

Perception of Importance and Performance of Certified Costa Rican Ecolodges

by

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Author's Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Abstract

With the growth of ecotourism and nature-based tourism, ecolodges are becoming more popular as an accommodation choice by tourists. There is currently no universal certification program ensuring service quality or environmental sustainability for ecolodges. Costa Rica is one of the few countries with a certification program in place that allows ecolodges to join by meeting certain standards. Visitors from three different certified ecolodges in Costa Rica were asked to fill out a questionnaire asking for demographic and trip characteristic information, with a section pertaining to their perception of importance and performance of 42 ecolodge attributes. The information was then applied to an Importance-Performance Analysis to gain a better understanding of how ecolodges are operating based on visitor feedback. The results from this thesis are then compared to the results of a similar study done by Kwan (2008) in Belize, where no certification exists for ecolodges. It is found that certified ecolodges received higher performance scores from their guests than uncertified ecolodges. It was also found that visitors place higher importance on more attributes when visiting a certified ecolodge, compared to uncertified ecolodges. This study also found that certified ecolodges are meeting the expectations of their clientele, by having higher performance scores than importance scores on 41 of 42 attributes. This thesis indicates that the presence of certification programs for ecolodges influences higher performance scores and can help ensure a successful future for this type of accommodation.

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Table of Contents

Author's Declaration.....	ii
Abstract	iii
Acknowledgements	iv
List of Figures	ix
List of Tables	x
Chapter 1: Study Background	1
Introduction	1
Background Information.....	3
Costa Rica as Ecotourism Destination.....	4
Events Contributing to Costa Rica Tourism.....	5
Costa Rica Code of Ethics for Tourism	6
Study Site	7
Tourism Growth on the Osa Peninsula	8
Foreign Ownership on the Osa Peninsula.....	9
Ecotourism Participation on the Osa Peninsula.....	10
Certification for Sustainable Tourism	10
Problem Statement.....	13
Research Objectives.....	13
Research Questions	13
Contributions of this Study	15
Chapter 2: Literature Review	17
Introduction	17
Ecotourists	17
Describing Ecotourists.....	17
Motivations of Ecotourists	20
Tourists Visiting Costa Rica	22
Introduction	22
Psychographic Personality Types	24
Future Tourism Planning for Costa Rica.....	26
Satisfaction Measurement in Tourism.....	27
Certification.....	28

Introduction	28
Certification in Tourism.....	30
Accreditation and Certification Process and Players	32
Tourism Certification in Costa Rica	36
Certification for Sustainable Tourism	36
Green Deal	39
The New Key to Costa Rica.....	40
Financial Importance of Ecotourism	41
Ecolodges	42
Introduction	42
Accommodation Flexibility in Ecotourism	44
Improving Ecolodges with Consumer Feedback	45
Importance-Performance Analysis	46
Introduction	46
Perceived Importance and Performance of Attributes.....	48
Interpreting the IPA Grid.....	50
Chapter 3: Methodology	52
Introduction	52
Study Framework.....	52
Study Design	53
Research Instrument.....	56
Survey Distribution	58
Data Analysis.....	60
Chapter 4: Results	62
Section 1: Costa Rica Ecolodges.....	62
Survey Response Rate.....	62
Descriptive Statistics	63
Age Group	63
Male to Female Ratio	64
Country of Residence	64
Education	65
Employment Status.....	66

Annual Household Income (US dollars)	66
Trip Characteristics	67
Total Trip Length in Costa Rica.....	68
Average Length of Stay at the Ecolodge	69
Party Composition.....	70
Major Sources of Information.....	70
Past Experience with Nature Based Accommodations/Ecolodges	71
Other Types of Accommodations Used on the Trip.....	72
Most Popular Recreational Activities during Respondents' Ecolodge Stays	73
Most Important Travel Motivation Factors	74
Single Most Important Reason for Travelling to Costa Rica	76
“What is an Ecolodge?”.....	77
Knowledge of Costa Rican Certification for Sustainable Tourism (CST)	78
Research Questions	79
Research Question 1	80
Research Question 2	82
Research Question 3	85
Research Question 4	91
Research Question 5	98
Research Question 6	98
Research Question 7	101
Section 2: Comparing Costa Rica and Belize Ecolodges.....	105
Summary of Results	114
Chapter 5: Summary and Discussion.....	116
Summary and Discussion of Findings.....	117
Demographic and Trip Characteristics	118
Perception of Importance and Performance of Attributes.....	120
The Modified IPA Results	122
Demographic and Trip Characteristic Differences in the Five Derived Factors	124
Satisfaction on the Five Derived Factors.....	125
Comparing Findings in Costa Rica and Belize.....	126
Implications of the Findings	126

Implications for Future Research.....	128
Utility of the Modified IPA Technique.....	128
Biases, Issues, Limitations, and Recommendations of the Study	130
Recommendations Future Research.....	131
Conclusion.....	132
References.....	135
Appendix A	146
Appendix B	152
Appendix C	154
Appendix D	156

List of Figures

- Figure 1 Geographical Location of Costa Rica and the Osa Peninsula
- Figure 2 Conceptual Framework of Study
- Figure 3 Psychographic Personality Types
- Figure 4 Players in Tourism Ecolabels
- Figure 5 Ecotourism Accommodation Spectrum
- Figure 6 Importance-Performance Analysis Grid
- Figure 7 A Lodging Style Available at Bosque del Cabo Rainforest Lodge
- Figure 8 Main Dining Area at El Remanso Rainforest Wildlife Lodge
- Figure 9 A Type of Lodging Style Available at Luna Lodge
- Figure 10 The Modified IPA Grid for all Derived Factors
- Figure 11 Total Sample: The Modified IPA Grid for all Attributes

List of Tables

- Table 1 Purpose of Visit: Selected Results of 1995 Visitor Survey, Costa Rica
- Table 2 Summary of the Costa Rican Sustainable Tourism Program
- Table 3 Magnitude Estimates of Ecotourism in Costa Rica and Kenya
- Table 4 Costa Rica International Tourism Statistics
- Table 5 Ecolabels: Calendar of Events
- Table 6 Summary of Sustainable Tourism Related Certifications and Guidelines in Costa Rica
- Table 7 CST Criteria for Hotels
- Table 8 Facility Ratings Criteria Used in the New Key System to Costa Rica
- Table 9 Characteristics of Ecolodges
- Table 10 Variables of this study
- Table 11 Age Group
- Table 12 Country of Residence
- Table 13 Education
- Table 14 Employment Status
- Table 15 Annual Household Income
- Table 16 Average Trip Length
- Table 17 Average Length of Stay
- Table 18 Party Composition
- Table 19 Major Sources of Information
- Table 20 Past Experience with Nature-Based Accommodations
- Table 21 Other Types of Accommodation Used on the Trip
- Table 22 Other Types of Accommodation Used on the Trip
- Table 23 Travel Motivation Attributes
- Table 24 Common Responses: Single Most Important Reason for Travelling to Costa Rica
- Table 25 Summary Information of Ecolodge Patrons' Perception of an Ecolodge

Table 26 Knowledge of CST

Table 27 Important Ecolodge Attributes (Perception of Importance Ratings above 4.0)

Table 28 Performance of the 25 Most Important Ecolodge Attributes

Table 29 Factor Analysis Results of Ecolodge Attributes

Table 30 Perception of Importance of Derived Factors based on Demographic Statistics and Specific Trip Characteristics

Table 31 Comparison of the Important Ecolodge Attributes between Costa Rica and Belize Ecolodges

Table 32 Perception of Performance Ratings for 40 Ecolodge Attributes in Costa Rica and Belize

Table 33 Comparison of Derived Factors and Variable Grouping

Chapter 1: Study Background

Introduction

The tourism industry is an example of how businesses must adapt to trends in order to stay successful. As peoples' motivation for travel changes, so too must the accommodations, attractions, information, and transportation desired for a satisfying experience. The depletion of the earth's natural resources and current debates over climate change has brought issues of environmental justice to the front page of newspapers. The desire of people to travel to exotic natural areas of the planet has grown, leading to increased visitation to developing countries (Kwan, 2008). Nature-based tourism has given rise to the development and usage of an accommodation that caters to tourists who place high importance on the preservation of natural environments and the living culture present in host countries (Liu, Siguaw & Enz, 2008; Kwan, 2005).

Ecolodges tend to be small-scale and cooperative with the natural environment, as opposed to other accommodations that manipulate or destroy the environment they are constructed in (Osland & Mackoy, 2004). Fifteen years ago, the majority of existing literature dealt with best practices, the physical environment, sustainability assessments, and provided definitions to help explain ecolodges (Wight, 1997). Research directed at the tourists themselves has uncovered other dimensions of ecotourism that were not considered in early literature (Liu, Siguaw & Enz, 2008).

Some owners and managers of ecolodges have realised the value of sustainability and have strived to reach milestones involved in certification programs (CST, 2012). Certifying products and services as ecotourism is considered to be a mark of generally high product quality

as well as an indication of environmentally, economically, and socially sound products (Haaland & Aas, 2010). This may be true, but do tourists who partake in ecotourism expect their accommodations to meet standards linked to the high quality product that is expected from the overall experience? Accommodations are a major part of the tourism experience and different tourist types require certain luxuries (Chu & Choi, 2000). It is important for ecolodge managers to know how certification can influence a tourist's perception of their business and what is expected.

Division by price is a common way of separating expectations as well as experience offered (Patterson, 1993). Ecotourists are not a homogenous group and have different motivations that are challenging to label (Wight, 2001). This makes it challenging to ascertain particular reasons pertaining to accommodation selection. Since ecotourists are said to be environmentally conscious consumers, it is difficult to know if components of the natural environment are more highly valued than the services offered at a destination, or vice versa (Wight, 2001). When tourists decide to stay at an ecolodge, what attributes are they basing their decisions on?

Kwan (2008) asked if it was legitimate to say that tourists who choose to stay at more expensive ecolodges have the strongest preferences on high quality services, and less on wildlife interactions and quality of natural environment as compared to the tourists who stay at ecolodges at the lower-price categories. Can the opposite be said about tourists who stay at ecolodges at the lower-price categories? Kwan (2008) also asked how much do ecolodge patrons' perception of importance and performance at ecolodges with different price ranges vary? Kwan (2008) studied patrons of ecolodges in the Cayo District in Belize. The purpose of the study conducted in Belize

was to compare the ecolodge patrons' perception of importance and performance of various travel attribute motives amongst ecolodges categories based on price (Kwan, 2008).

The situation in Belize might indicate the situation of ecolodges more generally. The average size of an accommodation facility in Belize is less than 10 (Blackstone, 1998). Belize Tourism Board (2004) reported 75 listed accommodations facilities in the Cayo District, including campgrounds, hotels/resorts/lodge/inns, liveaboards, condominiums, guesthouses, and vacation rentals. Ecolodge developments are concentrated in and near three towns: Belmopan, San Ignacio, and Benque Viejo del Carmen (Kwan, 2008). Of the 75 accommodation facilities in the Cayo District, 28 of them are nature based accommodations, ecolodges, or eco-resorts (Kwan, 2008). These lodges are situated within or near natural landscapes, and range from providing basic to luxurious accommodations, and with that comes a variety of lodging styles, dining facilities, amenities, nature trails, organized guided tours, and other nature-related activities (Kwan, 2008). This District has applied substantial innovation in the emerging ecolodge industry, as amenity features, environmental education programs and facilities continue to be developed (Kwan, 2008).

Background Information

Costa Rica has a large ecotourism market as well as several established evaluation and certification systems (Rivera, 2002). This research will ask ecolodge patrons their expectations upon arrival at the ecolodge, as well as how satisfied they were when their stay is complete. By asking tourists their expectation and perception of performance levels at ecolodges that are certified, this research will help determine how certification can influence what is expected from a company. By measuring perceptions of importance and performance of clientele, this thesis will also uncover if and how certification influences the quality of services offered by an

ecolodge. This will be achieved by comparing the results of this research to findings of Kwan (2008) in Belize, a study that included uncertified ecolodges. This comparison is rationalized because global definitions for an ecolodge exist and the product, the accommodation itself, should be very similar regardless of location. Due to the lack of global standards for ecolodges, certification is one way to improve service quality. Certification is a market signal of quality and the avoidance of green washing of products.

Costa Rica as Ecotourism Destination

Costa Rica is one of the richest countries in the world in terms of offering an ecotourism experience. The diverse ecosystems present in the country paired with unique natural environments provide all the aspects of the ecotourism experience in remarkable form. International tourism has expanded in Costa Rica since 1950 and continues to grow (Weaver, 1999; ICT, 2011). A survey of foreign tourists was conducted in 1995 to better understand the motivations of travel to Costa Rica. The results showed that visitors were almost equally interested in ecotourism-related pursuits as they were in 3S activities (sea, sand, sun) as their purpose of visit (Table 1).

Table 1.

Purpose of Visit: Selected Results of 1995 Visitor Survey, Costa Rica

Purpose of Visit	USA	Europe	Germany
Sea and Sun	43.9	45.4	85.3
Sport Fishing	8.0	3.1	8.0
Surfing	10.8	7.0	7.2
Snorkelling/diving	9.0	13.5	27.5
Kayaking/rafting	6.6	11.4	9.9
Other sports	2.0	4.8	12.5

Natural History	41.5	49.8	57.1
Birdwatching	11.2	28.8	50.4
VFR	25.1	17.0	16.1
Seminars	7.8	7.0	3.7
Business	16.1	14.4	6.9
Learning Spanish	8.5	10.9	17.9

(TTI, 1996)

Events Contributing to Costa Rica Tourism

Looking back at important events or occurrences leading up to the success of Costa Rica as a tourism destination, one particular decision is important. In 1948, the abolition of the armed forces of Costa Rica took place (Bien, 2002). This allowed military funds to be redirected to other fields such as health and education. This had a domino effect that lead to a country with a strong middle-class, people able to vacation within or outside the country, while also being able to welcome foreign tourists. The Organization for Tropical Studies (OTS) established biological and tropical biological stations in Costa Rica in the 1970s (Bien, 2002). A study done by Laarman (1989) revealed that family and friends of OTS researchers, and returning students were the primary source of growth of nature-oriented tourism in Costa Rica, and the market that exists in Costa Rica was created by word-of-mouth. Bien (2002) recognized that the preconditions for establishing tourism and a tourist industry within a country were already in place: an educated workforce, a populace which itself was familiar with vacation travel, reasonably good infrastructure, and natural beauty. Bien (2002) also added that the proximity to the United States of America also played a major role in the development on the industry, as it became Costa Rica's main market.

Bien (2002) identified two other events in the 1980s that dramatically increased public awareness of Costa Rica. The first was in 1987, when Costa Rica's president Oscar Arias won the Nobel Peace Prize for his 'Central American Peace Plan'. The second event was the excellent performance that Costa Rica displayed at the 1990 World Cup of Soccer. Both these occurrences improved and increased the image of Costa Rica to the rest of the world. By 1990, tourism was producing more income for Costa Rica than coffee production and in 1993 it surpassed bananas (Bien, 2002). Income generated from tourism was not the only thing that changed over time. Bien (2002) found that in 1985, Costa Rica attracted sophisticated tourists. Bien (2002) also stated that as the country increased in popularity, naïve tourists also became attracted to Costa Rica and by 1992 there was a change in types of visitors. This shift attracted attention from mainstream business communities, first local investors and financial institutions and then international investors and hotel chains (Bien, 2002).

Costa Rica Code of Ethics for Tourism

Changes in the type of businesses opening in Costa Rica and the different types of tourists visiting the country called for change in what could be marketed as sustainable or nature-oriented tourism. This gave birth to Costa Rica's earliest code of ethics for tourism in 1989. Below is the code of ethics to help manage tourism, created by the Costa Rican Audubon Society and the Institute for Central American Studies:

- 1) Tourism should be culturally sensitive.
- 2) Tourism should be a positive influence on local communities.
- 3) Tourism should be managed and sustainable.
- 4) Waste should be disposed of properly.
- 5) Wildlife and natural habitats must not be needlessly disturbed.
- 6) There must be no commerce in wildlife, wildlife products, or native plants.
- 7) Tourists should leave with a greater understanding and appreciation of nature, conservation, and the environment.

- 8) Ecotourism should strengthen conservation efforts and enhance the natural integrity of places visited (Holland, 1992).

Study Site

This study was conducted in Costa Rica, a country located between Nicaragua and Panama in Central America. To be more exact, the research was done on the Osa Peninsula, a peninsula of Costa Rica in the Pacific Ocean, almost at the Panama border (Figure 1). The Osa Peninsula is a part of the Puntarenas province and is one of the most biologically intense places on the earth, hosting at least half of all species living in Costa Rica (Osa Conservation, 2010). The peninsula is approximately 1214 km² in size, making it an international hotspot and a high global conservation priority (Osa Conservation, 2010). The main town on the peninsula is Puerto Jimenez, which has its own airport and provides access to Corcovado National Park, one of the peninsula's main attractions.



Figure 1. Geographic Location of the Osa Peninsula, (Coast and Kayak Magazine, 2011).

Tourism Growth on the Osa Peninsula

On the Osa Peninsula, a U.S corporation, Osa Forest Products (OFP), controlled approximately 47,000 hectares but invested minimally into the property, allowing 80 percent of the peninsula to be covered in rainforest in the late 1960s (Van den Hombergh, 1999). One of the major factors contributing to Costa Rica's ecotourism boom was the government's rapid expansion of protected areas in the 1970s and 1980s (Zamora & Obando, 2001). Costa Rica used a broad development model that created a series of push and pull factors toward the country. On top of this, the presence of gold drew hundreds of peasant migrants to the Osa Peninsula. These new migrants claimed nearly 10,000 hectares of OFP land and quarrelled, violently at times, with OFP personnel until President Daniel Oduber took land from OFP and created and created Corcovado National Park in 1975 (Horton, 2009). This was a substantial decision as the park occupied 41,189 hectares of land (Horton, 2009). The situation on the northern Pacific beaches of Costa Rica was quite the opposite, where large transnational hotel chains started to dominate (Horton, 2009). The trend on the Osa Peninsula however was heading in a different direction as individual North American and European investors recognized the potential for ecotourism in the later 1980s (Minca & Linda, 2000). Some of the expected reasons for the lack of hotel investment on the Osa Peninsula are geographical remoteness and a lack of infrastructure (Tico Times, 2002). Another reason that hotels have chosen not to be present on the Osa Peninsula is the strong social presence of local people and the strong possibility of a public protest (Tico Times, 2002).

In the 1980's the Osa Peninsula was a remote "off the beaten track" travel destination. The area had very limited services and the way of life of locals was centred on traditional activities such as agriculture, cattle ranching, and gold panning (Horton, 2009). A major

transformation took place over the next decade, changing the way the peninsula operated. Small airplanes delivered ecotourists to Puerto Jimenez and backpackers filled dozens of new small hotels (Horton, 2009). With this also came local taxi services as SUV's congested the main streets of peninsula's new center of attention for ecotourism. By the 1990s, the tourism sector had overtaken coffee and bananas as Costa Rica's second-leading source of foreign exchange, first being microchips (Inman, 2002). Tourism had also risen to employ 12 percent of the labour force at this time (Zamora & Obando, 2001). This was reflected in the number of annual visitors to the peninsula, as it increased from several thousand in 1990 to over 20,000 in 2000 (Van den Hombergh, 1999). Zamora & Obando (2001) found that Costa Rica received over 1 million tourists in 2000, and over half of whom visited at least one protected area. In 2010, a recorded 2,099,892 tourists visited Costa Rica, bringing tourism figures up higher than that registered in 2008, which was a record year with 2,089,174 tourists recorded (Consultantes Rio Colorado, 2010).

Foreign Ownership on the Osa Peninsula

Horton (2009) explains the important economic and cultural advantages that enabled foreign investors to buy property on the Osa Peninsula. The first advantage was they had capital to purchase land and invest in ecotourism infrastructure. This was an advantage over locals because of the neoliberal reforms of the past two decades, which emphasized market criteria over social criteria, making it difficult for Costa Ricans to obtain bank loans (Eldeman, 1999). Also, foreign investors possessed a greater range of international experience for these types of investments. Finally, foreign investors belonged to fluid, transnational social networks that allowed them to recognize the potential for ecotourism on the peninsula well before Costa Ricans, who were still rooted in more localized and restricted social and cultural networks.

Ecotourism Participation on the Osa Peninsula

A three-tiered model of participation in ecotourism can be observed On the Osa Peninsula. The top tier consists of small to medium-sized, largely foreign owned ecolodges with up to several dozen employees (Horton, 2009). These ecolodges can be found on private reserves with rainforest and beach access on the edges of Corcovado National Park and Drake Bay, offering a dozen or more rooms ranging in price from fifty US dollars to several hundred for a night (Horton, 2009). The ecotourists staying in these lodges tend to be in the higher income brackets, and it can be said that although one-quarter of this type of lodge ran into financial difficulties, they possess the greatest opportunity for high profits (Horton, 2009). This makes for high competition between ecolodges in a small area in order to remain profitable (Horton, 2009). The second tier of accommodations catering to ecotourism on the Osa Peninsula consists of approximately 35 small hotels, with an average of three to eight rooms located in the town of Puerto Jimenez, catering mainly to budget travellers (COBRUDES, 1997). The owners of the small hotels in this tier were generally well-off residents of the town before ecotourism began, and charged between ten and twenty dollars a night to employ family labour and typically one or two salaried employees (Horton, 2009). The third tier of ecotourism participation on the peninsula is comprised of less well-off Costa Ricans who work as cooks, maids, maintenance, caretakers, and guides, employed by foreign-owned enterprises (Horton, 2009).

Certification for Sustainable Tourism

According to the World Tourism Organization (2002), two-thirds of all eco-labels were established and run by private tourism organisations and non-government organisations, while the remaining third were developed by government agencies. Honey (2008) found that in Costa Rica, the government authorities had the main responsibility for both establishing and running

the Costa Rican program for Sustainable Tourism (CST). Haaland & Aas (2010) found that the four criteria within the CST are: (1) physical and biological environment, (2) infrastructure and services, (3) customers, (4) socioeconomic environment. These criteria reflect the original program that was designed for medium-to-large lodging facilities (hotels), but then expanded to tour operators and now includes vehicle rental services (Certification for Sustainable Tourism, 2012). It can be said that the criteria are similar to a sustainability matrix including social, economic, and environment components (Bien, 2002). The certification system has 153 checkpoints, each rated one to three, and applicants are given a score of one to five ‘leaves’ according to how well they meet the four criteria (Haaland & Aas, 2010). A summary of the CST is given in Table 2, created by using useful information related to Costa Rica from the Haaland & Aas (2010) study.

Table 2.

Summary of the Costa Rican Sustainable Tourism Program

Year Launched	1997
Owner	Authorities
Certifies	Hotels and tour operators
Financing-development, Financing-regular operations	Public, Public
Number of certified businesses/products as of 2007	Hotels: 202 (CST, 2012)
Auditing levels	External 5 levels (1-5 leaves awarded)
Specifically addressing protected areas?	No

(Haaland & Aas, 2010).

The CST is the product of an initiative taken by the Costa Rican Tourist Board (ICT) in 1995 (Bien, 2002). The certification was unique because it was the first performance-based

voluntary environmental program created by government in a developing country (Rivera, 2002). The original edition was for hotels only in 1997, then in 2005 an edition for tour operators was added, the CST-TO (Honey, 2008). Tour operators have helped the initiative by announcing they will eventually only make use of certified hotels (CST, 2012). Car rental services also decided to work with certified businesses in 2012 (CST, 2012). This dedication will have a positive impact on the number hotels seeking certification. Honey (2008) criticises the CST by claiming it ‘mixes apples with oranges’ and waters down other, small scale ecotourism places in the country. This has called for a push towards the establishment of a version more specifically aimed at smaller ecolodges.

This certification is not specific to ecotourism, its main focus being sustainability in general. Instead of having three evaluation categories like the Green Deal (Bien, 2002), the CST has four: 1) Physical-biological environment, 2) Infrastructure and services, 3) External Client, and 4) Socio-economic environment (CST, 2012). The evaluations are made by a team of auditors with professional specialties. To achieve certification by the CST, a minimum score of 20 percent is required in each category (CST, 2012). In 2001, modifications were made to the questions to make the questionnaire more applicable internationally and to small business (Bien, 2002).

The Certification for Sustainable Tourism is designed to categorize and differentiate tourism companies based on the degree to which their operations relate to the sustainable model. The CST established a classification system called ‘levels of sustainability’, that are set on a scale of zero to five, each representing the relative position of a company in terms of sustainability. For example, a company that has taken the first step in the sustainability process would receive a level one. As the levels progress, criteria within represents advancements in

sustainability, meaning a company with a level five score would be an example of maximum sustainability (CST, 2012).

Problem Statement

The purpose of this thesis is to discover if certification impacts ecolodge patrons' perception of importance and performance of ecolodge facilities and services, by comparing certified ecolodges in Costa Rica to the uncertified ecolodges in the study in Belize, and to discover if demographic and specific trip characteristics are associated with perceptions of importance and performance to aid in future management of ecolodges.

Research Objectives

Ecolodges, like all accommodations, are an important component of the travel experience. However, unlike other forms of accommodations, there is no rating system in place to recognize the quality of services offered. Hotels for example, are subjected to the five-star rating system that puts the quality of the hotel and its' services into perspective for possible clientele. Also, no brand has been developed for ecolodges. Lodge owners create their accommodation based on what they expect guests will enjoy and value the most. This study has taken advantage of the Costa Rican Certification for Sustainable Tourism, to determine ecolodge patrons' perspective of importance and performance with the presence of certification.

Research Questions

As ecotourism grows in popularity and demand, it will be important to have an understanding of how ecolodge patrons perceive the quality provided by the accommodation and its associated services. Since ecotourism is heavily based on the quality of the natural environment, the natural features found in the surrounding area of an ecolodge are likely to

impact the quality of time a guest experiences while visiting. Another important factor that is likely to weigh in on a visitors perception of an ecolodge, is the knowledge of the staff, especially guides. A group staying at an ecolodge may speak to the guide everyday about the experiences they had, but at a hotel, the same group may only speak to one staff member, typically the front desk clerk, and a very limited amount. Also, the socio-demographic information and trip characteristics of those involved in the study will affect the results of the analysis. Clustering the results will aim to improve the use of the results and make the perception of performance much clearer, showing where ecolodges are performing highest, and where improvements should be made. To better understand ecolodge patrons and accomplish the research objectives of this study, several research questions have been created:

1. What ecolodge attributes did patrons who visited Costa Rica consider to be the most important? Do these important attributes differ from those found in Belize?
2. What are the patrons' perceptions of the performance on the most important ecolodge attributes? Do these ratings differ from those found in Belize?
3. Can the ecolodge attributes be clustered into distinct factors? If so, what are these ecolodge selection factors and do they differ from those in the Kwan (2008) study?
4. Are demographic and specific trip characteristics associated with patrons' perceptions of the importance on the factors?
5. Are demographic and specific trip characteristics associated with patrons' perception of the performance on the factors?
6. What are the perceptions of importance versus performance for each factor?
7. What are the perceptions of importance versus performance for each ecolodge attribute?

