SUSTAINABILITY AND BALANCED ECOTOURISM MANAGEMENT:
LESSONS FROM WHALE WATCHING IN LAGUNA SAN IGNACIO,
BAJA CALIFORNIA SUR, MEXICO

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ABSTRACT

This paper examines ecotourism from an ecological, economic, and social perspective and argues that integrated management provides more robust solutions that have a greater overall benefit for the local community, such as at Laguna San Ignacio (LSI) in the El Vizcaíno Biosphere Reserve of Baja California Sur, Mexico. Integrated solutions recognize that there is a correlation between social and environmental injustice and the market, as well as the need to implement solutions that will address them at the same time. In many cases, the theory of ecotourism as sustainable development does not translate as smoothly into “on the ground” results. An indicator-based conceptual framework was therefore used to assess and identify some of the strengths and weaknesses of the existing initiatives at Laguna San Ignacio, as well as some recommendations for improvement. Future research should focus on developing new strategies for ecotourism and sustainability in the community as well as how they can be applied in other similar situations to achieve sustainable development.
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CHAPTER ONE: INTRODUCTION

1.1 Research Objectives

This paper will examine the impacts and the implementation of ecotourism. Specifically, it will look at the advantages and disadvantages of ecotourism from an ecological, economic, and social perspective and how the integration of these considerations needs to be maintained throughout the process of establishing a viable ecotourism industry (Gibson, 2006). These principles will provide the foundation from which to study the impacts of whale watching in Laguna San Ignacio (LSI) in Baja California Sur, Mexico, and the way that tour operators have helped to shape the way the industry operates. The paper will also apply theoretical principles for successful ecotourism management, using specific indicators to identify where the strengths and weaknesses are at LSI.

1.2 Study Context & Significance

Ecotourism has recently been labeled as a quickly growing industry with great potential to change the way that environmentally sensitive areas are managed and how people view and implement development. Ecotourism has its roots in traditional tourism, an industry which generates half a trillion dollars a year of economic activity (Goodwin, 1996). By 2010, it is expected that there will be over one billion individuals who will travel to another country (Goodwin, 1996). As a result, there is a growing concern that these activities have the ability to negatively impact the natural environment and create irreversible damage.
Rapid population growth and overexploitation of natural resources has occurred in many developing countries as a response to poverty. While there have been some efforts to create conservation reserves, socio-economic factors had led to local communities ignoring regulations and engaging in illegal poaching, resource extraction, and other destructive practices that reverse the benefits of these reserves (Agersted, 2006). In order to resolve the conflicts between Mexican management and local communities, it has been argued that management plans also need to incorporate social and economic development (Agersted, 2006). Ecotourism is considered one of the few strategies that may be able to accomplish this goal as it is non-extractive and provides incentives for conserving nature while at the same time reducing the impacts on wildlife (Agersted, 2006). Economic benefits include the local retention of profits and the provision of an alternative to unsustainable local uses of the environment such as logging, while social benefits include local ownerships and control of ecotourism ventures that can provide short-term stability and allow time to be devoted to long-term conservation plans and which encourage community cohesion (Scheyvens & Purdie, 1999; Agersted, 2006).

While ecotourism appears good in theory, many studies indicate that this is very difficult in practice and as a result, there are very few examples that exemplify sustained ecotourism (Agersted, 2006). In 1976, the Governor General of the World Conservation Union (IUCN), Gerardo Budowski, described three types of relationships that can occur between tourism development and environmental conservation. These include: 1) symbiosis, 2) co-existence, and 3) conflict. He also noted that while development and conservation often did start with co-existence, more often than not, they were likely to
move towards conflict (Higham & Luck, 2002). This paper will argue that symbiosis between conservation management and development can only occur if ecological, economic, and social considerations are considered throughout the process of design and implementation of sustainable ecotourism in ecotourism management (Gibson, 2006).

The case study of Laguna San Ignacio in Baja California Sur is a good model in which stakeholders are moving towards incorporating an interdisciplinary approach. The area was originally established as a migratory reserve in the 1970s and in 1988, the El Vizcaíno Biosphere Reserve was created. This provides a history to be able to critically analyze how well the current management is doing, determine where the flaws lie, and identify possible solutions and improvements. These lessons can also be implemented for other biosphere reserves and protected areas.

1.3 Methodology

A descriptive approach was used to examine the theory of ecotourism management and the case study. Without having a pre-determined lists of criteria or indicator-based framework, it is difficult to quantify changes or the success of a certain action. Additionally, many of these benefits are intangible and the approach that works the best for ecotourism operations is highly dependent on the dynamics of each of the individual communities. It also allows for complex linkages and interactions to be examined.

The majority of the research presented in this paper is based on reviewing the available literature through a critical lens and relating it to sustainable and integrated management, as well as the case study. A wide range of authors was used to attempt to
gain different perspectives on a number of presented themes. Additionally, an informal survey was completed and presented to examine how well whale watching and ecotourism companies were able to market themselves on the Internet. This was accomplished using a simple search on Google.

1.4 Limitations

There are a number of factors that limited the scope and the research provided in this study. These include:

- Difficulties in defining “ecotourism” can result in inconsistencies in reporting of revenue and other indicators.

- Qualitative information is difficult to compare, making it difficult to determine if a certain technique is successful. Additionally, what is considered an improvement in one situation may not be considered one in a different situation.

- Research at Laguna San Ignacio has been sporadic. While there is a fair bit of information on LSI, there are few long-term studies that provide both scientific knowledge on the health of the ecosystem and the whales, as well as social research and knowledge about how ecotourism affects the local human communities.

- Traveling to Mexico was not an option because of cost and time restraints, so it was impossible to perform personal interviews with reserve management, local fishers and tour guides, and the community in general. As a result, the information that is presented may be biased based on the researcher.
1.5 Report Organization

This paper is divided into seven sections. **Chapter one** is an introduction and provides the research objectives, a brief overview of the context and significance of the study, as well as an introduction of the case study. **Chapter two** provides background information and a short history of ecotourism. It also outlines the current status of ecotourism throughout the world and some information about biosphere reserves. **Chapter three** is a literature review that examines what constitutes successful ecotourism from an ecological, social, and environmental perspective, and ways in which they need to be integrated to create a robust management program. **Chapter four** provides some background information on the case study including its location, the relevance of Laguna San Ignacio in a biosphere reserve, as well as describing whale watching opportunities and the local communities. **Chapter five** uses an indicator-based approach to identify some of the potential problems of ecotourism of LSI and evaluate how well it is doing based on specific indicators. It also provides some recommendations for future improvement. **Chapter six** looks at how accessible whale watching and ecotourism are from a non-academic perspective and provide the findings. **Chapter seven** will summarize the main points of the discussion presented and provide some overall suggestions for future research.
CHAPTER TWO: BACKGROUND INFORMATION ON ECOTOURISM

This section provides a brief description of the challenges of defining ecotourism, some of the variations, and the definition that will be used for the purposes of this paper. It will then examine the history and the attitudes that led up to ecotourism the developed and developing world, look at the current state of ecotourism, and then provide some background information on biosphere reserves and how they can contribute to ecotourism.

2.1 Defining Ecotourism

The term “ecotourism” is relatively new and there is no internationally accepted definition (Goodwin, 1996). As a result, there are conflicts as to what kind of practices can actually be termed “ecotourism” and the word is often exploited as a marketing strategy to make tourism activities appear more environmentally friendly even if there is little or any changes to the actual practise (Goodwin, 1996; Scheyvens & Nick Purdie, 1999; Agersted, 2006; Blamey, 1999). As Kelman argues, “a tour advertised as environmentally friendly can be just as suspect as many of the products tarted up with green packaging at your grocery store” (Wight, 1994).

Other terms that are used interchangeably with “ecotourism” include “responsible travel,” “sustainable tourism” and “sustainable development.” The term “sustainable development” in itself appears to be a contradiction of terms (Wall, 1997; Butler, 1993). The term “sustainable” indicates that the system, in this case the natural environment, is able to function in a dynamic equilibrium so that all ecological functions can be accomplished. In opposition, the term “development” has traditionally in Western culture referred to the economic growth related to modernization and industrialization (Sharpley,
Growth is based on the premise of using more resources to create a profit and wealth, which destroys the very means that it used to create the wealth. It is difficult to sustain, and traditional development has been shown in many cases to exceed the carrying capacity of the land (Agersted, 2006). While the concept of economics is still often seen as the cornerstone to development, it is slowly starting to incorporate social, political, and cultural components including self-reliance (Sharpley, 2000). This is evident in Butler (1993) and Wall's (1997) definition of “sustainable tourism” as the “longevity of any form of tourism” and “sustainable development” as the “incorporation of economic, ecological, and social factors” (Wall, 1997; Butler, 1993). In this paper, while it is acknowledged that ecotourism is one form of sustainable development, the two terms will be used interchangeably.

So then what is ecotourism? In 1987, the Brundtland Commission defined sustainable development as meeting the needs of the present generation without compromising the needs of the future generation” (Nagel, 2002). Diamantis (1999) and Ross & Wall (1999) argue that the distinguishing feature of ecotourism is the focus on ethics and principles (Diamantis, 1999; Ross & Wall, 1999). According to Higham and Luck (2002), a review of the literature suggests that most definitions mention the following characteristics:

- Conservation and the contribution to biodiversity;
- Education;
- Local ownership and participation;
- Economic benefits, particularly to the local community;
• Small-scale – both in terms of the number of participants as well as the size of the outfitter/company providing the service;
• The relevance of cultural resources;
• Minimal impacts to the environment and reduced use of non-renewable resources;
• Overall sustainability.

2.1.1 Definition of Ecotourism for the Purposes of this Paper

After reviewing extensive literature and many interpretations of ecotourism, the following definition from the Ecotourism Society will be used:

Ecotourism is,

“purposeful travel to natural areas to understand the culture and natural history of the environment, taking care not to alter the integrity of the ecosystem, while producing economic opportunities that make the conservation of natural resources beneficial to local people” (Wood, 1991)

This definition was chosen based on its ability to incorporate all the mentioned characteristics, as well as include ecological, economic, and social considerations. Without the integration of these three “pillars” at different scales in conjunction with policy and governance, ecotourism as a development strategy will not be successful over the long-term.
2.2 The Birth of Ecotourism

2.2.1 The Emergence of the Demand for Responsible Tourism in Canada & the United States

The need to protect natural resources in Canada and the United States has been realized since the late 1890s, a period of high resource extraction. To protect these resources, conservation groups such as the Sierra Club and the National Audubon Society devised strategies that emphasized the balance between the immediate need for production with the means to sustain a continuous yield (Silveria, n.d.). Under the Roosevelt administration, the Reclamation Service and the U.S. Forest Service were created and looked at resource development strategies (Silveria, n.d.; Lewis, 2006). At the time, however, these organizations consisted mainly of “wealthy, white, Anglo-Saxon” and well-educated males who wanted to preserve the environment because they enjoyed outdoor activities (Silveria, n.d.).

