Dolphin Discoveries(2004)Limited										✓							
19 Dolphin Seafaris(NZ) Limited		✓								✓							
20 Dolphin Watch & Nature Ecotours Ltd	✓	✓						✓		✓							
21 East Coast Charters										✓							
22 Everton Bed and Breakfast										✓						✓	
23 Foxll Sailing Adventures	✓									✓	✓				✓		
24 Kaikoura Kayaks	✓	✓						✓		✓							
25 French Pass Motel and Sea Safaris		✓								✓							
26 Fullers Bay of Islands Limited	✓									✓							
27 Wilderness Lodge Lake Moeraki		✓								✓							
28 Glass Bottom Boat Whitianga Limited		✓						✓		✓							
29 Kaikoura Marine Tours	✓									✓							
30 Hollyford Valley Walk Limited		✓				✓		✓		✓				✓			
31 Aurora Charters										✓						✓	
32 Omuku Farm Hostel										✓							

Whale Watching Operators	Eco-operator	Qualmark	Purchasing local products	Using environmentally friendly products	Using renewable energy	Promoting energy efficiency	Monitoring	Hiring local staff	Staff training	Wildlife introduction	Education during tours	Waste reduction	Reusing	Recycling	Cultural respect and preservation	Donations	Cleaning up shores	Planting trees
33 Kahu Kayaks Limited		✓								✓								
34 Farewell Spit Nature Experience										✓								
35 Kairoura Aero Club Inc										✓								
36 Nugget View & Kaka Point Motels	✓									✓								
37 Marahau Sea Kayaks										✓					✓			
38 Abel Tasman Aquatani	✓					✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	
39 Marlborough Sounds Adventure						✓	✓			✓		✓	✓	✓		✓		
40 Cave Cruiser Adventures	✓									✓								
41 Moeraki Fishing Charters										✓								
42 Monarch Wildlife Cruises Limited	✓	✓								✓								
43 Ngati Koata Trust	✓									✓								
44 Private Discovery Tours	✓	✓	✓	✓		✓			✓	✓	✓			✓	✓			
45 Kaikoura Pedal Kayaks										✓								
46 Pelorous Tours Limited	✓									✓								
47 White Island Tours Ltd	✓	✓	✓							✓	✓	✓			✓	✓		
48 Rakiura Charters Limited	✓									✓	✓					✓		
49 Real Journeys Limited	✓			✓		✓	✓			✓	✓	✓		✓	✓	✓	✓	
50 Seal Coast Safari		✓								✓								
51 Nine Dives	✓									✓								
52 Kaikoura Helicopters										✓								
53 Kaiteriteri Boat Chatters										✓								
54 Southern Discoveries		✓		✓						✓		✓	✓	✓				
55 Topspot Backpackers										✓								
56 Abel Tasman Charters	✓	✓	✓	✓		✓				✓	✓		✓	✓	✓	✓		
57 Catlins Wildlife Trackers	✓									✓	✓			✓	✓	✓		
58 Sails Ashore/ Talisker Charters					✓					✓								
59 The Sea Kayak Company(2013) Ltd		✓	✓	✓	✓		✓			✓	✓	✓		✓		✓		
60 Canoes and Kayak Taranaki										✓								
61 Whale Watch Kaikoura Limited	✓	✓	✓	✓			✓			✓	✓			✓	✓	✓		
62 Wild Earth Adventures(2003) Ltd	✓									✓	✓							
63 Wilderness Guides Marlborough So										✓								
64 Wings Over Whale Kaikoura Ltd		✓								✓	✓							

4.5 Limitations

Although the aim of this research is to gain an insight to the role of whale watching operators in New Zealand for ecotourism through studying their websites, not all the operators were studied in this research. As stated previously, the document from DOC indicates that most of the whale watching operators in New Zealand have websites; the research results were thus only generated from analysing data on these available websites. Unfortunately, information about the operators who do not have websites was not collected and analysed, and this could lead to missing potentially significant data concerned with ecotourism. Therefore, an entirely complete and comprehensive understanding about the role that all the whale watching operators in New Zealand contribute to ecotourism cannot be achieved in this study.

Additionally, data was only collected from the websites, and it is not guaranteed that the operators would have posted all they have done for ecotourism on their websites. Any missing important information would not have been analysed, which could lead to an inaccuracy of this study.

The possibility also exists that some operators in fact did not make the efforts for ecotourism, or made less effort than what they have claimed on their websites. Since the research data was gathered entirely from their websites, which the companies designed to promote themselves, it is possible that the information posted on their websites is polished and biased towards themselves, thus influencing the accuracy and reliability of the research results.

Finally, some operators do not provide a lot of, or enough information about their efforts for ecotourism on their websites. As shown in the findings, some of the contributions for ecotourism are not accompanied with detailed information. For example, there is little detail about the “local products consumption” effort on the websites, such as the proportion of local products consumption compared to imported products consumption, which would help deepen understanding about this effort associated with economic benefits to the local community. As such, the contributions without sufficient information provided could not be analysed comprehensively, nor in depth.

Chapter 5 Discussion

Based on the research findings, it appears that some whale watching operators tend to claim on their websites that they are making various efforts to contribute for the development of ecotourism in New Zealand. However, their participation in many of these contributions was found to be relatively low. The author counted the number of entries in each category for descriptive statistics (and to allow for later discussion). The data was analysed based on the categories shown in Table 5.1.

Table 5.1 Research Results

Eco-operators: Twenty-five operators claimed that they are Eco-operators and offer various Eco-tours, which accounted for 39.1 % of all the whale watching operators in New Zealand.	
Qualmark: Almost half of all the operators (thirty-one) display their Qualmark certifications on their websites.	
Purchasing and Operation	Purchasing local products: Eight (12.5%) operators claimed that they tend to purchase and use local products.
	Using environmental friendly products: Eleven operators (17.2%) mentioned that they use environmental friendly products.
	Using Renewable energy: Three operators (4.7%) indicated that they utilize renewable energy.
	Promoting energy efficiency: Ten of all operators (15.6%) promoted their focus on the various energy efficient ways in which they conducted their business operations.
	Monitoring: Six whale watching operators, which account 9.4% of all operators, said that they regularly monitor their commercial performance.
Staff Management	Hiring local staff: Four (6.3%) of the operators indicated that they prefer to hire local employees.
	Staff training: Seven operators (10.9%) indicated on their websites that they conduct staff training.
Education	Wildlife introduction: The most frequently found measure was the wildlife introduction on their websites. All the operators mentioned it.
	Nineteen operators (29.7%) claimed that the provide education to customers during tours.
Waste Control	Waste reduction: Twelve operators (18.8%) mention that they reduce the waste.
	Reusing: Eight operators claim that they reuse their waste, which account for 12.5% of all companies.
	Recycling: Sixteen operators (25%), which account for a relatively high proportion of the total are recycling their waste.

Conservation Work	Cultural respect and preservation: Nine operators introduced this contribution, which account for 14.1%.
	Donations: Seventeen of the whale watching operators in New Zealand mentioned that they would make financial donations for ecotourism, which accounted for 26.6%.
	Cleaning up beaches: Only three operators (4.7 %) revealed that they regularly help clean up beaches.
	Planting trees: There were four operators identified, who spent effort on planting trees, this accounted for 6.3% of all the companies.
	Introducing conservation programs: Four operators (6.3%) claimed that they established their own conservation programs.

All the results will be discussed in the following sections.