Contributions of this Study

The answers to the research questions will add to the literature available on ecolodge patrons and the performance of ecolodges in meeting the expectations of their clientele while keeping to standards of sustainability. Costa Rica is rich in ecotourism and by surveying tourists on trip, a better understanding of what draws visitors to this country, and in particular specific ecolodges, can be found. This study will also discover the differences in what is most important to visitors when visiting Costa Rica and Belize, and how each country performs in the same market.

This research is important for multiple reasons, shown in Figure 2. From a business perspective, it will help ecolodges better understand their clientele and know what visitors are expecting. This will make lodges more efficient in making future changes. This research will also benefit the ecotourism literature by discovering what the main attributes and reasons are for tourists choosing to stay in ecolodges as a form of accommodation in Costa Rica and how demographics and specific trip characteristics influence decision making. Tourism on the Osa Peninsula will also benefit as those included will be able to see how certified ecolodges are performing in comparison to ecolodges in Belize based tourist's perception of importance and performance.

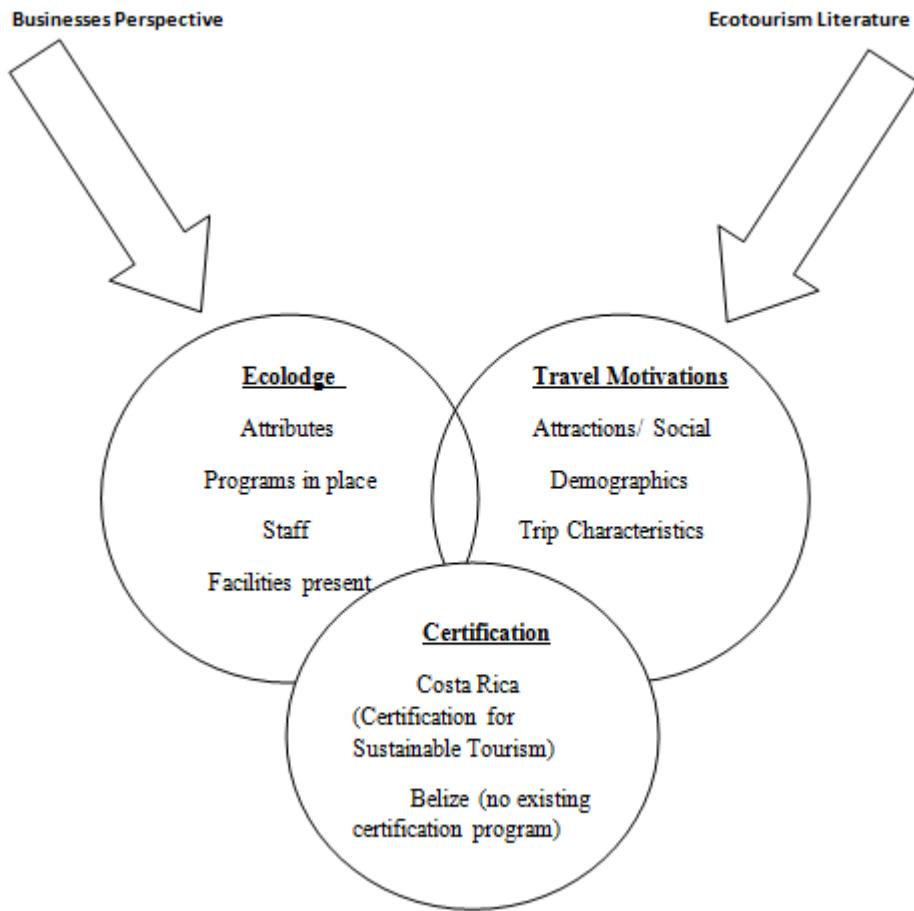


Figure 2. Conceptual Framework of study (Ingribelli, 2012).

Chapter 2: Literature Review

Introduction

Chapter 2 contains summaries gathered from a variety of academic papers, newspaper articles, official reports, related studies, and websites that contribute to a better understanding of the key concepts underlying this thesis. There are multiple topics explained in this chapter. This literature review has six main sections of focus.

The first section focuses on ecotourism as an industry as well as the characteristics and motivations of eco-lodge patrons. The second section examines the type of tourists visiting Costa Rica and how tourism management should plan to maintain a dominant tourism sector. Customer satisfaction, an important concept to any product including tourism, is examined in section three. Section four takes an in-depth look at certification, and how it affects the tourism industry in Costa Rica. The characteristics of eco-lodges and how they can improve are described in section five, followed by a summary of Importance-Performance Analysis in section six.

Ecotourists

Describing Ecotourists

Ecotourists have been described in many ways in tourism literature. Ecotourists have been described as “people who require environmentally compatible recreational opportunities, where nature rather than humanity predominates” (Kerr, 1991, p.248). Eagles (1992) developed a list of interests that were common amongst ecotourists. It was found ecotourists were ‘interested in visiting wilderness , national parks, tropical forests, and viewing birds, mammals, trees and wildflowers’, they want to ‘experience new lifestyles and meet people with similar interests to themselves’ and they prefer to see their travelling dollars contributing toward conservation and

benefitting the local economy (Eagles, 1992). Beeton (1998) stated that there are two main groups of characteristics that distinguish ecotourists: demographic and psychographic. The demographic characteristics can be measured quantitatively and include age, gender, life cycle stage, occupation, income, and education level. The psychographic characteristics are measured qualitatively and include values, motivations, and pre-established images. Ballantine and Eagles (1994) developed a list of eight psychographic characteristics that help define ecotourists: (1) possession of environmental ethic, (2) willingness not to degrade the resource (3) focus on intrinsic rather than extrinsic motivation, (4) biocentric rather than anthropocentric in orientation, (5) aiming to benefit wildlife and the environment, (6) striving for first-hand experience with natural environment, (7) possessing an expectation of education and appreciation, (8) high cognitive and affective dimensions. All of the characteristics stated by Ballantine and Eagles (1994) are highly valuable to ecotourism operators.

The International Ecotourism Society (2012) describes ecotourists as experienced travellers who are more than likely to have a college/university degree and have a higher income bracket. Boo (1991) stated that ecotourists are generally more accepting of conditions different from home than other types of tourists. Galley and Clifton (2004) highlighted the importance of a strong science orientation being present with ecotourists. Wight (1996b, 1996c) used ecotourist characteristics to differentiate between general consumers interested in ecotourism and experienced ecotourism travelers. Experienced ecotourists tended to travel as couples 61% of the time, with limited family 15% of the time, and alone 13% of the time, compared to general consumers who more are more likely to travel as family. Another notable characteristic of ecotourists is their willingness to spend more money than general tourists (Wight, 1996b). A study done by Wight (1994, p. 41) documented '[Ecotourists] on average, would spend 8.5%

more for services and products provided by environmentally responsible suppliers'. Studies also show the vast majority of ecotourists live in western nations such as USA, Germany, Canada, Sweden, and Australia (Wright, 1994).

Many categories have been developed to profile ecotourists into different types. Weaver and Lawton (2002) divided ecotourists along a spectrum with hard and soft being the endpoints. Harder ecotourists have a strong desire to learn about nature, are interested in viewing wild and remote destinations, are not afraid of a physical and mental challenge, preferring backpacker accommodations, and camper and recreation vehicles. Those included in the harder ecotourist designation are much younger with a higher education level, and tend to be in the high-income bracket compared to other ecotourists. At the opposite end of the spectrum are softer ecotourists who are less committed to the environment and enjoy beach resorts as much as nature settings. This type of tourist put more value in accommodations with a good variety of services and facilities (Weaver and Lawton, 2002). Similarly, softer ecotourists are highly educated and from the higher income bracket, but enjoy travelling as a family. Those who expressed a blend of harder and softer traits are known as 'structured' ecotourists. This type of tourist is committed to the natural environment, but at the same time expects a high level of services and facilities. Structured ecotourists were older travellers found in the high-income bracket, and were more likely to arrange their trips through travel agents. It is also stated that structured ecotourists enjoy a hard ecotourism experience that can be interpreted for them (Kwan, 2005). Meaning some of the components of the hard ecotourism experience may be less intense, such as the physical activity (Weaver and Lawton, 2002).

Unfortunately, there is no universal classification system for ecotourists. This makes studying motivations and accommodation choice more difficult due to the variety of ways to

separate those being studied. Wight (1996a) separated ecotourists by labelling them as general-interest consumers and experienced ecotourists. Twynam and Robinson (1997) classified ecotourists as enthusiasts, adventurers, naturalists, vacationers and urbanists. Lindberg (1991) divided ecotourists into two groups called dedicated and casual. Kusler (1991) identified three types of ecotourists: do-it-yourselfers, group-tour ecotourists, and scientific or school groups. Palacio and McCool (1997) classified ecotourists by four categories: (1) nature escapists, (2) ecotourists, (3) comfortable naturalists and (4) passive players. Robinson et al. (1998) created six market segments to separate ecotourists: (1) enthusiasts, (2) weekend warriors, (3) environmentally friendly tourists, (4) escapists, (5) naturalists and (6) adventure naturalists.

Motivations of Ecotourists

One way to try and determine what shapes ecotourists' decisions on accommodation choice is linked to their motivations for travel. "Motivation is aroused when individuals think of certain activities that are potentially satisfying. Since people act to satisfy their needs, motivation is thought to be the ultimate driving force that governs travel behaviour. Therefore, tourists' motivation should constitute the basis for marketing strategies" (Pyo et. al., 1989, p.277). Dann (1981) explains that push and pull factors are central in motivating tourists. Push factors are internal to the individual, while pull factors are aroused by the destination. Bellow and Etzel (1985) elaborate on this by establishing that push factors establish the original desire to travel, but pull factors are crucial in explaining the actual destination choice. Crompton (1979) alludes to two main push factors, novelty and education. An important point to consider is that "ecotourists satisfaction may not only come from the experience itself but also from the external reward of having promoted environmentally sound travel and having made a contribution to the destination region" (Wearing & Neil, 2009, p. 201). A qualitative study by Harlow and Pomfret

(2007) investigated the personal development of seven ecotourists who undertook a ten-week nature-based volunteer project in Zambia. The ecotourists experienced strong spiritual emotions caused by being in nature and the ‘self-concept’ of each individual was enriched through both environment and non-environment events.

The specific niche that is ecotourism, makes defining tourists’ motivations using a push and pull model difficult. Chan and Baum (2007) raise the point that those motivations that are internal, such as discovery, enlightenment, and personal growth, are important to ecotourists but the features of a natural destination are more than simply pull motives to ecotourist. To describe the destination as a pull phenomenon is to overlook the importance of the natural environment as a motivator (Eagles, 1992). Wearing and Neil (2009) state the goals of ecotourism are to provide ecologically sound travel experiences that contributes to the natural, economic, social, and cultural environment. Prior to departure, ecotourists have expectations of what the experience will be and assume they will be satisfied. The ability of local communities to understand ecotourists’ motivations will better position them to meet the needs and expectations of clientele. Local communities involved in ecotourism are beginning to shift away from extractive industries as a means of production. The same can be said for ecolodges and the responsibility of providing accommodations to ecotourists. Recognizing the motives of ecotourists differ from mainstream tourists is essential to tourism management as well as ecolodge management. An example of how visitor expectations were used in ecologically sustainable management is whale shark tourism in Queensland. Birtles et al. (1995) reference how feedback from ecotourists helped change diving regulations to enhance protection of aquatic species, and ultimately increase the satisfaction of the experience.

Lutz and Prosser (1994) recognize that ecotourists ideally enter a destination in the ‘discovery and emergence’ stage of the ‘tourism destination product life cycle’. Ecotourists are described as ‘explorers’ by Chan and Baum (2002), someone who seeks the wilderness, or unspoiled areas, for the natural or cultural assets contained within the region. It is also believed that ecotourists desire to reach destination areas before others have the chance to make noticeable impacts (Chan and Baum, 2007). Ecolodges can use this information to help cater to their clientele. It is important that lodges with unique and highly valued attractions nearby are aware of how to manage their ecotourists and increase satisfaction.

Tourists Visiting Costa Rica

Introduction

Costa Rica has a reputation of high environmental stewardship, making it a highly visited country by ecotourists. This can be observed through the high number of protected areas with high visitation numbers over the years (The Costa Rica Tourism and Travel Bureau, 2010). Weaver (1999) declared that most ecotourism activity in Costa Rica is carried out within relatively confined protected areas and adjacent areas. It was observed that access impacted visitation, and that remote destinations must exercise more specialized ecotourism activities to motivate people to visit (Weaver, 1999). These discoveries were supported by Boza (1993, p.244) in saying “ecotourism has proven to be the strongest argument for the protection and development of Costa Rica’s national park system”. Table 3 displays the estimates of the major pull factors associated with Costa Rica and Kenya as major ecotourism destinations.

Table 3.

Magnitude Estimates of Ecotourism in Costa Rica and Kenya

Ecotourism Variable	Magnitude
Specialized accommodation as a proportion of total inventory	Minor
Number of local communities directly affected	Minor
Direct employment	Minor
Direct government investment	Minor
Direct revenue generation	Minor
Specialized ecotourist intake as a proportion of all visitors	Minor
Activity space with significant ecotourism	Minor
Total tourist activity time used for ecotourism	Substantial
Ecotourism as a visitor motivation	Major
Indirect revenue generation	Major
Popular market image as an ecotourism destination	Major

(Weaver, 1999).

Recent statistics indicate that Costa Rica has had steady international tourism arrivals from 2007 to 2009 (World Tourism Organization, 2010). Costa Rica experienced an increase in visitors and revenues from international tourists in 2008 and a drop off of eight percent in 2009 (World Tourism Organization, 2010). Table 4 displays international tourism arrivals and total income from tourism from 2008-2011.

Table 4.

Costa Rica International Tourism Statistics

Year	International Tourism Arrivals	Total Tourism Income (US dollars)
2008	2,089,000	2,174,100

2009	1,923,000	1,805,800
2010	2,009,829	1,857,600
2011	2,192,059	1,985,400

(Costa Rica Tourism Board, 2011)

Psychographic Personality Types

Costa Rica's global reputation as a tourist destination became established in the 1980s when the nation's president won the Nobel Peace Prize (Liu et. al., 2008). After the award was won, demand to visit the country increased and the hotel business grew with it. Plog (2001) found the type of tourist a destination attracts is indicative of the destination's position in the product cycle. This information can be used to predict the rise and fall of a destination, based on the level of development required to attract a particular type of traveler. This concept can be tied into strategic planning, that improves market performance and encourages the calculated thinking necessary to respond to competitive changes.

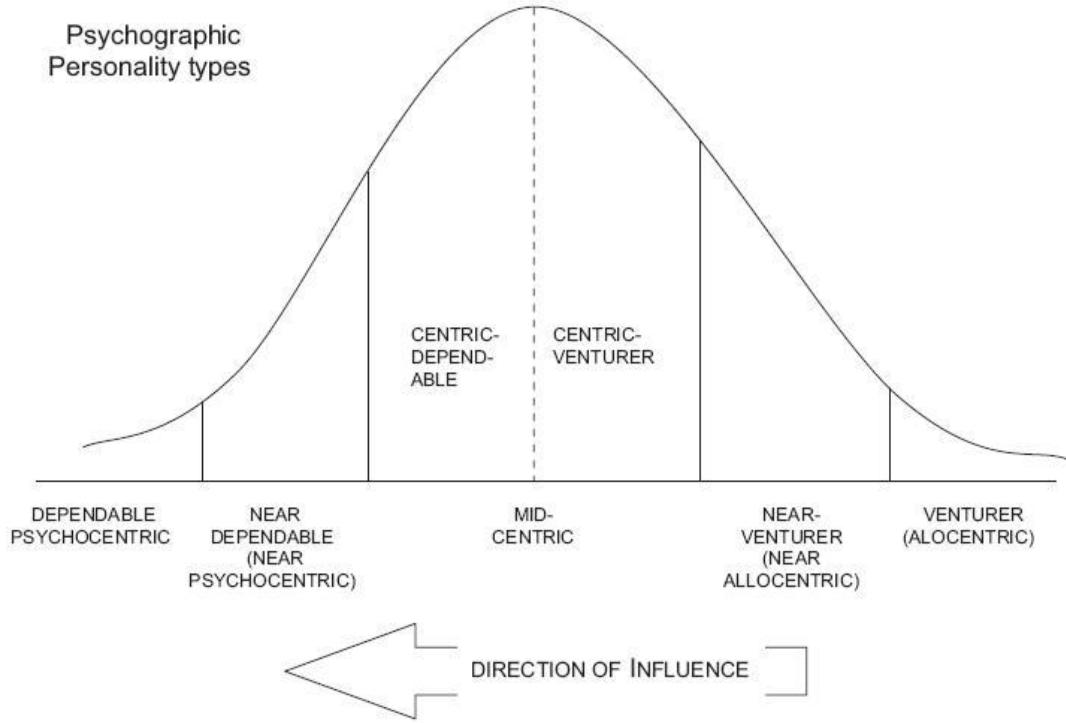


Figure 3. Psychographic personality types (Plog, 2001).

In the both 2001 and 2004, Plog assigned Costa Rica to the Near-Venturer psychographic position. These tourists are relatively well-educated, spend more of their discretionary income on travel, are adventurous with their choices of activities and accommodations, avoid the use of travel agents and tours, take long trips, and travel alone largely by automobile within the area of their destination (Plog, 2001). Liu et al. (2008) tested the validity of Plog's (2001, 2004) research findings by surveying United States travellers to Costa Rica. The survey results showed that of 122 respondents: 84% travelled to Costa Rica for leisure on their last visit, 3% for business, 11% for both. Liu et al. (2008) determined that Costa Rica's position is evolving from being a destination of Near-Venturers to one that attracts Mid-Centrics. Following Plog (2001), this could be a result of the country's actions to build up its travel infrastructure to the point that Venturers are less interested and Mid-Centrics are attracted. Liu et al. (2008) stresses caution of

further ‘slippage’ down Plog’s continuum. This is true because Plog (2001, p.20) states “the ideal psychographic positioning for most destinations lies somewhere in the middle of the Near-Venturer segment. A destination at this point has broadest positioning appeal possible because it covers the largest portion of the psychographic curve.”

Future Tourism Planning for Costa Rica

Liu et al. (2008) urges that proactive steps be taken to review the Costa Rican destination planning and new initiatives be developed to address the country as an ecotourism destination. “The focus should be to ensure resource preservation and promote efforts to maintain the integrity of ecosystems” (Liu et al. 2008, p. 275). The nation has taken great strides by appointing a minister of environment and energy to serve as the environmental champion, and it is also comforting that nearly 25% of the country’s land mass is under national preservation (Horton, 2009). Liu et al. (2008) found that a large portion of US travelers visited Costa Rica for ecotourism or its unspoiled environment. Also, participants in the survey enjoyed ecotourism, sightseeing, and beach and waterfront activities the most. A marketing strategy for Costa Rica would be to target ecotourists as opposed to mass tourists, who expect and prefer package tours with fixed itineraries, planned and guided stops, and make no major decisions on their own (Wall, 2006). Also, if Mid-Centrics are targeted they should be encouraged to be more adventurous during their stay (Liu, et al., 2008). It is important that Costa Rica is clear on its goals for the future and do not allow managers to “shoot themselves in the foot by allowing unfocussed development to trample the once-beautiful areas that so delighted Venture-type travellers” (Liu et al., 2008, p. 276).

Satisfaction Measurement in Tourism

In order for a business or industry to be successful, it must ensure customer satisfaction; the tourism industry is no exception. There is much debate revolving around how tourists, like all consumers, assess their own satisfaction levels. The literature provides two basic options to address the current debate (Martinez & Garau-Vadell, 2010). The first option is to measure satisfaction as a one-dimensional variable, meaning it is isolated and independent; however this view faces criticism (Bigne et al., 2001). The main criticism is that it assumes that when consumers achieve the same level of satisfaction, they also share the same judgements with respect to the different aspects of the product they have purchased (Martinez & Garau-Vadell, 2010). Bates et al., (2003) found this assumption to be false, and it may explain why people with the same level of satisfaction display different loyalty patterns. The alternative view is that consumer satisfaction is a multi-dimensional construct (Athanassopoulos, 2000). Research by Martinez & Garau-Vadell (2010) supports that measuring tourist satisfaction as a multidimensional construct is valid and useful in order to identify attributes that contribute the most to the creation of tourist satisfaction. This multidimensional approach is more appropriate for analysing tourism satisfaction because it permits a breakdown of the main dimensions, allowing a better understanding of tourism behaviour (Martinez & Garau-Vadell, 2010).

There is a broad range of literature indicating that guest satisfaction is largely derived from a company's positive performance (Oh & Jeong, 2010). A company's performance can be measured on several different levels, such as performance as compared to expectations (Oh & Parks, 1997), emotional experience (Barsky & Nash, 2003), value perceptions (Mattila, 1999), service quality (Parasuraman et al., 1994), or perceived performance itself (Cronin & Taylor, 1992). Companies with limited resources struggle to find ways to satisfy guests' ever-increasing

demands, but those with more resources have invested in programs to manage clientele satisfaction, such as surveys and comment cards (Shoemaker and Lewis, 1999). Although it is not always done in the same fashion, performance measures based on multiple attributes or dimensions are often used to predict another phenomenon such as overall guest satisfaction (Saleh & Ryan, 1992).

Guest satisfaction is of major importance in the lodging industry for the determination of repeat visitation by clientele (Oh & Jeong, 2010). Knowing this, it is surprising that there are limited studies determining whether operational performance predicts guest satisfaction consistently across different market segments in the literature (Oh & Jeong, 2010). Level of service, level of price or room rates charged, and type of operation are common market segments in the lodging industry, with Mobil Travel Guide's five-star rating system being the most popular hotel service rating system (Oh & Jeong, 2010).

Certification

Introduction

Accreditation is a process to improve the quality and safety of a product or service (Greenfield & Braithwaite, 2008). The concept of accreditation has been established in many industries and business sectors. When accreditation is granted, a formal declaration by a designated authority states that an organisation has met predetermined standards (Braithwaite, Westbrook, Pawsey, et al., 2006). As with any form of regulation, its value can be contested, as the issue of accreditation is one that generates strong reactions from many professionals (Greenfield, Pawsey, Naylor, et al., 2009). With all accreditation programmes, some support and some are critical of its existence (Greenfield & Braithwaite, 2008). The researcher found during

this thesis that some ecolodges are unable to afford the cost of being accredited. This means that even if the lodge offers a product that meets the standards for certification, it is unable to join the program. This could cost lodges profits if people prefer to visit certified lodges, making it even harder for less profitable lodges to become certified.

There are several reasons to support accreditation programmes, some of the most common are: to effect improvements in quality and safety, enhance organizational functioning, and develop better teamwork (Pomey, Contandriopoulos, Francois, Tosh & Bertrand, 2004). It is important to note also that accreditation is often described as a managerial responsibility (Pomey et al., 2004). Those who oppose the usefulness of accreditation defend that programmes and standards are inappropriate (Pongpirul, Sriratanaban, Asavaroengchai, et al., 2006), professional norms are believed to be more relevant than regulatory devices in addressing quality and safety (Pomey et al., 2004), and bureaucracy and other costs of participating are criticized as being high (Fairbrother & Gleeson, 2000).

Accreditation routed through environmental standards originated in the manufacturing industry, with greater, direct and measurable environmental impacts, clearer operating systems, and larger organisations (Tribe, Font, Griffiths, Vickery, & Yale, 2000). Manufacturing standards were originally set by the European Commission, and recognised by Eco-Management and Audit Scheme (EMAS) in 1993 (Tribe et al., 2000). Tribe et al., (2000) state that EMAS was devised for local authorities, and is the only version for the service sector. An expansion occurred in 1996, when the International Standards Organisation set ISO 14001, which awards whole organisations for any industry (Tribe et al., 2000). Since 1996, ISO 14001 has been achieved by a handful of tourism organisations, such as Center Parcs UK (Collins, 2000).

Certification in Tourism

Businesses can self-declare themselves as being sustainable, green, environmentally friendly, eco-friendly and so on (Font, 2002). Multiple definitions for sustainability and ecotourism, and disputes about what is in and what is outside of tourism, make it a difficult industry to regulate (Font, 2002). Even when governments take an active attitude towards regulating claims, it is limited to governmental boundaries, making it inefficient due to the international nature of the tourism industry (Font, 2002). There are over 100 ecolabels for tourism, hospitality, and ecotourism, with many overlapping in sector and geographical scope, beginning in the mid-eighties but majority developed in the nineties (Font & Buckley, 2001).

Because the original EMAS and ISO systems are only feasible to larger companies, the tourism industry has decided to work with its own systems, usually having a much softer approach (Synergy, 2000). Before the use of ecolables, codes of practice, industry manuals and awards were the main tools to improve the industry and tourist actions and awareness towards the environment (Synergy, 2000). Ecolables were introduced as a more formalised method to monitor environmental efficiency by requiring verification by an independent third party (Synergy, 2000). The tourism industry benefits from this form of monitoring because it becomes linked to technical advice, the label can be regained through a cyclical review, and the criteria evolve in stages (Synergy, 2000). Like all accreditation systems, there are criticisms of the tourism ecolables used. Those opposed to ecolabels argue that they are expensive, require time, usually they focus on hotels or ecotourism providers, the ecolabel organiser has limited marketing power, and the criteria focus on environmental management, not environmental performance (Synergy, 2000). Table 5 outlines the process followed, key players, and the importance of discussions revolving around tourism certification and accreditation (Font, 2001b).

Table 5.

Ecolabels: Calendar of Events

Date	Event/Action	Outcome
1985	First Blue Flags awarded	Foundation for Environmental Education in Europe (FEEE) starts expansion campaign, currently over 1800 beaches and 600 marinas
1998	Green Globe Standards launched	Companies sign up to principles to use logo
December 1998	United Nations Environmental Program (UNEP) publishes milestone report on tourism labels	Supports development of ecolabels as self-regulation methods
April 1999	World Tourism Organisation (WTO) concerned with quality and reliability of ecolabels, certification systems, awards	WTO proposes at UN-CSD-7 to investigate their effectiveness
March 2000	ITB(Berlin) ecolabelling panel, organised by ECOTRANS	Little enthusiasm for single European ecolabel
May 2000	Green Globe 21 associates with CRC Sustainable Tourism (Australia)	Strengthen image, increase scientific/ academic background.
Throughout 2000	Green Globe increases worldwide alliances	PATA Green Leaf, Caribbean Alliance for Sustainable Tourism and Green Key
August 2000	World Wildlife Foundation (WWF) published critical report of Green Globe 21	Green Globe forced to publicly respond to take action
September 2000	FEMATOUR report on the EC Ecolabelling board	European hotels do not accept single label. Campsites and hostels to be targeted.
November 2000	Mohonk workshop, funded by the Ford Foundation	Principles of Ecotourism and Sustainable Tourism Certification tabled as possible agreement by participants
November 2000	Rainforest Alliance	RA opened proposes the Sustainable Tourism Stewardship Council

January 2001	First e-conference on ecotourism certification	Allowed open participation, but not managed
March 2001	First book on ecolabels published (edited by Font and Buckley)	Creates theoretical body of knowledge and baseline data
April 2001	GG21 Benchmarking CD-ROM	Development of sector specific benchmarks in a user-friendly format
May 2001	Rainforest Alliance offers to the WTO to be the Advisory Board for the Sustainable Tourism Stewardship Council	WTO accepts offer, proposal strengthened
May 2001	WTO seminar on Certification systems and standards in tourism seminar	Latin American and Caribbean WTO member governments request WTO to take a leading role in setting international standards
June 2001	Second e-conference on ecotourism certification	Follow up planned, aimed to reach agreements
June 2001	ECO-LAB proposal to EC's LIFE	ECOTRANS will benchmark environmental indicators for ecolabels, and strengthen co-operation between labels
July 2001	Rainforest Alliance commissions a feasibility study of the Sustainable Tourism Stewardship Council	15 month research period will generate discussion and interest in the topic. Outcomes unknown
August 2001	Tour Operators Initiative for Sustainable Tourism commissions a report on the value of ecolabels to tour operators	Certification accepted as one method to inform supply chain management for tour operators, but not sufficiently widespread to be the only method

(Font, 2001b)

Accreditation and Certification Process and Players

There has been much progress in the development and establishment of ecolabels in tourism and hospitality leading to internationally agreed principles of compliance and assessment (Font, 2002). It is important to understand the process that leads to accreditation or certification

in the tourism industry. The funding body usually aims to influence a specific sub-sector of the industry that has been identified as problematic in terms of its environmental performance (Font, 2002). To achieve this, a team or company that acts as an awarding body is contracted out, on the basis of a grant in aid to cover planning and management costs (Font, 2002). The awarding body will have expertise in several subjects such as project management, marketing and lobbying, in addition to experts in the criteria of the specific label or areas it aims to change (Font, 2002). Another external body is contracted to prepare the detailed outline of the label criteria, and to verify if the applicant meets the criteria (Font, 2002). Applicants usually pay a fee that covers verification costs (Font, 2001a).