The current environmental movement, whose initiation is primarily accredited to Rachel Carson’s groundbreaking book of 1962, *Silent Spring*, highlighted the human health risks associated with environmental damage and pollution from rapid industrialization. During this time, the increase in time, wealth, and education led to two dramatic social changes (Silveria, n.d.; 20). Canadians and Americans began to view nature and the outdoors as an essential part of recreational activity and created values for what wilderness meant to society. As a result, they began to look at the role of nature and question the implications of its use in a broader sense (Silveria, n.d.). By the late 1960s, there was a realization that there was an integral link between environmentalism and technology, industry, and political power. Environmentalists and
grassroots groups began to demand that these sectors instigate better environmental regulation and monitoring (Silveria, n.d.). In particular, the “hippie” movement was instrumental in rejecting the dominant values of the time and adapting a new ecological paradigm. The values that were embraced during this time has had a far-reaching impact and has injected environmental consciousness into society through a variety of media and educational outlets (van der Veen, 2006).

In 1987, the Brundtland Commission Report formulated their definition of sustainable development, which was the first formal attempt to link development and the environment. Since then, many environmental meetings and forums have explored how the protection of the environment can be used to boost the economies of developing nations. The demand for nature-oriented tourism has exploded as a result and has become the fastest growing sector of tourism (Theobald, 2005).

2.2.2. Ecotourism in the Developing World

The drive for social responsibility in Canada, the United States, and other developing nations coincided with the independence of many countries in the 1960s and 1970s. Many of these countries were burdened with a colonial legacy of exploitation-based economies fuelled by resource extraction rather than sustainable development. As a result, they lacked the infrastructure for strong independent economics. By the late 1980s and 1990s, many had become debt-ridden and were looking for new ways to diversify their economies (Boo, 1990; Wunder 2000).

For many countries tourism provides economic justification for protecting vulnerable areas that may not have been conserved otherwise (Agersted, 2006; Boo, 1990). It requires a relatively small investment, but produces local tourist spending and
that allows for sustainable development. Wunder (2000) describes this as a “win –win” situation (Wunder 2000). For the world’s least developed countries, tourism is one of the few ways that they are able to participate in an international market and, when managed well, can consistently create a trade surplus (Mastny, 2001). Some other values and benefits are listed in table 1.

The World Bank and the International Monetary Fund (IMF) have been highly involved in this movement and argue that the goals of development policy cannot be distinguished from environmental protection (Nagel, 2002). As a result, the World Bank and the International Monetary Fund (IMF) have altered their development policies to be more in alignment with the Millennium Development Goals (Nagel, 2002; The International Tourism Society, 2007). They are encouraging developing countries to created Poverty Reduction Strategy Papers (PRSPs), meant to increase the involvement of the borrowing country, and increase fiscal responsibility. Countries are persuaded to diversify their economies by investing in tourism infrastructure and training, developing and retaining heritage in order to alleviate poverty, decreasing debts, and boosting social services (Nagel, 2002; Mastny, 2001).

Caution is required in interpreting these actions, as tourism-related projects are mostly urban revitalization and hotel rehabilitation projects, neither which explicitly suggest that environmental concerns are a priority. Additionally, it can be argued that the World Bank and IMF structural adjustment programs (SAPs) of the 1950s to 1990s contributed to the debt and poverty of these countries. Some of the conditions for SAPs included the reduction/elimination of social expenditures, devaluation of currencies, elimination of trade barriers, increased foreign investment, privatization, resource
extraction, and the exportation of raw “cash crops” such as cotton, sugar, or coffee. There have been numerous examples of the negative effects of these SAPs including the water crisis of Cochabamba, Bolivia (Assies, 2003; Perreault, 2005; Sachs, 1987). The new PRSPs have been criticized for being too similar to the original SAPs and it has been suggested that the World Bank and IMF are still overly involved in the policy-making processes of these countries.

2.3 Current State of Global Ecotourism

Ecotourism has become the fastest growing sectors of the tourism industry. Since the 1990s, ecotourism has been growing at a rate of 20-34% per year, and in 2004, it grew three times faster than the general tourism industry. It is estimated that it will continue to grow for the next two decades, with sustainable tourism increasing to 25% of the world’s travel market within six years, at a value of USD $473.6 billion (The International Ecotourism Society, n.d.).

Growing displeasure with both environment management and heavily commercialized, overrun, and polluted destinations has shifted the tourism industry from mass tourism to more specialized, flexible, and personalized trips (Mastny, 2001). Travelers are placing an increasing importance on the quality of their vacation destinations, and prefer trips that focus on the individual experiences, such as those centred around the natural environment or culture (Theobald, 2005, Mastny, 2001).

Consumers are also expecting environmental and social protection to be part of the service that companies provide (The International Ecotourism Society, n.d.). In Germany, 65% of travelers surveyed expected environmental quality, and half of those in Britain would be more likely to choose a company that ensured good working and
environmental conditions. Additionally, visitors are more willing to pay for services and products that are created by environmentally conscious producers (Boo, 1990; Theobald, 2005). According to the International Ecotourism Society (n.d.), in a U.K. study, 30% of travelers said that they would be willing to pay 5% more for services that were ethically produced or prepared and 70% of American, British, and Australian tourists would pay up to $150 more for a two week stay in a hotel with a “responsible environmental attitude.”

It is important to note that because of the ambiguity of the definition of the term “ecotourism,” there are difficulties in attaining exact statistics (Goodwin, 1996; Isaacs, 2000). This could account for the over $400 billion difference in estimates of ecotourism expenditures (Isaacs, 2000). The growing trend towards environmentally and socially-friendly travel, however, is evident in most statistics and can be used as a good indicator of the direction that the industry is heading in.

Part of the shift in travel preferences and attitudes towards culturally and environmentally focused activities and destinations are reflected in the increase of the number of visitors to developing countries, particularly those in Asia, the Middle East, Africa, and South America. Mastny (2001), predicts that there will be a further decline in visits to Europe, while China will become both one of the most travelled to countries, as well one of the largest sources of tourists by 2020 (Table 2). The average ecotourist comes from developed countries such as Canada, the United States, Europe, and Japan, is highly educated and belongs to a higher income bracket (The International Ecotourism, Society, n.d.; Isaacs, 2000). They are generally experienced travelers,
however, there has been an upsurge of college and university students in participating in volunteer or study abroad programs (The International Ecotourism, Society, n.d.). Why might interest and expenditures on ecotourism rise? As well as the rise of income, this could also be attributed to the “snowball” effect of the industry. As the number of sustainably responsible services increases, more options are available, resulting in increased competition and lower prices. Other possibilities include the falling price of airfare and other forms of travel (although this can be contested as more taxes are put in places, such as the impending carbon emission taxes), and rising prices for alternative “non-eco-friendly” tourism and products. Information sharing between ecotourists and their friends is also one of the most important sources of trip information (The International Ecotourism, Society, n.d.).

2.4 Biosphere Reserves & Ecotourism Management

Biosphere reserves grew out of the idea of “protected areas.” Since the early 19th century, they were often established with no input and little consideration of the needs of the local people, restricting their access to their traditional resource areas. Communities benefited very little from these protected areas and as a result often see protected areas as unfavourable. As a result, this has led to illegal poaching and resource extraction in many cases, such as at Laguna San Ignacio (Agersted, 2006). This trend has led to a realization that traditional protection methods were not successful in conservation and led to the creation of the development of biosphere reserves by the United Nations Education, Scientific and Cultural Organization (UNESCO) in 1974 (UNESCO, 2008b). As of March 2008, there were 529 sites worldwide in 105 countries (UNESCO, 2008a). This program, named “Man and the
Biosphere Programme” (MAB), was created to “innovate and demonstrate approaches in conservation and sustainable development” and have three interconnected functions:

- **Conservation** – to reduce biodiversity loss, and contribute to the conservation of landscapes, ecosystems, species, and genetic variation
- **Development** – to work towards improving livelihoods, enhancing social, cultural, and economic conditions for environmental sustainability, and meeting the Millennium Development goals.
- **Logistics** – to provide support and an opportunity for research, monitoring, environmental education, and training. Also helps with adaptive management of the biosphere plans as necessary.

Biosphere reserves are usually divided into three sections (Figure 1):

1) **Core Zone** – Human activities are forbidden with the exception of scientific research and monitoring. Usually located around an organism or microcosm of particular ecological concern.

2) **Buffer Zone** – Human use is allowed but is strictly regulated to activities that protect the conservation of the area, such as education, training, research, and tourism

3) **Transitional Zone** – Allows use such as agriculture and human settlements.

(Agersted, 2006; Young, 1999)

Zoning helps to delineate and identify the ecologically sensitive areas, while also recognizing the importance of community needs. While biosphere reserves follow these general principles, they are also adapted to each particular case, as will be examined in Sections 4 and 5.
CHAPTER THREE: APPROACHES TO ECOTOURISM FROM AN ECOLOGICAL, ECONOMIC, SOCIAL, AND INTEGRATED MANAGEMENT PERSPECTIVE

Ecotourism is one of the many examples of how sustainability can be achieved. Sustainability is commonly described as being represented by a Venn diagram at the intersection of ecological, economic, and social interests (Figure 2). As a result, sustainability requires that management be integrated throughout the planning process. Many sustainability projects, however, have addressed these considerations separately and then struggled to integrate them at the end of the project (Gibson, 2006). This method has been used historically as it fits well into the pre-existing fields of study and therefore is how most governmental groups are organized. In contrast, integrated sustainability does not fit neatly into one as single domain, as a result, is usually an uncommon, unfamiliar, and uncomfortable practice (Gibson, 2006). Additionally, integrated management emphasizes the beginning and middle of the planning process, which can also result in a lot of wasted time, energy, and resources if it fails, a risk that many companies are not willing to take because of their revenue-driven agendas. While not ideal, for organizational purposes, this section will take the conventional approach and also break up ecotourism into ecological, economic, and social perspectives. It will then summarize by looking at how integrated management ties together many of the recommendations and concerns from each perspective. Ecotourism, as Wall (1997) describes it, is “an instigator of change.” Introducing tourism into areas that have been previously exploited by outsiders will no doubt bring changes
and place new demands on the environment and communities. This creates new relationships at different scales and also presents new challenges (Wall, 1997).