5.1 Eco-whale watching operators in New Zealand

There were twenty-five operators claiming that they were eco-operators and provided various eco-tours, which accounted for 39.1% of all whale watching operators in New Zealand. For example, Back to Nature Tours New Zealand Limited claims that, “We ensure we hold and update all necessary licenses, permits and consents, to practice eco-tourism”. It is mentioned on the website of Dolphin Seafaris (NZ) Limited that they are an ecotourism operator, that respects wild animals and their environments. Some operators promote their tours as eco-tours on websites, such as Ruggedy Range Wildness Experience, who mentions that they are providing evening eco-watch tours.

In 1993, ecotourism guidelines for nature tour operators were published by the International Ecotourism Society, establishing a standard for ecotourism, which since has gained widespread acceptance within the tourism industry, NGOs, and the academic field (Wood et al., 2002). According to the guidelines, ecotourism operators should take a number of responsibilities. They should minimize the negative impacts on the environment and make financial contributions for environmental conservations. Additionally, operators should protect local cultures and traditions, and support local enterprises and service providers. They should also offer local guide services and assist with the local guides training, and manage their tourism operations in a responsible manner by utilizing guidelines for tourists’ behaviours. Furthermore, they should build environmental and cultural consciousness through the information and education for tourists, and cooperate with local non-government organizations and the government, to develop plans for management of tourists that will

preserve the local environment and local residents (The International Ecotourism Society, 1993).

Since the twenty-five whale watching operators label them themselves as ecotourism operators, it should mean that their business operations would have met the requirements of the ecotourism principles and that they are taking on the responsibilities as ecotourism operators, therefore making contributions to environmental conservation, the development of local communities and the protection of culture.

5.2 Whale watching operators with Qualmark certification

Almost half of the identified operators (thirty-one) exhibit the Qualmark certification on their websites. The Qualmark is a socially and environmentally responsible tourism certification programme in New Zealand (Honey, 2002). Qualmark is New Zealand tourism's official quality assurance organization, providing a trusted guide to quality travel experiences, and the Qualmark symbol verifies that the business has met stringent quality standards and environmental criteria, thus earning New Zealand tourism's official quality mark. In New Zealand, the Qualmark accreditation programme was launched in 1994 by the New Zealand government tourism organization, two non-government organizations (Tourism Industry Association New Zealand and Adventure Tourism Council New Zealand) and a private sector organisation (the Automobile Association). Qualmark certifies and rates accommodations and tourism retail companies, and then awards them from one to five stars; the certification is valid for one year, after which the business must apply to be re-certificated (New Zealand Tourism Guide, 2014). The Qualmark programme is supported by various stakeholders who have interests and concerns about the promotion of conservational tourism beyond the profitability of the certification. This is why Qualmark programmes incorporate environmental and social-cultural criteria, including rating a business's natural area focus, contribution to conservation, interpretation, cultural components, work with local communities and responsible marketing (Honey, 2002).

The commitment of New Zealand's tourism industry is to conserve the environment for future generations. An enhanced environmental criteria catalogue has been implemented into the existing annual Qualmark assessments (New Zealand Tourism Guide, 2014). All companies that display a Qualmark star grading or endorsed Qualmarks must now be assessed on their environmental performance. Qualmark businesses should be able to

accomplish a number of minimum requirements, which include various basic environmental practices and completing an environmental review of their business. The green environmental award is an additional Qualmark for the business having a great environmental performance, and any Qualmark business with the additional green environmental award should be performing excellently in the environmental practices and engaging in a variety of activities, such as waste management, energy efficiency, water conservation, environmental conservation and community support (New Zealand Tourism, 2013). This research found that twenty-three whale watching operators have obtained and are displaying the additional green environmental logo, for example, Abel Tasman Sea Shuttle Limited, Ruggedy Range Wilderness Experience and Dolphin Blue.

The high proportion of whale watching operators being Qualmark certified, and obtaining the additional green environmental logo means that this sector of the tourism industry in New Zealand has a good performance record in ecotourism.

5.3 Efforts made for ecotourism

According to the results, a variety of efforts are made by New Zealand whale watching operators for ecotourism. In terms of their features, they will be classified and discussed in five groups, including purchasing and operation, staff management, education, waste control and conservation work.

5.3.1 Purchasing and operation

5.3.1.1 Purchasing local products

Eight operators (12.5%) claimed on their websites that they purchase local goods and services whenever possible, but these companies post little information about this measure. Ecotourism has the commitment to the development of the local community, and emphasises local economic ownership and business opportunities (Wood et al., 2002). Tourism operations should strive to maximize the economic benefits for the local business and host community, thus a significant proportion of economic advantages should be provided back to local businesses rather than to external companies (Weaver, 2008). Ecotourism is supposed to promote local economic participation and encourage eco-tourists to consume local products, which brings considerable benefits to local businesses, and consuming local products and services could greatly support the local economy and employment (Wood et al., 2002). It is therefore of great importance for operators to support local business and service providers

where possible — this type of support in return could also provide the visitors with an authentic experience of the destinations.

5.3.1.2 Using environmentally friendly products

Eleven operators (17.2%) claimed that they used environmentally friendly products, and most of them have given detailed information with regard to these environmentally friendly products used in their tourism operations. Environmentally friendly products usually mean that they do not harm or damage the environment, whether in their production, use or disposal. For example, products made from biodegradable material are not hazardous to animals, and will not contribute to the large landfill sites or cause toxic wastes, thus helping to reduce the effects of global warming, acid rain, and various other environmental problems (Abele et al., 2005). Hence, using environmentally friendly products is obviously beneficial to the environment.

A large proportion of operators mentioned that they used environmentally friendly cleaning products (rather than detergents) in their vans to prevent polluting drains. For instance, Southern Discoveries mentioned that they do not use detergents when washing vessels to protect the fiord from pollutants; Dolphin Blue said on their website that they make a commitment to using environmentally friendly and where possible biodegradable products, such as dishwashing liquid, hand soaps, and cleaning products.

Detergents are the most commonly used cleaning products that have many disadvantages to the environment. According to Abel (1974), the use of detergents and their disposal in lakes, rivers and oceans is causing severe problems, as detergents could have poisonous effects on aquatic life if they are present in sufficient quantities. Surfactant detergents have been proven to reduce the breeding ability of aquatic life. Moreover, the chemicals in detergents could lead to abnormally accelerated growth of algae that releases toxins and deplete oxygen in the water. When the algae decompose, the water ecosystems with reduced oxygen can only support fewer individuals, gradually reducing the variety of aquatic organisms (Rand, 2003). Therefore, it is extremely important for operators to use environmentally friendly cleaning products and avoid detergents that could cause severe problems to the local water environment.

Many operators (Dolphin Blue, Abel Tasman Charters, The Sea Kayak Company (2013) Limited) mentioned that they use environmental friendly paper. The manufacturing of paper and cardboard products consumes energy and tree resources. More importantly, when the paper breaks down during decomposition, methane is produced, which has a powerful capacity to influence global warming. These operators may have realized the importance of using environmentally friendly paper in their operations, for example, Southern Discoveries mentioned that their brochures are printed on environmental friendly paper and that they are even using biodegradable inks; Abel Tasman Charters say that they use toilet tissues made from recycled paper.