Once the verification method has been decided, the awarding body promotes the ecolabel to applicants (Font, 2002). The goal of the ecolabel is usually to improve the environmental performance of the applicants (Font, 2001a). Figure 4 displays the players involved in tourism ecolabelling and how they interact. In order to understand the diagram, some definitions need to be made known. A standard is a document approved by a recognised body that provides for common and repeated use of a prescribed set of rules, conditions or requirements (Thoth, 2000). There are several types of standards, some voluntary, some mandatory, others developed by the consensus of all parties (Thoth, 2000). An assessment is the process of examining, measuring, testing or otherwise determining conformance with requirements specified in an applicable standard (Thoth, 2000). The process will vary depending on criteria and can be done by a site visit, desk review of paper evidence, or a hands-on measurement of impacts, but all must be verified (Font, 2002). The certification process is the procedure by which a third party (i.e. the awarding body) gives written assurance to the consumer (i.e. the industry in general) that a product, process, service, or management system conforms to specified requirements (Thoth,

2000). Accreditation Bodies are said to ‘audit the auditors’ and their capacity to certify companies and/or products (Font, 2002). Since this is where costs start adding up, most tourism ecolabels skip this step (Thoth, 2000).

The relationships present in Figure 4 can be further expanded by considering the process of compliance assessment that an ecolabel should work against, described in five steps: setting standards, undertaking assessment, certifying this assessment, accrediting certification, recognition of the values of the certificate, and acceptance by the industry (Font, 2002). The goal of such a system is to lead recognition and acceptance by the industry as a strong voluntary standard that is met by a critical mass of players and by the market as a quality symbol and a meaningful difference that influences purchasing behaviour (Font, 2002).

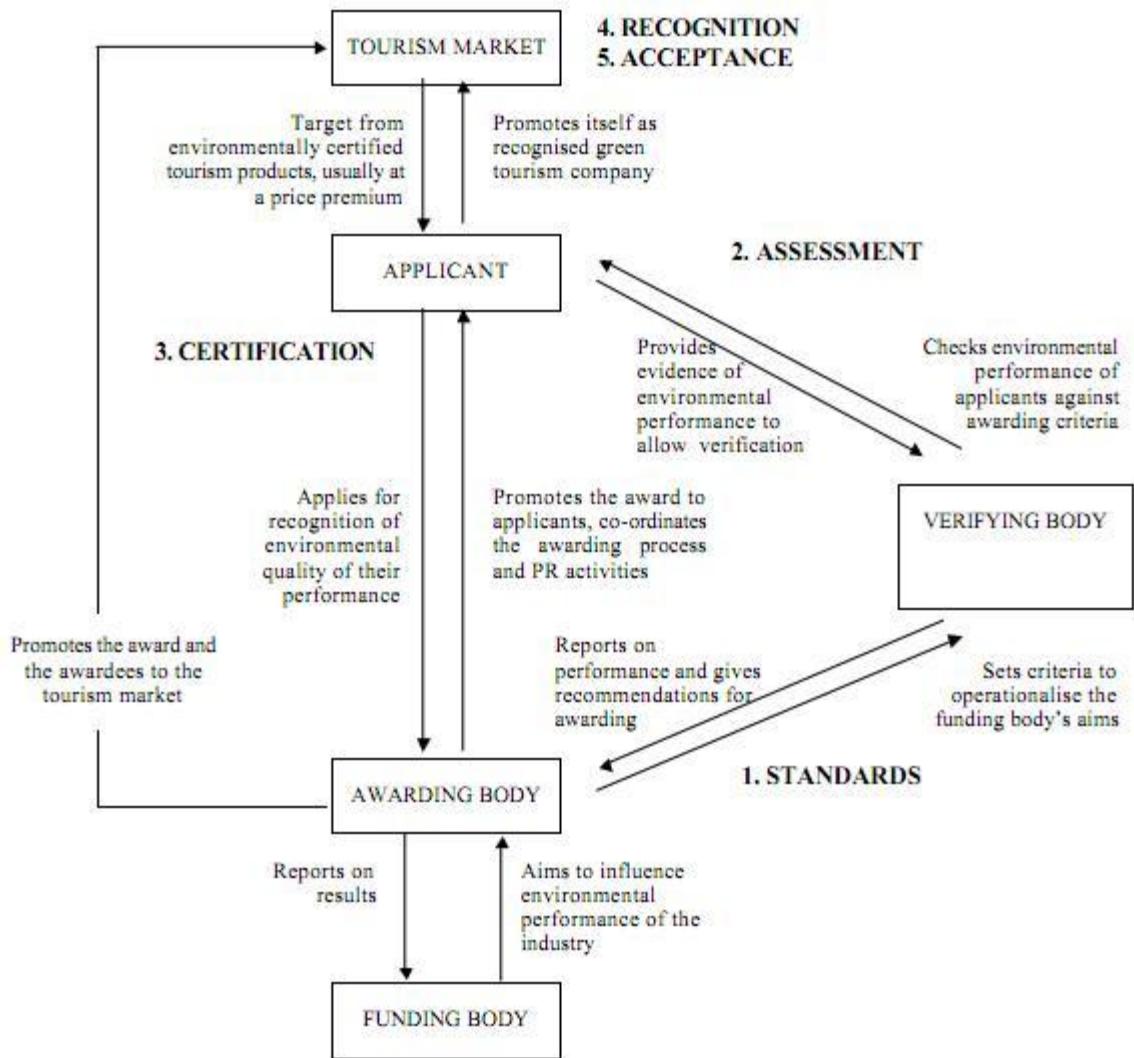


Figure 4. Players in tourism ecolabels (Font, 2001a).

Tourism Certification in Costa Rica

Costa Rica has four certifications related to sustainable tourism. Table 6 is a brief summary of each one's main purpose.

Table 6.

Summary of Sustainable Tourism Related Certifications and Guidelines in Costa Rica

Certification Name	Main Purpose
Best Practice Guidelines for Ecotourism in Protected Areas	Designed for public nature reserves. *Not a certification, more of a guide.
New Key System	Small ecotourism businesses.
Green Deal	Small and very small tourist enterprises of all types.
Certification for Sustainable Tourism	Medium to large lodges, hotels, tour operators.

(Ingribelli, 2012)

Certification for Sustainable Tourism

The Certification for Sustainable Tourism (CST) is designed to categorize and differentiate tourism companies based on the degree to which their operations relate to the sustainable model. The CST established a classification system called 'levels of sustainability', that are set on a scale of zero to five, each representing the relative position of a company in terms of sustainability (Table 7). For example, a company that has taken the first step in the sustainability process would receive a level one. As the levels progress, criteria within represents advancements in sustainability, meaning a company with a level five score would be an example of maximum sustainability (CST, 2012). The CST is the certification program used to represent certified ecolodges for this study.

Table 7.

CST Criteria for Hotels

Descriptors	Criteria for Hotels
A) Biological and physical	1. Policies and programs 2. Emissions and wastes 3. Green zones 4. Natural areas 5. Protection of flora and fauna
B) Physical Plant	6. Formulation of policies 7. Water consumption 8. Energy consumption 9. Commodity use -food and beverages -cleaning and cosmetics 10. Waste Management 11. Training
C) External Client	12. Communication and participation 13. Guest facilities and instructions 14. Management of groups 15. Feedback
D) Socioeconomic Context	16. Direct economic benefits 17. Indirect economic benefits 18. Contribution to cultural development 19. Contribution to health 20. Infrastructure and security

(Certification for Sustainable Tourism, 2010)

The questionnaire for lodging establishments has 153 questions that are divided into four descriptors. Each question reflects a positive condition related to sustainability, producing an evaluation of how many positive conditions a particular company is meeting in percentage terms (CST, 2012). In addition to the survey results, a ‘general evaluation’ is available for the employer and evaluator, so that both can refer to the positive and negative situations that may affect the score of the questionnaire.

In terms of organisation and financing, the Costa Rican Tourism Institute is responsible for program implementation, with help from the National Institute for biodiversity (INBIO), and support from the Natural Accreditation Commission (Haaland & Aas, 2010). The Ministry of Tourism markets the CST both nationally and internationally and the application process is now free due to government funding (Font & Harris, 2004). Currently, 202 hotels are certified by the CST (CS, 201). The CST is audited by an interdisciplinary team made of members reflecting the criteria of the program, and all rating criteria and scores are made public on the CST website (Bien, 2002). If a certified business does not maintain its scores from a previous CST accreditation process, it can receive a lower rating level or be removed from the certification completely (CST, 2012). It is important to note that although the application process is free, the expenses of implementing what is necessary to maintain certification can be expensive, making it challenging for less profitable businesses.

Costa Rica believes that ecotourism may move a step closer to ecological and social sustainability through a good classification system, but restructuring takes time and money (Haaland & Aas, 2010). The potential of accusations of green washing and lack of credibility are present in any certification system (Thwaites, 2007). Haaland & Aas (2010) state one challenge for ecotourism is the size of the industry. In other countries, ecotourism is small and therefore

possesses limited resources to invest in the certification program. This can lead to free riders due to the lack of legal powers to enforce certification. In order for ecotourism and the CST to be successful in the future, within all four criteria, government finance is required as well as knowledge and experience sharing between countries (Haaland & Aas, 2010).

Green Deal

The International Ecotourism Society (TIES) is based out of the USA but receives extensive input from Costa Rica (Bien, 2002). One of the accomplishments of TIES was pooling together surveys of tour operators, travel agents, consumers, and academics from mainly the USA and Costa Rica to create and publish a small widely used pamphlet that acts as guidelines for nature tourism operators (Bien, 2002). These guidelines are at the root of several ensuing certification systems that exist today, such as the Green Deal.

The Green Deal, which began in 1999, was designed to rate small and micro tourist businesses in Costa Rica. The evaluation criteria are divided into three axes: quality, environment, and social impact (Bien, 2002). This rating system can be applied to hotels, community-based tourism, restaurants, tourist transport, travel agencies, guides, and tour-operators. Bien (2002) addresses the Green Deal as unique because it is designed to be complementary to the Certification for Sustainable Tourism (CST). For example, a business that meets all simpler criteria of the Green Deal would achieve a medium-level rating on CST. It is important to note that as a business grows larger; it can no longer rated by the Green Deal certification system. When a business grows, it must comply with CST criteria in order to be certified in Costa Rica (Bien, 2002).

The New Key to Costa Rica

Another certification system that exists in Costa Rica is ‘The New Key to Costa Rica’, which is used to distinguish ‘ecotourism certification’ from ‘certification of sustainability’. This certification was first published in 1978, and was edited to incorporate the sustainability of lodging facilities and tour operators. The main criteria used by the New Key System are environmental compliance, impact on the local economy, and sociocultural factors (Blake & Becher, 2001). The actual evaluation itself divides each criterion into three tiers, the first tier being most heavily weighted and the third tier having the least weight. Bien (2002) brings up a notable criticism in saying the New Key to Costa Rica does not comply with harmonizing criteria in consultation with all major interested parties. In other words, this certification applies a top-down approach written by the proponents of the system.

Table 8.

Facility Ratings Criteria Used in the New Key System to Costa Rica

Criteria	Tier 1	Tier 2	Tier 3
Environmental variables emphasizing environmental impact and energy and natural resource use	<ul style="list-style-type: none">-Solid waste disposal-Sewage treatment-Does the lodging own a reserve; what percentage of total land owned is set aside as a natural reserve?-What type of protection is given to the reserve (the lodge’s own or a nearby public/private reserve used for tours)-Participation in	<ul style="list-style-type: none">-Real impact on the site by construction-Number of persons per tour-Erosion of trails-Use of biodegradable cleaning products-Energy conservation-Construction materials-Information for visitors-Wild animals in	<ul style="list-style-type: none">-Introduction of exotic species-Water conservation-Impact studies

	conservation projects	captivity	
Economic variables examining how much money stays in local communities and how much flees the country's capital or international investors	<ul style="list-style-type: none"> -Employees' origin -Owners' origin/residence 	<ul style="list-style-type: none"> -Contracts with local providers -Where are purchases made -Are local handicrafts sold -Year-round employee contracts -Employee incentives 	<ul style="list-style-type: none"> -Which major purchases for the lodging are imported directly?
Sociocultural variables, evaluating the owners understanding and strengthening of local culture	<ul style="list-style-type: none"> -Takes action of culture questions -Participates in community organizations 	<ul style="list-style-type: none"> -Makes donations (money, resources, time) 	<ul style="list-style-type: none"> -Identifies positive and negative cultural aspects
(Blake & Becher, 2001).			

Financial Importance of Ecotourism

As mentioned earlier, nature-oriented tourism began as a small, obscure niche market, but by 1994 it was Costa Rica's main foreign exchange earner (Bien, 2002). In 2000, Costa Rica earned just over one million dollars, averaging \$1000 in spending over ten days by tourists (Bien, 2002). Bien (2002) showed that 60% of those tourists were motivated to visit by ecotourism offerings, while an additional 20% of tourists not motivated primarily by ecotourism, visited a National Park or ecotourism facility during their stay. This adds up to more than \$600 million dollars being received by Costa Rica for ecotourism and other nature-based attractions in 2000. In 2010, tourism contributed with 5.5% of the country's GDP and generated 21% of the foreign exchange (Department de Estadisticas, 2011).

Ecolodges

Introduction

The main focus of this thesis is to study customer perceptions of importance and performance while staying in certified ecolodges in Costa Rica. The International Ecotourism Society (TIES) describes an ecolodge as “an industry label used to identify a nature-dependent tourist lodge that meets the philosophy ecotourism” (Russell et al., 1995, p.147). Kwan (2005, p.20) states “an ecolodge offers a tourist an educational and participatory experience, developed and managed in an environmentally sensitive manner and conserve the natural environment”. There are characteristics that separate ecolodges from other forms of accommodations such as hotels. The majority of ecolodges are individually-owned, as opposed to being part of a chain, and more often found near environmentally sensitive regions, national parks, and protected areas (Kwan, 2005). The brief existence of ecolodges has not allowed time for the creation of acceptable guidelines for the expansion of ecolodges, but Kwan (2005) complied existing literature to form a list of development characteristics (Table 9).

Table 9.

Characteristics of Ecolodges

Ecolodge Characteristics	The International Ecolodge and Guidelines (Mehta et al., 2002)	The Ecolodge Sourcebook for Planners and Developers (Hawkins et al., 1995)
Operational Criteria	<ol style="list-style-type: none">1. Uses alternative, sustainable means of water acquisition, and reduces water consumption.2. Has sound waste management.3. Meets its energy needs through passive design	<ol style="list-style-type: none">1. Minimizes use of non-renewable energy resources and materials.

		and renewable energy resources.
Pre-Design Criteria	<ol style="list-style-type: none"> 1. Uses traditional building technology and materials whenever possible. 2. Has minimal impact on the natural environment during construction. 3. Has careful design of the infrastructure and landscaping so that it blends with the local physical and cultural environment. 	<ol style="list-style-type: none"> 1. Employs sustainable design principles. 2. Is designed in harmony with the local natural and cultural environments.
Social and Community Criteria	<ol style="list-style-type: none"> 1. Contributes to sustainable local community development through educational programs and research. 	<ol style="list-style-type: none"> 1. Benefit local conservation and research initiatives both public and private and offer excellent interpretation programs. 2. Benefit local communities through the provision of jobs with advancement opportunities and by buying local products and services.
Other Criteria	<ol style="list-style-type: none"> 1. Must embody the three main principles of ecotourism. 	

(Kwan, 2005).

Some ecolodge accommodations do not meet the guidelines in Table 9, but still have the “eco” label (Kwan, 2005). The ecotourism certification of products and services is now considered to be a mark of generally high product quality as well as an indication of environmentally, economically, and socially sounds products (Haaland & Aas, 2010). Earlier ecotourists required few services and the term most often used to describe desired

accommodations was rustic. Over time, the market has grown and with expansion comes increased demand and the creation of more service levels. It is common now to see ecolodges that pamper the visitor with high quality services such as exceptional cuisine, very unique and well-maintained rooms, and additional amenities more common to a resort, including hot tubs and spas (Marques, 2000). One unique trait that ecolodges have is they are so closely built and linked with the natural environment they are in, making all ecolodges different from one another. The difficulty that this presents is trying to uncover what ecolodge attributes or qualities are most desirable to tourists choosing a specific lodge.

Accommodation Flexibility in Ecotourism

Wight (1997) argued that ecotourism accommodations range from luxurious hotel settings to rustic non-fixed roof accommodations such as camps and tents (Figure 5), but `fixed-roof` accommodations should be sorted into either rustic or comfortable. A survey conducted by Wight (1997) compared accommodation choices between ecotourists and general consumers. The study found that general consumers chose hotels most often (51%), and only 41% of ecotourists selected hotels and were more likely to select more adventurous-type accommodations such as cabins, lodges, camping, bed and breakfasts, and ranches. Figure 5 shows the wide variety of accommodations that ecotourists will consider staying in based on where they are situated on the spectrum developed by Wight (1997). When general consumers were asked to select the number of accommodations they would be willing to stay in, the average response was 1.5. Ecotourists were asked the same question and yielded a response of 3.5, showing they are more flexible when it comes to lodging choices. A key finding of this survey was “vacation experience seems to determine the accommodation; the accommodation is not the critical determinant” (Wight, 1997, p.210).

ECOTOURISM ACCOMMODATION SPECTRUM

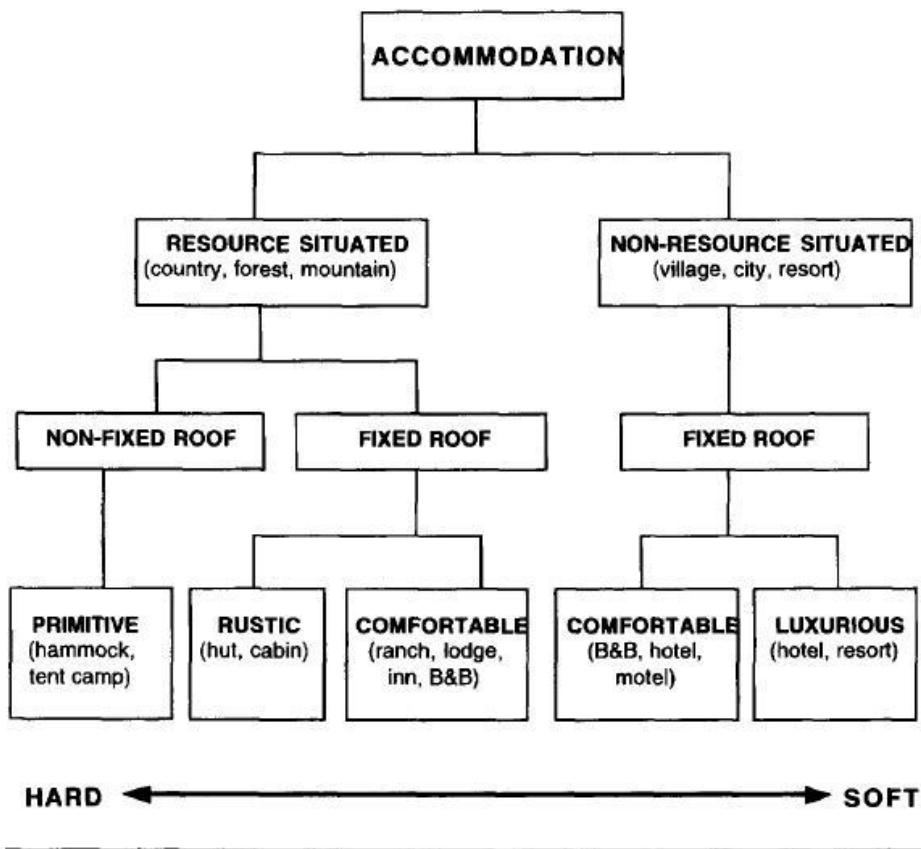


Figure 5. Ecotourism accommodation spectrum (Wight, 1997).

Improving Ecolodges with Consumer Feedback

Consumer feedback is a very valuable resource for any product, including accommodations. Studying the way tourists rate the quality of services offered during a hotel visit helps managers improve the experience offered at their accommodation and is proved worthwhile in the literature (Callan, 2001). It is uncommon for any type of industry to successfully expand without gathering detailed information on what their clientele expect and value most highly (Qu, Ryan, & Chu, 2000). However, ecolodges have continued to increase in

numbers, even with few studies done on the perception that ecolodge patrons have of the service quality provided.

As the number of ‘ecotourists’ increases, a wider variety of offerings from ecolodges can be expected to develop. For every new ecotourist, there is a chance that a new perception of accommodations is developed that is different from all others. For example, there are nature tourists that place a high emphasis on quality wildlife interaction and less on accommodation service quality, but at the same time there are also tourists who highly value comfortable and high quality facilities and services (Weaver & Lawton, 2002). This can be seen as the variety of services and amenities offered by ecolodges has expanded over time to meet the needs of clientele. This ultimately led to different price levels based how many and what type of services and amenities an ecolodge provided its’ tourists.

Importance-Performance Analysis

Introduction

For this research to be successful, it requires a methodology that can bridge the gap between customer perceptions and recommendations for management. The methodology to be used in this thesis will be an Importance-Performance Analysis (IPA) survey, which is completed by tourists staying at ecolodges that are members of the Certification for Sustainable Tourism. Data for IPA is most often obtained through on-site sampling and survey methodology, allowing managers to capture information directly from users (Gill, 2010). IPA involves a three-step process: (1) identification of management-influenced attributes associated with a venue/service, (2) analysis of these attributes based on user data that rates attribute importance and performance (typically Likert scales), and (3) geographical presentation of the results (Hendricks et al., 2004).

The final step generates the most recognizable aspect of IPA, which involves graphing data coordinates based on mean importance/performance ratings for an attribute or feature (Gill, 2010). These coordinates are overlaid on a four-quadrant graph.

This methodology was introduced into the field of marketing in the 1970s for identifying strengths and weaknesses of brands, products and service (Kitcharoen, 2004). Kitcharoen (2004) states the IPA identifies strengths and weaknesses by comparing: (1) the relative importance of the attribute, and (2) consumer's evaluation of the offering in terms of those attributes. Importance is viewed as a reflection of the relative value of the various qualities of attributes to consumers. Therefore, attributes with a lower importance rating are likely to play a lesser role in affecting overall perceptions, while higher importance ratings are likely to play a more critical part in the overall experience of the tourist. This is a valuable concept because any business, in this case ecolodges, need to find what attributes are more influential in ensuring repeat purchase behaviour. Lovelock, Patterson, & Walker (1998, p.21) state the usefulness of this particular tool to management to "direct scarce resources to areas where performance improvement is likely to have the most effect on overall customer satisfaction." This is especially true for ecolodges in their goal of using resources appropriately.

Importance-Performance Analysis has one underlying assumption; the level of customers' satisfaction with an attribute is primarily derived from their expectation and judgement of the product's or service's performance (Chu & Choi, 2000). The approach is effective in making comparison between the importances that consumers place on an attribute and performance in relation to that attribute (Fallon & Schofield, 2006). As a managerial tool, IPA has grown in popularity and has been broadly used to identify strengths and weaknesses of brands, products, services, and retail establishments in various industries (Chapman, 1993).

Importance-Performance Analysis provides resource managers, government officials, and private businesses with easy-to-understand and information about visitor preferences and satisfaction for a product (Gill, 2010).

Nepal (2007) used Importance-Performance Analysis to examine the perspective of trekkers at ecotourism destinations in Nepal regarding the importance they give and their satisfaction with accommodation related services and facilities. The four main subjects of the study were: (1) level of importance ecotourists attach to accommodation-related amenities, (2) the level of satisfaction of ecotourists with accommodation-related amenities, (3) the discrepancy between importance and satisfaction, and (4) the influence of satisfaction on willingness to pay an ‘eco’ fee for the conservation area where the accommodation facilities were located. Nepal (2007) stresses the need to consider emotive influences and the measuring and managing of consumer satisfaction is critical to the sustainability of a product.

Perceived Importance and Performance of Attributes

The importance of an attribute is commonly regarded as a person’s general assessment of the significance of an attribute for a product or service (Chu & Choi, 2000). By considering both expectations that relate to certain important attributes and judgement of performance on the same attribute, many studies have analysed consumer satisfaction (Swan & Coombs, 1976). If the goal of IPA is to provide optimal management strategies for multiple interests, it is critical to consider the importance/performance from the concept of different user types (Gill, 2010). Hendricks, Schneider, and Budruk (2004) extended the segmentation concept to benefit-based groupings showing that this type of segmentation can greatly enhance IPA capabilities and provide clear data for management. Popular criterion used for benefit-based segmentation includes type of

primary activity, geographic origin, age, gender, or other specific attributes (Hendricks et al., 2004).

Studies concluded that one should link the importance and performance of a single attribute, because the concept of importance is viewed in the same regard as satisfaction by consumers (Barsky, 1992). MacKenzie (1986) stated that when a customer perceives an attribute as important, it is believed to play a significant role in influencing his or her product choice. In other studies, the term importance has been used to explain the perceived importance of an attribute and its effect on product or service quality (Carman, 1990). Lilien, Kotler, and Moorthy (1993) explain the term ‘important attributes’ as those considered important by consumers, and that the various brands or products are perceived to differ. Other studies stated that performance lies in customer perception of performance of the attributes. Hemmasi, Strong & Taylor, (1994) stated the more favourable the perception of performance, the greater the likelihood of choice when consumers are deciding between similar alternatives. Demographic characteristics can influence the perception of importance and performance of an individual. Criteria such as age, gender, and employment status are found to influence IPA scores in this research. The same is found for specific trip characteristics. This is strategically critical for hotel operators to understand and identify the product or service attributes perceived by consumers as important and to know how customers perceive these attributes (Hemmasi et al., 1994). It is valuable for hotel operators to recognize such attributes because it is likely that favourable post-purchase experience may lead to the consumer repurchasing at the same hotel if he or she is satisfied with performance (Hemmasi et al., 1994).