3.1 Ecotourism from an Ecological Perspective

3.1.1 Benefits

The benefits of ecotourism for the biophysical environment and biodiversity are numerous. Before the increase in popularity of ecotourism, there were very few checks on resource extraction, particularly in developing countries (Malaysian Institute of Economic Research, n.d.). As a result, mining, logging, and clearing for agriculture began to threaten the ecological integrity of these countries. Ecotourism encourages responsible travel and can help to restore biological and ecological processes (Wall, 1997). The revenue that is created through ecotourism can then be returned to the system and be used to maintain and offset the cost of conservation and provide an economic alternative to these potentially non-sustainable practices (Wall, 1997; Kiss, 2004).

For some visitors, ecotourism provides a rare glimpse into the history of species and ecosystems that have maintained high ecological integrity. As ecotourism gains momentum, more people will become well versed in the needs of these ecosystems. Increased knowledge and understanding means that individuals and groups, generally from developed countries are more likely to take action and pressure the appropriate organizations to increase ecosystem protection.

3.1.2 Considerations and Critiques

There are many ecological factors that need to be considered in sustainable development. For example, proponents of ecotourism generally assume that their
activities are benign and leave little impact. A review of the literature, however, reveals that ecotourism can have hidden negative consequences on the environment. The assumption that there are no negative effects is made because tour groups tend to be small and because of the common motto “take only photographs and leave only footprints” (Wall, 1997). Even footprints can have an impact, however, and this leads to questions about the environmental consequences of ecotourism (Wall, 1997). There is very little conclusive research that examines the impact of short-term or day visits. In the absence of information, the relationship between the use and the impacts is believed to be linear. The relationship, however, is more likely to include specific carrying capacities and buffers for disturbance (Wall, 1997). The difficulties of identifying the carrying capacity coupled with the generally long lag/response time of certain organisms can mean that detrimental effects or disturbances will not be evident for many years, such as in the effect of DDT on the food chain.

One of the most prevalent arguments against ecotourism and conventional tourism in general is the “off-site” costs. These primarily refer to the modes of transportation that are used to get to these often “exotic” destinations. For example, the average ecotourist will end up travelling by plane, which consumes the largest amount of energy per capita and contributes just as much to greenhouse gas emissions and climate change as the conventional tourist (Wall, 1997). This overshadows the amount of energy and impact that is reduced from ecotourist activities and provides a false sense of accomplishment.

Other critiques suggest that ecotourism is usually directed at ecologically sensitive areas that may have a limited ability to withstand pressures. Slogans such as
“see it before it disappears” encourage more visitors which is counterproductive to the initial objective. While the value and appreciation of the ecosystem may increase, it can also speed up the rate of degradation. Additionally, visitation may occur at critical times such as during mating or breeding which can have unintended implications (Wall, 1997). More risks from tourism activities are described in table 3 (Agersted, 2006). Other stressors can include noise, erosion, and air pollution. Ecotourism is also very dependent on weather which can affect the reliability and viability of ecotourism ventures.

3.1.3 Recommendations from an Ecological Perspective

Successful ecotourism from an ecological perspective needs to limit environmental impacts and contribute to the conservation, management and/or restoration of the area (Agersted, 2006; Wight, 1993). The following list provides some suggestions for how outfitters can incorporate sustainable practices in their businesses:

- Limit the group size to a maximum of 12 people, with a preferable size of 8-10 individuals (Agersted, 2006; Wight, 1993);
- Use renewable resources such as biofuels in replacement of diesel;
- Use the appropriate choices of equipment and modes of transportation as well as reduce the amount of motorized vehicles that create emissions;
- Reduce waste and ensure the availability of suitable waste disposal methods;
- Involve and inform visitors of the biophysical processes that occur as part of a “fun” educational program (Agersted, 2006);
- Use tour guides that are knowledgeable in a diverse range of ecosystem composition and functionality (Wight, 1993);
• Create and promote an environmental and ethical code of contact for both
  operators, guides, and visitors;
• Restrict and monitor resource use by ecotourists (i.e. make sure they stay within
  the boundaries)
• Alter the timing and location of trips to avoid known sensitive areas during certain
  times of the year such as mating (Wall, 1997);
• Measure and monitor biophysical changes such as vegetation composition and
  structure, rates and locations of erosion, vegetation dynamics, and wildlife
  behaviour and habitat (Wall, 1997);
• Advocate for a local biosphere reserve to provide a legal incentive and resources
  for conservation (Wall, 1997).

3.2 Ecotourism from an Economic Perspective

3.2.1 Benefits

Ecotourism is one of the few ways that a country can turn a profit with a relatively
small amount of input. It has the ability to stimulate the economies of some communities
by providing employment for some marginal areas and disadvantaged people (Agersted,
2006). If the efforts are contained at a small scale, it makes it easier to maintain local
control over ecotourism initiatives and therefore provide solutions that are better suited
to the community (Scheyvens & Purdie, 1999). As well, local retention of profits can
provide economic incentives and alternatives to unsustainable uses of the environment
such as logging and poaching (Scheyvens & Purdie, 1999).

In 2001, whale watching recorded an international return of investment of 10%
for over a decade, reasonably higher when compared to more traditional practices such
as farming which can often produce a rate of return at under 5% (Hoyt, 2001).

According to Hoyt (2001), multinational mining companies in Australia are highly successful, however, they will not invest in a project unless they can gain at least a 15 – 20% return. For small businesses to be gaining a 10% return, they are doing remarkably well given that there are other non-economic benefits which were not included in these figures (Hoyt, 2001).

Other direct benefits are derived from money spent by tourists on guiding, visitor fees, donations, transportation, lodging, equipment rentals, food, retail services and souvenirs or by outside tourism operators who need supplies, infrastructure and manpower to run their activities. Because of the wide range of ecotourism options, there are many roles and jobs that need to be fulfilled, resulting in a diversification of employment, as previously described (Agersted, 2006).

3.2.2 Considerations and Critiques

There are a number of issues that need to be considered during the process of weighing the benefits and disadvantages of ecotourism from an economic perspective. In order for ecotourism to be sustainable, it also needs to be economically sustainable (Wall, 1997). This seems to be a contradiction, as previously alluded to in Chapter 2, as industries that create a profit tend to follow conventional economics and encourage growth at the expense of the natural environment. This encourages people to act against their own best interests by placing greater value on present rather than future consumption (Wall, 1997). This has been shown in many cases where the growth of ecotourism has unintentionally exceeded the carrying capacity of the site (Agersted, 2006).
If ecotourism stays small and local, then there are also other complications. Small group sizes and restricted numbers of visitors that are used to ensure minimal ecological impact also reduces the amount of profit from ecotourism (Wall, 1997). As a result, there exists the temptation that outfitters will attempt to increase group sizes to try to make their business more economically viable (Wall, 1997).

Ecotourism as a niche industry can work both to the benefit and detriment of the community. As a niche market, ecotourism addresses a need or service that is not being provided by conventional tourism (Goodwin, 1996; Wall, 1997). It also specializes on a few services and tailors an experience to a narrowly defined group of people. If marketed correctly, this niche market can still create profits, even without the economies of scale that mass conventional tourism relies on. In order to capitalize on this opportunity, the outfitter needs to find accessible customers. The nature of ecotourist destinations, however, is that they are often isolated and therefore establishing an international market and customer loyalty can be a challenge (Wall, 1997).

There is considerable evidence that ecotourists are willing to spend more money, as previously discussed, but a good portion of this money is lost due to “leak out.” Leak out refers to money that is spent on travel or outside the destination itself (Wall, 1997). Leakage is particularly prevalent when the tour company is not owned by the destination community. Many of the companies that offer cruises to Alaska are owned by large national or international organizations. The majority of money is spent on the ship. Even the shops at stop-off points in Alaska are owned by the cruise companies, rather than by the local communities. Additionally, destinations are generally remote and there is little infrastructure or means to spend money even if visitors would like to.
As a result, the investment is low, however, because there is less leakage and economies are smaller, the money can still have a large impact (Wall, 1997). Another concern with ecotourism is that it is a highly volatile industry that relies heavily on foreign investment and factors that are well beyond the control of a community. For example, international travel seems to go through certain trends, where one country is highly advertised for a few years and then an event occurs which changes the “fad” destination to another country. In Canada, Central America has been a popular destination, but now the promotion of ecotourism is starting to move towards the Asian countries. Additionally, seasonal patterns can play a large role in the viability of ecotourism (Goodwin, 1996).

The bottom line for ecotourism is that it needs to be profitable for a local community. A community that is starving is a community that cannot afford to be conservationists. Where local people do receive benefits, they are more likely to respect and help create environmental regulation (Scheyvens & Purdie, 1999; Wall, 1997). As well, the distribution of economic benefits is just as important as the benefits themselves (Scheyvens & Purdie, 1999). This will be discussed in further detail in Section 3.4.2.

3.2.3 Recommendations from an Economic Perspective

Successful ecotourism from an economic perspective needs to ensure that ecotourism operators are profitable, as well as ensuring that the financial benefits for visitors are maximized and stay within the community (Wall, 1997). Other recommendations include:

- The economic benefits that are created need to benefit local people in ways that complement traditional practices such as incorporating bird or whale knowledge
into the ecotourism industry (Agersted, 2006). This reduces the need for external training and means that the local community can deliver a better products based on experiential knowledge (Goodwin, 1996).

- Strengthen the relationship between conservation and marketing (Wight, 1993);
- Profits should be re-invested locally (Goodwin, 1996);
- Reduce the amount of economic leakage by keeping management control local (Wall, 1997);
- Increase the diversity and quantity of value-added products without using more resources (Mastny, 2001).

3.3 Ecotourism from a Social Perspective

3.3.1 Benefits

There are a number of social benefits that can come from successful tourism. As previously mentioned, people who are poor and have low living standards are unable to look further than their immediate needs. Ecotourism has the ability to raise their standard of living and improve their well-being and cohesion as a community both in the short and long-term (Goodwin, 1996; Scheyvens & Purdie, 1999; Wall, 1997). For example, increasing the participation and the control that local people have in the decision-making process empowers them and makes them feel responsible for ensuring that decisions made are the most suitable for the goals and needs of the community. Additionally, when the basic needs of a community is met, there is more time and resources for community events (Wall, 1997).

In some cases, ecotourism can help revive or preserve the cultural heritage of the destination through the sharing of culture, artifacts, crafts or traditions that might
have died out otherwise. For example, in the Siaan Kan biosphere in Mexico, outside interest in their traditional knowledge resulted in increased pride and recognition of the integrity of their culture. As well, many members looked for further training opportunities which could be used to increase the ability and well-being of the community (Agersted, 2006).