5.3.1.3 Using renewable energy

Currently, fossil fuels, such as coal, oil, and natural gas are primarily utilized as the conventional energy sources (McNerney & Cheek, 2012). However a lot of smoke and dust would be generated when burning these fossil fuels for generating electricity, which can have harmful impacts on the atmosphere, ecosystem, soil and water environment (Omer, 2008).

The utilization of renewable energy is efficient and aids environmental conservation, which is why it is encouraged in many natural areas for the development of ecotourism (Wood et al., 2002). According to the research findings, only three companies claim on their websites that they were utilizing renewable energies, which makes only 4.7% of the total sample. These three operators have briefly described the types of renewable energy they were using for their tourism business operations: Carino Sailing & Dolphin Adventures said they use wind energy as often as possible; Sails Ashore/Talisker Charters use solar energy; and The Sea Kayak Company (2013) Limited use both wind and solar energy where possible.

According to Fornasiero and Graziani (2012), renewable energy is derived from natural processes that are inexhaustible and replenished constantly, which exist perpetually and are abundant in quantity in the environment. Renewable energy can be generated from various sources, including solar, wind, ocean, hydropower, biomass, geothermal resources, biofuels and hydrogen. It is a clean alternative to fossil fuels, and is better for the environment. Renewable energy technologies are often believed to be eco-technologies due to the fact that they generate clean energy with few (if any) pollutants. Using clean renewable energy, no sulphur dioxide, carbon dioxide, smoke, dust or solid waste is produced, and

therefore, fewer negative impacts on the natural environment. It is thus significantly beneficial for the ecosystem in the natural areas (Seifried & Witzel, 2010).

5.3.1.4 Promoting energy efficiency

Most tourism activities and operations require energy in many forms, thus energy utilization and conservation are important issues with an environmental impact (Buckley, 2009). As tourism operations and individual visitors make use of energy from either stationary or moving sources, they ultimately contribute to the environmental impact associated with their energy utilization. The cumulative impacts of energy consumption by tourism is substantial, therefore energy conservation measures are both environmentally and economically significant on a local scale as well as globally (Soteriades, 2012). For vehicles, fuel efficiency can be enhanced by refinements in the engine design and streamlining of the body. This could help reduce the fuel consumption and thus saving costs (Buckley, 2009).

According to the research findings, ten operators (15.6%) promoted themselves as being energy efficient in their business operations in different ways. It could be found that several operators have noticed the importance of developing their vehicles to promote energy efficiency. For example, Abel Tasman Charters acknowledged that as with all transport operations, fuel usage has one of the greatest environmental impacts, therefore they try to minimize this by using an efficient catamaran hull design. They also use a “space-age” hull coating to help the vessel 'slide' through the water with as little resistance as possible. Dive! Tutukaka Limited said that they installed NAVman navigation systems on all their boats to calculate better routes and thus improve fuel efficiency, and The Abel Tasman Aqua Taxi stated that in order to minimize fuel consumption, they would continue to invest heavily in the most fuel-efficient boat motors and other fuel-saving technologies.

The promotion of energy efficiency also depends considerably on operational practices (Soteriades, 2012). Some of operators use good general operational management to minimize their fuel burn per passenger, for example, as Abel Tasman Aqua Taxi mentioned on their website, they work hard to select the most appropriate route or vehicle to minimize fuel consumption; Back to Nature Tours New Zealand Limited, endeavour to fill up the capacity of a van rather than use it more than once for fewer passengers. They would park and turn off their vessels when waiting for passengers rather than leaving the engines running, and they regularly tune their vehicles to ensure they are using fuel efficiently.

5.3.1.5 Monitoring

There were six whale watching operators, which accounted 9.4% of all identified operators, who said that they regularly monitored their commercial performance, and half of them have given detailed information about this measure on their websites.

Back to Nature Tours New Zealand Limited mention that they have made it their mission to regularly assess their commercial operations in the natural environment, in order to maintain an updated environmental plan to ensure that they are helping to minimize the negative impacts on the natural areas, and maximize the positive impacts that they can help achieve. A data logging-system is used by Real Journeys Limited to monitor their performance of carbon emission reduction from coaches, vessels and aircraft. As mentioned on the website of Marlborough Sounds Adventure Company, various aspects in its operations (including waste, water usage, electricity and fuel usage) are continually monitored and reviewed. Through monitoring they can keep track of their working efficiency and check the effects of their activities.

It is extremely important for tour operators to minimise their impacts on the environment, hence, the long-term monitoring programmes are emphasized as important approaches to assess and minimize human impacts in the principle of ecotourism (Wood et al., 2002). Impact monitoring, which is also known as periodic collection and evaluation of data in relation to stated activities, objectives and goals, is an important approach to assess progress and change affected by development and conservation projects (Margoluis & Salafsky, 1998). As Rome (1999) asserted, when complemented by consistent modifications in management, monitoring can help reduce negative impacts. Monitoring can be utilized by tourism operators to assess the scale of both positive and negative effects of their operations on the environment and to predict conditions in the future. Therefore, monitoring can be a significant and useful way for tourism operators to evaluate success, and can also help identify and signal potential problems or dangers.

5.3.2 Staff Management

5.3.2.1 Hiring local Staff

Employment is a significant benefit of ecotourism in the local community. The creation of local employment could considerably contribute to that community's social stability and wellbeing (Wood et al., 2002). As Weaver (2008) noted, local operators should provide

various kinds of employment opportunities to local residents. In this research, only four operators (6.3%) mentioned on their websites that they hire local employees.

According to IFAW et al.,(1997), whale watching jobs are commonly seasonal and require a diverse range of skills. Local people are more familiar with local environments and cultures, which could place them in a better position to provide tourists with high quality whale watching experiences. For example, according to Lück (2009), locals who were former whalers and fishermen had excellent knowledge about the local whales and other marine life, and were thus often hired as guides. Therefore, due to the nature of whale watching, it could prove to be more and convenient for operators to hire local people as staff.

5.3.2.2 Staff training

Seven operators (10.9%) expressed their views on the importance of staff training and a few of them had mentioned some detailed information of this sector. It was found that the training content had focus on two major aspects: environmental knowledge and cultural understandings. For example, as Dolphin Watch & Nature Ecotours Ltd mentioned on their website, in order to provide tourists a high quality tour experience, their staff undergo rigorous training to ensure that their knowledge is accurate, detailed and interesting. Abel Tasman Aqua Taxi said that all staff within the company have to receive environmental and cultural training. Therefore, they can share the wealth of knowledge on their ecological environment and local history with tourists.

As Lipscombe and Thwaites (2000) noted, staff training is required by various tourism organizations, including conservation NGOs, local government organizations and tour operators. The tourism operators are responsible for ensuring that any trip is of a high quality. To achieve this, the operators must have quality guides. The key staff will need to be trained in management and in specific skills. Giving staff sufficient access to the appropriate training programs will improve their ability to communicate with and manage tourists in sensitive natural and cultural environments (Wood et al., 2002).

Private Discovery Tours maintained that well-informed driver guides are a crucial asset to their business success and the visitor experience. They are trained to improve their cultural understanding by attending a workshop on Ngai Tahu values to introduce a more meaningful cultural component. Attending workshops is a widely accepted helpful and effective way to

train staff and there are many successful examples of tourism operators' staff training workshops all over the world (UNEP, 2005).

5.3.3 Education

5.3.3.1 Wildlife introductions

All operators provided marine wildlife information since the animals are the primary attractions of their activities, however some operators provided only little information about the wildlife on their websites. For example, on Capital Adventure Tours' website, only the animals' names are mentioned in the contents of their tour plans, and on the Pelorous Tours Limited's website, only a few pictures of animals are posted.