Interpreting the IPA Grid

Importance-performance analysis provides comparison of the dimensions, and allows for a matrix evaluation of the differences between the dimension, allowing managers to recognize areas where they need to revise resource allocation (Matzler, Sauwein, & Heischmidt, 2002). The interpretation of the IPA is presented graphically on a grid divided into four quadrants (Figure 6). The Y-axis reports the customer's perceived importance of selected attributes, and the X- axis displays the product's performance in relation to these attributes (Chu & Choi, 2000). The four quadrants that are represented on the IPA grid are: Concentrate Here, Keep Up the Good Work, Low Priority, and Possible Overkill. All attributes that are placed in a quadrant can be interpreted in the same way. In the Concentrate Here quadrant, attributes are perceived to be very important to respondents, but performance levels are seen as fairly low (Chu & Choi, 2000). This signifies that improvement efforts should concentrate here. In the Keep Up the Good Work quadrant, attributes have a high importance score, and the company or organization has achieved high levels of performance in relation to these activities (Chu & Choi, 2000). Attributes found in the Low Priority quadrant have low importance scores and low performance scores. Although performance levels are recorded as low for these attributes, managers do not have to be overly concerned because these attributes also receive a low importance score and limited resources should be expended on this cell (Chu & Choi, 2000). The fourth quadrant is titled Possible Overkill, containing attributes of low importance but of relatively high performance (Chu & Choi, 2000). Respondents are satisfied with the performance on these attributes, but managers should consider that the resources and effort put into these attributes is more than necessary to achieve customer satisfaction.

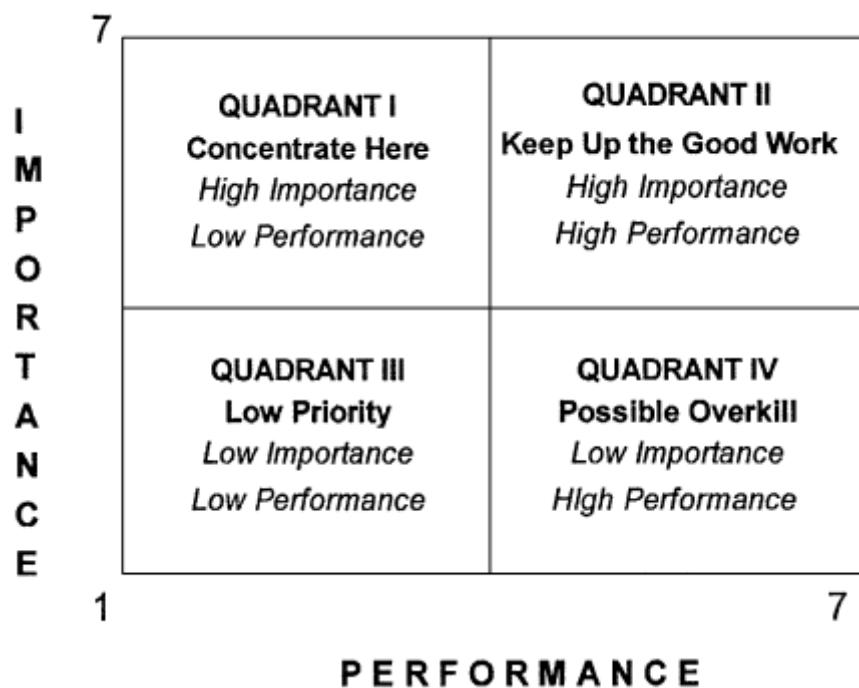


Figure 6. Importance-Performance Analysis Grid (Chu & Choi, 2000).

Chapter 3: Methodology

Introduction

Chapter 3 will describe the methods used to accomplish the objectives of this study.

Chapter 3 describes the selection of the sample, the survey instrument, and the data collection process, along with the procedures for data analysis.

Study Framework

Similar to the Kwan (2008) study, this research seeks to identify the relationships among ecolodge attributes and tourists' perception of importance and ecolodges. This study is constructed to determine the relationships between the dependent and independent variables at lodges that belong to the Costa Rican Certification for Sustainable Tourism.

Table 10 lists the variables of this study. Kwan (2005) summarises that the dependent variables: perception of importance and performance ratings were dependent on the independent variables: tourists' demographic profile, trip characteristics, and ecolodge categories. The perception of importance and performance of an ecolodge may vary by the gender, age, or any other independent variables attached to a particular respondent. At the same time, the values of a respondent may depend on the country they are visiting.

Table 10.

Variables of this Study

Variables	Attributes
Dependent Variables	<ul style="list-style-type: none">• Tourists' perception of importance of ecolodge attributes• Tourists' perception of performance of ecolodge attributes
Independent Variables	<ul style="list-style-type: none">• Ecolodge country: Costa Rica and Belize• Tourists' demographic information: Age, gender, country of residence, education, employment status, and annual household income.

-
- Tourists' trip characteristics: Length of stay, sources of information, travel motivation, past experience, and travel party.
-

Study Design

The sample population for this study is made up of tourists who stayed at three ecolodges on the Osa Peninsula in Costa Rica between July 2011 and May 2012. Due to the fluctuation in visitation levels at the ecolodges throughout the year, survey completion took many months. The ecolodges had fairly low visitation from July through to October, with an increase in November, and highest numbers in December and January, with moderate visitation from January to May.

Ecolodges involved in this study were found using the internet; the CST website has contact information for all certified lodges. To recruit lodges, a letter was sent out to each lodge explaining the purpose of the study and the benefits to their lodge should they choose to participate. Thirty invitation letters were sent out to lodges all over Costa Rica. The interest expressed in joining the study was low using this recruitment strategy; and the researcher left for Costa Rica in July 2011 with three confirmed lodges for the study.

The original plan was to compare certified and uncertified ecolodges in Costa Rica. The researcher also planned to exclude lodges with less than 12 rooms, but due to the high interest on the Osa Peninsula, there was a possibility to accept such lodges and carry out the entire study on one peninsula. The appeal of this opportunity convinced the researcher to include smaller lodges and compress the study area to the Osa Peninsula. The lodges that expressed interest in joining the study also met the criteria of the original design, three lodges belonging to the CST and three that do not. When distribution of the questionnaires began, there were a total of six ecolodges

included in the study. As data collection progressed, all three uncertified lodges removed themselves from the study at separate times and produced no useable data. Unfortunately, it was several months into the study and the researcher had already left the Osa Peninsula, allowing for no time for replacement lodges to be recruited. After the three withdrawals, the study was reorganized to compare certified ecolodges in Costa Rica with uncertified ecolodges in Belize, using the findings from Kwan (2008).

The three ecolodges included in this study from Costa Rica are Bosque del Cabo Rainforest Lodge (Figure 7), El Remanso Rainforest Wildlife Lodge (Figure 8), and Luna Lodge (Figure 9). The pricing of the three Costa Rican ecolodges is similar, with variation based on the number of people per room, the style of cabin, and the time of year. The three lodges in Costa Rica would be found in the medium and high priced categories of the Kwan (2008) study. The lodges included in the Belize study by Kwan (2008) were: The Lodge at Chaa Creek, Duplooy's Jungle Lodge, Black Rock River Lodge, Crystal Paradise Resort, Mayan Mountain Lodge, and The Trek Shop.



Figure 7. A lodging style available at Bosque del Cabo Rainforest Lodge (Ingribelli, 2011).



Figure 8. Main dining area at El Remanso Rainforest Wildlife Lodge (Ingribelli, 2011).



Figure 9. A type of lodging style available at Luna Lodge (Ingribelli, 2011).

Research Instrument

The questionnaire was based on the Kwan (2008) survey, with modifications recommended by the Kwan research and the change in location from Belize to Costa Rica. Kwan (2008) conducted an extensive review of relevant literature on hotel and ecolodge studies to determine 41 key ecolodge attributes that would be rated. Each attribute was carefully selected after determining which attributes were mentioned most frequently in other hotel studies. For a full explanation of the attribute selection process, refer to Kwan (2008) Chapter 3.3.3.

One question was removed and changed to gain a better understanding of how ecolodges are performing in Costa Rica. The ecolodge attribute “Mayan archeological sites” was removed and substituted with “Volcano viewing”. One attribute was added to the end of this list, asking visitors to rank the Importance and Performance of “Certification by the Costa Rican Certification for Sustainable Tourism”. With the addition of this attribute, the total for this thesis

is 42 attributes. There was also a question added to better understand if visitors were knowledgeable of the CST.

The survey instrument used in Kwan (2008) was a four-page questionnaire, divided into three sections. The first and last sections are made of questions on travel characteristics and demographics. A similar layout was used in this Costa Rica research. Kwan (2008) used a four-point scale for concerning travel motivation attributes, but this thesis used a five-point Likert scale to offer a neutral response choice.

The portion of the questionnaire that pertains to travel motivations is made up of 19 motivation attributes that were selected according to ecotourist motivation studies (Eagles & Cascagnette, 1995; Wight 1996b). Respondents ranked the 19 motivation attributes on a five-point Likert Scale that included 1 (not important at all), 2 (not important), 3 (neutral), 4 (somewhat important), and 5 (very important). The attributes are arranged in a way that is easy to read, with the following group names: attractions, social motives, and other motives. To avoid bias that might arise from the order of presentation (Moser & Kalton, 1979), the ecolodge attributes were listed in alphabetical order in the original questionnaire and this practice was followed in this study.

Section B of the survey consists of ecolodge attributes for tourists to evaluate their perception of importance and performance of each. This section is also ranked on a five-point Likert scale for both importance and performance. The importance section of the Likert Scale is organized to include 1 (not at all important), 2 (not important), 3 (neutral), 4 (important), and 5 (excellent). The segment that asks about performance has a Likert Scale containing 1 (poor), 2 (bad), 3 (OK), 4 (good), and 5 (excellent).

Open ended questions were included in all three sections of the questionnaire to gain a better understanding of certain topics. For example, the definition of an ecolodge in Section B. Information from ecolodge owners indicated that a high percentage of visitors spoke, wrote, and understood the English language, even if it was a second language. This allowed for the survey to be written in the English language only.

Kwan (2008) commented that the salaries coded in the annual household income section were not mutually exclusive. For example, the response categories were coded as \$10,000 to \$30,000, \$30,000 to \$50,000, and \$50,000 to \$70,000... etc. There was a possibility that a respondent who earns \$30,000 may have checked either one of the response categories, but since the possibility of he or she earning the exact dollar amount was slim, the findings of this question should not skew the sample. No changes were made for this study, allowing direct comparisons to be made to the Kwan (2008) findings.

Survey Distribution

Upon checking in, the survey was distributed to ecolodge patrons by either the front desk staff or the researcher, based on the level of cooperation by staff at each lodge. If the lodge staffs was willing to hand out the survey, they would simply say, “We would like your feedback on your experience here through this survey”. If the researcher was the one distributing the survey, he approached visitors after check in and said “Hello, I am Masters student from the University of Waterloo, Ontario, Canada, and my research is focussed on ecolodges and those who stay in them. I was wondering if you would like to help my research by completing this short survey. All the necessary information regarding purpose and instruction are stated at the beginning of the survey. Thank you.”

The researcher explained and conversed with the owners and front desk staff at each individual lodge, providing background and answering questions about the questionnaire and the project. The protocol that worked best was to have the researcher take the lead on approaching visitors in the early stages, while the front desk staff observed until they were comfortable enough to explain the survey on their own. This required a level of trust to be given to lodge owners to ensure the questionnaires were handed out properly, and to not affect the results or remove critical surveys.

Respondents were approached by staff at the front desk during or just after check-in and were given a questionnaire for self-completion. Only the guests who were interested and willing to complete the questionnaire were given one. If there were two or more guests in one room or cabin, only one questionnaire was distributed. It was then up to the guests, that were sharing the unit, to decide who would complete the questionnaire. It was recommended that the trip organizer and decision maker be the evaluator. Since the questionnaire was only designed in English, respondents also had to be able to read the English language and understand what the survey was asking of them. The guests were asked to return the completed questionnaires to the front desk at check-out.

A total of 225 questionnaires were handed out at the three ecolodges. A total of 152 questionnaires were completed, giving a 67.6%. Surveys were originally given to three uncertified ecolodges on the Osa Peninsula, but only 11 were returned to the researcher, and found to be unusable or inconclusive. These data were not subsequently used.

Data Analysis

Once the surveys were returned, the data were input Microsoft Excel 2010 spreadsheets and subsequently transferred to the Statistical Package for Social Sciences (SPSS). Descriptive statistics, consisting of frequencies and mean ratings on respondents' demographic and trip characteristics were computed. The mean importance and performance score was calculated for all 42 ecolodge attributes. The exploratory Factor Analysis was used to create and correlate variable composites from the 42 ecolodge attributes and enable comparison with Kwan (2008). This process was able identify smaller sets of factors that explain high amounts of variance among attributes. This process simplifies the use of IPA for management, by creating similar subgroups to focus on.

The perception of importance and performance of each ecolodge attribute and the derived factors were then plotted on separate IPA grids. The IPA grids consist of cross-hairs that are created based on the mean values of the perception of importance (Y-axis) and performance (X-axis) (Kwan, 2008). For this study, the cross-hairs are placed at 4.0 on both the X and Y axis, to display a useable distribution for ecolodge owners and management. The cross-hairs are placed at 4.0 to clearly distinguish between the factors and attributes that are considered Important (above 4.0) and Not Important (below 4.0). Once the cross-hairs are in place, the ecolodge attributes and derived factors are plotted into meaningful identifiable quadrants. From this, comparisons of the perception of importance and performance of each attribute and factor can be calculated.

Multiple Univariate Analysis of Variance (ANOVA) was used to analyze the differences between the derived factors to the tourists' demographic characteristics and specific trip characteristics. The perception of importance versus performance was then calculated for each

derived factor. The results show what areas of management are being done most successfully, in meeting the expectations of tourists, and what areas need work or more resources. The results also show where unnecessary resources are being used and management is perhaps putting too much effort into.

Chapter 4: Results

Chapter 4 provides the findings of this study. Seven research questions were raised in the introductory chapter, which are answered here. This chapter is divided into two main sections. The first section focuses on the findings made from the data collected at the Costa Rican ecolodges only. The second section is a comparison between some of the main findings in Costa Rica and in Belize.

Section 1: Costa Rica Ecolodges

This section focuses on the findings of the study done in Costa Rica. The first part discusses the response rate of the study. The second part explains the descriptive statistics regarding demographics and trip characteristics of the respondents', followed by a final part focussing on the findings of the seven research questions. The Importance attributes that are found to be most influential in decisions made by ecolodge patrons are identified and discussed. The perceptions of performance of those important attributes are also discussed. By clustering the attributes according to analyzable factors, satisfaction levels can be reported, sociodemographic demographics that influence the perception of importance of the factors are determined, and factors requiring management attention are discovered.

Survey Response Rate

Each ecolodge was given 75 questionnaires, the three certified ecolodges combined to submit 152 completed questionnaires. This calculates to an average response rate of 68% for the three lodges. The surveys were completed over an eleven month period, July 2011 to May 2012. The response rate was calculated by dividing the number of valid questionnaires by the number of total questionnaires possibly handed out at the three ecolodges.

Descriptive Statistics

This section reports on the results from the total sample. It uses the same order of presentation as Kwan (2008), reporting the demographic statistics of samples, including comparisons between certified and uncertified ecolodges. The six variables discussed include age, male to female ratio, country of residence, education, employment statuses, and annual household income.

Age Group

The most frequent age group among the respondents from the certified ecolodges was 36 to 45 years old (n= 37, 24.3%), followed by the 26 to 35 age group (n= 34, 22.4%), and the 46 to 55 age cohort (n=33, 21.7%) (Table 11). The youngest age group, 16-25 years old, was the only group to occupy less than 10% of the sample.

Table 11.

Age Group

Age Group	Frequency	Percentage of Sample
16-25	10	6.58
26-35	34	22.37
36-45	37	24.34
46-55	33	21.71
56-65	20	13.16
66+	16	10.53
No Answer	2	1.32
TOTAL	152	100

Male to Female Ratio

There were 66 male respondents (43.5%) and 85 female respondents (55.9%), and the male to female ratio was 1 to 1.3. The reasons why female respondents outnumbered male respondents are unknown. I speculate that it could be due to gender response bias; the females were more willing to fill in the questionnaires and perhaps played a bigger role in choosing the accommodation during the trip planning stage.

Country of Residence

The majority of respondents from certified ecolodges resided in the United States (n=99, 65.1%), followed by the European Union countries (n=19, 12.5%), and Canada (n= 17, 11.2%). It was also found that, although Costa Rica had a very low number (n=5, 3.3%) it was the highest amongst Central American countries (Table 12).

Table 12.

Country of Residence

Countries	Frequency	Percentage of Sample
Costa Rica	5	3.29
European Union	19	12.50
Canada	17	11.18
Honduras	0	0.00
Nicaragua	0	0.00
Panama	0	0.00
United States	99	65.13
Others	8	5.26
No Answer	4	3.29
TOTAL	152	100.00

Education

The majority of the respondents from certified ecolodges were highly educated: 78.3% (n=119) had a Bachelor's Degree or above (Table 13). An interesting statistic is the high number of respondents who hold a Master's or Doctoral Degree (n=71, 46.7%), almost half of the sample. Similar results occurred in Kwan (2008), where the total sample is dominated by those earning a Bachelor degree, Master's degree, or Doctoral degree. These findings are normal for most ecotourism research that has also found ecotourists to be more highly educated than average tourists (TIES, 2008).

Table 13.

Education

Education Level	Frequency	Percent of Sample
< High school or 12 years of schooling	1	0.66
Completed high school(secondary school)	4	2.63
Some post-secondary school education	13	8.55
Diploma	12	7.89
Bachelor's Degree	47	30.92
Master's or Doctoral Degree	71	46.71
MD	1	0.66
No Answer	3	2.63
TOTAL	152	100

Employment Status

Just under half of the sample were employed full-time (n=73, 48%), followed by those who are self-employed (n=22, 14.5%) and retired (n=22, 14.5%) (Table 14). Studies show that ecotourists are normally in the higher income bracket (TIES, 2008). Kwan (2008) also found that the highest portion of her sample was comprised of those working full-time. It would make sense that a high percentage of visitors staying in Costa Rican ecolodges would be employed full-time; assuming full-time employment can generate high income.

Table 14.

Employment Status

Occupation	Frequency	Percent of Sample
Employed full-time	73	48.03
Employed part-time	13	8.55
Self-employed	22	14.47
Retired	22	14.47
Homemaker	2	1.32
Not Employed	0	0.00
Student	11	7.24
No Answer	9	5.92
TOTAL	152	100

Annual Household Income (US dollars)

Table 15 indicates that 24.2% of the respondents had an annual household income of more than \$140,000 USD (n=37). The next most frequent income brackets were \$70,000-

\$90,000 USD (n=18, 11.8%), and \$100,000-\$120,000 (n=13, 8.5%) (Table 15). This finding is similar to those of Kwan (2008), where the above \$140,000 income bracket was most frequent within the Upscale and Mid-price categories. The high portion of respondents earning more than \$140,000 could be linked to the high number of respondents who have earned a Master's or Doctoral Degree. It can be assumed that with a higher level of education, an individual will earn more income.

Table 15.

Annual Household Income

Income Bracket	Frequency	Percent of Sample
<\$10,000	3	1.96
\$10,000-\$30,000	5	3.27
\$30,000-\$50,000	10	6.54
\$50,000-\$70,000	12	7.84
\$70,000-\$90,000	18	11.76
\$90,000-\$100,000	12	7.84
\$100,000-\$120,000	13	8.50
\$120,000-\$140,000	10	6.54
>\$140,000	37	24.18
No Answer	32	21.57
TOTAL	152	100

Trip Characteristics

This section explains the travel behaviour and motivations of the. The nine variables include trip length, length of ecolodge stay, party composition, major sources of information,

past ecolodge experience, other types of accommodations, most popular recreational activities, travel motivation, and single most important reason for travelling to Costa Rica.

Total Trip Length in Costa Rica

The total trip length data show relatively long trips. A large portion of respondents stayed in Costa Rica from 8 to 11 days (n=48, 31.6%) (Table 16). The second most frequent trip duration was 4 to 7 days (n=43, 28.3%), followed by 12 to 25 days (n=25, 16.5%). It is important to note here that all the ecolodges included in this study were on the Osa Peninsula, and it is common for one day to be designated to travel to the peninsula and one day to go back to the mainland, typically San Jose. A group could coordinate the flight from the Osa Peninsula and their flight out of Costa Rica but it can be difficult, especially with unpredictable weather conditions. If one were to take a bus or drive from San Jose to the Osa Peninsula, it is a full day's ride, roughly eight hours. This trip length data is very similar to that found in Kwan (2008) for Belize, with relatively long trips taken and similar distribution of trip lengths.

Table 16.

Average Trip Length

Number of Days	Frequency	Percent of Sample
1-3	3	1.97
4-7	43	28.29
8-11	48	31.58
12-15	25	16.45
>15	33	21.71
No Answer	0	0.00
TOTAL	152	100

Average Length of Stay at the Ecolodge

Table 17 displays that the most frequent number of nights to stay at an ecolodge on the Osa Peninsula was five (n=42, 27.6%), followed by four nights (n=38, 25%), and 3 nights (n=27, 17.8%). Therefore the visitors tended to stay from 3 to 5 nights. Kwan (2008) found that the most frequent stay length was 3 nights, followed by 4 nights and 2 nights. Therefore the Belize visitors tended to stay from 2 to 4 nights. The longer length of stay in Costa Rica for this Costa Rica study may relate to the long travel time and difficult of reaching the Osa Peninsula.

Table 17.

Average Length of Stay at Ecolodge

Number of Nights	Frequency	Percent of Sample
1	0	0.00
2	8	5.26
3	27	17.76
4	38	25
5	42	27.63
6	14	9.21
7	12	7.89
>7	9	5.92
No Answer	2	1.32
TOTAL	152	100

Party Composition

Table 18 illustrates that a large portion of the respondents travelled with their spouse or partner (n=65, 42.8%), followed by families with kids (n=41, 27%), and groups of friends (n=18, 11.9%). The same order was found in the Kwan (2008) study.

Table 18.

Party Composition

Party Composition	Frequency	Percent of Sample
Alone	8	5.26
Spouse/ Partner	65	42.76
Family (all adults)	14	9.21
Friends	18	11.84
Organizational group	3	1.97
Family (with kids)	41	26.97
Other	3	1.97
No Answer	0	0.00
TOTAL	152	100

Major Sources of Information

When respondents were asked what were the most important sources of information influencing their decision regarding what ecotodge to stay at, the Internet was most common (n=93, 40.3%), followed by Family/Friends (n=47, 20.6%), Travel Guide Books (n=36, 15.6%), and Word of Mouth (n=16, 6.9%) (Table 19). These findings are a testament to the influence of the World-Wide-Web and the rising power of social media. These data are similar to the findings of Kwan (2008) for Belize, with internet being the most frequently used source of information.

Table 19.

Major Sources of Information

Major Sources of Information	Frequency	Percent of Sample
Friends/Family	47	20.35
Travel Guide Books	36	15.58
Travel Brochures	2	0.87
Word of Mouth	16	6.93
Environmental Association	7	3.03
Person Experience/ here before	6	2.60
Films	3	1.30
Travel Agent	7	3.03
Magazine Articles	7	3.03
Tour Package	1	0.43
TV	2	0.87
Internet	93	40.26
Others	3	1.30
No Answer	1	0.43
TOTAL	231	100

Past Experience with Nature Based Accommodations/Ecolodges

Slightly over half of the respondents who stayed in a certified ecolodge had stayed in a nature based accommodation or an ecolodge prior to this visit (n=84, 55.3%) (Table 20). This suggests a clientele with experience in the types of facilities offered at the ecolodges studied. Similar levels of experience with ecolodges were found in Belize (Kwan, 2008).

Table 20.

Past Experience with Nature-Based Accommodations

Past Experience with Nature-Based Accommodations	Frequency	Percent of Sample
Yes	84	55.26
No	68	44.74
No Answer	0	0.00
TOTAL	152	100

Other Types of Accommodations Used on the Trip

When respondents were asked what other types of accommodations they had used, during their trip to Costa Rica, over half of the sample declared hotels/motels/resorts (n=122, 68.5%) (Table 21). The response with the next highest frequency was Private Cottage/Cabin (n= 15, 8.4%), followed by Home of friends and relatives (n=12, 6.7%). The high use of hotels/motels/resorts can be due to the need to spend one night in San Jose before and after visiting the Osa Peninsula to help coordinate domestic and international flights. There was a high use of hotels/motels/resorts in the Belize study, followed by the use of guest houses and private cottages (Kwan, 2008).

Table 21.

Other Types of Accommodation Used on the Trip

Types of Accommodation	Frequency	Percent of Sample
Home of friends and relatives	12	6.74
Hotel/Motel/Resort	122	68.54

Guest House	10	5.62
Campground/Trailer Park	2	1.12
Cruise Ship	0	0.00
Private Cottage/Cabin	15	8.43
Local Village	6	3.37
Other	7	3.93
No Answer	4	2.25
TOTAL	178	100

Most Popular Recreational Activities during Respondents' Ecolodge Stays

When respondents were asked what recreational activity they engaged in most while staying at a particular ecolodge, the most frequent response was Hiking and Walking, as it accounted for 73.7% of the total sample (n=112) (Table 22). The recreational activity with the next highest frequency was Wildlife viewing/learning (n=12, 7.9%), which is substantially lower than Hiking and Walking. All lodges included in this study are located on very large pieces of land, where well thought out trails have been created. It is common for many of the other activities included in Table 22 to take place while on a Hike or Walk. Kwan (2008) found Hiking and Walking to be the most frequent activity, followed by water activities, and Mayan cultural trips.

Table 22.

Most Popular Recreational Activities

Popular Recreational Activities	Frequency	Percent of Sample
---------------------------------	-----------	-------------------

Hiking, Walking	112	73.68
Wildlife viewing/learning	12	7.89
Bird viewing only	6	3.95
Swimming/Surfing	1	0.66
Relax/Yoga	5	3.29
No Answer	16	10.53
TOTAL	152	100

Most Important Travel Motivation Factors

The respondents ranked how important each of the 19 items was when planning their trip to Costa Rica. This ranking was on a Likert scale ranging from 1 (not at all important), 2 (not very important), 3 (neutral), 4 (somewhat important), 5 (very important). Table 23 displays the mean score and standard deviation for all 19 motivation attributes. The respondents ranked attraction motive: *wilderness and undisturbed nature* as the most important motivation for travelling to Costa Rica (mean=4.83), followed by psychological factor: *learn and explore nature* (mean=4.77). The attraction motives continued to receive high rankings as *tropical forests* (mean=4.71), *mammals* (mean=4.53), *trees and wildflowers* (mean=4.29), and *photography of landscape and wildlife* (mean= 4.29) followed next. The motive *be physically active* also scored a mean of 4.29 and was followed by *go places where one feels safe* (4.23). It is here where the first social motive is found in the ranking order, as *being together as a family* scored a mean of 4.20. The findings from Kwan (2008) indicate that those visiting Belize shared the same top three travel motivations: Learn and explore nature, Tropical forests, and Wilderness and undisturbed nature.