3.3.2 Considerations and Critiques

Social conflicts that arise from ecotourism are often related to the differences in the cultures of the visitors and the local community (Goodwin, 1996; Wall, 1997). Butler (1974) argues that the amount of the consequences depends on the size of the difference between the two groups (in Wall, 1997). He also postulates that visitors may bring in customs, values, habits that are intrusive or offensive to the local people (Butler, 1991 in Agersted, 2006). Goodwin (1996) notes that conflicts arise as result of the immediate interests of the rich tourists and the local people. This can contribute to the breakdown of local cultural traditions (Young, 1999). It could also encourage spending on excessive material goods or could cause individuals to want to migrate in order to gain access to certain goods or opportunities, leaving broken communities behind (Agersted, 2006).

In the case of some well-intentioned efforts to protect nature for ecotourism and other “non-extractive” purposes, they have ended up being detrimental for the local people. In the case of many biosphere reserves and national parks, traditional resource uses or users have been eliminated, isolating local people and disallowing them from using their traditional territory for hunting, gathering, and other activities (Goodwin, 1996; Wall, 1997; Young, 1999). It was hoped that residents would be able to benefit from
ecotourism, however, the lack of relevant skills such as language or business management meant that they were often not able to take advantage of these opportunities (Wall, 1997). As McNeely (1993 in Goodwin, 1996) states, “protected areas cannot co-exist in the long term with communities which are hostile to them” and that local people should be considered important stakeholders that should be consulted as part of a park or ecotourism creation process. Additionally, facilitating local involvement means that they are more likely to benefit and will not compete with tourists for natural resources or engage in ecologically harmful activities. Local participation is also appreciated by tourists and can be used as a marketing opportunity (Goodwin, 1996).

The notion of control is extremely important (Scheyvens & Purdie, 1999). Many of the problems that are experienced with the creation of parks and protected areas are similar to those caused by foreign control of ecotourism outfitters (Godwin, 1996). In the case of Vanuatu in the 1980s, some owners saw local culture as a constraint and took some token measures such as using local produce and hiring and training local staff. The local community, however, was not involved in decision-making and benefited very little from these businesses. Since then, the community has now established and run a “land dive,” an event similar to bungee jumping but with vines and over land. Up to 50 tourists per day are flown in and then out to watch (Scheyvens & Purdie, 1999).

Organization is a synthetic process, with a council that discusses the location of the jumps and the individuals who will be performing the jumps (Scheyvens & Purdie, 1999). This empowers the community by allowing them to take leadership over their own economic well-being and encourages social interaction and cohesion.
Another critique of ecotourism is that much of the literature assumes that communities are homogenous and that any benefits will be shared equally within the community. This is often not the case because of the power hierarchies that exist within the groups. The development of ecotourism has a tendency to exacerbate existing inequalities. In a community on Yap, the Federation of Micronesia, one chief kept all the entrance fees to the village for himself, resulting in resentment of some of the community members. As one individual recounts, “money is making people stingy and therefore harming community spirit.” The distribution of economic benefits can have a profound result on the social benefits that are created. As Taylor (1995) states in (Scheyvens & Purdie, 1999), “the assumption that communities can share unproblematically in the production of the tourism product and the benefits deriving from this is excessively romantic.”

3.3.3 Recommendations from a Social Perspective

- Contribute to the management of the protected areas and improve the links between local communities and those who manage protected areas (Scheyvens & Purdie, 1999);
- Encourage an interest in the sustainable development and protection of natural areas, both within the country visited and home country of the visitor (Higham & Luck, 2002);
- Ensure that local stakeholders have the opportunity to voice their opinions and have input in the decision-making process (Scheyvens & Purdie, 1999);
- Embrace cultural identity, spirituality, and subsistence practices as cultural diversity and biodiversity are often linked (Goodwin, 1996);
• Encourage genuine interactions between hosts and guests (Higham & Luck, 2002);

• Use ecotourism as an educational and awareness opportunity; many see education as one of the main differences between tourism and ecotourism (Goodwin, 1996);

• Be intellectually challenging and emotionally stimulating in order to change overall behaviour towards conservation and protection (Higham & Luck, 2002);

• Ensure that there is enough local skill and knowledge within local communities to be able to relate to visitors (language, lifestyle, marketing etc). This will likely require partnerships, resources and help from outside organizations in training local people (Scheyvens & Purdie, 1999);

• Need to recognize the similarities of the goals of local communities and (generally longer-term) conservation plans and integrate the needs of both (Scheyvens & Purdie, 1999).

3.4 Integrative Management

Tackling sustainability and ecotourism as an integrative process recognizes the interconnections and relationships between all members in involved, and that problems cannot be solved through simple solutions. The Brundtland Commission was one of the leaders in integrated management and recognized the correlation between social injustice and environmental injustice and the need to address both at the same time. Wall (1997) described this as the distinction between a single-sector and multi-sector approach.
Integration has the ability to give traditionally disadvantaged groups or individuals a voice, which adds considerable knowledge. For example Aboriginal traditional knowledge was used to help researchers determine the ecology and history of fire as an aid for restoration in the Fraser Valley of British Columbia (Lepofsky et al., 2005). Without this information, a link of the paleoecological puzzle would have been missing.

Additionally, integration can create stronger connections between different jurisdictions and authorities, as well as different levels of governance. While it will take time for management paradigms to shift, there are increasingly more examples of integrated systems such as in integrated water management (Ferreyra & Beard, 2007) and community forestry (Shifley, 2006; Brendler & Carey, 1998), and agriculture.

Integrated sustainability is most effective when sustainability is built into a larger overall governance framework such as biosphere management (Gibson, 2006). The following lists some considerations that integrated ecotourism needs to address.

- The need to integrate all sustainability considerations throughout the entire process of deliberation, decision and implementation (Gibson, 2006; Ferreyra & Beard, 2007);
- Integration should avoid compromises that benefit one of the three pillars (ecological, economic, and social) in favour of decisions that are mutually-advancing (Gibson, 2006);
- The process and management must be transparent and accountable not only to stakeholders but also ecotourists and other visitors to ensure that sustainability is respected (Ferreyra & Beard, 2007);
• Sustainable practices for ecotourism need to be incorporated into local
government and governance (i.e. multi-player governance) (Gibson, 2006);
• Solutions should consider intragenerational and intergenerational equity (Gibson,
2006);
• Have an iterative conception-to-resurrection agenda, i.e. make sure that there a
number of checkpoints at which smaller decisions are made, rather than have
one junction with a large decision (Gibson, 2006);
• Processes should be a continual learning process with constant monitoring and
adjustments as necessary (i.e. adaptive environmental management) (Gibson,
2006);
• The solution should be locale-specific;
• Need to ensure that each discipline (i.e. ecological, economic, and social) is
represented in the final product;
• Establish committees, partnerships, and other mechanisms early in the decision-
making process so that as many perspectives are included (Agersted, 2006).
Laguna San Ignacio (LSI), located in the El Vizcaino Biosphere Reserve in Baja California Sur provides a good model for studying ecotourism for a number of reasons. Its relatively long history as a protected area in an undeveloped country provides an unusual opportunity to study how different techniques have contributed to the success or hindrance of ecotourism for sustainable development. Ecological, economic, and social concerns, similar to the ones presented in the theory, have arisen over the past few decades, with varying degrees of success. This provides a means through which to critically analyze how well the current management is doing, determine where the flaws lie, and identify possible solutions and improvements. Additionally, since 1994, there has been a resurgence of conservation and community efforts which provides an interesting and exciting look into some innovative solutions.

Many of the world’s natural resources that still exist in pristine to semi-pristine conditions are located in developing areas and countries, making them difficult to protect. In areas that are poor, social and economic pressures usually dominate at the expense of the environment. LSI provides an opportunity to prove that the environment does not have to suffer, and that there are ways to provide a wide range of benefits that address not only the local communities, but also the local ecology.

There were some limitations that were encountered during reviewing this case study. It was not possible to travel to Mexico to conduct personal interviews, so this section relies on a literature review which is restricted to secondary sources and and may present a bias based on the researcher. Consistent and long-term research was
also not available so some of the trends are based on predictions and/or projections, which may not accurately reflect some of the results and/or findings.

4.1 Objectives & Organization

Sections four through six examines ecotourism management using the case study of LSI in order to compare the described theory with tangible “on the ground” results. Chapter four will provide some information about where the reserve is, the purpose of the reserve, ecotourism and whale watching in the area, and provide some historical context for the case study. Chapter five will examine some of the real challenges of ecotourism development, look at some real indicators of success, discuss marketing accessible marketing strategies for a potential tourist to the area, provide some lessons learned, and some suggestions for improvement. Chapter six will examine how accessible the promotion material for LSI is as a student in Kingston.

4.2 Background Information

4.2.1 Location

Laguna San Ignacio (LSI) is located on the Pacific Coast of Baja California in Mexico. It is about 700 km south of the United States-Mexico border. It is located within the El Vizcaíno Biosphere reserve which was established in 1988 and recognized as a World Heritage Site by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) in 1993 (Agersted, 2006). The area is home to Vizcaíno Desert, one of the most arid deserts in North America. The lagoon is also bounded by three mountain ranges: the Sierra de Santa Clara to the north, the Sierra de San Francisco to the northeast, and the Sierra de Guadalupe to the southeast. The waters are sheltered
from the rough Pacific waters by two barrier islands which reduce the water flow into three openings (Figure 4, 5).

The lagoon is fairly isolated, with access limited from an assortment of small and poorly maintained roads, some made of dirt, with poorly marked intersecting paths. The nearest town of San Ignacio (population about 4000) is located about 68 km to the northeast of the lagoon, however, there are five small communities that live directly around the lagoon. There is a primitive landing strip that was created when the clam fishing industry began to take off in the 1980s. Other than the landing strip, there is very little infrastructure and no running water or electricity. Many of the goods that are used in the villages are brought in from one of the larger towns (Agersted, 2006).

Less than 50mm of rainfall annually, hot summer temperatures and intense winds, along with depleted solids and limited fresh water have also attributed to keeping the LSI area one of the least populated parts of Mexico (Agersted, 2006).

4.2.2 El Vizcaino Biosphere Reserve & Biological Importance

Laguna San Ignacio (LSI) is part of the largest remaining undisturbed coastal wetlands in Mexico. Recognizing the ecological importance of the area for birds, LSI and the neighbouring lagoon, Ojo de Liebre, or Scammon’s Lagoon, were originally established as a migratory reserve. In 1979, it was declared a whale refuge and maritime tourist attraction (6, Agersted, 2006).