Some operators do include detailed information of wildlife on their websites. For instance, there is a large section to introduce marine wildlife introduction on Monarch Wildlife Cruises Limited's website (Figure 5.1). Information on a variety of marine wildlife (such as Bottlenose dolphins, Dusky dolphins, Hector's dolphins, New Zealand Fur Seal) that the tourists would encounter during their whale watching tours is provided. The length, weight, population and habitats of each species are explained in detail with pictures and description, therefore, it is beneficial for the tourists to identify them during the trip. In Kaikoura Kayaks' website, information on endangered species and relevant issues are introduced, which helps increase people's awareness of the importance of protecting them.

Figure 5.1 Marine wildlife introduction on Monarch Wildlife Cruises Limited' website



Source: Monarch Wildlife Cruises (n.d.)

According to a report from IFAW et al. (1997), the marine wildlife that the tourists encounter is the most obvious focus for education, and this education starts with outreach material such as websites. Through the marine wildlife introductions on the operators' websites, tourists can gain a better understanding about the animals and their habitats, behaviours and characteristics before embarking on the tours. Therefore, the marine wildlife information on websites plays a significant role in educating people, which could contribute to having a more informative experience on the tour.

5.3.3.2 Education during tours

It is generally accepted that education should be an essential part of tourism, particularly at heritage sites and in natural areas (Ham, 1992; Fennell, 1999). Many regulatory organisations use an educational component as one of the conditions of issuing licenses for the tour operators. For instance, the New Zealand Marine Mammals Protection Regulations (1992) clearly state that commercial operations should have adequate educational value to participants or to the public. As Simonds noted (1990), ecological awareness can be enhanced when environmental education is incorporated. It has been suggested that one of the most significant aspects of whale watching is its potential to educate people, and help them to appreciate and understand marine wildlife and the biosystem they live in (Hoyt, 2007).

There are nineteen operators, accounting for 29.7% of all companies, claiming that they provide education to tourists during their tours. Half of them only mentioned that they educated tourists, while the other half gave more detailed information about this aspect. By studying their websites, it was found that the environment and wildlife conservation are the two main topics in their education. This relatively high proportion of whale watching operators in New Zealand expressing that they offer education to visitors, indicates that they realize the significance of education in their tourism activities, and are willing to take the responsibility of educating through tourism.

It was noted that some of the operators educate tourists through interpretation. For example, Dive! Tutukaka Limited mentioned on their website that they offer interpretive briefings to create appreciation, awareness and understanding of the local environment. Abel Tasman Aquataxi said that their guides would personally and briefly interpret the journey, local environment and the history of the area for tourists. These briefings are unscripted and “from the heart”, and every tourist can freely interact directly with their guides.

Today, interpretation is a significant educational tool, which has been recognized by many whale watching operators for environmental conservation. Markwell and Weiler (1998) asserted that it is the ecotourist's commitment to act ecologically and environmentally friendly, which could be supported through the well-interpreted tour experiences. Effective interpretation is central to ecotourism due to the fact that it could help increase visitors' satisfaction, enhance support for conservation of the environmental areas and help reduce negative impacts of tourism activities. Recent research suggests that tourists increasingly expect a certain depth of interpretation during their marine wildlife experience (Lück, 2003). As Lück (2007) stated, "there is a significant tourists' demand for information about the wider marine environment, threats to marine wildlife and the role of conservation bodies" (p.344). Some operators also interpret the regulations with regard to environmental protection and wildlife conservation for tourists. In order to manage the tourists' behaviour, operators such as Kaikoura Kayaks, Abel Tasman Aquataxi, Dolphin Seafaris (NZ) Limited, and Ruggedy Range Wildness Experience interpret the regulations to tourists for environmental and wildlife conservation. For instance, Kaikoura Kayaks outlined the rules of observing seals for the tourists, and interprets the importance of each rule.

Education is widely considered as an effective approach for the management of human's inappropriate behaviour while watching marine wildlife. As Andersen and Miller (2006) asserted, from the whale watching management perspective, marine environmental education could complement regulations for the purpose of changing tourists' attitudes and conduct. There are an abundance of successful examples around the world about how education can help manage tourists' inappropriate behaviour and minimize their negative impacts around marine wildlife (Orams & Hill, 1998; Meinhold, 2003). Therefore, it is of significance for whale watching operators to manage the tourists' behaviour by educating them about conservation regulations.

5.3.4 Waste control

5.3.4.1 Waste reduction

Twelve operators (18.8%) mentioned that they attempt to reduce the waste they create, and only five of them clearly explain this attempt on waste reduction on their websites. According to Weaver (2008), the stakeholders of ecotourism are responsible for their operations to reduce the wastes in natural areas, which could have severe impacts on the local ecosystem. As Lück and Higham (2007) indicated, a large amount of marine waste is created by

irresponsible whale watching activities and inappropriate tourists' behaviours; this waste has been proven to be detrimental to the marine wildlife and people. Therefore, waste management should form a vital part in the whale watching operators' business operations.

3R concepts (Reduce, Reuse and Recycle) are highlighted in many studies, which are the most significant aspects with regard to waste management (Memon, 2010). In New Zealand, the whale watching operators attempt to reduce waste in several ways: many operators mentioned that they try to reduce the amount of packaging on things they purchase for waste reduction. For example, Southern Discoveries said the anti-waste packaging purchasing decisions are mandatory in their business. Some operators reduce waste by modifying their operations, for example, the Sea Kayak Company (2013) Limited try not to waste paper by investing in online paperless office systems, which are completely green and resource-saving; Marlborough Sounds Adventure mentioned that they utilize new equipment to wash the boats to reduce the waste water created.

5.3.4.2 Reusing

Reusing is to use an item again after it has been used. Using products more than once not only reduces the volume of waste, but also the consumption of resources by limiting the demand for high quantities of these products. Certain products can be reused for the same purpose, such as containers, utensils and plates. Some products can even be reused for different purposes, for instance, grey water reused for watering gardens and waste newspapers reused for fuel (Beeton, 1998). Eight operators which account for 12.5% of all companies claim that they reuse their waste as part of their business operations. And again, some just mentioned this measure, whereas others gave more information about it. As Beeton (1998) noted, the use of disposable items should be avoided in ecotourism operations. Therefore, reusing products is widely accepted as an economic way in their tourism business. Many whale watching operators in New Zealand reuse their products for the same purpose. For example, Southern Discoveries and Marlborough Sounds Adventure Company both choose to reuse various containers, such as bags, bottles and lunch boxes. Some companies reuse old products for a new purpose, for example, Marlborough Sounds Adventure Company mentioned on their website that their old bicycle tubes are transformed into tree ties. Many items are easy and convenient for companies to reuse, therefore the concept of reusing old products is an efficient approach that does not have high energy costs or require

reprocessing, and also makes contributions to the conservation of the local environment, which should be encouraged among all whale watching operators in New Zealand.

5.3.4.3 Recycling

According to Saddleback (2010), recycling is a process by which waste materials are diverted from the waste stream (the waste materials are sorted and then used to produce new products). There are various benefits of recycling, including decreasing energy usage, reducing the consumption of raw materials and water, minimizing waste (by limiting the need for "conventional" waste disposal), lowering greenhouse gas emissions and even conserving land (Steel, 1999). Recycling is a key component of modern waste reduction management, and many kinds of materials, such as glass, paper, metal, plastic, textiles, and some electronics are recyclable. Materials to be recycled are first collected, then sorted, cleaned, and reprocessed into new materials bound for manufacturing. The composting of biodegradable waste is also considered recycling (Apryl, 2013).