Table 23.

Travel Motivation Attributes

Attraction Motives	Mean	SD
Wilderness and Undisturbed Nature	4.83	0.46
Tropical Forests	4.71	0.65
Mammals	4.53	0.71
Tress and Wildflowers	4.29	0.85
Photography of landscape and wildlife	4.29	0.95
Birds	4.16	0.91
Lakes and Streams	3.71	1.12
Volcanoes	3.02	1.48
Barrier Reefs	1.92	1.20
<hr/>		
Social Motives		
Being together as a Family	4.20	1.32
Meet People with Similar Interests	3.03	1.18
Visit Friends and Relatives	2.07	1.42
<hr/>		
Other Motives		
Learn and Explore Nature	4.77	0.47
Be Physically Active	4.29	0.70
Go to Places Where One Feels Safe	4.23	0.85
Have Fun and Be Entertained	4.07	1.14
See Maximum in Time Available	3.99	1.07

Warm Climate	3.85	1.05
Feel at Home Away from Home	3.58	1.24

Single Most Important Reason for Travelling to Costa Rica

When patrons were asked to answer the open-ended question, “What was your single most important reason for travelling to Costa Rica”, responses could be grouped into nine common themes. The most frequent response from the sample was dominantly *enjoy nature and wildlife* (n=84, 55.3%) (Table 24). This response is not a surprise, since the first ranked motivation for travelling to Costa Rica was *wilderness and undisturbed nature* (Table 23). This response also supports *hiking and walking* (Table 22) as the most popular recreational activity that patrons engaged in while visiting an ecolodge. The second most frequent response was, surprisingly, *relax/yoga* (n=11, 7.2%), followed by *see family/friends* and *experience Costa Rica* which both received a frequency of nine (5.9%) (Table 24). It is interesting that *relax/yoga* received the second highest frequency, as it is not often mentioned in ecotourism literature. No direct comparison could be made to Kwan (2008), other than the absence of yoga in the Belize study.

Table 24.

Common Responses: Single Most Important Reason for Travelling to Costa Rica

Common Responses	Frequency	Percent of Sample
Enjoy Nature/Wildlife	84	55.26
Relax/Yoga	11	7.24
See Family/Friends	9	5.92
Experience Costa Rica	9	5.92

Activities as a Family	6	3.95
Ecotourism	5	3.29
Study a Particular Species	4	2.63
Experience Culture	3	1.97
Visit National Parks	1	0.66
No Answer	20	13.16
TOTAL	152	100

“What is an Ecolodge?”

To understand the tourists’ concept of an ecolodge, an open-ended question was used.

Table 25 shows the frequencies of each of the concepts that were given as answers by ecolodge patrons. The most common theme or answer was “enjoy nature in a respectful/sustainable way” (n=89, 46.6%), followed by “increase environmental preservation/protection” (n=24, 11.8%), while “teach about wildlife and nature” and “contribute to local economy” both had frequencies of 12 (5.9%). This shows that collectively, the patrons who visited the certified ecolodges had a good understanding of the definition and key concepts of what an ecolodge is. Individually however, very few answers were given that were all encompassing of the key concepts that ecolodges pride itself on being. A high amount of patrons mentioned “enjoy nature in a respectful/sustainable way” but that was all they wrote. It was rare for an answer to give two concepts and very rare for a patron to mention more than two concepts. This finding contrasts with Kwan’s (2008) finding from Belize where she found “that the ecolodge patrons did not have an agreed upon idea of the purpose and function of ecolodges”.

Table 25.

Summary Information of Ecolodge Patrons' Perception of an Ecolodge

Common Responses	Frequency	Percent of Sample
Enjoy Nature in Respectful/Sustainable Way	89	46.63
Increase Environmental Preservation/Protection	24	11.76
Teach about Wildlife and Nature	12	5.88
Contribute to Local Economy	12	5.88
Use Renewable Energy and Recycle	8	3.92
Hotel in the Jungle	7	3.43
Low Carbon Footprint	6	2.94
Example for Future Accommodations	1	0.49
No Answer	45	22.06
TOTAL	204	100

Knowledge of Costa Rican Certification for Sustainable Tourism (CST)

To gain a better understanding of visitors' awareness of the certification program in place, respondents were asked "Is this ecolodge part of the Costa Rican Certification for Sustainable Tourism", and were given a selection of three answers, as shown in Table 26. The most common response, and also the correct response, was "yes" (n=88, 57.9%), followed by "don't know" (n=52, 34.2%), and finally "no" (n=4, 2.6%). It was brought to the researcher's attention, that during the early stages of the data collection for this thesis, one lodge was not yet

certified, but was in the process of being judged. This lodge shared this information with its respondents if asked, and eventually earned its certification two months into data collection. At this point, the amount of surveys that had been collected was small and all visitors were informed that the lodge would be certified in the near future. Table 26 shows a major portion of ecolodge visitors (34.2%) were not aware of the lodge's certification status they were visiting. This suggests that about a third of the market were not aware of certification and therefore could not consider certification as being a factor in destination choice.

Table 26.

Knowledge of CST

Is Ecolodge Certified?	Frequency	Percent of Sample
Yes	88	57.89
No	4	2.63
Don't Know	52	34.21
No Answer	8	5.26
TOTAL	152	100

Research Questions

This section answers the seven research questions presented in Chapter 1. This information will help contribute to a better understanding of ecolodge patrons and how they perceive the quality provided by ecolodges.

Research Question 1

What ecolodge attributes did patrons who visited Costa Rica consider to be the most important?

To find out the important attributes that influence patron's ecolodge selection, 42 ecolodge attributes were measured on a five-point Likert scale ranging from 1 (very unimportant), 2 (unimportant), 3 (neutral), 4 (important), to 5 (very important). Appendix B displays the ratings of perception of importance from the total sample for all 42 ecolodge attributes.

The calculation of the mean of the 42 perception of importance attributes from the total sample indicated that 25 items received an overall average importance rating above 4.0. Meaning, the respondents perceived that these 25 items as being important, or very important, in their selection of ecolodges (Table 27).

Table 27.

Important Ecolodge Attributes (Perception of Importance Ratings above 4.0)

Rank	Attribute	Importance Rating	Standard Deviation
1	Scenery	4.80	0.45
2	Availability of Wildlife	4.77	0.47
3	Availability of Trees and Wildflowers	4.64	0.63
4	Quality of Environment and Landscape	4.63	0.62
5	Private Sleeping Room; Private Washroom	4.59	0.71
6	Availability of Trail Hiking Facilities	4.55	0.77
7	Value of Money	4.50	0.70
8	Friendliness of Staff	4.49	0.74

8	Knowledgeable Guides	4.49	0.69
10	Decent Sanitary Condition	4.46	0.71
11	Design Sensitive to Natural and Cultural Environment with Minimal Negative Impact	4.43	0.79
11	Staff Provide Efficient Services	4.43	0.74
13	Guided Wildlife Tours	4.36	0.82
14	Reputation of Lodge	4.34	0.89
15	High Quality Food	4.32	0.75
16	Cleanliness	4.31	0.84
17	Recycling of glass, paper, and plastic	4.26	0.87
18	Availability of a Particular Habitat or Species	4.25	1.01
19	Efficient Reservation	4.18	0.80
20	Dining and Bar Services	4.11	0.87
21	Comfort of Bed	4.09	0.88
22	Local Food, Produced with Local Ingredients	4.07	0.91
23	Meets its Energy Through Renewable Energy Resources	4.06	1.03
24	Price	4.05	0.85
25	Authentic Design, Appropriate to Setting	4.01	1.03

Table 27 illustrates that the most important attributes that influenced ecolodge patrons' choice selections are those related directly to the natural physical environment. The highest mean scores were earned by *scenery*, *availability of wildlife*, *availability of trees and wildflowers*, and *quality of environment and landscape*. These attributes were followed by *private sleeping room*, *private washroom*, *availability of trail hiking facilities*, *value of money*, *friendliness of staff*, and *knowledgeable guides*. These findings show that the quality of the natural environment is very important to ecolodge visitors in Costa Rica. This information supports the first ranked

motivation for travelling to Costa Rica was *wilderness and undisturbed nature* (Table 23) and also supports *hiking and walking* (Table 22) as the most popular recreational activity that patrons engaged in while visiting an ecolodge. As mentioned earlier, *hiking and walking* is a central activity to many other activities and important responses, such as viewing scenery, trees and wildflowers, and mammals. The attributes in Table 27 are of a variety of backgrounds. Some motivated by the natural environment, services offered, infrastructure and design of the lodge, and personality of staff members. This indicates that ecolodges need to perform highly in a wide variety of areas in order to match what is expected by its clientele.

Research Question 2

What are the patrons' perceptions of the performance on the most important ecolodge attributes?

To find out the performance of attributes that influence patron's ecolodge selection, 42 ecolodge attributes were measured on a five-point Likert scale ranging from 1 (poor), 2 (bad), 3 (OK), 4 (good), to 5 (excellent). Typically, the respondents rated the performance of the certified ecolodges highly. The average of the performance scores was 4.31, which is between good and excellent. Appendix C displays the ratings of perception of performance from the total sample for all 42 ecolodge attributes.

Table 28 shows the perception of performance of the 25 attributes ranked higher than 4.0 in importance. If the value is positive, performance is greater than importance. If the value is negative, performance is less than importance. The overall performance distribution indicates that *scenery* received the highest performance rating out of all attributes, with a very impressive mean score of 4.96. *Scenery* was also the most important attribute in Question 1, it was followed

by friendliness of staff, quality of environment or landscape, availability of trees and wildflowers, staff provide efficient services, and knowledgeable guides. The values in the column labeled “Difference” were obtained by subtracting the “Importance” mean from the “Performance” mean.

Table 28.

Performance of the 25 Most Important Ecolodge Attributes

Performance Ranking	Importance Ranking	Attribute	Importance Rating	Performance Rating	Difference
1	1	Scenery	4.80	4.96	0.16
2	8	Friendliness of staff	4.49	4.92	0.43
3	4	Quality of Environment or Landscape	4.63	4.88	0.25
4	3	Availability of Trees and Wildflowers	4.64	4.87	0.24
4	11	Staff Provide Efficient Services	4.43	4.87	0.44
6	8	Knowledgeable Guides	4.49	4.84	0.34
7	2	Availability of Wildlife	4.77	4.83	0.06
8	6	Availability of Trail Hiking Facilities	4.55	4.82	0.28
8	15	High Quality Food	4.32	4.82	0.50
8	11	Design Sensitive to Natural and	4.43	4.82	0.39

		Cultural Environment with Minimal Negative Impact			
8	23	Meets its Energy Needs Through Renewable Energy Sources	4.06	4.82	0.76
8	5	Private Sleeping Room; Private Washroom	4.59	4.82	0.23
13	14	Reputation of Lodge	4.34	4.76	0.42
13	17	Recycling of Glass, Paper, and Plastic	4.26	4.76	0.50
15	13	Guided Wildlife Tours	4.36	4.75	0.39
15	10	Decent Sanitary Condition	4.46	4.75	0.28
17	20	Dining and Bar Services	4.11	4.74	0.63
18	25	Authentic Design, Appropriate to Setting	4.01	4.73	0.71
19	18	Availability of a Particular Habitat or Species	4.25	4.70	0.45
20	22	Local Food Produced with Local Ingredients	4.07	4.68	0.61
21	16	Cleanliness	4.31	4.61	0.30
22	7	Value of Money	4.50	4.57	0.07

23	19	Efficient Reservation	4.18	4.56	0.38
24	21	Comfort of Bed	4.09	4.32	0.23
25	24	Price	4.05	4.10	0.05

It should be noted that all of the 25 most important attributes have a positive score, which means performance is exceeding importance. Even the attributes with the lowest mean performance rankings earned a positive difference. In fact, the only attribute out of 42 with a negative difference was *availability of volcano viewing* and it had both very low importance and performance rankings, and the difference was barely noticeable (-0.01) (Appendix D).

Research Question 3

Can the ecolodge attributes be clustered into distinct factors? If so, what are these ecolodge selection factors?

The perception of importance of the 42 ecolodge attributes was factor-analyzed to identify the ecolodge selection factors by using the principal component analysis with orthogonal VARIMAX rotation. The exploratory factor analysis was conducted to gain a better understanding of the structure of the data. The results of the factor analysis suggested an eleven-factor solution, including all 42 attributes, explaining 74% of the variation. These results however, produced several components with only one attribute included explaining very little of the variance of the data. The highest amount of variance explained by one component was 11%. The percentage of variance explained decreased throughout each component and the final three components only explained approximately three percent each. It was decided by the researcher to reduce the number of factors to 5, this way each factor represented a significant percentage of the

variance. It was then decided to remove seven attributes from the analysis due to low communality scores. The attributes *availability of a particular habitat or species*, *availability of horse-back riding facilities*, *availability of volcano viewing*, *availability of security personnel*, *bird-watching facilities and tours*, *convenient location- easy accessibility*, and *scenery* were removed from the factor analysis. After rerunning the factor analysis with 35 ecolodge attributes, the five factors explained 57% of the variance in the data.

The factor analysis was valid because the result of the one-tailed significant test of the correlation matrix showed more than 50% of the correlations coefficients were greater than 0.3 in absolute values indicating that the intercorrelations among the 35 attributes were strong (Noursis, 1994). The overall significance of the correlations matrix were 0.000 with a Barlett Test of Sphericity value of 1925.179, meaning the data matrix had sufficient correlation for factor analysis. The Kaiser-Meyer-Olkin (KMO) overall measure of sampling adequacy was 0.784, indicating the data were likely to factor well based on correlation and partial correlation (Kaiser, 1974).

Cronbach's Alpha was conducted to test the reliability and internal consistency of each factor. The results showed that the range of the five factors Cronbach's Alpha values were from 0.750 to 0.9 and all of the factors had the Alpha coefficient well above the minimum value 0.5, considered to be the acceptable indication of reliability for basic research (Nunnally, 1967) Table 29 shows the results of the factor analysis. The five derived factors were named: *Service Quality* (Factor 1), *Ecotourism Principals and Sustainability* (Factor 2), *Amenities and Services* (Factor 3), *Physical Environment* (Factor 4), *Guided Hikers* (Factor 5).

Table 29.

Factor Analysis Results of Ecolodge Attributes

Ecolodge Attribute Factor	Factor Loading	Eigen-Values	Percent of Variance	Communalities
Factor 1: Service Quality (N=15) ($\alpha=0.88$)		5.55	.175	
Cleanliness	.782			.715
High quality food	.725			.638
Decent sanitary condition	.683			.645
Private sleeping room; private washroom	.661			.468
Value of money	.643			.488
Comfort of bed	.636			.558
Reputation of Lodge	.627			.565
Staff provide efficient services	.598			.519
Quality of the environment or landscape	.594			.544
Price	.592			.452
Dining and bar services	.572			.529
Friendliness of staff	.562			.490
A variety of food selections	.529			.432
Authentic design, appropriate to setting	.485			.473
Variety of lodging styles	.285			.435
Factor 2: Ecotourism Principles and Sustainability (N=8) ($\alpha=0.85$)		3.61	.138	
Uses alternative, sustainable means of water acquisition and reduces water consumption	.818			.716

Meets its energy needs through renewable energy resources	.806	.721
Recycling of glass, paper and plastic	.785	.666
Local food, produced with local ingredients	.688	.594
Design sensitive to natural and cultural environment with minimal negative impact	.610	.738
Benefit local communities through provision of jobs	.606	.518
Certification by the Costa Rican Certification for Sustainable Tourism	.530	.462
Efficient reservation	.426	.412
Factor 3: Amenities and Services (N=7) ($\alpha=0.83$)	3.14	.110
Availability of research facilities	.769	.615
Availability of sales and rental services for recreational equipment	.760	.596
Availability of entertainment	.724	.587
Business facilities and conference rooms	.702	.524
Availability of river trips (canoeing/boating/kayaking)	.639	.481
Availability of library and information facilities	.578	.490
Nature interpretation centre or conservation education programs	.458	.544
Factor 4: Physical Environment (N=3) ($\alpha=0.78$)	1.95	.872

Availability of trees and wildflowers	.855	.757
Availability of wildlife	.849	.754
Availability of trail hiking facilities	.708	.620
Factor 5: Guided Hikers (N=2) ($\alpha=0.75$)	1.24	.654
Guided wildlife tours	.804	.660
Knowledgeable guides	.769	.712

Service Quality (Factor 1) contained 15 attributes, and explained 17.5% of the variance in the data, with an eigenvalue of 5.55, and a reliability of 88% (Table 29). The attributes associated with this factor dealt with service quality items, including: *cleanliness, high quality food, decent sanitary condition, private sleeping room; private washroom, value of money, comfort of bed, reputation of lodge, staff provide efficient services, quality of environment or landscape, price, dining and bar services, friendliness of staff, variety of food selections, authentic design; appropriate to setting, and variety of lodging styles.*

Ecotourism Principles and Sustainability (Factor 2) contained eight attributes, accounted for 13.8% of the variance, had an eigenvalue of 3.61, and a reliability of 85%. The attributes associated with this factor referred ecotourism principals and the concept of sustainability. The attributes are: *uses alternative, sustainable means of water acquisition and reduces water consumption, meets its energy needs through renewable energy resources, recycling of glass/paper/plastic, local food produced with local ingredients, design sensitive to natural and cultural environment with minimal negative impact, benefit local communities through*

provisions of jobs, certified by the Costa Rican Certification for Sustainable Tourism, and efficient reservation.

Amenities and Services (Factor 3) contained seven attributes, explained 11% of the variance, had an eigenvalue of 3.14, and a reliability of 83%. The attributes included in this factor are related to availability of amenities and services on site, consisting of *availability of research facilities, availability of sales and rental services for recreational equipment, availability of entertainment, business facilities and conference rooms, availability of river trips (canoeing/boating/kayaking), availability of library and information facilities, and nature interpretation centre or conservation education programs.*

Physical Environment (Factor 4) contained three attributes, accounted for 8.7% of the variance in the data, had an eigenvalue of 1.95, and a reliability of 78%. The attributes associated with this factor are linked to the physical environment and what it contains, including *availability of trees and wildflowers, availability of wildlife, and availability of trail hiking.*

Guided Hikers (Factor 5) contained only two attributes, accounting for 6.5% of the variance, had an eigenvalue of 1.24, and a reliability of 75%. The two attributes in this factor are *guided wildlife tours, and knowledgeable guides.* Both attributes are related to hiking with a guide who is able to share knowledge and educate participants.

Research Question 4

Are demographic and specific trip characteristics associated with patrons' perceptions of the importance on the factors?

In order to test if demographic profile and trip characteristics influenced ecolodge patrons' perception of importance on the five derived factors Univariate Analysis of Variance, and t-tests were applied.

In terms of demographics, the results of ANOVA revealed that respondents' mean scores for the five derived factors had variation by gender and employment status. To discover which factors hold significant variances in relation to the two variables, a Univariate Analysis of Variance was applied (Table 30). The results of the Univariate Analysis of Variance shows that the differences in mean importance for Gender were significantly different for Factor 2, *ecotourism principals and sustainability* ($F=4.865$, $p=0.032$); and Employment Status differed significantly for Factor 3, *amenities and services*, ($F=2.479$, $p=0.044$). When examining specific trip characteristics, it was found that the mean importance values of Party Composition were significantly different for Factor 1, *service quality* ($F=3.960$, $p=0.004$), and also for Factor 4, *physical environment* ($F=2.685$, $p=0.029$). The trip characteristic Stay Length was significantly different for Factor 2, *ecotourism principles and sustainability* ($F=2.527$, $p=0.030$). There were three trip characteristics that indicated significant differences amongst mean importance for Factor 3, *amenities and services*. The characteristics Total Trip Length in Costa Rica ($F=4.640$, $p=0.005$), Most Influential Information in Decision-Making ($F=2.201$, $p=0.040$), and Stayed in Nature-Based or Ecolodge Before ($F=9.527$, $p=0.003$) significantly differed on Factor 3.

Table 30.

Perception of Importance of Derived Factors based on Demographic Statistics and Specific Trip Characteristics

Sociodemographics and Trip Characteristics x Factors	Mean	SD	F	p
Factor 1: Service Quality				
<u>Party Composition</u>			3.960	0.004
Alone	-0.066	0.892		
Spouse/Partner	-0.078	0.682		
Family [all adults]	0.514	0.692		
Friends	-1.212	2.155		
Organizational Group	-0.472	n/a		
Family [with kids]	0.348	0.794		
Factor 2: Ecotourism Principles and Sustainability				
<u>Gender</u>			4.865	0.032
Male	-0.074	0.957		
Female	0.057	1.037		
<u>Stay Length (number of nights)</u>			2.527	0.030
1	-1.093	n/a		
2	1.013	0.492		
3	0.049	1.116		
4	-0.322	1.144		
5	-0.138	0.869		
6	0.332	0.709		
7	-0.022	1.012		

>7	0.814	0.623
<hr/>		
Factor 3: Amenities and Services		
<u>Employment Status</u>		
Employed full-time	-0.166	0.882
Employed part-time	0.099	0.657
Self-employed	0.488	1.22
Retired	-0.595	0.731
Homemaker	-0.937	n/a
Student	0.640	0.809
<u>Total Trip Length in Costa Rica</u>		
1 to 3 days	1.185	n/a
4 to 7 days	0.020	1.012
8 to 11 days	-0.233	0.780
12 to 15 days	0.857	1.323
>15 days	-0.227	0.868
<u>Most Influential Information in Decision-Making Process</u>		
Friends/Family	-0.187	0.831
Travel Guide Books	0.281	1.272
Word of Mouth	1.850	1.028
Environmental Association	-0.285	0.644
Personal Experience/here before	-0.479	n/a
Films	0.273	n/a
Travel Agent	0.654	0.087

Magazine Articles	0.686	n/a
Internet	-0.125	0.966
<u>Stayed in nature-based accommodation or an ecolodge before?</u>		
Yes	0.186	1.00
No	-0.161	0.979
Factor 4: Physical Environment		
<u>Party Composition</u>		
Alone	-1.012	1.216
Spouse/Partner	0.079	0.963
Family [all adults]	0.130	1.024
Friends	-0.015	0.706
Organizational Group	-2.571	n/a
Family [with kids]	0.072	0.974

Trip Characteristic Differences in the Perception of Importance on Service Quality

The results of the ANOVA showed that the perception of importance on *service quality* significantly differed on party composition ($F=3.960$, $p=0.004$). Respondents traveling in a family group of all adults had the highest mean score of 0.514. The next highest group was a family that included kids, with a mean score of 0.348. Respondents traveling alone had a mean of -0.066, those traveling with a spouse/partner had a mean of -0.078, those within an organizational group had a mean score of -0.472, and respondents traveling with friends had a mean score of -1.212 (Table 30).

The results of party composition show that groups traveling with family had the highest perception of importance on *service quality*. Those travelling with friends had the lowest perception of importance, but the highest standard deviation. This could be because of the many unlimited personalities and motivations that could be present within a group of friends. There is a chance that friends could have different standards of *service quality* based on past experiences and background. The instruction of the survey was for it to be completed by one person in each group, but it is possible the information given could represent an entire group if it was completed together.

Demographic and Trip Characteristic Differences in the Perception of Importance on Ecotourism Principles and Sustainability

The results of the ANOVA indicated that the perception of importance on *ecotourism principles and sustainability* significantly differed on both demographic and specific trip characteristics. This factor differed significantly on the mean scores for gender ($F=4.865$, $p=0.032$) and length of stay (number of nights) ($F=2.527$, $p=0.030$). When looking at gender, females had a higher mean score (0.057), than males (-0.074). When dealing with the length of stay (number of nights), two nights had a mean of 1.013, followed by those visiting longer than seven nights with a mean of 0.814, six nights had a mean of 0.332, three nights had a mean of 0.049, seven nights had a mean of -0.022, five nights had a mean of -0.138, four nights had a mean of -0.322 and lastly one night had a mean of -1.093 (Table 30).

The results of gender support the findings of Mohai (1992), in saying that women are found to express greater concern for the environment than men. When looking at stay length, there is no recognizable trend or pattern in the mean importance scores based on the number of

nights. The mean scores fluctuate randomly from negative to positive and no concrete conclusions can be made based on this data.

Demographic and Trip Characteristic Differences in the Perception of Importance on Amenities and Services

The ANOVA indicated that *amenities and services* had the highest amount of significant differences on the perception of importance of all the derived factors. Regarding demographics, employment status differed significantly on this factor ($F=2.479$, $p=0.044$). there were also several trip characteristics that significantly differed on *amenities and services*, including total trip length in Costa Rica ($F=4.640$, $p=0.005$), most influential information in decision-making ($F=2.201$, $p=0.040$),and finally if respondents stayed in a nature-based accommodation or ecolodge before ($F=9.527$, $p=0.003$) (Table 30).

Looking at employment status in detail, it is observed that students had the highest mean of 0.640, followed by self-employed with a mean of 0.488, employed part-time had a mean of 0.099, employed full-time had a mean of -0.166, retired had a mean of -0.595, and lastly homemaker with a mean of -0.937 (Table 30). If the homemaker case is removed (single case), these results mirror those found by Kwan (2008), where students had the highest importance mean and retirees had the lowest regarding *amenities and services*. This could be because students are likely to have the lowest disposable income, and would want the most in terms of services and amenities for the cost of their stay.

When concentrating on the total trip length in Costa Rica, the highest mean value was appointed to 1 to 3 days with a mean of 1.185, followed by 12 to 15 days with a mean of 0.857, 4 to 7 days with a mean of 0.020, those staying longer than 15 days had a mean of -0.227, and

lastly 8 to 11 days with a mean of -0.233 (Table 30). The data shows no recognizable pattern, similar to the case of “length of stay” and *ecotourism principles and sustainability*. The only trend that can be observed is there is more variation in the higher mean scores than in the lower mean scores.

When respondents were asked what the most influential information was in their decision-making process, there were many answers given. The response with the highest mean was word of mouth with a mean of 1.850, followed by magazine articles with a mean of 0.686, travel agents with a mean of 0.654, travel guide books with a mean of 0.281, films with a mean of 0.273, Internet with a mean of -0.125, family/friends with a mean of -0.187, environmental association with a mean of -0.285, and lastly personal experience/here before had a mean of -0.479 (Table 30). Word of mouth could pertain to anyone, even those with no experience or credibility. It is speculated that the high importance stems from the personal attachment to the information or the source it came from. Magazine articles was only a single-case variable.

When respondents were asked if they had stayed in a nature-based accommodation or ecolodge before, the response with the higher mean was yes (0.186), while there was a lower mean response for no (-0.161) (Table 30). It makes sense that those who have stayed in a nature-based accommodation or ecolodge would place higher importance on *amenities and services* because they have experience and a better understanding of what to expect. Those visiting for the first time are influenced by various sources of information that could be inconsistent.