El Vizcaino Biosphere Reserve was created in 1988 to include LSI and the surrounding desert area to a total of over 2.5 million hectares of protected land. This is the largest reserve in Latin America. The littoral zone of LSI is important for sustaining a rich marine and bird life. Each year over 70,000 shorebirds of over 221 species visit the
area to feed, rest, and breed. It is also a feeding ground for other resident and migratory animals including grey whales, bottlenose dolphins, California sea lions, black and green sea turtles (Agersted, 2006).

In the winter, LSI plays a particularly important role in grey whale reproduction, as it is one of the three lagoons that are used by these whales for nursing and calving. More than half the world’s grey whale population is born within LSI and Scammon’s Lagoon; both have played an integral role in bringing the whales back from near extinction in the 1940s following a period of intense hunting and habitat disturbance. In 2000, there was an estimated healthy stock of about 27,000 individuals (Dedina, 2000).

The biosphere reserve also plays an important economic role in the region, with the shallow waters of LSI home to commercially valuable fish and shellfish including lobster, abalone, Pacific calico scallop, broomtail grouper, and California halibut. The reserve has not escaped controversy, however, as in 1995, external resource extraction corporations were interested in salt mining in the salt flats, an activity that would have significantly altered an important ecosystem. While this will not be discussed in detail, the international opposition that was raised as a result of this controversy raised the profile of LSI and the tourist dollars that were invested in the area (Dibble, 2005). The influx of money, however, only lasted a couple years, highlighting the importance of a fluctuating market on the success of tourism in the area.

4.2.3 Ecotourism & Whale Watching

The first tourist companies to bring visitors to Laguna San Ignacio were from the United States. The majority of the boats consisted of either tourism companies that
organized nature travel, or fishing companies that rented their boats to individuals or
groups during the low season (Agersted, 2006). While tourists were able to come in
close contact with the whales, there was little if any cultural or economic exchange with
the local communities since all companies mostly offered day trips and brought their
own supplies (Agersted, 2006; Dedina & Young, 1995).

In the 1980s, however, one of the companies realized that it was cheaper to rent
the boats and contract local families to drive them. Other companies followed suit,
viewing this as a good way to strengthen ties with the communities and provide a more
well-rounded tourism experience (Agersted, 2006; Young, 1999). In 1991, fishing within
the whale watching zone during the tourist season was prohibited (Dedina & Young,
1995). In compensation, local skiff drivers were given exclusive permits to work in the
area. Some companies were initially skeptical about how well this would work due to
inadequate training. The result, however, was positive, as local tour drivers were soon
recognized for their experiential knowledge. As well, this trend coincided with a boom in
international ecotourism and appreciation for the “authenticity” and local culture of travel
destinations.

By 1994, there were two San Ignacio-based and three local LSI whale watching
companies which provided an array of services including day trips, camping facilities,
and home-cooked meals. These operators continue to make a living in whale watching
and also provide other secondary economic benefits for the community. Additionally,
there are a number of foreign-run services that provide day trips or the opportunity to
live aboard a boat (Agersted, 2006).
Whale watching in LSI occurs between December and March, as grey whales migrate down the North American Pacific coast towards calmer and shallower waters to mate, give birth, and nurse their calves. Tours generally last a few hours and there is about a 75% chance of seeing whales, as it is not uncommon to have 300-400 individuals in the lagoon at any one time (Dedina, 2000).

Unique to LSI, is the presence of “friendly whales.” This has not always been the case. As Francisco “Pachico” Mayoral described on their family’s whale watching website, “until that day there had been no known contact between gray whales and man without one or the other ending up dead.” As Pachico struggled to get away from the whale, it continued to follow him passively until Pachico realized that it was friendly (Pachico’s Eco Tours, 2008). This friendly behaviour has spread to the other whales and they are now known to approach the boats, attracted by the sound of the boat motor and the attention. To reduce harassment, reserve guidelines specify that boats must stay at least 30 metres from the animals, unless the whales approach out of their own will (Young, 1999).

4.2.4 History of the Local Communities & People

There is little that is known of the indigenous people of Laguna San Ignacio. It is thought that they were wiped out by diseases that were introduced during European contact and colonization. In the mid 19th century, American and European whalers were the most frequent visitors, depleting whale populations so much that whaling was abandoned in the 1920s due to its unprofitability. The neighbouring Scammon’s Lagoon was also used by the United States for naval practice, a practice that affected the
whales’ sensitive ears and consequently forced them to find new breeding grounds (Dedina, 2000).

In the 1970s and 1980s, the emergence of the scallop industry resulted in an influx of people to the area. Between 1970 and 1995, the population increased from 26 individuals to 506 (Agersted, 2006; Young, 1999). As a result of the high levels of immigration and their diverse backgrounds, there was little social cohesion in the community. LSI residents currently consist of five settlements - La Laguna, La Base, La Fridera, Ejido Luis Echevrria, and El Cardon. They can be further grouped into three highly polarized groups:

- **Families of the original settlers** – These individuals have been living in the area since 1920s and grow by including the extended families. They have little formal education and make a living from tourism and fishing. They have little political influence over resource development (Young, 1999).

- **Impoverished rurals from mainland Mexico** – Many were temporary workers in the scallop industry who settled in illegal areas. Most have little formal education and are poor, with makeshift houses constructed with cardboard, plywoods, tarps, or any other material that they can find. As Dedina and Young (1995) describe, the community has a reputation of lawlessness that results from the transient nature of its inhabitants and the illegal poaching and involvement in narcotics trading activities (Dedina & Young, 1995).

- **Educated professionals from Mexico City and La Paz** – Most of these individuals came to the LSI area during the 1980s-1990s. They are well-educated
and have the most influence over decision-making and available tour and fishing permits granted by the Mexican government. (Agersted, 2006; Young, 1999)

The extreme heterogeneity of this community has provided extra challenges, and ecotourism management and development needs to focus on the social challenges of the community in order achieve sustainability.
CHAPTER FIVE: CASE STUDY ANALYSIS

5.1 Identified Problems of Ecotourism in the Area

With the constant flux of immigration and emigration into the area, there are a number of perceived and tangible problems with ecotourism

5.1.1 Lack of stable economic benefits

With only sixteen people were employed in whale watching in 1994, local fishers questioned the viability of the industry for sustaining themselves and their families, particularly since the season is only four months long. Additionally, the majority of tourists who visited LSI in the 1990s and into the early 2000s were brought in by boats or tour companies that were not locally based. As a result, only about 1.2% of the revenue created from activity was being funneled into the local community, meaning that they would still have to fish throughout the year (Agersted, 2006, Young, 1999). For example, in 1990, the government banned fishing during the grey whale season, completely cutting off the main source of income for many families.

5.1.2 Mexican central control and lack of stakeholder involvement

Environmental management in Mexico is highly centralized due to limited expertise and trained personnel. Before the 1994-1995 season, local resource decisions in Mexico were made in Mexico City, away from the “on the ground” results of their policies. As a result, the regulations governing human activities around whales and the allocation of permits prior to 1995 appeared to be arbitrary (Agersted, 2006; Young, 1999).
Bureaucratic “red tape” was and continues to be a challenge. For example, Kuyima, a whale watching company that was formed by newly immigrated wealthy individuals in 1985, was given a permit that granted them permission to operate 80% of the total number of whale watching skiffs, as well as exclusive access to servicing foreign tour boats and camps. The government argued that they wanted to give operators with the most experience greater access to the resources, however, locals who had been informally operating tour boats were at a disadvantage as they had no formal records to prove their experience (Agersted, 2006; Young, 1999).

The isolation of LSI has also proved to be a challenge, resulting in a lack of communication between resource users and the government. In 1994, local operators were not informed that their presence was required at a meeting to La Paz and consequently missed the appointment because they assumed that paper would be delivered by government officials as they had the year before. As a result, traditional fishers and tour guides were not granted any permits for the 1994-1995 season (Young, 1999).

5.1.3 Conflicts between “local” populations

As previously mentioned in section 4.3.5, the population in LSI is highly polarized and is a cause of much conflict. For example, in 1994, Kuyima took advantage of a change in the law that allowed the privatization and development on formally communal land by building a small tourism complex. Traditional local fishers and tour operators were unable to compete, creating more inequality in the community. The varying needs and desires of each of the sub-communities in LSI also means that it is difficult to come to a consensus in determining the future of whale watching and ecotourism in the area.
5.2 Indicators of Success

Indicators are commonly used to assess the successes and areas of improvement in a management plan, legislation, or other action. Some of the benefits of indicators include their ability to identify relationships between different factors, determining an evaluation method, and comparing diverse sets of information (Journey Mexico, 2007). There are a number of different indicators that could have been used in this paper, however, only five have been chosen based on their applicability and relevance to the theory and case study, the presence of that theme within the literature, the availability of information, and the ability to make conclusions and recommendations.

5.2.1 Local Operators must be profitable

Changes in the number of visitors, revenue, and local employment of local people are often used as indicators for ecotourism growth. In 1994, the number of visitors to Laguna San Ignacio was estimated to be around 1000. Between 1994 and 2002, the number of visitors peaked at almost 4000 visitors in 2000, but started to experience a decline shortly afterwards. The peak can be attributed to the increase in publicity during and following the salt mining controversy. Following the September 11th attack on New York, fear of travel is thought to have contributed to the 20% decrease of visitors in 2002 (Agersted, 2006). This exemplifies the vulnerability of the industry and its dependence on external markets.

The decline in number of visitors has resulted in a decrease of overall revenue from whale watching. While there has been some inconsistencies with reporting – likely due to the lack of stable infrastructure, consistent management, and skills – the overall
ecotourism in the LSI area is estimated to have declined from $3.3 million – $1.8 million between 1994 and 2002.

The distribution of the revenue, however, shows signs of increased success and resilience of local outfitters. Foreign companies that offer “liveabords,” including cruise ships and tour boats, have seen their numbers decrease, effectively increasing the market share of local and ability to compete in markets previously only occupied by foreign businesses (Ivey 2002 in 7) (Figure 6). Agersted (2006) estimates that between 1994 and 2002, revenue for local and regional operators increased from 3-7% to 10-17% of the total ecotourism revenue (end-to-end estimates including travel costs) (Figure 7).

Increasing revenue can be partially attributed to the growth of local outfitters’ ability to create value-added products. As the Eco Tours advertises, they provide a variety of services including solo (90 minute) and double (2 x 90 minutes) day trips, 24 hour packages including home-cooked meals, accommodations, and camp facilities, as well as bird watching and other amenities (Pachico’s Eco Tours, 2008). Out of all the services provided by local and regional outfitters, package tours created the most revenue, increasing from approximately $47,000 to $123,000 between 1994 and 2002 (Agersted, 2006).