Sixteen operators claim to be recycling their waste, which accounts for a relatively high proportion of the sample (25%). By studying the websites with detailed information about recycling, a number of recycled items can be identified. Paper, plastics and glass are the most common items for recycling. A number of operators mentioned that they recycle plastics. Plastics are one of the most common rubbish items found all over the world, and include water bottles, drink containers and confectionary packaging, just to name a few. These items pose a great threat to wildlife and environment due to the fact that most of them are not biodegradable, and would persist in the environment for a great number of years. Recycling plastics can save a large amount of energy, important natural resources and help conserve the natural environment (Goodship, 2007).

Paper recycling is frequently mentioned on many of the operators' websites. Paper breaking down in landfills will generate methane, a major greenhouse gas which has the capacity of global warming many times greater than carbon dioxide. According to Koutsoyiannis and Kundzewicz (2009), a great amount of paper pulp is produced from wood; the manufacturing of paper and cardboard products from recycled materials could therefore conserve a large number of trees in the process. Moreover, manufacturing paper from the recycled materials

can save up to 90% of the water and 50% of the energy normally required to make them from using raw materials.

On some operators' websites, recycling glass is mentioned. Glass could take a million years to naturally break down, which means that every piece of glass that has ever been sent to a landfill is still sitting there, taking up valuable land space. Each glass bottle recycled saves valuable non-renewable resources such as bauxite, iron-ore and sand, all of which are used in the manufacture of new glass. Finite natural resources such as oil and coal are also conserved, due to the fact that recycled glass takes less energy to manufacture than producing glass from virgin materials (Glass Packaging Institution, 2013). Some operators (Abel Tasman Charters, Catlins Wildlife Trackers and Private Discovery Tours) stated that they compost their organic waste. According to Apryl (2013), composting is an extremely satisfying way to help the local environment. The rich nutrients in compost would be released into the soil, which is beneficial to the local vegetation. In addition, composting the organic waste reduces unwanted insects, thereby reducing or completely eliminating the need for pesticides or herbicides, which in return prevents runoff pollution.

5.3.5 Conservation work

5.3.5.1 Cultural respect and preservation

Nine operators (14.1%) expressed their efforts on the respect and preservation of local culture, and most have clearly indicated how they made contributions to cultural preservation. Local cultural preservation can help a community to not only protect its economically valuable physical assets, but also preserve its practices, history, environment, and a sense of continuity and identity (Wood et al., 2002).

It could be seen that some operators are working to improve their knowledge of cultural heritage. For the purpose of local culture appreciation and preservation, people firstly should have a clear and deep understanding about it. Therefore, as mentioned in the staff training section, some companies would train their employees in obtaining cultural knowledge, for example, Abel Tasman Wilson's Experiences Ltd assures tourists through its website that their guides are trained to understand and respect items of spiritual and historical significance. As Lipscombe and Thwaites (2000) noted, training is an important tool to enhance the staff's cultural understanding, thus creating the awareness of the need for cultural preservation, and allowing them to provide the tourists with the interpretation of cultural information. Some operators try to improve their cultural knowledge by consulting with the

local people, for example, Private Discovery Tours improves their heritage knowledge through dialogs with local historians; Back to Nature Tours New Zealand Limited communicates with locals about Māori history and how to respectfully enjoy the places of historical and cultural significance. It is vital for the tour operators to considerate their commercial activities from the local communities' points of view, for the reason that they have a deeper insight into their own culture and are more knowledgeable about its protection and development (King, & Stewart, 1996).

As Weaver (2008) suggested, ecotourism activities could disturb the dynamics of the local culture. The external or foreign cultures could be harmful to the local culture. In order to protect the original traditions and cultures away from excessive external disturbances and influences, it might be necessary to limit the number of tourists and set strict visiting times. These restrictions have been widely accepted by many operators and organizations in the effort to preserve local culture in numerous tourism destinations (Rome, 1999). Catlins Wildlife Trackers mentioned that they would restrict the number of people they take on tours and vary their activities and timing to ensure that there is no disruption to the quality of life of the local communities.

5.3.5.2 Donations

Increased financial support is a significant benefit to local environmental conservation, and the various ecotourism stakeholders should make financial contributions through fees, donations, and other forms (Weaver, 2008).

Seventeen whale watching operators (26.6%) in New Zealand mentioned that they made financial donations in various forms, most of whom have explained these in details on their websites. A variety of types of trusts, foundations and projects for different conservation purposes are included in their donation contributions, for example, the Abel Tasman Birdsong Trust for the protection of local birds protection, Fiordland Conservation Trust for the Sinbad Sanctuary and Leslie Hutchins Conservation Foundation for the protection of Hector's and Maui's dolphins. It was found that a majority of these operators chose to give financial support for local wildlife conservation, some of whom even gave detailed information about how they generated the donated funds. Many operators choose to donate a certain portion of their revenues to various local conservation trusts, for example, Abel Tasman Aqua Taxi donate 10c from each passenger's fare to the Abel Tasman Birdsong

Trust; and every year passengers of Real Journeys contribute more than \$50,000 to the Leslie Hutchins Conservation Foundation via a \$1 passenger levy on their Doubtful Sound operations. As Weaver (2008) noted, donating through ecotourism is an effective way to encourage customers to get involved and participate in local conservation efforts.

5.3.5.3 Cleaning up beaches

Only three operators (4.7%) revealed that they regularly help clean up the beaches. Recently, the wastes found on beaches have significantly raised public concern about the beach and nearshore water quality. The oceanic and land-based wastes are major contributors to beach degradation. Unclean beaches present an aesthetic and potential health hazard as well as a more serious environmental problem that threatens the survival of many endangered marine species (Schwartz, 2005). Therefore, effective actions should be taken to resolve this problem by all stakeholders, such as beach clean-ups, an important and useful grassroot initiative organized by various organizations, including tour operators to conserve the coastal environment (Schwartz, 2005).

As revealed in the literature review, a large number of various rubbish is always found on beaches. The amount of human-generated rubbish found floating on the oceans and washed up on beaches is increasing at an alarming rate. This volume of trash presents a critical problem threatening the marine environment, with most of this waste being derived from land and originating from inland sources. According to Lück and Higham (2007), one of the most significant sources of ocean pollution is land-based pollution, particularly from human refuse, industrial waste and agricultural run-off into streams and rivers, and eventually into the oceans. It was estimated that about 70% of waste found in oceans came from inland sources (Berghan, 1998).

Additionally, rubbish left on the beaches by tourists also accounts for a significant proportion of the marine pollution. Tourists' activities, however, are extremely difficult to control from legal and management perspectives (Berghan, 1998). As the tourism activities in marine environments continue to grow in popularity, this beach debris will continue to increase. Therefore, the beach clean-ups, attempts made by the three New Zealand whale watching operators is of significance, as they are greatly contributing to the local beach environmental conservation efforts.