Trip Characteristic Differences in the Perception of Importance on Physical Environment

The ANOVA results indicated that the perception of importance on *physical environment* significantly differed on party composition ($F=2.685$, $p=0.029$). respondents traveling with

family that were all adults had the highest mean of 0.130, followed by those traveling with a spouse/partner with a mean of 0.079, those traveling with family that included kids had a mean of 0.072, groups made of friends had a mean of -0.015, respondents traveling alone had a mean of -1.012, and lastly traveling with an organizational group had a mean of -2.571 (Table 30).

Similar to *service quality*, those travelling with family but no children had the highest mean importance score. Those travelling alone had a low mean score, this could be indication that perhaps they are seeking something more, and the physical environment is not a key factor in their experience.

Research Question 5

Are demographic and specific trip characteristics associated with patrons' perception of the performance on the factors?

The results of the MANOVA test reveal that there was no difference found on the perception of performance in the derived factors in relation to demographic or trip characteristics. This shows that demographic and specific trip characteristics were found to have no influence on ecolodge patrons' evaluations of the performance of the *service quality*, *ecotourism principles and sustainability*, *amenities and services*, *physical environment*, and *guided hikers*. This suggests that there is no difference in the perception of performance, regardless of one's demographics or their perception if importance of attributes. This could also be due to the consistently high performance scores by all three certified ecolodges.

Research Question 6

What are the perceptions of importance versus performance for each factor?

As previously mentioned, the relationship between the importance and performance of attributes can be presented on a two-dimensional grid. When presented on the x and y axes, importance and performance ratings are combined to form a new data, presented on a four-quadrant grid which helps to measure service quality. The grid system aids management to identify areas where scarce resources should be concentrated. To determine the perception of importance ratings versus performance ratings of each factor so management can allocate resources to weaker areas, the modified importance-performance analysis was used.

The traditional four-quadrant IPA technique has been criticized, as discussed earlier, because critics have stated that the quadrant classification may not be truly representative due to the subjective placement of the gridlines. In the traditional use of the IPA, the placement of the gridlines makes a considerable difference on the interpretation of the data and subsequent action. For this study, the IPA grid is being used as a managerial tool. This means the gridlines will be adjusted to show a distribution in variables and factors that can aid managers in improving their ecolodges.

Table 31 displays the perception of importance and performance of all five derived factors. It was found that *physical environment* received the highest importance ratings, followed by *guided hikers, service quality, ecotourism principles and sustainability, and amenities and services*. The performance ratings of all five factors were rated higher than the importance ratings; this indicates that patrons were satisfied with the five areas offered by the ecolodge they chose to stay at.

Table 31.

Importance-Performance Ratings of the Five Factors

Factor	Variables	Mean Importance	Mean Performance	Difference
1	Service Quality	4.23	4.66	0.42
2	Ecotourism Principles and Sustainability	4.00	4.69	0.69
3	Amenities and Services	2.34	3.28	0.94
4	Physical Environment	4.65	4.84	0.19
5	Guided Hikers	4.43	4.80	0.37

Figure 10 displays the modified importance –performance grid results for the derived factors. The IPA grid on Figure 10 shows that certified ecolodges were performing well with regard to *service quality* (Factor 1), *physical environment* (Factor 4), and *guided hikers* (Factor 5), as these factors are in the “keep up the good work” quadrant. *Amenities and services* (Factor 3) was the only factor present in the “low priority” quadrant. With the gridlines arranged at exactly 4.00 on the x and y axis, *ecotourism principles and sustainability* (Factor 2) is on the border of “keep up the good work” and “possible overkill”. It is important to note that no factors are displayed in the “concentrate here” quadrant, indicating that certified ecolodges on the Osa Peninsula are doing a good job overall.

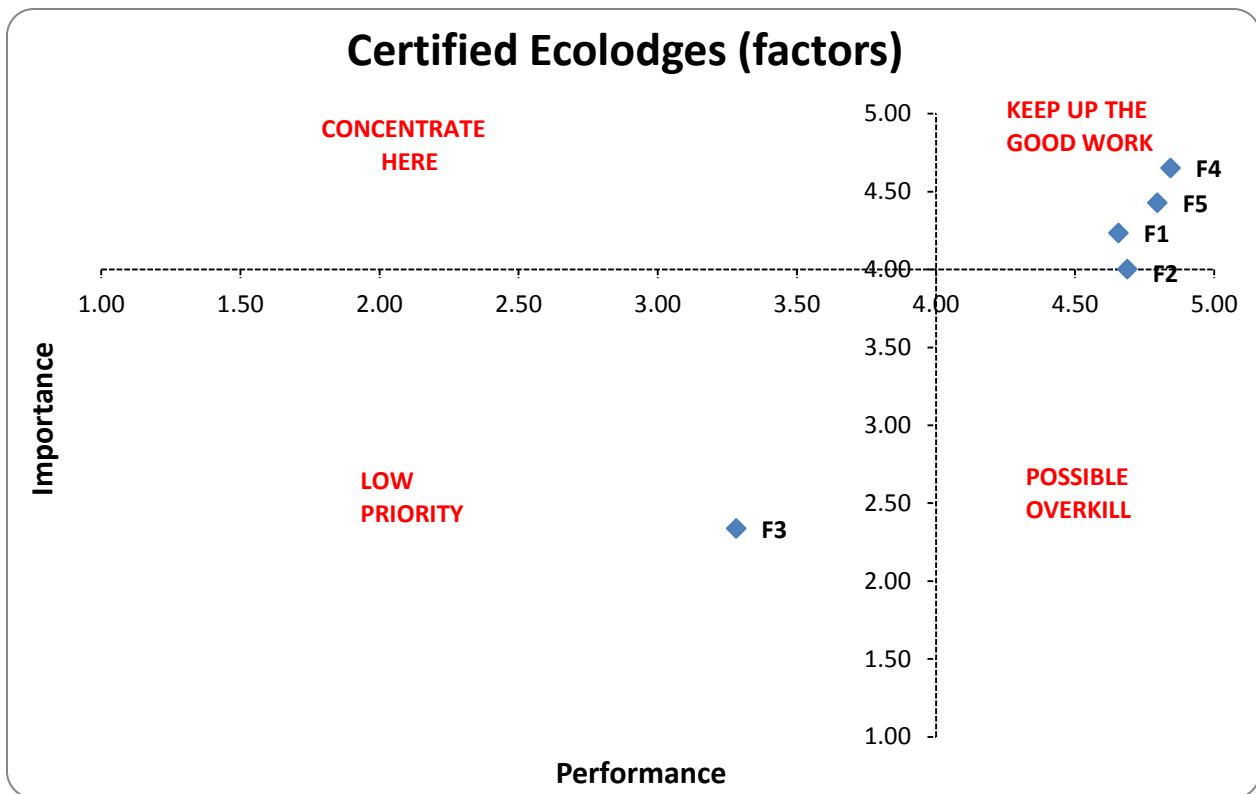


Figure 10. The Modified Importance-Performance Analysis Grid for all Derived Factors

Research Question 7

What are the perceptions of importance versus performance for each ecolodge attribute?

Figure 11 shows the results of the IPA grid for all 42 variables included in the study. A total of ten variables are found in the “low priority” quadrant, seven variables in the “possible overkill” quadrant, and twenty-five variables in the “keep up the good work” quadrant. No variables are present in the “concentrate here” quadrant (Table 32).

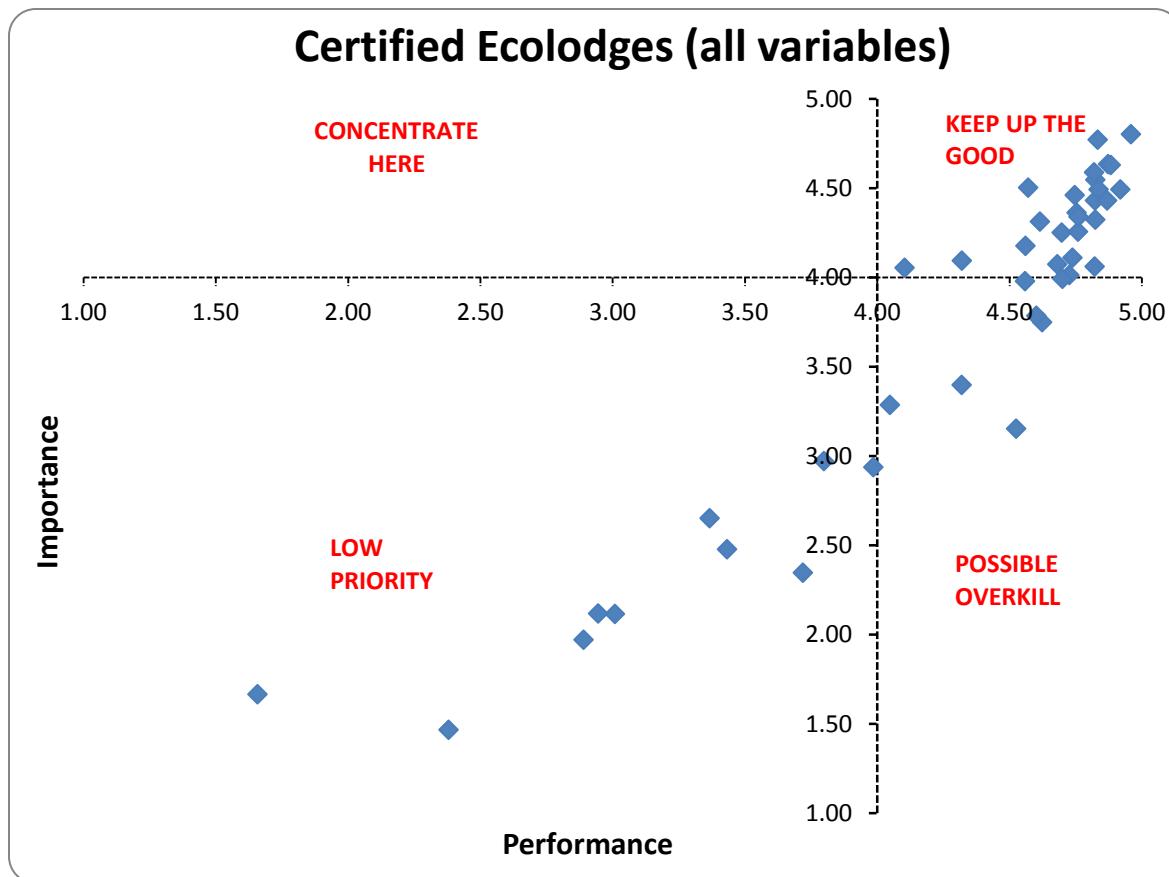


Figure 11. Total Sample: The Modified Importance-Performance Analysis Grid for all Attributes

Table 32 displays the 42 variables by the quadrant they were divided into in Figure 11. This allows for a more exact interpretation of how ecolodge patrons rated each variable and how management should handle the results. Table 32 clearly shows what attributes managers can consider a low priority and be sure that performance matches importance, but does not have to exceed by a great difference. Those attributes included in the “possible overkill” are interesting from a managerial perspective. Managers have to decide if they would like to reduce some resources being put toward these seven attributes or continue to exceed importance by a large difference. This should be handled on a case by case basis, depending on the priorities of each ecolodge and the variable itself. Many of the attributes included in the “possible overkill”

quadrant would benefit a lodge's reputation by exceeding the original importance rating by patrons, this may be worth the extra effort and resources put forth. All variables belonging to the "keep up the good work" quadrant indicate managers and staff are performing well in these areas and should strive to maintain that status.

Table 32.

Ecolodge Attributes Divided by IPA Quadrants

Quadrant	Variables
Low Priority	Availability of volcano viewing Availability of sales and rental services for recreational equipment Availability of onsite entertainment Availability of research facilities Availability of river trips (canoeing/boating/kayaking) Availability of horse-back riding facilities Availability of security personnel Availability of library and information facilities Business facilities and conference rooms Convenient location – easy accessibility
Possible Overkill	A variety of food selections A variety of lodging styles Bird-watching facilities and tours Benefit local communities through provision of jobs Nature interpretation centre or conservation education programs Uses alternative, sustainable means of water acquisition and reduces water consumption Certification by the Costa Rican Certification for Sustainable Tourism

Keep Up the Good Work	<p>Authentic design, appropriate setting</p> <p>Availability of a particular habitat or species</p> <p>Availability of trail hiking facilities</p> <p>Availability of trees and wildflowers</p> <p>Availability of wildlife</p> <p>Cleanliness</p> <p>Comfort of bed</p> <p>Decent sanitary condition</p> <p>Design sensitive to natural and cultural environment with minimal negative impact</p> <p>Dining and bar services</p> <p>Efficient reservation</p> <p>Friendliness of staff</p> <p>Guided wildlife tours</p> <p>High quality food</p> <p>Knowledgeable guides</p> <p>Local food, produced with local ingredients</p> <p>Meets energy needs through renewable energy resources</p> <p>Price</p> <p>Private sleeping room; private washroom</p> <p>Quality of the environment or landscape</p> <p>Recycling of glass, paper, and plastic</p> <p>Reputation of lodge</p> <p>Scenery</p> <p>Staff provide efficient services</p> <p>Value of money</p>
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Section 2: Comparing Costa Rica and Belize Ecolodges

This section compares some of the findings from this study with those from Belize (Kwan, 2008). Some of the research questions are revisited and conclusions are drawn from the two data sources. Comparisons are made using tabled data from Kwan (2008) because the raw data obtained by Kwan was unavailable. First, the most important attributes from Costa Rica are compared with those from Belize. Secondly, the perception of performance for each ecolodge attribute is compared between the two countries. Thirdly, the factor analysis from each study is discussed and the ecolodge attributes in each derived factor are compared.

Do the most important Costa Rican ecolodge attributes differ from those found in Belize?

Table 31 displays a comparison of the attributes ranked Important or Very Important by ecolodge patrons in Costa Rica and Belize. The most noticeable observation of the table is the difference in the number of attributes that received a score of 4 or above in each country. Respondents who visited Costa Rica had 25 attributes, while Belize only had 12 attributes that received a score of 4 or higher. It is also clear that the mean scores are much higher in Costa Rica than in Belize. For example, the top attribute in Belize (*Value of money*, 4.38) would be ranked 12th in Costa Rica. The attribute *scenery* was ranked very high by both groups (Costa Rica 1, Belize 2), and the same can be said for the first ranked attribute in Belize, as *value of money* was ranked 7th in Costa Rica. When looking at Costa Rica's rankings, it can be seen that attributes pertaining to the natural and physical environment are ranked highest, followed by attributes more linked to service quality and some amenities. Respondents from Belize however, ranked the attributes pertaining to service quality and amenities highest, and attributes concerning the physical environment followed.

Table 31.

Comparison of the Important Ecolodge Attributes between Costa Rica and Belize Ecolodges

Costa Rica Ranking	Attributes	Importance Rating	Belize Ranking	Attributes	Importance Rating
1	Scenery	4.80	1	Value of money	4.38
2	Availability of wildlife	4.77	2	Scenery	4.37
3	Availability of trees and wildlife	4.64	2	Friendliness of Staff	4.37
4	Quality of the environment and landscape	4.63	4	Decent sanitary condition	4.32
5	Private sleeping room; private washroom	4.59	5	Quality of the environmental landscape	4.31
6	Availability of hiking facilities	4.55	6	Cleanliness	4.20
7	Value of money	4.50	7	Design sensitive to natural and cultural environment with minimal negative impact	4.18
8	Friendliness of staff	4.49	7	Staff provide efficient services	4.18
8	Knowledgeable guides	4.49	9	Availability of trees and wild flowers	4.11
10	Decent sanitary condition	4.46	10	Availability of wildlife	4.09
11	Design sensitive to natural and cultural environment with minimal negative impact	4.43	11	Price	4.07
11	Staff provide efficient services	4.43	12	Knowledgeable guides	4.02

13	Guided wildlife tours	4.36	
14	Reputation of Lodge	4.34	
15	High quality food	4.32	
16	Cleanliness	4.31	
17	Recycling of glass, paper, and plastic	4.26	
18	Availability of a particular habitat or species	4.25	
19	Efficient reservation	4.18	
20	Dining and bar services	4.11	
21	Comfort of bed	4.09	
22	Local food, produced with local ingredients	4.07	
23	Meets its energy needs through renewable energy resources	4.06	
24	Price	4.05	
25	Authentic design, appropriate to setting	4.01	

It is interesting that there are only two attributes absent from Costa Rica's top 12 that are present in Belize's top 12, *price* and *cleanliness* are the only two attributes not present in both. It is important to note that although *cleanliness* was not in Costa Rica's top 12, it had a higher mean score by Costa Rica's respondents (4.31), than those in Belize (4.20). The *price* attribute was very close when comparing the two samples, 4.05 in Costa Rica and 4.07 in Belize.

How do the performance scores of each ecolodge attribute compare between Costa Rica and Belize?

Table 32 compares the mean performance score for each attribute between ecolodges in Costa Rica and Belize. The Difference column displays the difference between Costa Rican ecolodge scores and Belize ecolodge scores. A positive (+) number indicates Costa Rican had a higher score, a negative (-) number indicates that Belize has a higher score. The attributes *availability of Mayan cultural trips* and *certification by the Costa Rican Certification for Sustainable Tourism* were removed from this list because they did not apply to both countries, leaving 40 attributes. When looking at each attribute individually, Costa Rica had the higher mean performance score 31 out of 40 times (77.5%). When dealing with the top 12 most important attributes from the Belize study, Costa Rican ecolodges had high mean performance scores on all attributes except one, *price*. The other attributes that Belize ecolodges earned higher mean performance scores for are: *availability of onsite entertainment*, *availability of research facilities*, *availability of river trips (canoeing/boating/kayaking)*, *availability of sales and rental services for recreational equipment*, *availability of security personnel*, *business facilities and conference rooms*, and *recycling of glass, paper, and plastic*. Costa Rican ecolodges earned a higher mean performance score on the remaining 31 attributes. It is good that Costa Rican ecolodges were dominant in this section because its visitors ranked twice as many attributes as “Important” or “Very Important” as the visitors in the Belize study.

Table 32.

Perception of Performance Ratings for 40 Ecolodge Attributes in Costa Rica and Belize

Ecolodge Attributes	Cost Rica	Belize	Difference
1 A Variety of Food Selections	4.62	4.19	+0.43
2 A Variety of Lodging Styles	4.32	4.02	+0.3
3 Authentic Design, Appropriate to Setting	4.73	4.49	+0.24
4 Availability of a Particular Species or Habitat	4.70	4.15	+0.55
5 Availability of Horse-Back Riding Facilities	3.72	3.50	+0.22
6 Availability of Library and Information Facilities	3.99	3.37	+0.62
7 Availability of Onsite Entertainment	3.01	3.39	-0.38
8 Availability of Research Facilities	2.94	3.29	-0.35
9 Availability of River Trips (canoeing/boating/kayaking)	3.43	4.38	-0.95
10 Availability of Sales and Rental Services for Recreational Equipment	2.89	3.66	-0.77
11 Availability of Security Personnel	3.80	4.08	-0.28
12 Availability of Trail Hiking Facilities	4.82	4.16	+0.66
13 Availability of Trees and Wildflowers	4.87	4.62	+0.25
14 Availability of Wildlife	4.83	4.23	+0.6
15 Benefit Local Communities through Provisions of Jobs	4.60	4.12	+0.48
16 Bird-Watching Facilities and Tours	4.56	4.10	+0.46
17 Business Facilities and Conference Rooms	2.38	2.52	-0.14
18 Cleanliness	4.61	4.58	+0.03
19 Comfort of Bed	4.32	4.01	+0.31
20 Convenient Location – Easy Accessibility	3.37	3.91	-0.54
21 Decent Sanitary Condition	4.75	4.58	+0.17
22 Design Sensitive to Natural and Cultural Environment with Minimal Negative Impact	4.82	4.55	+0.27

23	Dining and Bar Services	4.74	4.31	+0.43
24	Efficient Reservation	4.56	4.29	+0.27
25	Friendliness of Staff	4.92	4.79	+0.13
26	Guided Wildlife Tours	4.75	4.16	+0.59
27	High Quality Food	4.82	4.29	+0.53
28	Knowledgeable Guides	4.84	4.49	+0.35
29	Local Food, Produced with Local Ingredients	4.68	4.23	+0.45
30	Meets its Energy Needs Through Renewable Energy Resources	4.82	4.04	+0.78
31	Nature Interpretation Centre or Conservation Education Programs	4.05	3.96	+0.09
32	Price	4.10	4.13	-0.03
33	Private Sleeping Room; Private Washroom	4.82	4.27	+0.55
34	Quality of the Environment or Landscape	4.88	4.67	+0.21
35	Recycling of Glass, Paper, and Plastic	4.76	4.96	-0.2
36	Reputation of Lodge	4.76	4.41	+0.35
37	Scenery	4.96	4.69	+0.27
38	Staff Provide Efficient Services	4.87	4.61	+0.26
39	Uses Alternative, Sustainable means of Water Acquisition and Reduces Water Consumption	4.70	4.25	+0.45
40	Value of Money	4.57	4.44	+0.13

How do the derived factors compare in terms of the attributes included in each from Costa Rica and Belize?

The factor analysis in this study produced five factors for Costa Rica. When the same analysis was done by Kwan (2008) in Belize, six factors were produced. However, there are

similarities in what attributes were grouped together to form the derived factors. Table 33 shows a comparison of the derived factors from each study and how the importance attributes were grouped together. Those attributes that are left blank, for either country, are those that were removed from the factor analysis in that study. Also, the attribute *Certification by the Costa Rican Certification for Sustainable Tourism* does not apply to Belize and therefore an N/A is used.

Table 33.

Comparison of Derived Factors and Variable Groupings

Ecolodge Attributes		Costa Rica	Belize
1	A Variety of Food Selections	Service Quality	Service Quality
2	A Variety of Lodging Styles	Service Quality	Design
3	Authentic Design, Appropriate to Setting	Service Quality	Design
4	Availability of a Particular Species or Habitat		
5	Availability of Horse-Back Riding Facilities		
6	Availability of Library and Information Facilities	Amenities and Services	
7	Availability of Volcano Viewing	Amenities and Services	Amenities and Services
8	Availability of Onsite Entertainment	Amenities and Services	Amenities and Services
9	Availability of Research Facilities	Amenities and Services	Amenities and Services
10	Availability of River Trips (canoeing/boating/kayaking)	Amenities and Services	Amenities and Services
11	Availability of Sales and Rental Services for Recreational Equipment	Amenities and Services	Amenities and Services
12	Availability of Security Personnel		
13	Availability of Trail Hiking Facilities	Physical Environment	Physical Environment

14	Availability of Trees and Wildflowers	Physical Environment	Physical Environment
15	Availability of Wildlife	Physical Environment	Physical Environment
16	Benefit Local Communities through Provisions of Jobs	Ecotourism Principles and Sustainability	Ecotourism Principles
17	Bird-Watching Facilities and Tours		
18	Business Facilities and Conference Rooms	Amenities and Services	
19	Cleanliness	Service Quality	Service Quality
20	Comfort of Bed	Service Quality	Service Quality
21	Convenient Location – Easy Accessibility		Price & Value
22	Decent Sanitary Condition	Service Quality	Service Quality
23	Design Sensitive to Natural and Cultural Environment with Minimal Negative Impact	Ecotourism Principles and Sustainability	Physical Environment
24	Dining and Bar Services	Service Quality	Service Quality
25	Efficient Reservation	Ecotourism Principles and Sustainability	
26	Friendliness of Staff	Service Quality	Service Quality
27	Guided Wildlife Tours	Guided Hikers	
28	High Quality Food	Service Quality	Service Quality
29	Knowledgeable Guides	Guided Hikers	Service Quality
30	Local Food, Produced with Local Ingredients	Ecotourism Principles and Sustainability	
31	Meets its Energy Needs Through Renewable Energy Resources	Ecotourism Principles and Sustainability	Ecotourism Principles
32	Nature Interpretation Centre or Conservation Education Programs	Amenities and Services	Ecotourism Principles
33	Price	Service Quality	Price & Value

34	Private Sleeping Room; Private Washroom	Service Quality	Service Quality
35	Quality of the Environment or Landscape	Service Quality	Physical Environment
36	Recycling of Glass, Paper, and Plastic	Ecotourism Principles and Sustainability	Ecotourism Principles
37	Reputation of Lodge	Service Quality	Price & Value
38	Scenery		Physical Environment
39	Staff Provide Efficient Services	Service Quality	Service Quality
40	Uses Alternative, Sustainable means of Water Acquisition and Reduces Water Consumption	Ecotourism Principles and Sustainability	Ecotourism Principles
41	Value of Money	Service Quality	Price & Value
42	Certification by the Costa Rican Certification for Sustainable Tourism	Ecotourism Principles and Sustainability	N/A

Table 33 shows many importance attributes are grouped into a similar or the same type of factor in both Costa Rica and Belize. Of all the importance attributes that were included in the factor analysis of both studies, only nine belonged to different groups: *a variety of lodging styles, authentic design; appropriate to setting, design sensitive to natural and cultural environment with minimal negative impact, knowledgeable guides, nature interpretation centre or conservation education programs, price, quality of the environment or landscape, reputation of lodge, and value of money*. The table also shows there four attributes were removed from the factor analysis in both studies, these attributes include *availability of a particular species or habitat, availability of horse-back riding facilities, availability of security personnel, and bird-watching facilities and tours*.

Summary of Results

Since ecolodges do not have a well-established rating system or corporate identity similar to that of the hotel industry, it is challenging to rate performance and service quality in most countries. Costa Rica has included ecolodges in its Certification for Sustainable Tourism (CST), forcing ecolodges to adhere to certain standards in order to become certified. This chapter reported the findings of the survey instrument and they compare to an almost identical survey conducted in Belize in 2008. By answering the research questions, the research objectives of this thesis have been accomplished. The perception of importance and performance ratings of the certified ecolodges are given and presented on a Modified IPA grid, while the ecolodge patrons' socio-demographic profile and trip characteristics are reported. Importance and performance scores of the ecolodge attributes are compared between Costa Rica and Belize, as well as the factors that were derived in both studies and each ones make-up.

The results of this study indicate that patrons visiting Costa Rica and Belize have different perceptions of importance for the ecolodge attributes, but some similarities can be found. There are only two attributes absent from Costa Rica's top 12 that are present in Belize's top 12, *price* and *cleanliness*. It also shows that patrons visiting Costa Rica generally had much higher importance ratings and considered more attributes Important and Very Important than those visiting Belize. Costa Rica had 25 attributes while Belize only had 12 with a mean importance score of 4 or higher. Also, the overall importance ratings were higher in Costa Rica. The top attribute in Belize, *value of money*, would be ranked 12th in Costa Rica. The overall performance was higher for the certified Costa Rican ecolodges when compared to ecolodges in Belize. Costa Rica had the higher mean performance score for 31 out of 40 attributes.