Not only have there been improvements in primary ecotourism jobs such as guiding, there has also been an increase in secondary jobs such as restaurants and other services. This decreases the stress on the natural resources and reduces the reliance on fishing. Having two main industries decreases the risk of total economic collapse in the event of a decline in either fishing or ecotourism. Additionally,
diversifying products can tap into undiscovered markets, reduce competition, and increase the uniqueness of a product or service (Mastny, 2001).

5.2.2 Contributes to the conservation and management of legally protected and other natural areas

One of the main goals of ecotourism is to ensure that the social and economic needs of a community are met, but in a sustainable manner that has reduces the impact on wildlife as much as possible. Grey whales are a particularly useful indicator species that can provide clues as to the health and status of not only of Laguna San Ignacio, but also the entire North Pacific ecosystem (Swartz et al., 2007). The Laguna San Ignacio Science Program, established in 2007, is a joint program with Pro-Peninsula, is responsible for measuring the health of the whales. They determined that the number of grey whales in February of 2007 was one of the lowest counts since 1978, 40% less than the highest recorded count in February 14, 1982. In particular, there was a marked decrease in female calf pairs, declining from 137 pairs in 1982 to 37 pairs in 2007 (Swartz, 2007; Swartz et al., 2007). Photographic data indicated that 12.35% of the total whales and 17.56% of the cow calves showed evidence of “skinny whale syndrome,” indicating the presence of malnutrition and/or disease. The number of cow calves that have this disease is particularly troubling, as it has implications on reproduction (Swartz, 2007; Swartz et al., 2007).

While records have shown that populations are declining, Swartz et al. (2007) suggested that this could be related to a shift in the winter distribution and ranges of the whales. Green and Pershung (2007 in Swartz et al., 2007) suggest that global water circulation is changing as a result of global warming which could result in changing food availability. This theory also postulates that the warming would have an effect on the
whales’ summer territory as the Arctic landscape undergoes change. As a result, the whales may have reached the carrying capacity of the ecosystem given these alterations.

These declines in whale numbers are occurring despite the regulation of whale watching using a permit system since 1978. By 1996, Mexico also had regulations for the length of the whale watching season and had limited each whale watching trip to a maximum duration of two hours (Swartz et al., 2007). Tours were also only permitted in the area nearest to the lagoon entrance and restricted in the inner two thirds of the lagoon (Jones and Swartz, 1984 in Swartz et al., 2007). After noting the increase in whale watching between 1996 and 2000, Urban and Gomez-Gallardo (2000) also identified a decrease of grey whale use of the lagoon. As a result, they noted the potential of the disturbance to disrupt normal whale activities and suggested that monitoring programs be implemented to monitor trends in both whale watching and whale numbers.

The grey whale populations appears to be responding to environmental changes, the decline in food availability, and increased human use, resulting in the reduced whale counts and health. Grey whales can tell us much about the health of the entire Pacific grey whale population as well as the Pacific ecosystem in general. More research, therefore, is required to determine the actual tangible effects that whale watching is having on the grey whale population (Swartz, 2007). A precautionary approach also be taken. It should incorporate limiting group sizes and waste and creating an ethical and environmental code for visitors and the community, among other suggestions presented in 3.2.3.
5.2.3 **Partnerships should be created to increase the network and resources to preserve biodiversity**

Particularly over the last decade, a number of new partnerships with different groups including the government have been formed. These include interactions between local fishers and tour guides with non-governmental universities, science research facilities, and non-governmental organizations (NGOs) to encourage the conservation, rather than the destruction of LSI’s resources (Young, 2001).

Since 1994, the government has started to decentralize control over the LSI area. In 1995, the reserve management headquarters was moved from La Paz to Geurrero Nego. While it is still a three hour drive away, it is an improvement over its old location. There was an increase in “on the ground” personnel who were responsible to talking to local communities. Additionally, government officials no longer accepted bribes or demanded illegal fees. This has greatly improved the relationship between the reserve management and the local communities and creates a better environmental for creating new integrated ideas (Agersted, 2006).

In 1977, Swartz, Jones, and Bursk conducted the first systematic studies of the grey whales in LSI (Laguna San Ignacio Science Program, 2007). Their efforts were joined by scientists who conducted some of the first research on radio-tagging, grey whale growth and energy use, as well as bioacoustics. In 1996, Urban resumed surveys on grey whale abundance and beginning in 2002, Swartz and Urban, with the help of Kuyima Eco-Tourism and the Universidad Autonoma de Baja California Sur, collaborated to create a photo ID for whales in Baja California.

In 2007, the science program at Laguna San Ignacio was established, representing a more collaborative and formalized approach to research. They were
joined by Pro-Peninsula to incorporate socioeconomic issues into conservation. On February 24, of the same year, a workshop was held that brought together ecotourism operators, fisherman, and the local residents of the lagoon to explain the “ecosystem science” program and to discuss some of the concerns over conservation and management at LSI. Part of the discussion also included discussing the value and uses of local knowledge in the decision-making process. Recommendations included updating and allowing fishers to share information using the LSI webpage, holding annual meetings in an accessible location to continue to knowledge-share and learn about the science program, and increasing co-ordination and efficiency of ecotour operations through improved awareness and communication (Swartz et al., 2007). In this way, local communities learned more about their environment and ecosystem from a scientific perspective, creating an integrated solution for biodiversity conservation.

5.2.4 Maximizes the early and long-term participation of local people in the decision-making process

In 2005, Ejido Luis Echeverria, one of the communities in Laguna San Ignacio, was involved in creating a 140,847 acre conservation easement, restricting access to development on the majority of their land. In return, the ejido receives $25,000 a year from a trust fund created by the International Community Foundation of San Diego (Laguna San Ignacio Whale Conservation Campaign, 2005; Dibble, 2005; Davis, 2008). The spending of the money is being monitored by Pronatura, the oldest and largest conservation group in Mexico, and Wildcoast, a conservation group based in San Diego that focuses on protecting the land in the Baja California Peninsula. They ensure that the money is being re-invested on environmentally sustainable development projects (Laguna San Ignacio Whale Conservation Campaign, 2005; Dibble, 2005).
This move by the ejido is unusual in Mexico for a number of reasons. In the 1917 Constitution, Mexico designated communal land among landless Mexicans, disallowing them from buying or selling the land. In the 1990s, changes allowed privatization of the communal property and as a result, ejidos were choosing to sell the land, having few alternative economic options. As a result, developers and land speculators began to quickly buy up the land. This was the case of the proposed salt extraction production in 1995 as has been previously mentioned. The Natural Resources Defense Council played an active role in opposing the development and raised $1.5 million for the creation of the easement. While these protected lands are common in other parts of the world, they are not common in Mexico, making this a unique opportunity for research (Dibble, 2005).

As Raúl López Góngora, president of Ejido Luis Echeverría, said, “Everyone in Baja California Sur is thinking about selling their land, but we’re going to show that you don’t necessarily have to sell” (Dibble, 2005). Pachico’s Eco Tours is leading the way in this movement and is hoping to diversify their services to include mountain biking, sailing, kayaking, and guided tours to ancient cave paintings in the area (Davis, 2008). They also foresee the creation of more job opportunities for the community through a farmers market and tour guides. Jesus Mayoral, the manager of Pachico’s Eco Tours, will also meet with a representative from Expedia, the travel website, to discuss some options as to how to better promote their company (Dibble, 2005; Davis, 2008). Negotiations with the neighbouring Ejido Emiliano Zapata for approximately 175,000 acres are underway (Laguna San Ignacio Whale Conservation Campaign, 2005).
Without economic benefits, it is very difficult to convince local people to conserve land (Davis, 2008). Combining efforts with other organizations brings different interests, concerns and expertise to create more powerful efforts and integrated solutions. Support from local groups also means that the effort to conserve biodiversity in Laguna San Ignacio is more likely to be sustained. The creation of the protected land is unique because the community itself made the decision for what they wanted for their own future (Davis, 2008). Other than making a land claim with Mexico’s National Agrarian Registry, there is no direct involvement by the government. If the ejido does not follow its conservation commitments, however, funds could be retracted and the group could be subject to a lawsuit. In this way, not only is the local community making a decision about how they want their land to be managed, but are also held accountable for their actions.

5.2.5 Creates educational opportunities for local communities, visitors, and the greater national or international community

Educational experiences are useful in creating support for conservation efforts both within the local community at LSI as well as at a greater scale. Prior to 1994, there were very few attempts at training local people, and consequently, there was limited understanding of what the biosphere was attempting to accomplish. Understanding the goals and how each individual can contribute to conservation means that they are more likely to take ownership in being environmentally sustainable (Young 1995b in Agersted, 2006).

Between 1995 and 1998, partners including the management of the reserve, UNESCO and RARE Conservation, a U.S.-based non-governmental organization (NGO), conducted three month guide training programs (Agersted, 2006; Swartz et al.,
Students learned to speak English, local and natural cultural history, tour guiding skills and planning, as well as marketing (Mahoff 2001 in 7). Many of the local tour guides have accumulated knowledge over a decade of ecotourism development and are now sharing their knowledge not only with visitors, but also with local children (Agersted, 2006; Pachico's Eco Tours, 2008).

In 1999, a local woman was hired to oversee the building of a community centre and to conduct environmental awareness workshops for the children of LSI. Her role also included acting as a liaison between reserve management and the community. In 2001, the Reserve, UNESCO, the United Nations Environmental Programme (UNEP), and RARE, teamed up to develop a long-term action plan for conservation in the El Vizcaino Biosphere Reserve. Some of the goals of the program included promoting the sharing of experiences and best practises for integrating ecotourism with conservation and enhancing awareness of conservation efforts in the area (Agersted, 2006).

Partnerships with scientific research groups such as the Laguna San Ignacio Science Program have also created educational opportunities for the local community, allowing individuals, such as Ranulfo of Pachico’s Eco Tours, to participate in research and monitoring in the lagoon (Pachico’s Eco Tours, 2008, Swartz et al., 2007).

Conservation efforts in LSI gained national and international recognition as a result of the salt mining controversy that began in 1995. Numerous celebrities took conservation at LSI as their cause and visited the area, taking part in whale watching and other ecotourism opportunities. They also helped to bridge the gap between this small community and the rest of the developed and undeveloped world (Young, 1999). While there has since been a decline in celebrity support, the international recognition
helped to create the funding needed to continue educational programming into the future.