5.3.5.4 Planting trees

According to Wood et al. (2002), tourism operators in natural areas should minimize the negative impacts and protect significant natural features, such as the local vegetation. Based on information collected from the websites, there were only four operators, accounting for 6.3% of all companies, making efforts to plant trees. Most of them have given detailed information about this contribution. For instance, as Dolphin Blue introduced on their website, they were aware that carbon emissions are generated by their everyday activities, which in turn could help accelerate global warming and climate change. Thus, they try to offset their carbon emissions by planting trees. The trees are planted on privately owned land, and the number planted would depend on the species, and how many tonnes of carbon emissions Dolphin Blue has to offset every year.

Carino Sailing & Dolphin Adventures and Dive! Tutukaka Limited mentioned on their websites that they are supporting and promoting a tree planting project - a local initiative that gives visitors the opportunity to purchase and plant a tree to offset their carbon footprints.

Since the Industrial Revolution that started in the middle of the 19th century, carbon dioxide (CO₂) emissions in the atmosphere have increased and continue to increase dramatically. Today the increase in CO₂ is having a drastic impact on the global climate, warming it up and altering weather patterns with more droughts and creating more extreme weather events. The sea levels are rising and many small islands and island nations are at risk of disappearing under water. Therefore, in order to mitigate the problem of rising global temperatures, it is necessary to join efforts to reduce the carbon dioxide emissions (Nelson, 2010).

Locals at tourism destinations and operators can offset tourists' carbon emissions by calculating their travel-related emissions and by making financial contributions to projects that address the mitigation of climate impacts, such as tree planting, reforestation, subsidizing renewable energy and increasing energy efficiency. Planting trees is a convenient approach, and one of the most frequently employed methods in carbon offsetting projects. Due to the fact that trees remove carbon dioxide from the air as they grow, tree planting can be used as a geoengineering technique to eliminate carbon dioxide from the atmosphere. Well-managed tree planting projects can also function as a breeding ground to promote biodiversity, help to reduce the risk of erosion, and create positive side effects for local communities through many eco-system services, such as sustainable sources of firewood. There are numerous

successful examples around the world that demonstrate the tree-planting projects implemented actually do help make the destinations carbon neutral (The International Ecotourism Society, 2012).

5.3.5.5 Introducing conservation programmes

According to the research findings, four operators (6.3%) mentioned that they had established their own conservation programs, and all introduce the purposes and their efforts in these programmes.

A program called "Conservation Holidays" was created by Catlins Wildlife Trackers to offer volunteer working conservation opportunities for customers. The volunteer conservation work would be done on conservation land in cooperation with the Department of Conservation, or on privately owned land with the cooperation of the landowners. According to Weaver (2008), with the increased awareness of environmental conservation, an increasing number of tourists are realizing the importance of environmental conservation, and are willing to protect the natural areas as volunteers. This program provides a direct way for tourists and operators to make contributions to local conservation together as volunteers, and is also beneficial to widely promote the concerns and importance of environmental protection.

The remaining three operators (Real Journeys Limited, Back to Nature Tours New Zealand Limited and Hollyford Valley Walk Limited) are working on predator-control programs. Some animals, such as rats, possums and mustelids(ferrets, stoats and weasels), are detrimental to local endangered wildlife, for example, the Yellow-eyed penguin. In order to maintain and increase the populations of protected wildlife, it is of paramount to protect them and control their predators (Olstead, et al, 2012). For instance, Hollyford Valley Walk Limited introduced their own predator-trapping program targeting stoats and other pests which are considered harmful to local wildlife. They purchased a number of stoat box-traps, placed them around the coastal areas, and implemented their trapping program throughout winter to help towards what would hopefully be a safe breeding season, particularly for the Fiordland crested penguin (Figure 5.3).

Figure 5.2 Hollyford Track Operation staff laying stoat-traps



Source: Hollyford Track (n.d.)

This program has been proven to be successful as a number of stoats and rats have been trapped. More importantly, it was found that populations of some local endangered wildlife species have increased, which is an extremely positive outcome for this program.

5.4 Summary

Data collected from the operators' websites indicated that they have made various contributions to ecotourism. It was found that some contributions made by many operators include wildlife introduction, education during tours, recycling, and donations. However, most contributions were only made by a small portion of the operators, such as purchasing local products, using renewable energy, using environmentally friendly products, promoting energy efficiency, monitoring, hiring local staff, staff training, waste reduction, reusing, cultural preservation, planting trees, cleaning up beaches and introducing conservation programs.

Some contributions for ecotourism were just mentioned on the operators' websites without much information to support this intensive study, whereas some operators explained their contributions in detail. A variety of information, such as how the operators implemented their contributions, or the purpose of these contributions were presented.

Chapter 6 Conclusion

6.1 Recapitulation

The aim of this study was to provide a comprehensive understanding about the role of whale watching operators in ecotourism in New Zealand through analysing the contents of their websites. Ecotourism has, since the 1980s, experienced a dramatic growth all over the world. Ecotourism comes with a definitional promise to promote responsible travel to natural areas, make a positive contribution to environmental conservation, and enhance the well-being of local communities (Wood et al., 2002). One of the significant forms of ecotourism is sustainable wildlife tourism. As Higginbottom (2004) noted, recent decades have experienced a dramatic growth in tourism where interaction with or observation of wildlife is involved. Whale watching, which is one of the most popular wildlife tourism activities, has grown exponentially in a number of countries and regions all over the world since the late 1980s, and various whale watching tourism activities have gained great popularity among wildlife tourists (Hoyt, 2001). Originally it was considered as an excellent form of tourism to protect the marine wildlife (instead of consumptive uses) that came with a number of benefits to the environment and local communities. However, marine experts have increasingly expressed concerns with regard to the potential negative impacts whale watching activities can have on the animals. Therefore, a number of researchers have gone to investigate these aspects in their studies on whale watching tourism in many areas around the world. The research on the whale watching tours targeted a variety of marine species and mostly focused on the impacts resulting from these tours. A significant number of researches are conducted which studied its growth and the impacts (for example, Orams, 1994, Berghan, 1998, and Lück & Higham, 2007). Whale watching tour operators are one of the most important stakeholders of the local environment and community, and thus have responsibilities to protect them, as well as comply with various principles and legal regulations (Higginbottom, 2004). In order to maximize the benefits for the environment, the community and tourists' experience, there is a significant need to conduct research on the whale watching tour operators.

This research was designed to study the operators in a New Zealand context. Websites are a common medium to introduce and promote business operators, as well as present their contributions for environmental conservation and social development to the tourists and general public. Thus, in order to gain a better understanding about the New Zealand whale

watching operators' ecotourism performance, it is necessary to develop detailed insights into the efforts they are making for the local environment, community and tourists through analysing their websites.

6.2 Summary of the research findings

Twenty-five operators claimed on their websites that they were ecotourism operators and provided various eco-tours; this accounted for 39.1% of all New Zealand whale watching operators. According to the International Ecotourism Society (1993), ecotourism operators have a range of important responsibilities. As these New Zealand whale watching operators consider themselves as ecotourism operators, their business operations should meet the standards of the ecotourism principles and they should be taking the responsibilities as ecotourism operators, thereby contributing to environmental conservation, development of local communities and local culture protection.

Almost half of the New Zealand whale watching operators (thirty-one) in this study exhibit Qualmark logos on their websites. Since Qualmark is a significant environmentally and socially responsible tourism certification programme in New Zealand, it means that these operators have met stringent quality standards and environmental criteria as accepted by the industry.