Once the ecolodge attributes were clustered into distinct factors, socio-demographic information and specific trip characteristics were found to affect patrons' perception of importance on several factors: *Service Quality* (F1) and *Physical Environment* (F4) were affected by Party Composition; *Ecotourism Principles and Sustainability* (F2) was affected by Gender and Stay Length; *Amenities and Services* (F3) was affected by Employment Status, Total Trip Length in Costa Rica, Most Influential Information in Decision-Making, and Stayed in Nature-Based Accommodation or Ecolodge Before. When factors were plotted on the Modified Importance-Performance grid (Mount, 2000), it displayed three factors within the 'keep up the good work' quadrant, one factor bordering "keep up the good work" and "possible overkill", and one factor within the "low priority" quadrant. One of the most important findings is that no factors, or individual attributes, are located in the "concentrate here" quadrant. Although the satisfaction levels were positive for all five derived factors, there was some variation in the differences.

Chapter 5: Summary and Discussion

The purpose of this thesis is to discover if certification impacts ecolodge patrons' perception of importance and performance of ecolodge facilities and services, by comparing certified ecolodges in Costa Rica to the uncertified ecolodges in the study in Belize, and to discover if demographic and specific trip characteristics are associated with perceptions of importance and performance to aid in future management of ecolodges. Initially the goal was to compare the findings from certified lodges to those from uncertified lodges in Costa Rica. Due to the lack of cooperation from uncertified lodges in Costa Rica, the focus shifted to comparing patrons' importance and performance ratings at certified ecolodges in Costa Rica to uncertified ecolodges in Belize. The Osa Peninsula is very dependent on ecotourism as an industry, and this study is a way for ecolodge owners to better understand their clientele and what is expected of their ecolodge. This information can help the region continue its success and ensure that any change or growth inflicts minimal negative impact on the environment and business. Also, the results of this study may encourage other countries to consider developing its own certification system, to aspire higher performance by ecolodges. These results are valuable to individual lodge management and the ecolodge industry, both from a theoretical and business perspective. The information in this study included demographic, trip characteristics, perception of importance and performance evaluation differences among ecolodges in Costa Rica and Belize. The seven research questions are answered and scores show that the presence of certification raises performance scores of ecolodges. The findings of this study indicate that the presence of a certification system is correlated with high performance scores at ecolodges, and also that demographic differences alone can also influence ecolodge patrons' perception of importance of

ecolodge services and facilities. Trip characteristics are also found to have an influence on ecolodge patrons' perception of importance ecolodge attributes.

This chapter summarizes the findings and provides recommendations for improving the ecolodge business in Costa Rica, and also the rewards of having a certification system in place. The first section summarizes the findings of the total certified sample of this study and the results to the research questions. The second section presents the implications of the findings in Costa Rica. Thirdly, the implications of having a certification program are outlined and recommendations for future research are discussed. Lastly, this study is concluded.

Summary and Discussion of Findings

A four-page self-completed questionnaire was distributed to ecolodge owners at six ecolodges on the Osa Peninsula of Costa Rica in 2011. The questionnaire was divided into three principal sections: 1) demographic information, 2) trip characteristics information; and 3) perception of importance and performance evaluation of 42 ecolodge attributes. Originally, the study consisted of three ecolodges that are members of the Costa Rican Certification for Sustainable Tourism (CST), and three that were not. As the study progressed, all three of the uncertified ecolodges removed themselves from the study and did not submit the required surveys needed to be included in the analysis. This forced the research to shift from comparing six ecolodges on the Osa Peninsula, to comparing ecolodges in Costa Rica to ecolodges in Belize from a previous study by Kwan (2008). This study now compares three certified ecolodges on the Osa Peninsula, to six ecolodges in Belize, where no certification exists. Of the three ecolodges that are included in this study from Costa Rica, a total sample size of 152 was collected between July 2011 and May 2012. The total response rate was 68% from the three certified ecolodges on the Osa Peninsula.

Demographic and Trip Characteristics

This study shows that 65% of ecolodge patrons who responded to the survey are from the United States, 12.5% from the European Union countries, and 11.2% from Canada. It is interesting that there were no visitors from surrounding Central American countries, but 3.3% from Costa Rica itself. There are three age cohorts that almost evenly dominate the majority of patrons visiting ecolodges on the Osa Peninsula. The most frequent age category is 36 to 45 years old (24.3%), followed by 26 to 35 years old (22.4%), and 45 to 55 years old (21.7%). This distribution of age cohorts supports the findings of Liu et al. (2008) in assessing Costa Rica's current position on the psychographic curve designed by Plog (2001). Liu et al. (2008) suggested Costa Rica was shifting from a destination for Near-Venturers to one that attracts Mid-Centrals. The majority of respondents visiting certified ecolodges were highly educated, (78.3% had at least a Bachelor's degree), and worked full-time. These are familiar characteristics for ecotourists, as found in other studies (Boo, 1991; Eagles & Cascagnette, 1995; Galley& Clifton, 2004; Palacio & McCool, 1997). There was a tie between those who are self-employed and those who are retired, both representing 14.5% of the sample. Just less than one quarter (24.2%) of the respondents had an annual household income of over \$140, 000 USD. This is also common for ecotourists, as they are typically in a high income bracket (Wight, 1996d; Ballantine & Eagles, 1994; Palacio & McCool, 1997). The characteristics found in this study are also similar to those used to describe ecotourists by The International Ecotourism Society (TIES, 2012).

In terms of trip characteristics, the most frequent visiting length in Costa Rica was 8 to 11 days, with stays at the ecolodges of 4 to 5 nights. Most respondents travelled with their spouse or partner, which has been found in other ecotourism research (Wearing & Neil, 2009; Boo, 1991; Palacio & McCool, 1997). Ecotourists visiting Costa Rica were strongly motivated to *enjoy*

nature and wildlife, supporting the nature enthusiast concept (Kerr, 1991; Boo, 1991, Eagles & Cascagnette, 1995; Galley& Clifton).These findings suggest the characteristics of ecolodge patrons on the Osa Peninsula are composed of ecotourists. The internet was clearly the most important source of information that influenced respondents' decision-making process when choosing an ecolodge, followed by family and friends, and travel guide books. Previous studies by Wright (1996a) found that word of mouth and travel brochures were more influential than the Internet as sources of information that influence ecotourists' decision-making process. The new information in this study shows the category of Internet is no longer limited to a simple website advertising an accommodation. It is now common for each ecolodge to have a Facebook group, where visitors can post and share photos and experiences with past or future visitors who have joined the group. This is a great way to keep visitors involved with what is going on at an ecolodge and influence them to make a return visit. This would also influence the "Friends and Family" category, as group members can invite other Facebook friends to join the group and receive updates and view photos of the lodge. Lodges can also partake in Twitter, and post beautiful pictures and have it reach all of its followers instantaneously.

In terms of respondents' ecolodge experiences and concepts, over half of the respondents had experience with nature-based accommodations and ecolodges. When patrons were asked for their definition of an ecolodge, the most common response was *enjoy nature in a respectful/sustainable way*, supporting Kerr (1991). Collectively, patrons who visited the certified ecolodges had a good understanding of the definition and key concepts of what an ecolodge is, but individually, very few answers were given that were all encompassing of the key concepts that ecolodges pride itself on being. This suggests that ecolodge marketing needs to

improve in the explaining of the roles and operational objectives of these unique accommodations (Kwan, 2008).

When respondents were asked if the ecolodge they were staying at was a part of the Costa Rican Certification for Sustainable Tourism, fifty-eight percent of patrons answered correctly in saying “yes”. Unfortunately, the next most frequent response was “don’t know”, with 34.2%, and lastly 2.6% of respondents answering “no”. This indicates that Costa Rica has to improve its marketing of the CST to make sure visitors are aware of the extra steps they are taking to ensure sustainability in its tourism industry (Wearing & Neil, 2009). Also, certified ecolodges should be proud in sharing the fact that they have earned a position in the CST and inform their guests.

Perception of Importance and Performance of Attributes

Of the 42 attributes included in the questionnaire, respondents declared that 25 of them are “Important” or “Very Important” in influencing patrons’ ecolodge selection. The following attributes are those that received a mean importance score of above 4.0:

1. Scenery
2. Availability of wildlife
3. Availability of trees and wildflowers
4. Quality of environment and landscape
5. Private sleeping room; private washroom
6. Availability of trail hiking facilities
7. Value of money
8. Friendliness of staff
9. Knowledgeable guides
10. Decent sanitary condition
11. Design sensitive to natural and cultural environment with minimal negative impact
12. Staff provide efficient services
13. Guided wildlife tours
14. Reputation of lodge
15. High quality food
16. Cleanliness

17. Recycling of glass, paper, and plastic
18. Availability of a particular habitat or species
19. Efficient reservation
20. Dining and bar services
21. Comfort of bed
22. Local food produced with local ingredients
23. Meets its energy through renewable energy resources
24. Price, and authentic design/ appropriate to setting.

This is a very broad list that encompasses many attributes of a variety of focus. This means that proper and efficient management of available resources is crucial for an ecolodge to meet the expectations of its clientele.

When looking at the attributes that are not considered important, all seven attributes from the factor “Services and Amenities” (F3) are found:

1. Availability of research facilities
2. Availability of sales and rental services for recreational equipment
3. Availability of entertainment
4. Business facilities and conference rooms
5. Availability of river trips (canoeing/boating/kayaking)
6. Availability of library and information facilities
7. Nature interpretation centre or conservation education programs

This makes sense because Factor 3 was the only factor located in the “Low Priority” quadrant of the Importance-Performance Analysis grid. The remaining ten unimportant attributes are found in “Service Quality” (F1) and “Ecotourism Principles and Sustainability” (F2), or were dropped during the factor analysis stage. There are no unimportant attributes in “Physical Environment” (F4) and “Physical Environment” (F5). This is useful for management to help them concentrate on what is important and making informed decisions regarding the focus of its resources. Kwan (2008) found that *reputation of lodge* was unimportant to patrons visiting Belize, and this made sense because branding is not well recognized in the ecolodge business.

However in Costa Rica, *reputation of lodge* received a score of 4.34, indicating it is in fact important. This could be due to the raised awareness of ecolodges in the marketplace. It could also indicate that given the larger number of ecolodges in Costa Rica, consumers are relying on reputation to make a choice. Although *certification by Costa Rican Certification for Sustainable Tourism* only received a mean importance score of 3.15 (Appendix B) and is not as important as other attributes, it will be interesting to see if this changes if more studies are done indicating the higher mean performance scores by certified ecolodges.

The performance evaluation of the 25 most important attributes reveals the performance of the ecolodges ranges from Good to Excellent. The most important attribute was *scenery* and it also scored the highest mean performance score. Looking at all 42 attributes, all but one had a positive IP score. This indicates that certified ecolodges on the Osa Peninsula are meeting the wants of their clientele and performing at a high level. The attribute *availability of volcano viewing* had both very low importance and performance rankings, and the difference was barely noticeable (-0.01). There are two variables that had the highest difference between importance and performance. Both *availability of horse-back riding facility* and *certification by the CST* had a mean difference of 1.37. This indicates that ecolodges are exceeding the expectations of its guests by the greatest amount on these two attributes. Visitors perhaps do not expect to participate in horse-back riding, but after experiencing the activity, they enjoy it thoroughly. Also, ecolodge patrons may not be aware of the CST, but after learning that the ecolodge they are visiting is a part of the certification program, they are impressed.

The Modified IPA Results

In order to further understand the importance and performance evaluation for all the ecolodge attributes, this study categorized the 42 ecolodge attributes into five ecolodge selection

factors: 1) service quality, 2) ecotourism principles ad sustainability, 3) amenities and services, 4) physical environment, and 5) guided hikers. By using the modified IPA, this study compares the importance and performance of ecolodge selection factors, as perceived by respondents from the total sample. For certified ecolodges, the modified IPA grid for the derived factors (Figure 10) shows that *amenities and services* was the only factor present in the “low priority” quadrant for this study. The grid also indicated that *service quality, physical environment, and guided hikers* all fall into the “keep up the good work” quadrant. With the gridlines in the chosen position, *ecotourism principles and sustainability* is on the border of “keep up the good work” and “possible overkill”. However, since the variables in this factor pertain to key ecotourism concepts and environmental sustainability, it could be suggested that overkill is not possible at an ecolodge. It would be a good criticism to be overly environmentally sustainable and strongly follow to the key ideas that make up the concept of ecotourism.

This factor arrangement is interesting to ecolodge owners and management for multiple reasons. Firstly, there are no variables or factors displayed in the “concentrate here” quadrant, indicating that certified ecolodges are not lacking in any areas of the business. Secondly, it is good to see that certified ecolodges are performing well in so many areas, indicated by the high number of attributes within the “keep up the good work” quadrant. However, this may lead to a certain level of high performance becoming expected by patrons, meaning that these ecolodges will need to maintain this high level as they try to improve in the necessary areas. It is crucial for management to be cautious as they try to improve on any attributes they see necessary, to ensure that other areas do not decline in performance.

The modified IPA grid for all variables (Figure 11) indicates that 17 attributes are located below the x-axis (importance rating of less than 4.0), seven within the “possible overkill”

quadrant. This gives management a clear idea of what attributes they can consider removing resources from for the purpose of improving other areas. Management must also keep in mind that four attributes; *uses alternative, sustainable means of water acquisition and reduces water consumption, bird-watching facilities and tours, benefit local communities through provision of jobs, and a variety of food selections* are all very close to the x-axis and could very easily increase in mean importance score, earning a score of above 4.0. Figure 11 also displays ten variables in the “low priority” quadrant of the modified IPA grid. This quadrant consists of variables that received the lowest mean importance and performance scores. Although the scores are low for these attributes, mean performance is still higher than mean importance for all but one, *availability of volcano viewing*, where the difference is a only -0.01. The attributes in this quadrant can be approached in multiple ways by management moving forward. One option is to not change anything and continue to perform at the same level, ensuring satisfaction to visitors even though the attributes are of lesser importance. A second option is to reduce the amount of time and resources being put into the performance of these attributes. This would have to be done carefully, as importance scores would have to be continually monitored to ensure that performance does not decline so much that negative differences are observed. It is also possible that over time, importance scores could improve for these attributes and management would need to make further adjustments in performance to maintain an acceptable level of satisfaction.

Demographic and Trip Characteristic Differences in the Five Derived Factors

The results of the ANOVA tests indicated that both demographic and trip characteristics have an impact on the respondents’ perception of importance on four of the derived factors. The results also indicated that neither demographic or trip characteristics had any impact on the perception of performance on the derived factors of this study. The four factors that were

impacted by either demographic or trip characteristics in this study are: *service quality*, *ecotourism principles and sustainability*, *amenities and services*, and *physical environment*.

The trip characteristic “party composition” proved to have impacts on the factors *service quality* and *physical environment*. In both cases, those travelling with family consisting of all adults had the highest mean importance scores. *Ecotourism principles and sustainability* received higher important scores by females than males, but there was no recognizable pattern based on length of stay by patrons. Employment status proved to have significantly different mean importance scores pertaining to *amenities and services*. Student respondents considered the factor most important, while retirees placed the least amount of importance on this particular factor. It was also found that word of mouth was the most influential source of information for this factor. There was a significant difference between respondents who had stayed in an ecolodge before and those who had not. Finally, although the question pertaining to total trip length in Costa Rica indicated to yield significant differences amongst total days spent in the country, there was no trend or pattern observed in the data.

Satisfaction on the Five Derived Factors

When working with the five derived factors of this study, all but one had a mean importance score of above 4.0. Factor 3, *amenities and services*, was the only factor found in the low priority quadrant of the IPA grid. When calculating the difference between performance and importance for the five derived factors, it was always positive. Regardless of how high importance scores are for different types of visitors, certified ecolodges have been able to perform at a high enough level that patrons are left satisfied, but not to the extent that resources are being wasted. As indicated by the empty possible overkill quadrant when looking at the IPA grid for the derived factors (Figure 10). This indicates that certified ecolodges on the Osa

Peninsula are doing a good job in meeting the wants of all types of visitors with different motivations.

Comparing Findings in Costa Rica and Belize

This study attempts to understand if there are benefits of having a certification program in place that has the option of including ecolodges. This was done by comparing mean importance and performance scores of ecolodges in Costa Rica and Belize. The Costa Rican ecolodges are members of the Costa Rican Certification for Sustainable Tourism, and there is no form of certification currently in Belize. It was found that ecolodge patrons visiting Costa Rica rated over twice as many ecolodge attributes as important as those patrons visiting Belize. Only two attributes are absent from Costa Rica's top 12 important attributes that are present in Belize's top 12, *price* and *cleanliness*. Out of the top 12 most important attributes from the Belize study, Costa Rican ecolodges had high mean performance scores on all attributes except one, *price*. When looking at all attributes included in both studies, Costa Rica has the higher mean performance score 31 out of 40 times. For the purpose of this research, certified ecolodges performed at a higher level than ecolodges without a certification program 77.5% of the time.

Implications of the Findings

This study shows that ecolodge patrons have some different perceptions of importance, performance, and satisfaction toward the ecolodges they are staying at based on the country they are visiting and the existence of a certification program. The information gathered from this study will be very valuable to the Osa Peninsula and its ecolodge businesses. The findings of this study will also be useful to other countries who are considering the development of a certification program of its own and the benefits in doing so. It was found that certified ecolodges had higher mean performance scores than uncertified ecolodges, almost for 80% of the

variables. This should encourage other countries to develop a certification program that can incorporate ecolodges. Costa Rica has done a very good job, and the CST can act as a guide for future certification programs. It is an interesting concept because the responsibility falls on both the country itself and the individual lodges. The country's government should be the main stakeholder in the development of any certification program. Once the certification is created, individual lodges will need to decide if it is feasible and realistic to work toward becoming certified.

Ecolodge accommodations are unique facilities; they vary significantly in terms of size, ownership, management, and operating characteristics (Sanders & Halpenny, 2001). This forces ecotourists to choose an accommodation based on price, word of mouth, Internet, and limited advertisement (Kwan, 2008). With the growing reach of the Internet, ecolodges have become dependent on websites and social media as the main way of attracting and confirming guest reservations. It is the easiest and least expensive way to reach mass amounts of people from one's current location. However, management is not the only user capable of reviewing an ecolodge on the Internet. Travel sites give public access to anyone who wishes to critique or comment on an accommodation he or she visited. This critique is then made viewable by all other users who visit the site. Since ecolodges are considered immature in the ranks of the tourism industry, people are still impressionable when it comes to shaping an idea of what an ecolodge is exactly. This makes it crucial, for ecolodges, that reviews are positive and helpful in establishing expectations for future clientele. Having high performance scores and meeting the expectations and wants of patrons will serve to be very beneficial to ecolodges all over the world.

Currently, there is no universal rating system or brand associated with ecolodges. It seems that in the future, ecolodge establishments should provide a rating system that is similar to that of a hotel star rating. Kwan (2008) suggested that instead of only rating food, facilities, and service quality similar to the hotel context, rating lodges should take into consideration ecotourism-operating principles, quality of environment and landscape, and availability of wildlife. There has been movement toward such a system, as Osland and Mackoy's (2004) classification of dedicated, casual, scientific, and agri-ecolodges assists tourists in their lodge selection by helping narrow the search to better fit their needs. Also, a small number of lodges in South Africa, Central American, and Western Canada have begun the concept of ecolodge branding (Wight & Associates, 1998; Honey, 2002). If this were to happen, with the combination of certification, selecting ecolodges will be much easier in the future for nature tourists; and would likely increase the standard of ecolodges and therefore improve performance across the board.

Implications for Future Research

Utility of the Modified IPA Technique

The traditional Importance-Performance Analysis (IPA) technique has proven to be useful in measuring customers' perceived service quality from a marketing stand point (Hendricks, Schneider& Budruk, 2004). Using the IPA technique to study customers' perception of importance and performance on a list of factors can be beneficial to any type of business. This study has applied the IPA technique to better understand tourists' perception of importance and performance on a list of ecolodge selection factors, for the purpose of better understand ecolodge clientele and improving satisfaction of this type of accommodation. From a business perspective, ecolodges gain a better understanding of different origins, age groups, motivations, and so on of

its customers. Individually, an ecolodge gets a precise report of its clientele and how they perceive the services and experience received. On a larger scale, the technique can be transferable to other countries to draw comparisons between lodges and tourists visiting different parts of the world. The grid presentation of the IPA technique is easy to interpret, and it serves as a guide for resource allocation (Kwan, 2008). By pinpointing the areas of strength, the need for concentration, possible overkill, and low priority, management is able to identify and adjust any problems that exist, understand why, and develop a solution to direct resource more efficiently (Kwan, 2008).

The hotel industry has adopted the IPA technique in many studies. Mainly to better understand and aid in the development of marketing strategies based on the outcome and display of data on perspective customers in each quadrant (Evans & Chon, 1989). The IPA technique is a very direct and precise way for management to identify patrons' needs and ensure they are satisfied customers. This information is of especially high value to ecolodge operators, because of the youth and individuality of ecolodges in general. If management can better understand ecolodge patrons' perception of importance and performance, they can improve services and facilities provided, and also set an example for future growth in the industry. As "green" ideas and companies continue to grow in popularity, it will be important that the growth and maturity of businesses is done with best practices, while at the same time satisfying customers. Ecolodges are no exception, as the expectations of its customers go far beyond service quality; environmental concerns and the quality of the environment continue to be vital attributes in patrons' ecolodge selection (Kwan, 2008). There is great potential for the demand of this type of accommodation to highly increase, and to ensure the success of the industry, lodges must be able to match the demand of its clientele. The IPA technique helps identify the needs of the current

visitors, allowing management to accurately prepare for future customers. This is the best way to make sure the future of ecolodges is responsible and well-informed hands.

Biases, Issues, Limitations, and Recommendations of the Study

There are various limitations in this study. Firstly, since the research is based on information gathered through survey, there may be a gender response bias because women are generally more willing to complete such surveys (Kwan, 2008). Secondly, like Kwan (2008) found, sampling bias might exist given that the distribution of the questionnaires highly depended upon the enthusiasm and effectiveness of the receptionist and lodge owners. Thirdly, only ecolodges certified by the Costa Rican Certification for Sustainable Tourism are included to represent Costa Rica ecolodges. It is unfortunate that uncertified ecolodges in Costa Rica did not cooperate and finish survey distribution. This limits Costa Rica participation to certified ecolodges only. Therefore comparisons should focus on certified ecolodges versus uncertified ecolodges, and not Costa Rica ecolodges and Belize ecolodges. To elaborate, the differences in gender show no evidence of affecting the results or the findings. There is also a limitation on what could be compared due to the lack of data available from the Kwan (2008) study. The raw data from that study was unavailable; therefore comparisons were constricted to final statistics and final values.

Also, the distribution of the questionnaires was done randomly. Based on this, there is no evidence the biases mentioned above provide any systematic biases in this thesis. There are potential Type 1 errors when conducting multiple ANOVA tests. An ANOVA controls for some of these errors so that the Type 1 error remains at 5% and one can be more confident that any significant result found is not just due to chance.

Finally, the Costa Rican Certification for Sustainable Tourism presents limitations itself. This certification is not specifically directed toward ecolodges, making some criteria inaccurate for ecolodges. This is something that can be improved in the future by either altering the current CST, or developing a separate certification for ecolodges only.

Recommendations Future Research

The limitations in this study assist in the design of future research. An increase in sample size would be beneficial to future studies. The best way to increase sample size would be to include more ecolodges. Since the majority of ecolodges have a small guest capacity, a much larger number of ecolodges would be necessary. It would be interesting to compare certified and uncertified ecolodges in one country, as this study originally set out to do. This could continue to be a challenge based on the cooperation received during this study, certified ecolodges are willing to participate, but uncertified lodges need more attention and continuous encouragement as the study goes on.

There is also the unfortunate possibility that uncertified ecolodges will discontinue cooperation at any moment with minimal or no warning or reason. If a study is to be conducted to compare certified and uncertified ecolodges within the same country, a large sample size is suggested and some form of written agreement concerning cooperation. In order to help ensure cooperation of ecolodges, owners and management need to understand the benefits of being involved in the study, and the information gained on their clientele as a result.

Like the Kwan (2008) study, this research is still exploratory, and further data should be collected and analysed to establish whether a consistent pattern of importance and performance ratings occur between certified and uncertified ecolodges. The findings of this study may reflect

the particular facilities and operation of ecolodges in Costa Rica and Belize. More ecolodge studies are required to validate the results of this study. This study focuses on a small peninsula of Costa Rica. Further research can be done to expand the understanding of the perception of importance and performance ratings across the country, including both certified and uncertified ecolodges. If the concept of certification travels to other countries, similar studies should be done there to gain a better understanding of effectiveness and compliancy between countries.

Conclusion

This thesis suggests that the presence of a certification program is correlated with high performance scores of ecolodges. Since ecotourists have different characteristics from other tourists, it is important to know what they value and what motivates them to choose ecolodges as an accommodation. Wight (2001) comments that nature tourists are a heterogeneous group in terms of their preferences and behaviour. It is also true that no ecolodges are built the exact same way, making it critical for owners and management to understand what attracts visitors to their individual lodge. If an ecolodge can deliver high performance scores, it increases the likelihood of visitors returning to repeat the experience. This is an important concept, as ecolodges become more common and competition for business increases.

Costa Rica has been a pioneer in nature-based tourism and continues to take very important steps for ecolodges, ensuring proper management for the future. The country offers diverse ecosystems paired with unique natural environments, providing all the aspects of the ecotourism experience in remarkable form. It is a country that understands the delicate balance of environmental sustainability and the importance of customer satisfaction. Looking back to a study done by Laarman (1989) that indicated the primary source of growth of nature-oriented tourism in Costa Rica, and the market that exists in Costa Rica, was word-of-mouth. The country

has always preached the concept of conservation and lead by example, with the creation of Corcovado National Park in 1975 (Horton, 2009). The remoteness and lack of infrastructure present made the Osa Peninsula an ideal location for respectful nature-based tourism. This is supported by Boza (1993, p.244) in saying “ecotourism has proven to be the strongest argument for the protection and development of Costa Rica’s national park system”.

Honey (2008) found that in Costa Rica, the government authorities had the main responsibility for both establishing and running the Costa Rican program for Sustainable Tourism (CST). This type of leadership and involvement is necessary for certification plans to be successful and last long term. There is also a trickledown effect that can take place when the government shows initiative and motivation to protect a country’s assets. In Costa Rica, tour operators have helped the initiative by announcing they will eventually only make use of certified hotels (Honey, 2008). This will further encourage hotels and ecolodges to become certified, in hopes of not losing business and professional relationships with others involved in the tourism industry. This shows that other players are willing to take necessary steps to ensure certification programs mature and improve in the proper direction, a motivation for governments to trust that if a program is developed it will be successful. Tour operators are in direct contact with tourists, making them very influential in tourists’ decision making during their stay. If tour operators only recommend certified ecolodges, this will strongly influence a lodge’s decision to join the CST.

As the ecolodge business continues to grow, it will be important to respect the natural environment it is hosting. Sustainable certification is one of the best and realistic ways to ensure conservation of the natural environment. Learning from Costa Rica, it is possible to restructure existing certification programs to include ecolodges. Another option is to develop new programs

based on lessons learned in other parts of the world. Certification can bring ecolodges to agree with overall goals of sustainability, assuming the criteria used in the system are appropriate. With ecolodge research being immature, information sharing will be of high importance for this industry moving forward.