5.3 Recommendations

After reviewing some of the indicators for the success of ecotourism in the conservation of biodiversity in LSI, suggestions include:

- **Increase the diversification and value-added products to increase economic benefits** – This can be in the form of creating services that extend the length of the ecotourism season or becoming specialized in one particular service. This not only increase revenue for the providing company, but also provides jobs in secondary services such as at lodging facilities, restaurants etc.

- **Continue grey whale monitoring programs over the long-term, also incorporate other organisms etc. in indicators** – This should also be done with the trends in whale watching tours to try to corroborate the results and make general statements about the effects of whale watching on grey whales and the ecosystem at LSI

- **Foster better relationships with external organizations** – Can provide funding to enhance current projects as well as the initiation of new services. Will also help to bridge the gap between LSI and the international community

- **Increase social cohesion within the different communities within LSI** – By having different social events and festivals that act as an educational event as well as opportunity for sharing information. Also can be done with roundtable discussions that encompass a variety of opinions and backgrounds.
- **Improve training and educational programming for both children and tourism operators** – Encourages social learning and an appreciation for the natural environment.

- **Formalize adaptive environmental management** – create formal channels for monitoring and re-assessment. Should include feedback not only from the local community but also visitors.

- **Improve promotion of whale watching and ecotourism in the LSI area** – Work with different groups including tourism agencies to gain access to a national and international market.

- **Encourage other ejidos to create land easements** – Provides not only an ecological incentive, but also an economic and social incentive.

- **Create a governance structure that is able to enforce regulation** – If laws are enforced and there is a tangible penalty, fewer people will be willing to illegally poach or use the area for narcotics transportation.

### 5.4 Summary

An indicator-based conceptual framework is useful in identifying where the strengths and weaknesses of ecotourism in Laguna San Ignacio lie. It also provides a means of creating benchmarks and evaluating how well the community is doing to protect biodiversity. There are many challenges that affect the viability of ecotourism, including creating enough economic stability to reduce the need to fish throughout the year. There are, however, many programs and initiatives that prove that ecotourism has the potential to be a very successful development strategy in this community, through a collective effort by many different groups.
CHAPTER SIX: CASE STUDY ANALYSIS – TESTING ECOTOURISM MARKETING IN LAGUNA SAN IGNACIO

Up to this point, the case study analysis has focused on some of the “on the ground” solutions that have been implemented in LSI and some of the specific management concepts and techniques that improve how they function. The purpose of this section is to examine the case study from a non-academic point of view in order to evaluate how accessible ecotourism in LSI is to the average tourist in Canada who does not know any of the background information and the work that it took to develop ecotourism in the area. It will discuss the application of integrated management on company websites and provide some suggestions for improvement.

6.1 Scenario & Persona

Scenario: “I am a female in my early 20s who is currently living in Kingston, Ontario. I am looking for a vacation option that is somewhere warm since all it seems to do here is snow. I am interested in environmental issues and have been studying the discipline at university for four years. As a result, I have been struggling with how to travel, knowing that airplanes are one of the most polluting forms of transportation, however, I would like to be able to make as many sustainable travel decisions as possible. After considering a number of locations, I have chosen to travel to Baja California Sur and would like to visit Laguna San Ignacio, having heard about it my animal behaviour class. According to my professor, this is one of the ‘world’s gems,’ serving as a breeding ground for a large portion of the Pacific grey whales. I don’t have any friends who have been to the area, so I am planning on relying on the internet to find information and make a decision.”
6.2 Methods

Using Google as a search engine, I chose some combinations of a few key words to narrow down my search. These included, but were not limited to, “ecotourism,” “whale watching,” “Baja California,” and “Laguna San Ignacio.” Some of the links led directly to company websites, while others led to personal accounts or journals of their travels to the area. If so, I skimmed through the ones that seemed the most informative to get a better idea of the experience that others had had and if there were any suggestions as to the best tour guides and options. I spent about three to four hours going through this process.

6.3 Findings

After searching on the internet for ecotourism companies in LSI, I created a list of five companies that I was able to find. These are listed and described in table 4. Table 5 uses the following six criteria to assess the companies based on what an average environmentally and socially conscious traveler would be looking for:

- Accessibility of website
- Ease of using the website
- Quality of Overall Services & Amenities including both selection of options as well as how sustainably-aware they were
- Variety of Options
- Accessibility of Site (ie transportation to LSI included in package?)
- Number of people on the tour
In general, the websites that I was able to find offered a wide variety of services and varying levels of ease of reading for each company. It was interesting that the two locally-owned and run companies were owned by the same family. The two websites were also the most difficult to understand and while I had no doubt that the quality of the tour itself would be high, the confusing layout and obvious language barrier as well as the requirement to set up my own travel arrangements would have been a deterrent. In contrast, the three other companies were based out of larger cities. Larger cities generally hold more skilled workers which is reflected in the quality of the English, grammar, and website.

For each of the websites, I noticed that there was a different perspective that was used to sell their product or seemed to be the focus of their business. For Go South Adventures, their main selling point appeared to be the convenience of the trip, which is useful in trying to appeal to the mass market, but not to someone who is looking for travel that is more socially and/or environmentally conscious. Baja by Kayak and Pachico’s Eco Tours, both locally owned and operated, emphasized the participation of the local community and the experience that he and his family had. Journey Mexico and Baja Ecotours both incorporated some environmental innovation aspects into their tours, as both offer solar and wind-powered energy for their accommodations.

6.4 Discussion & Conclusions

Although I was looking at these websites from an “outside” perspective, I also wanted to critically analyze how well they had done with respect to the definition of ecotourism that was proposed at the beginning of this paper. As previously mentioned, ecotourism is considered “purposeful travel to natural areas to understand the culture
and natural history of the environment, taking care not to alter the integrity of the ecosystem, while producing economic opportunities that make the conservation of natural resources beneficial to local people” (Wood, 1991).” The websites generally only focused their marketing on only one of the three “pillars” – ecological, economic, and social – of sustainable development that were outlined previously in their paper, rather than a combination of all three. I think that this continues to prove that while ecotourism in LSI is trying to create more integrated solutions, these are not necessarily seen as a strong point for marketing.

Additionally, all of the websites needed improvement. In a world where many, if not most, travelers are tech-savvy, it is important to utilize this tool as much as possible. I found it extremely frustrating to find an explanation, for example, of how the companies had teamed up with other organizations to provide better services, what the local involvement was, and how it affected/benefited/negatively impacted the local community. In the literature review, there were many examples of how Pachico’s Eco Tours uses education, partnerships, research, and economic opportunities to benefit the entire community. On the website, however there was very little mention of any of these actions, which would have been effective as a marketing technique. As an improvement, the website should create direct linkages between ecotourism (i.e. visitor dollars) and the positive effects on the community.

Accessibility of information also plays a huge factor in the ability of an outfitter to attract visitors. One company that was mentioned in much of the literature was Kuyima Ecotourism, which was involved with much of the research and infrastructure construction in LSI. Ironically, I was not able to find this website through a general
google. This is ironic as their website was the easiest to use and understand.

Additionally, Agersted (2006), provides a list of local, regional, and foreign whale
watching operators in LSI in 2004, many of which I could not find web-based information
for (Table 6). Of the five LSI-based outfitters, I was only able to find the website for
Pachico’s.

From a consumer viewpoint, it is very difficult to determine which companies are
taking meaningful steps toward sustainable development and which ones are not. For
those that are, their promotional material needs to exemplify how they are different to
mass tourism company and what the benefits are for the local community. Forming
partnerships with external companies to create and maintain a good accessible,
accurate website is essential. Ecotourism as a means of sustainable development can
only be maintained if it can make money; without accessible information and customers,
the entire system could collapse.
CHAPTER SEVEN: OVERALL CONCLUSIONS

This paper examined ecotourism from an ecological, economic, and social perspective and argued that integrated management provides more robust solutions that have a greater overall benefit for the local community, such as at Laguna San Ignacio (LSI) in the El Vizcaino Biosphere Reserve of Baja California Sur, Mexico. Integrated solutions recognize that there is a correlation between social and environmental injustice and the market, as well as the need to implement solutions that will address them at the same time. It also implements sustainability considerations throughout deliberation, decision-making, and implementation; incorporates traditional disadvantaged groups and multiple perspectives; creates partnerships at different scales; and uses adaptive environmental monitoring.

In many cases, the theory of ecotourism as sustainable development does not translate as smoothly into “on the ground” results. An indicator-based conceptual framework was therefore used to assess and identify some of the strengths and weaknesses of the existing initiatives at Laguna San Ignacio, as well as some recommendations for improvement. Some of the recommendations include: diversifying products; continuing long-term research; fostering better relationships with external organizations and the communities within LSI; improving training and educational programs; placing enforcement of regulations into the governance structure; and encouraging other ejidos to create land easements. Additionally, marketing information needs to be improved so that it reflects the benefits of ecotourism on the local community and so that it is accessible to an international market.
Future research should focus on developing new strategies for ecotourism and sustainability in the community as well as how they can be applied at other biosphere reserves and protected areas to achieve sustainable development.
APPENDIX A: BIBLIOGRAPHY


### Table 1: Benefits of biosphere reserves by value and purpose (Agersted, 2006)

<table>
<thead>
<tr>
<th>Value category</th>
<th>Main purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conservation values</td>
<td>Maintenance of biological functions and biological diversity; conservation of representative habitats and habitats of rare and endangered species (Agardy 1993; UNESCO 2002a)</td>
</tr>
<tr>
<td>Recreational values</td>
<td>Enhanced recreational opportunities, such as ecotourism (Eagles &amp; McCool 2002)</td>
</tr>
<tr>
<td>Commercial values</td>
<td>Sustainable use of species and ecosystem (Bohnsack 1996); employment opportunities (UNESCO 2002a)</td>
</tr>
<tr>
<td>Research/Education values</td>
<td>Increased understanding of natural systems and human impacts on them (BrucKhoorst &amp; Bridgewater 1999; UNESCO 2002a); interpretation for the purpose of tourism (Agardy 1993)</td>
</tr>
<tr>
<td>Historic values</td>
<td>Protection of archaeological, historical and cultural sites (Agardy 2000)</td>
</tr>
<tr>
<td>Management values</td>
<td>Provision of baseline data; simplification of use and monitoring; buffer against uncertainty (UNESCO 2002b)</td>
</tr>
<tr>
<td>Community values</td>
<td>Greater influence in local land-use decision-making; reduced conflict with protected area management; enhancement of traditional activities and culture; healthier environment (BrucKhoorst &amp; Bridgewater 1999; UNESCO 2002a; UNESCO 2002b)</td>
</tr>
</tbody>
</table>