Ecotourism is supposed to promote local economic participation and encourage tourists to consume local products, which can bring substantial benefits to local businesses. Purchasing local products is an effective and important approach to promote the development of the local economy and prevent leakage. However, only eight operators (12.5%) operators have mentioned implementing this initiative. Eleven operators (17.2%) said that they use environmentally friendly products. Many of them mentioned that they used cleaning environmentally friendly products rather than detergents to prevent polluting drains, and some others mentioned that they used environmentally friendly paper.

Renewable energy is a clean alternative to conventional fossil fuels, which is better for the environment. Only three companies (4.7%) claimed on their websites that they were using renewable energies. Wind and solar energy are the renewable energy sources utilized by these operators.

Ten operators (15.6%) expressed their focus on promoting the energy efficiency of their business operations in various ways, for instance, some of the operators developed their vehicles to promote energy efficiency.

Long-term monitoring programmes are significant approaches to assess and minimize human impacts in the principle of ecotourism. Six New Zealand whale watching operators, which accounted 9.4% of all operators in this study, claimed that they regularly monitored their operation performance.

Employment is an important benefit brought by ecotourism, which would considerably contribute to the local social stability and wellbeing. In addition, there are many advantages for hiring local people due to the nature of whale watching jobs. However, only a small proportion (6.3%) of all operators have indicated that they paid attention to this matter.

Seven operators, which account for 10.9%, expressed that they provided their staff with training. Many operators' training content would include two main significant aspects: environmental knowledge and cultural understanding.

All the whale watching operators provided at least some cetaceans information on websites. Some operators provide information on marine wildlife in detail. The features of each species are explained in detail with images and descriptions, so that it becomes useful for tourists to identify and view them during the actual trip. On some operators' websites, the situations on endangered marine species are introduced, which helps rise tourists' awareness of protecting them.

Education during tours is a relatively common contribution effort made by the operators, with nineteen of them (29.7%) claiming that they would offer education in some forms to visitors during their whale watching experience. Many mentioned that they would educate tourists through interpretation, which is widely accepted as an effective educational tool. In order to manage the tourists' behaviour, some operators interpret and emphasise the regulations around the environmental conservation for tourists.

Twelve operators (18.8%) mentioned that they implemented various methods to reduce waste. One widely accepted approach for waste reduction introduced by operators is to

reduce the amount of packaging on things. Some of the operators also attempted to reduce waste by updating their operations.

Eight operators claimed that they reuse their waste, which accounts for 12.5% of all the companies in this study. As introduced on their websites, some whale watching operators in New Zealand would reuse certain products for the same purpose, and others would reuse old products for new purposes.

Sixteen whale watching operators, which accounted for a relatively high proportion of the sample (25%), were recycling their waste. Plastic, paper and glass are the most mentioned waste products they recycled.

Nine operators (14.1%) expressed their involvement in the preservation of local culture. Some operators are improving their heritage understanding through staff training or by consulting with local authorities, and one company chose to restrict the number of tourists and visiting time to ensure minimal disruption to the local people's culture and traditions.

Seventeen of the whale watching operators (26.6%) in New Zealand mentioned that they made financial donations for ecotourism in various ways. Many different conservation purposes were also mentioned in their donation contributions, and a number of operators made financial support contributions towards the local wildlife conservation.

Cleaning up beaches is a helpful grassroots initiative implemented by many types of organizations. However only three operators (4.7%) mentioned that they actively help to clean up beaches.

Planting trees is one of the most frequently performed activities in carbon offsetting projects. There were only four operators mentioned that they are contributing their effort on tree planting, which accounts for 6.3% of the companies.

Four operators (6.3%) noted that they had established their own conservation programmes, and all introduce the purposes and their efforts in these programs. One programme was created by an operator to volunteer working conservation opportunities for tourists, and three operators are working on predator-control programs.

6.3 Recommendations for future research

This study has only analysed the information about whale watching operators through the data provided on their websites. Future research is needed to better understand the efforts made for ecotourism in New Zealand. For the purpose of deeper investigation about the contributions, it is of significance to study these operators' managers, and staff attitudes towards ecotourism in these operators. Their views concerned with ecotourism and their willingness to make efforts for it are important and should be investigated to gain a greater understanding.

In order to have a more in-depth appreciation about the efforts made for ecotourism, and how the operators actually implemented their measures for ecotourism contributions also need to be investigated. As the findings revealed, some efforts, like purchasing local food and planting trees, were only mentioned with little detail in terms of how they were actually conducted. Therefore, it is relevant to study the measures they take, and the specific processes.

Future research is also required to investigate the results or outcomes of these various contributions that operators have made for ecotourism, on the local environment, local communities and tourists' experience, in order to develop their operations for making these measures more efficient and effective. Due to the fact that there was so little information on the websites about the effects of the various efforts being made, it is essential to examine the practical performance of these efforts from a range of perspectives.

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Appendix 1: Marine Mammals Protection Regulations 1992- PART 3 Behaviour around marine mammals

1.1.1.1.1 Conditions governing commercial operations and behaviour of all persons around any marine mammal

Every commercial operation, and every person coming into contact with any class of marine mammal, shall comply with the following conditions:

(a) persons shall use their best endeavours to operate vessels, vehicles, and aircraft so as not to disrupt the normal movement or behaviour of any marine mammal:

(b) contact with any marine mammal shall be abandoned at any stage if it becomes or shows signs of becoming disturbed or alarmed:

(c) no person shall cause any marine mammal to be separated from a group of marine mammals or cause any members of such a group to be scattered:

(d) no rubbish or food shall be thrown near or around any marine mammal:

(e) no sudden or repeated change in the speed or direction of any vessel or aircraft shall be made except in the case of an emergency:

(f) where a vessel stops to enable the passengers to watch any marine mammal, the engines shall be either placed in neutral or be switched off within a minute of the vessel stopping:

(g) no aircraft engaged in a commercial aircraft operation shall be flown below 150 metres (500 feet) above sea level, unless taking off or landing:

(h) when operating at an altitude of less than 600 metres (2 000 feet) above sea level, no aircraft shall be closer than 150 metres (500 feet) horizontally from a point directly above any marine mammal or such lesser or greater distance as may be approved by the Director-General, by notice in the *Gazette*, from time to time based on the best available scientific evidence:

(i) no person shall disturb or harass any marine mammal:

(j) vehicles must remain above the mean high water spring tide mark and shall not approach within 50 metres of a marine mammal unless in an official carpark or on a public or private slipway or on a public road:

(k) no person, vehicle, or vessel shall cut off the path of a marine mammal or prevent a marine mammal from leaving the vicinity of any person, vehicle, or vessel:

(l) subject to paragraph (m), the master of any vessel less than 300 metres from any marine mammal shall use his or her best endeavours to move the vessel at a constant slow speed no faster than the slowest marine mammal in the vicinity, or at idle or “no wake” speed:

(m) vessels departing from the vicinity of any marine mammal shall proceed slowly at idle or “no wake” speed until the vessel is at least 300 metres from the nearest marine mammal, except that, in the case of dolphins, vessels may exceed idle or “no wake” speed in order to outdistance the dolphins but must increase speed gradually, and shall not exceed 10 knots within 300 metres of any dolphin:

(n) pilots of aircraft engaged in a commercial aircraft operation shall use their best endeavours to operate the aircraft in such a manner that, without compromising safety, the aircraft's shadow is not imposed directly on any marine mammal.

1.1.1.1.2 Special conditions applying to whales

1.1.1.1.3 In addition to complying with the provisions set out in Conditions governing commercial operations and behaviour of all persons around any marine mammal , every commercial operation and every person coming into contact with whales shall also comply with the following conditions:

(a) no person in the water shall be less than 100 metres from a whale, unless authorised by the Director-General:

(b) no vessel shall approach within 50 metres of a whale, unless authorised by the Director-General:

(c) if a whale approaches a vessel, the master of the vessel shall, wherever practicable,—

(i) manoeuvre the vessel so as to keep out of the path of the whale; and

(ii) maintain a minimum distance of 50 metres from the whale:

(d) no vessel or aircraft shall approach within 300 metres (1 000 feet) of any whale for the purpose of enabling passengers to watch the whale, if the number of vessels or aircraft, or both, already positioned to enable passengers to watch that whale is 3 or more:

(e) where 2 or more vessels or aircraft approach an unaccompanied whale, the masters concerned shall co-ordinate their approach and manoeuvres, and the pilots concerned shall co-ordinate their approach and manoeuvres:

(f) no person or vessel shall approach within 200 metres of any female baleen or sperm whale that is accompanied by a calf or calves:

(g) a vessel shall approach a whale from a direction that is parallel to the whale and slightly to the rear of the whale:

(h) no person shall make any loud or disturbing noise near whales:

(i) where a sperm whale abruptly changes its orientation or starts to make short dives of between 1 and 5 minutes duration without showing its tail flukes, all persons, vessels, and aircraft shall forthwith abandon contact with the whale.

1.1.1.4 Special conditions applying to dolphins or seals

In addition to complying with the conditions set out in conditions governing commercial operations and behaviour of all persons around any marine mammal, any commercial operation and any person coming into contact with dolphins or seals shall also comply with the following conditions:

(a) no vessel shall proceed through a pod of dolphins:

(b) persons may swim with dolphins and seals but not with juvenile dolphins or a pod of dolphins that includes juvenile dolphins:

(c) commercial operators may use an airhorn to call swimmers back to the boat or to the shore:

(d) except as provided in paragraph (c), no person shall make any loud or disturbing noise near dolphins or seals:

(e) no vessel or aircraft shall approach within 300 metres (1000 feet) of any pod of dolphins or herd of seals for the purpose of enabling passengers to watch the dolphins or seals, if the number of vessels or aircraft, or both, already positioned to enable passengers to watch that pod or herd is 3 or more:

(f) where 2 or more vessels or aircraft approach an unaccompanied dolphin or seal, the masters concerned shall co-ordinate their approach and manoeuvres, and the pilots concerned shall co-ordinate their approach and manoeuvres:

(g) a vessel shall approach a dolphin from a direction that is parallel to the dolphin and slightly to the rear of the dolphin.

APPENDIX 2: Websites of whale watching operators in New Zealand

Name of whale watching operators in New Zealand	Official websites
Abel Tasman Sea Shuttle Limited	www.abeltasmanseashuttles.co.nz/
Abel Tasman Wilson's Experiences	www.abeltasman.co.nz/
Active New Zealand Limited	www.activenewzealand.com
Ruggedy Range Wildness Experience	www.ruggedyrange.com
Dolphin Blue	www.dolphinblue.co.nz
Akaroa Dolphins Limited	www.akaroadolphins.co.nz/
Auckland Dolphin & Whale Safari (2005) Limited	www.exploregroup.co.nz
Back to Nature Tours New Zealand Limited	www.backtonaturetours.co.nz/
Beachcomber Cruises(2006) Limited	www.beachcombercruises.co.nz
Black Cat Group 2007 Limited	www.blackcat.co.nz
Dolphin Encounter	www.dolphinencounter.co.nz/
Capital Adventure Tours	www.cattours.co.nz
Carino Sailing & Dolphin Adventures	www.sailingdolphins.co.nz/
Seal Swim Kaikoura	www.sealswimkaikoura.co.nz
Collingwood Safari Tours Limited	www.farewellspit.com/
Cruising Milford Sound Limited	www.jucycruise.co.nz/
Dive! Tutukaka Limited	www.diving.co.nz
Dolphin Discoveries(2004) Limited	www.dolphindiscoveries.com/
Dolphin Seafaris(NZ) Limited	www.nzdolphin.com
Dolphin Watch & Nature Ecotours Ltd	www.naturetours.co.nz
East Coast Charters	www.coastalotagocharTERS.co.nz/
Everton Bed and Breakfast	www.accommodationkaiteriteri.co.nz
Fox11 Sailing Adventures	www.akaroafoxsail.co.nz/
Kaikoura Kayaks	www.kaikourakayaks.co.nz
French Pass Motel and Sea Safaris	www.seasafaris.co.nz/
Fullers Bay of Islands Limited	www.dolphincruises.co.nz/
Wilderness Lodge Lake Moeraki	www.wildernesslodge.co.nz/

Glass Bottom Boat Whitianga Limited	www.glassbottomboatwhitianga.co.nz/
Kaikoura Marine Tours	www.kaikouramarinetours.co.nz/
Hollyford Valley Walk Limited	www.hollyfordtrack.com
Aurora Charters	www.auroracharters.co.nz
Onuku Farm Hostel	www.onuku.co.nz
Kahu Kayaks Limited	www.kahukayaks.co.nz/
Farewell Spit Nature Tours	www.farewell-spit.co.nz
Kaikoura Aero Club Inc	www.airkaikoura.co.nz
Nugget View & Kaka Point Motels	www.catlins.co.nz/
Marahau Sea Kayaks	www.msk.co.nz/
Abel Tasman Aqua Taxi	www.aquataxis.co.nz
Marlborough Sounds Adventure	www.marlboroughsounds.co.nz
Cave Cruzer Adventures	www.cavecruzer.co.nz
Moeraki Fishing Charters	www.moerakifishingcharters.co.nz/
Monarch Wildlife Cruises Limited	www.wildlife.co.nz/
Ngati Koata Trust	www.koata.iwi.nz
Private Discovery Tours	www.rdtours.co.nz/
Kaikoura Pedal Kayaks	www.kaikourapedalkayaks.co.nz
Pelorous Tours Limited	www.pelorustours.co.nz/
White Island Tours Ltd	www.whiteisland.co.nz/
Rakiura Charters Limited	www.rakiuracharters.co.nz
Real Journeys Limited	www.realjourneys.co.nz/
Seal Coast Safari	www.sealcoast.co.nz/
Nine Dives	www.sealswimming.com/
Kaikoura Helicopters	www.worldofwhales.co.nz/
Kaiteriteris Boat Charters	www.sealimousines.com
Southern Discoveries	www.southerndiscoveries.co.nz/
Topspot Backpackers	www.topspot-sealswims.co.nz/
Abel Tasman Charters	www.abeltasmancharters.co.nz/
Catlins Wildlife Trackers	www.catlins-ecotours.co.nz
Sails Ashore/ Talisker Charters	www.sailsashore.co.nz
The Sea Kayak Company (2013) Ltd	www.seakayaknz.co.nz/

Canoes and Kayak Taranaki	www.canoeandkayak.co.nz/locations/Canoe+Kayak+Taranaki.html
Whale Watch Kaikoura Limited	www.whalewatch.co.nz/
Wild Earth Adventures (2003) Ltd	www.wildearth.co.nz
Wilderness Guides Marlborough Sounds	www.wildernessguidesnz.com/
Wings Over Whale Kaikoura Ltd	www.whales.co.nz