### Table 2: Top 10 Spenders and Earners of International Tourism Receipts and Share of Total, 2000 (Mastney, 2001)

<table>
<thead>
<tr>
<th>Spenders</th>
<th>Share of Total (percent)</th>
<th>Earners</th>
<th>Share of Total (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>14.0</td>
<td>United States</td>
<td>18.0</td>
</tr>
<tr>
<td>Germany</td>
<td>10.0</td>
<td>Spain</td>
<td>6.5</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>7.7</td>
<td>France</td>
<td>6.3</td>
</tr>
<tr>
<td>Japan</td>
<td>6.6</td>
<td>Italy</td>
<td>5.8</td>
</tr>
<tr>
<td>France</td>
<td>3.6</td>
<td>United Kingdom</td>
<td>4.1</td>
</tr>
<tr>
<td>Italy</td>
<td>3.2</td>
<td>Germany</td>
<td>3.7</td>
</tr>
<tr>
<td>Canada</td>
<td>2.6</td>
<td>China</td>
<td>3.4</td>
</tr>
<tr>
<td>Netherlands</td>
<td>2.5</td>
<td>Austria</td>
<td>2.4</td>
</tr>
<tr>
<td>China</td>
<td>n.a.</td>
<td>Canada</td>
<td>2.3</td>
</tr>
<tr>
<td>Belgium/Luxembourg</td>
<td>n.a.</td>
<td>Greece</td>
<td>1.9</td>
</tr>
<tr>
<td>Top 10 Total</td>
<td>50.2</td>
<td>Top 10 Total</td>
<td>54.4</td>
</tr>
<tr>
<td>Element</td>
<td>Example of Risks from Tourism Activities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Ecosystems   | - Integrity of biological reserve processes and wildlife may be disturbed or disrupted by ecotourism development and use  
|              | - Soil compaction can occur in certain well-used areas and from construction  
|              | - Erosion from use of trails and roads  
| Vegetation   | - Trampling, transportation and other intensive use in fragile habitats can have a negative effect on vegetation  
|              | - Removal of vegetation for construction, food, grazing and souvenir purposes might have negative impacts on the environment  
|              | - Introduction of invasive species might bring disturbance to plant community  
|              | - Fire frequency may change due to tourists and park tourism management  
| Water        | - Increased demands for fresh water  
|              | - Disposal of sewage or litter in rivers, lakes or oceans increases pollution levels  
|              | - Release of oil and fuel from ships and smaller craft  
| Air          | - Motorized transportation may cause pollution from emissions  
| Wildlife     | - Habitat destruction and fragmentation which occurs from a variety of construction purposes e.g., roads, trails, buildings, and moors and settlements might have threatening effects on wildlife populations  
|              | - Wildlife feeding can lead to behavioural changes, poor nutrition and dependence on artificial food supply  
|              | - Litter, garbage and pollution might influence wildlife reproduction negatively  
|              | - Noise, visual or harassing behaviour can increase stress and natural rates of wild life mortality by disturbing wild life processes such as breeding, feeding, hunting, migration routes and resting  
|              | - Human habitation can cause changed wildlife behaviour such as approaching people for food  
|              | - Ecotourism growth might increase extraction pressures on existing wild life e.g., in the form of over fishing, hunting for game meat, and animal souvenirs made from native species  
|              | - Invasive species might accidentally be introduced from effects of transportation, escapement of pets, etc.  


Table 3: Examples of risks on the natural environment from tourism activities (Agersted, 2006)
<table>
<thead>
<tr>
<th>Ecotourism Company</th>
<th>Website</th>
<th>Headquarters Location</th>
<th>Apparent Focus of Marketing</th>
<th>Notes</th>
</tr>
</thead>
</table>
• Staff come from a variety of backgrounds and locations in the world  
• Working with a number of organizations to ensure that travel is sustainable  
• $2,255/person including a chartered flight from San Diego for five days in LSI  
• Camping  
• Group size: up to 24 |
U.S. Office: Colorado Springs | Some Environmental/General Tourism | • Cabins and facilities are solar-powered, also wind generators on-facility  
• Provide meals on-side – authentic cuisine  
• Have own campground at LSI  
• 5 day accommodations + air from San Diego |
| Baja by Kayak     | [http://www.babajakayak.com/About.htm](http://www.babajakayak.com/About.htm) | LSI | Social Benefits, knowledge, local communities | • 5-6 days  
• Run by Pachico Mayoral (also of Pachico Eco Tours)  
• Have a number of packages that cater a variety of people and backgrounds  
• Website focuses on how the company is locally run and operated, personal experiences  
• Have to find own way there |
| Pachico’s Eco Tours | [http://www.pachicosecotours.com/](http://www.pachicosecotours.com/) | LSI, have external office | Social Benefits, knowledge, local communities | • A couple packages including one/two day trips, also bird watching  
• Accommodations are cabins with extra fee for bedding etc.  
• Also focus on personal connections with whales, personal stories  
• Home cooked meals available also for an additional fee  
• Have to find own way there |
| Go South Adventures | [http://www.gosouthadventures.com/mexico-baja-whale.htm](http://www.gosouthadventures.com/mexico-baja-whale.htm) | Seattle, WA | Genera/Mass Tourism/Economic | • 5 days, $2100 including a chartered flight from San Diego  
• Accommodations are canvas safari tents  
• Seems generic, no apparently focus on environmental concerns  
• No details about the “Ecotourism part of the trip” ie about the animals or specific details of the environment |

**Table 4:** Ecotourism and whale watching companies in Laguna San Ignacio that were accessible by a general internet search
### Table 5: Evaluation of five ecotourism companies in Laguna San Ignacio

<table>
<thead>
<tr>
<th>Company</th>
<th>Accessibility of Website</th>
<th>Ease of Use of Website</th>
<th>Quality of Overall Services &amp; Amenities*</th>
<th>Quality of Variety in Options</th>
<th>Accessibility to Site</th>
<th>Group Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Journey Mexico</td>
<td>High</td>
<td>Med</td>
<td>Medium</td>
<td>Low</td>
<td>High</td>
<td>Up to 24</td>
</tr>
<tr>
<td>Baja Ecotours</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>Med</td>
<td>High</td>
<td>Up to 24</td>
</tr>
<tr>
<td>Baja by Kayak</td>
<td>High</td>
<td>Low</td>
<td>High</td>
<td>Med</td>
<td>Low</td>
<td>n/a</td>
</tr>
<tr>
<td>Pachico’s Eco Tours</td>
<td>High</td>
<td>Med</td>
<td>High</td>
<td>Med</td>
<td>Low</td>
<td>7-8 (size of boat)</td>
</tr>
<tr>
<td>Go South Adventures</td>
<td>Med</td>
<td>Med-Low</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
<td>n/a</td>
</tr>
</tbody>
</table>

*Accessibility & Environmental Consciousness

### Table 6: Local, regional, and foreign operators conducting whale watching tours in Laguna San Ignacio, 2004

<table>
<thead>
<tr>
<th>Company</th>
<th>Location</th>
<th>Activities offered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecoturismo Kuyima</td>
<td>San Ignacio</td>
<td>whale watching, camping/lodging facilities, outsourcing, food and drinks, and transportation</td>
</tr>
<tr>
<td>Pachico’s Eco Tours</td>
<td>Laguna San Ignacio</td>
<td>whale watching, outsourcing, food and drinks</td>
</tr>
<tr>
<td>Baja Adventure</td>
<td>Laguna San Ignacio</td>
<td>whale watching, camping/lodging facilities, food and drinks</td>
</tr>
<tr>
<td>Antonio’s Eco Tours</td>
<td>Laguna San Ignacio</td>
<td>whale watching, food and drinks, camping/lodging</td>
</tr>
<tr>
<td>Cantil Rey Laguna Tours</td>
<td>San Ignacio</td>
<td>whale watching, transportation</td>
</tr>
<tr>
<td>Baja Discovery</td>
<td>San Diego</td>
<td>whale watching*, upscale camping/lodging facilities</td>
</tr>
<tr>
<td>Baja Expeditions</td>
<td>San Diego</td>
<td>whale watching*, upscale camping/lodging facilities</td>
</tr>
<tr>
<td>Lindblad Expeditions (Sea Bird, Sea Lion)</td>
<td>New York</td>
<td>whale watching*, liveaboards</td>
</tr>
<tr>
<td>Horizon</td>
<td>San Diego</td>
<td>whale watching*, fishing, liveaboards</td>
</tr>
<tr>
<td>Shogun Sport Fishing</td>
<td>San Diego</td>
<td>whale watching*, fishing, liveaboards</td>
</tr>
<tr>
<td>H&amp;M Landing (Spirit of Adventure)</td>
<td>San Diego</td>
<td>whale watching*, fishing, liveaboards</td>
</tr>
<tr>
<td>Royal Star Sports Fishing</td>
<td>San Diego</td>
<td>whale watching*, fishing, liveaboards</td>
</tr>
<tr>
<td>Royal Polaris Sports Fishing</td>
<td>San Diego</td>
<td>whale watching*, fishing, liveaboards</td>
</tr>
<tr>
<td>Pacific Queen Sports Fishing</td>
<td>San Diego</td>
<td>whale watching*, fishing, liveaboards</td>
</tr>
<tr>
<td>Searcheter Sports Fishing</td>
<td>San Diego</td>
<td>whale watching*, fishing, liveaboards</td>
</tr>
</tbody>
</table>

Note: All liveaboards and foreign camps present in LSI must use local companies to conduct whale watching activities.

Source: (CONANP 2005)
APPENDIX C: FIGURES

**Figure 1:** Zoning in biospheres (UNESCO, 2002 in Agersted, 2006)

Source: UNESCO 2002

**Figure 2:** Venn diagram representing ecotourism at the centre of ecological, economic, and social interests (2.4)
Figure 3: Recommendations and principles for equitable ecotourism development (Scheyvens & Purdie, 1999)
Figure 4: Location of Laguna San Ignacio in the Baja California peninsula and in relation to surrounding towns. The circles indicate the location of Laguna San Ignacio (bottom left) and the nearest town, San Ignacio (centre) (adapted from Agersted, 2006).
Figure 5: Close-up map of Laguna San Ignacio. The circles indicate the location of the five settlements (centre) and the barrier islands that reduce water flow into the lagoon (bottom centre) (adapted from Agersted, 2006)
Figure 6: Estimated ecotourism gross revenue in LSI defined by operators type in 1994 and 2002. Note the decrease in liveabords and the increase of local and regional outfitter revenue (Agerstead, 2006).

Figure 7: Estimated gross revenue for local and regional tour operators in LSI, 1994-2002 (Agersted, 2006)