This study has shown that although certification programs can begin with the government, responsibility to improve program development can be taken on by other parties involved. It also shows that once a certification plan is in place, ecolodges that adhere to the standards and become certified, show higher performance scores than lodges that are not part of a certification program. Nature-based tourism relies heavily on the natural environment. If that is degraded, the business itself will cease to exist, having a domino effect on many stakeholders. As the ecolodge business continues to expand, countries will need to decide if they trust individual owners to ensure sustainability, or if guidelines and standards need to be created. Costa Rica has taken the necessary steps to protect an important industry, and the environment.

References

- Ballantine, J., & Eagles, P. (1994). Defining ecotourists. *Journal of Sustainable Tourism*, 2(4), 210-4.
- Barsky, J. (1992). Customer satisfaction in hotel industry: meaning and measurement. *Hospitality Research Journal*, 16(1), 51-73.
- Beeton, S. (1999). *Ecotourism: A Practical Guide for Rural Communities*. Landlinks Press, Collingwood, Australia.
- Belize Tourism Board (BTB). (2004). *Tourism statistics*. Retrieved Dec 10, 2003, from <http://www.belizetourism.org/statistics/html>
- Bello, D.C., & Etzel, M.J. (1985). The role of novelty in the pleasure travel experience. *Journal of Travel Research*, 24(1), 20-6.
- Bien, A. (2002). Environmental certification for tourism in Central America: CST and other programs. In M. Honey (Ed.), *Ecotourism and certification. Principles and practice*. Washington, DC, Island Press.
- Birtles, A., Cahill, M., Valentine, P., & Davis, D. (1995). Incorporating research on visitor experiences into ecologically sustainable management of whale shark tourism. In (H. Richins, J. Blackstone Corporation Resource Management and Tourism Consultants (1998). *Tourism strategy for Belize*. Belmopan, Belize: Progress Ltd.
- Blake, B., & Becher, A. (Eds.). (2001). *The New Key to Costa Rica*. Berkeley, CA: Ulysses Press.

- Boo, E. (1991). Planning for ecotourism. *Parks*, 2(3), 4-8.
- Burak Jacobson Inc. (1985). *Segmentation Analysis for the Canadian Tourism Attitude and Motivation Study*. Ottawa: Department of Regional Industrial Expansion, Tourism Canada.
- Callan, R.J., (2001). Business travellers' perception of service quality: a prefatory study of two European city centre hotel. *International Journal of Tourism Research*, 3(4), 313-323.
- Carman, J. M. (1990). Consumer perception of service quality: An assessment of SERVQUAL dimensions. *Journal of Retailing*, 66(1), 33-55
- Certification for Sustainable Tourism. (2012). *Certification for Sustainable Tourism*. Retrieved 2 February, 2011, from <http://www.turismo-sostenible.co.cr/intro.html>.
- Chapman, R.G. (1993). Brand performance comparatives. *Journal of Products and Brand Management*, 2(1), 42-50.
- Chu, R. K. S., & Choi, T. (2000). An importance-performance analysis of hotel selection factors in the Hong Kong hotel industry: A comparison of business and leisure travellers. *Tourism Management*, 21(4), 363-377.
- Coast and Kayak Magazine. (2011). *Costa Rica: The Osa Peninsula – Pura Vida!* Retrieved Oct 25, 2011, from <http://www.wavelengthmagazine.com/2003/on03webpad.html>
- Consejo Broqueno Para el Desarrollo Sostenible (COBRUDES). (1997). *Diagnostico socioeconómico de la region Brunca*. n.p.

Consultantes Rio Colorado. (2010). *Costa Rican 2010 tourism reported up 11 percent over 2009*. Retrieved Oct 9, 2012, from <http://amcostaricaarchives.com/2011/01/costa-rican-2010-tourism-reported-up-11-percent-over-2009/>

Costa Rica Tourism Institute. (2011). *Tourism Statistical Yearly Report 2011*. Retrieved Oct, 14, 2012, from

http://www.visitcostarica.com/ict/pdf/anuario/Statistical_Yearly_Report_2011.pdf

Crompton, J.L. (1979). Motivations for pleasure vacations. *Annals of Tourism Research*, 3(1), 408-424.

Dann, G. (1981). Tourism motivation: an appraisal. *Annals of Tourism Research*, 4, 184-194.

Department de Estadisticas ICT (2011). *Anuario Estadistico 2010*. Instituto Costarricense de Turismo (ICT). Retrieved 2011-10-27.

Eagles, F.J. (1992). The motivation of Canadian ecotourists. In B. Weiler (Ed) *Ecotourism: Incorporating the Global Classroom*. Bureau of Tourism Research, Canberra, Australia.

Eagles, P. F. J., & Cascagnette, J.W. (1995). Canadian ecotourists: Who are they? *Tourism Recreation and Research*, 20(1), 22-28.

Edelman, M. (1999). *Peasants against Globalization: Rural Social Movements in Costa Rica*. Stanford, Stanford University Press.

Evans, M.R., & Chon, K. S. (1989). Formulating and evaluating tourism policy using importance-performance analysis. *Hospitality, Education, and Research Journal*, 13(2), 203-213.

Fallon, P., & Schofield, P. (2006). The dynamics of destination attributes importance. *Journal of Business Research*, 59, 709-713.

Font, X., & Harris, C. (2004). Rethinking standards from green to sustainable. *Annals of Tourism Research*, 31(4), 986-1007.

Galley, G., & Clifton, J. (2004). The motivational and demographic characteristics of research ecotourists: operation Wallacea volunteers in southeast Sulawesi, Indonesia. *Journal of Ecotourism*, 3(1), 69-82.

Haaland, H.,& Aas, O. (2010). Eco-tourism certification- Does it make a difference? A comparison of systems from Australia, Costa Rica and Sweden. *Scandinavian Journal of Hospitality and Tourism*, 10(3), 375-385.

Harlow, S., & Pomfret, G. (2007). Evolving environmental tourism experiences in Zambia. *Journal of Ecotourism*, 6(3), 184-209.

Hemmasi, M., Strong, K. C., & Taylor, S. A. (1994). Measuring service quality for strategies planning and analysis in service firms. *The Cornell Hotel and Restaurant Administration Quarterly*, 38(4), 24-34.

Hendricks, W., Schneider, I. E., & Budruk, M. (2004). Extending importance-analysis with benefits-based segmentation importance-performance analysis. *Journal of Park and Recreation Administration*, 22(1), 53-74.

Holland, R. (1992). Code of ethics for sustainable tourism. *San Jose, Costa Rica: Collaboration with Sustainable Tourism*.

Honey, M. (ed.) (2002). *Ecotourism and Certification*. Washington D.C.: International and Pan America.

Honey, M. (2008). *Ecotourism and sustainable development: Who owns paradise?* Washington, DC: Island Press.

Horton, L. (2009). Buying up nature: Economic and social impacts of Costa Rica's ecotourism boom. *Latin American Perspective*, 166(36), 93-107.

Inman, C. (2002). *Tourism in Costa Rica: The challenge of competitiveness*. Retrieved Oct 18, 2011, from <http://www.incae.ac.cr/ES/clacds/investigacion/pdf/cen653.pdf>.

International Ecotourism Society. (2008). *Fact sheet: global ecotourism*. Retrieved 1 January, 2010 from, www.ecotourism.org

Kaiser, H. F. (1974). An index of factorial simplicity. *Psychometrika*, 39, 31-36.

Kerr, J. (1991). Making Dollars and Sense out of Ecotourism/Nature Tourism. *Paper presented at First International Conference in Ecotourism, Brisbane, Australia*.

Kitcharoen, K. (2004). The importance-performance analysis of service quality in administrative departments of private universities in Thailand. *ABAC Journal*. journal.au.edu.

Kusler, J.A. (1991). Ecotourism and resource conservation: Introduction to issues. In J.A. Kusler (Ed.) *Ecotourism and Resource Conservation: A Collection of Papers* (Vol. 1, pp.2-89).

Kwan, P. (2005). Ecolodge patrons' expectation and perception of performance. M. A. Thesis. University of Waterloo. Print.

Kwan, P. (2008). A comparison of ecolodge patrons' characteristics and motivations based on price levels: A case study of Belize. *Journal of Sustainable Tourism*, 16(6), 698-718.

Lilien, G. L., Kotler, P., & Moorthy, K. S. (1993). *Marketing models* (p.88). New York: The Prentice- Hall.

Lindberg, K. (1991). *Policies for Maximizing Nature Tourism's Ecological and Economic Benefits*. Washington, DC: World Resources Institute.

Liu, Z., Siguaw, J., & Enz, C. (2008). Using tourist travel habits and preferences to assess strategic destination positioning: The case of Costa Rica. *Cornell Hospitality Quarterly*, 49(3), 258-281.

Lovelock,C., Patterson, P.G.,& Walker, R.H (Eds.). (2001). *Services marketing: An Asia-Pacific Perspective*. Sydney: Prentice-Hall.

Lutz, J., & Prosser, B. (1994). The changing world of tourism. *Geographical*, 66, 53-55.

MacKenzie, S. B. (1986). The role of attention in mediating the effect of advertising on attribute importance. *Journal of Consumer Research*, 13(September), 174-195.

Marques, L. C. (2000). An evaluation of ecolodges in the Brazilian Amazon. *Proceedings of Ecotourism Conference in the Dominican Republic, Santo Domingo, D.N Dominican Republic*. Retrieved February 16, 2004, from <http://kiskeya-alternative.org/publica/diversos/ecolodge-brasil.html>

Matzler, K., Sauerwein, E., & Heischmidt, K. (2002). Importance-performance analysis revisited: The role of factor structure of customer satisfaction. *Service Industries Journal*, 23(2), 112-129.

Minca, C., & Linda, M. (2000). Ecotourism on the edge: the case of Corcovado National Park, Costa Rica. In X. Font, & J. Tribe (Eds.), *Forest Tourism and Recreation: Case Studies in Environmental Management*. Oxford, Oxford University Press.

Mohia, P. (1992). Men, women, and the environment: An examination of the gender gap in environmental concern and activism. *Society and Natural Resources: An International Journal*, 5(1), 1-19.

Moser, C., & Kalton, G. (1979). *Survey methods in social investigation* (2nd ed.). Aldershot: Grower.

Nepal, S. (2007). Ecotourists' importance and satisfaction ratings of accommodation-related amenities. *Anatolia: An International Journal of Tourism and Hospitality Research*, 18(2), 1-22.

Noursis, M. J. (1994). *SPSS professional statistics 6.1.*[computer software user manual] Chicago, IL:SPSS Inc.

Nunnally, J. C. (1967). *Psychometric theory*. New York: McGraw-Hills Inc.

Osa Conservation. (2010). *About the Osa Peninsula*. Retrieved October, 17, 2011, from <http://osaconservation.org/AboutTheOsa.html>

Osland,G.E., & Mackoy, R. (2004). Ecolodge performance goals and evaluation. *Jouurnal of Ecotourism*, 3(2), 109-127.

Palacio, V. and McCool, S.F. (1997). Identifying ecotourists in Belize through benefit segmentation: A preliminary analysis. *Journal of Sustainable Tourism* 5(3), 235-243.

Patterson, P. G. (1993). Expectations and product performance as determinants of satisfaction with a high-involvement purchase. *Psychology and Marketing*, 10(5), 449-465.

Plog, S.C. (2001). Why destination areas rise and fall in popularity: An update of a *Cornell Quarterly* classic. *Cornell Hospitality Restaurant and Administrative Quarterly*, 42(3), 13-24.

Prosser, G. (1986). The limits of acceptable change: an introduction to a framework for natural area planning. *Australia Parks and Recreation*, 22(2), 5-10.

Pyo, S., Mihalik, B.J., & Uysal, M. (1989). Attraction attributes and motivations: a canonical correlation analysis. *Annals of Tourism Research*, 16(2), 277-282.

Qu, H., Ryan, B., & Chu, R. (2000). The importance of hotel attributes in contributing to travellers' satisfaction in the Hong Kong hotel industry. *Journal of Quality Assurance in Hospitality and Tourism* 1(3), 65-83.

Richardson, & A. Crabtree) *Ecotourism and Nature-Based Tourism*. Ecotourism Association of Australia, Brisbane, Australia.

Rivera, J. (2002). Assessing a voluntary environmental initiative in the developing world: The Costa Rican Certification of Sustainable Tourism. *Policy Sciences*, 35(4), 333-360.

Robinson, D., Twynam, D., Haider, W. and Hunt, L. (1998). Identifying desired ecotourism activities, settings and experiences. In M.E. Johnston, G.D. Twynam and W. Haider (Eds) *Shaping Tomorrow's North: The Role of Tourism and Recreation* (pp. 98-125). Thunder Bay, Ontario, Canada: Centre for Northern Studies, Lakehead University.

Russell D., Bottrill, C., & Meredith, G. (1995). Introduction: International ecolodge survey. In D.E. Hawkins, M.E. Wood, & S. Bittman (Eds). *The ecolodge sourcebook for planners and developers*. North Belington, VT: The Ecotourism Society.

Sanders, A., & Halpenny, E. (2001). *The business of ecolodges. A survey of ecolodge economics and finance*. Burlington, VT: The International Ecotourism Society.

Swan, J., & Coombs, I. L. (1976). Product performance and consumer satisfaction: a new concept. *Journal of Marketing*, 40(2), 25-33

The Costa Rica Tourism and Travel Bureau. (2010). *Protected Areas and National Parks of Costa Rica*. Retrieved 10 February, 2010, from
<http://www.costaricabureau.com/nationalparks.htm>

The International Ecotourism Society. (2012). *What is Ecotourism*. Retrieved 4 January, 2012, from <http://www.ecotourism.org/what-is-ecotourism>

Thwaites, R. (2007). The Australian Eco-Certification Programme (NEAP): Blazing a trail for ecotourism certification, but keeping on track? In R. Black & A. Crabtree (Eds.), *Quality assurance and certification in ecotourism*. New York, CABI Publishing.

Tico Times. (2002). *Ambitious tourism plan unveiled*. April 5.

TTI. (1996). Costa Rica. *International Tourism Reports*, 4, 4-24.

Twynam, G.D. and Robinson, D.W. (1997). *A Market Segmentation Analysis of Desired Ecotourism Opportunities*. Sault Ste. Marie, Ontario, Canada: Her Majesty the Queen in Right of Canada.

Van den Hombergh, H. (1999). *Guerreros del Golfo Dulce: Industria forestal y conflicto en la Peninsula de Osa, Costa Rica*. San Jose: Departamento Ecumenico de Investigaciones.

Wearing, S., & Neil, J. (Eds.). (2009). *Ecotourism: Impacts, Potentials and Possibilities, Second edition*. Elsevier, Oxford.

Weaver, D. (1999). Magnitude of ecotourism in Costa Rica and Kenya. *Annals of Tourism Research*, 26(4), 792-816.

Weaver, D. B., & Lawton, L. (2002). Overnight ecotourism market segregation in the Gold Coast hinterland of Australia. *Journal of Travel Research*, 40(3), 270-280.

Wight, P. (1994). Environmentally responsible marketing of tourism. In (E. Carter, & G. Lowman, Eds.) *Ecotourism: A Sustainable Option?* John Wiley & Sons, New York, pp. 39-55.

Wight, P.A. (1996a). North American ecotourists: Motivations, preferences, and destinations. *Journal of Travel Research* 35(6), 3-8.

Wight, P.A. (1996b). North American ecotourists: Motivations, preferences, and destinations. *Journal of Travel Research* 34(4), 2-10.

Wight, P.A. (1996c). North American ecotourists: Motivations, preferences, and destinations. *Journal of Travel Research* 35(1), 3-10

Wight, P. A. (1996d) North American ecotourists: Market profile and trip characteristics. *Journal of Travel Research*, 24(4), 2-10.

Wight, P.A. (1997). Ecotourism accommodation spectrum: does supply match demand? 18(4), 209-220.

Wight, P. A. (2001). Ecotourists: Not a homogeneous market segment. In D.B. Weaver (Ed.), *The Encyclopaedia of Ecotourism* (pp.37-65). New York. CABI Publications.

Wight & Associates. (1998). Bundling, branding, and bellyaching: Where is ecotourism going internationally? *Proceeding of the Ecotourism Association of Australia 1998 National Conference*. Section 5, (pp 109-113). Retrieved August 20, 2003, from http://www.btr.gov.au/service/confproc/ecotourism98/Section_5.pdf

World Tourism Organisation. (2002). *Voluntary initiatives for sustainable tourism*. Madrid: World Tourism Organisation.

World Tourism Organization. (2010). *UNWTO Tourism Highlights 2010 Edition*. Retrieved February, 11, 2010, from <http://www.unwto.org/facts/menu.html>

Zamora, N., & Obando, V. (2001). *Biodiversity and tourism in Costa Rica*. Retrieved Oct 18, 2011, from [http://www.unep.org/bpsp/Tourism/Case%20Studies%20\(pdf\)/COSTA%20RICA%20\(Tourism\).pdf](http://www.unep.org/bpsp/Tourism/Case%20Studies%20(pdf)/COSTA%20RICA%20(Tourism).pdf).

Appendix A

Guest Questionnaire

Costa Rica Ecolodges-----Guests' Questionnaire

Hello! Your answers are very important for your next ecolodge visit!

Ecolodges are a popular accommodation choice. In order to help the ecolodge industry improve its quality. Your time and care in responding to these questions may help improve the quality of ecolodges in Costa Rica and other countries.

You are invited to participate in a Geography Master's research study conducted by Josh Ingribelli from the Department of Geography in the University of Waterloo, Ontario, in Canada. The results of this study will contribute to the understanding of tourists' perception of the of ecolodges, through evaluating the ecolodge at which you are now staying. You may omit any question you prefer not to answer. There are no known or anticipated risks to participation in this study. Participation in this project is voluntary and anonymous. All information you provide will be considered confidential. The data collected through this study will be kept for a period of 2 years in a locked office in my supervisor's office at the University of Waterloo. If you have any questions about this study, or would like additional information to assist you in reaching a decision about participation, please feel free to contact Professor Paul Eagles at 00+1(519)-888-4567 ext. 32716. I would like to assure you that this study has been reviewed and received ethics clearance through the Office of Research Ethics at the University of Waterloo. However, the final decision about participation is yours. Should you have any comments or concerns resulting from your participation in this study, please contact Dr. Susan Sykes in the Office of Research Ethics at 00+1 (519)-888-4567 Ext. 36005 or ssykes@uwaterloo.ca.

This questionnaire will take **less than 15 minutes** of your time to complete.

Section A. Travel experience and motivation

1. What is the total length for this Costa Rica trip?

- | | |
|--------------------------------------|--|
| <input type="checkbox"/> 1 to 3 days | <input type="checkbox"/> 8 to 11 days |
| <input type="checkbox"/> 4 to 7 days | <input type="checkbox"/> 12 to 15 days |
| | <input type="checkbox"/> > 15 days |

2. How many nights are you staying at this lodge? (*Pls. circle your answer*)

1 2 3 4 5 6 7 >7

3. What was the most important source of information that influenced your decision-making process when selecting this ecolodge? (*Check at most three*)

- | | | |
|---|---|--|
| <input type="checkbox"/> Friends/Family | <input type="checkbox"/> Environmental Association | <input type="checkbox"/> Internet |
| <input type="checkbox"/> Travel Guide Books | <input type="checkbox"/> Personal Experience/her before | <input type="checkbox"/> Films |
| <input type="checkbox"/> Travel brochures | <input type="checkbox"/> Travel Agent | <input type="checkbox"/> Magazine articles |
| <input type="checkbox"/> Word of mouth | <input type="checkbox"/> TV | Others _____ |

4. Have you stayed in a nature-based accommodation or an ecolodge before?

- Yes No, this is my first time.

5. What other types of accommodation are you using on this trip? (Check all that apply)

- | | | |
|--|--|--|
| <input type="checkbox"/> Home of friends and relatives | <input type="checkbox"/> Campground/Trailer Park | <input type="checkbox"/> Local Village |
| <input type="checkbox"/> Hotel/Motel/Resort | <input type="checkbox"/> Cruise Ship | <input type="checkbox"/> Other: |
| <input type="checkbox"/> Guest House | <input type="checkbox"/> Private Cottage/Cabin | |

6. Which of the following best describe yourself and the others who travel with you on this trip? (Pls. check one)

- | | | |
|--|---|---------------------------------|
| <input type="checkbox"/> Alone | <input type="checkbox"/> Friends | <input type="checkbox"/> Others |
| <input type="checkbox"/> Spouse/partner | <input type="checkbox"/> Organizational group | |
| <input type="checkbox"/> Family [all adults] | <input type="checkbox"/> Family [with kids] | |

7. What was the recreation activity that you engaged in most often, while staying at this ecolodge?

8. Please circle the number that best describes how important each item was to you when planning this Costa Rica trip.

	not at all important	not very important	neutral	somewhat important	very important
<i>Attractions:</i>					
Barrier reefs	1	2	3	4	5
Birds	1	2	3	4	5
Mammals	1	2	3	4	5
Trees and wildflowers	1	2	3	4	5
Lakes and streams	1	2	3	4	5
Volcanoes	1	2	3	4	5
Tropical forests	1	2	3	4	5
Wilderness and undisturbed nature	1	2	3	4	5
Photography of landscape and wildlife	1	2	3	4	5
<i>Social motives :</i>					
Being together as a family	1	2	3	4	5
Meet people with similar	1	2	3	4	5

interests

Visit friends and relatives	1	2	3	4	5
<i>Other motives:</i>					
Learn and explore nature	1	2	3	4	5
Have fun and be entertained	1	2	3	4	5
Go to places where one feels safe	1	2	3	4	5
Feel at home away from home	1	2	3	4	5
Warm climate	1	2	3	4	5
See maximum in time available	1	2	3	4	5
Be physically active	1	2	3	4	5

9. What was your single most important reason for traveling to Costa Rica?

Section B. Your opinion about this ecolodge

10. Against each of the ecolodge features listed below, please rate on a scale of 1 to 5:

i) Their importance to you when selecting this lodge



ii) The performance of this lodge poor bad OK good excellent



	Importance					Performance				
A variety of food selections	1	2	3	4	5	1	2	3	4	5
A variety of lodging styles	1	2	3	4	5	1	2	3	4	5
Authentic design, appropriate to setting	1	2	3	4	5	1	2	3	4	5
Availability of a particular habitat or species	1	2	3	4	5	1	2	3	4	5

Availability of horse-back riding facilities	1	2	3	4	5	1	2	3	4	5
Availability of library and information facilities	1	2	3	4	5	1	2	3	4	5
Availability of Volcano viewing	1	2	3	4	5	1	2	3	4	5
Availability of onsite entertainment	1	2	3	4	5	1	2	3	4	5
Availability of research facilities	1	2	3	4	5	1	2	3	4	5
Availability of river trips (canoeing /boating/kayaking)	1	2	3	4	5	1	2	3	4	5
Availability of sales and rental services for recreational equipment	1	2	3	4	5	1	2	3	4	5
Availability of security personnel	1	2	3	4	5	1	2	3	4	5
Availability of trail hiking facilities	1	2	3	4	5	1	2	3	4	5
Availability of trees and wildflowers	1	2	3	4	5	1	2	3	4	5
Availability of wildlife	1	2	3	4	5	1	2	3	4	5
Benefit local communities through provision of jobs	1	2	3	4	5	1	2	3	4	5
Bird-watching facilities and tours	1	2	3	4	5	1	2	3	4	5
Business facilities and conference rooms	1	2	3	4	5	1	2	3	4	5
Cleanliness	1	2	3	4	5	1	2	3	4	5
Comfort of bed	1	2	3	4	5	1	2	3	4	5
Convenient Location – easy accessibility	1	2	3	4	5	1	2	3	4	5
Decent sanitary condition	1	2	3	4	5	1	2	3	4	5
Design sensitive to natural and cultural environment with minimal negative impact	1	2	3	4	5	1	2	3	4	5
Dining and bar services	1	2	3	4	5	1	2	3	4	5
Efficient reservation	1	2	3	4	5	1	2	3	4	5
Friendliness of staff	1	2	3	4	5	1	2	3	4	5
Guided wildlife tours	1	2	3	4	5	1	2	3	4	5
High quality food	1	2	3	4	5	1	2	3	4	5
Knowledgeable guides	1	2	3	4	5	1	2	3	4	5
Local food, produced with local ingredients	1	2	3	4	5	1	2	3	4	5
Meets its energy needs through renewable energy resources	1	2	3	4	5	1	2	3	4	5
Nature interpretation center or conservation education programs	1	2	3	4	5	1	2	3	4	5
Price	1	2	3	4	5	1	2	3	4	5
Private sleeping room; private washroom	1	2	3	4	5	1	2	3	4	5

	Importance					Performance				
	1	2	3	4	5	1	2	3	4	5
Quality of the environment or landscape										
Recycling of glass, paper and plastic	1	2	3	4	5	1	2	3	4	5
Reputation of Lodge	1	2	3	4	5	1	2	3	4	5
Scenery	1	2	3	4	5	1	2	3	4	5
Staff provide efficient services	1	2	3	4	5	1	2	3	4	5
Uses alternative, sustainable means of water acquisition and reduces water consumption	1	2	3	4	5	1	2	3	4	5
Value for money	1	2	3	4	5	1	2	3	4	5
Certification by the Costa Rican Certification for Sustainable Tourism	1	2	3	4	5	1	2	3	4	5

11. What other ecolodge attributes are important to you but are not listed above?

12. Is this ecolodge part of the Costa Rican Certification for Sustainable Tourism? Yes / No / Don't Know

13. Which of the following statements best describes your opinion? (Pls. check one)

Staying at this ecolodge ...

- provides only room and board and contributes very little to my trip experience in Costa Rica
- enhances my travel experience in Costa Rica
- is one of my main reasons for traveling to Costa Rica

14. Please describe in your own words what you think an **ecolodge** is.

Section C: Personal Data

15. What is your age? _____



16. Which gender are you?

Male

Female

17. Which of the following best describes the highest level of education you have been able to obtain?

< 8 years of schooling

9-12 years of schooling

Completed secondary school (also called high school)

Some post secondary education (College, Technical Institute or University)

Obtained a diploma, trade certificate or apprenticeship (other than university)

Obtained a University degree at bachelor's level (also called 1st degree)

Obtained a master's or Ph.D. degree (also called Post-graduate or Doctoral degree)

18. What is your country of residence?

Costa Rica

Honduras

United States

European Union Country

Nicaragua

Others _____

Canada

Panama

19. Which of the following best describes your current employment status? (Please check one)

Employed full-time

Employed part-time

Self-employed

Retired

Homemaker

Not employed

Student

20. Which of the following best describes your family household annual income before taxes last year? (**US dollars**)

< \$10,000

\$ 50,000 – \$70,000

\$100,000-- \$120,000

\$ 10,000--\$30, 000

\$ 70,000 -- \$90,000

\$120,000 --\$140,000

\$ 30,000-- \$50, 000

\$ 90,000 -- \$100,000

> \$140, 000

Currency Exchange:

\$ CAN = \$1.04 USD \$ PESO = \$ 0.08 USD \$ EURO = \$1.4 USD \$POUND = \$1.6 USD \$ Bz = \$0.5 USD \$ Quetzales = \$0. 1 USD

Do you have any other comments that you want to share with us?

THANK YOU !
Your contribution will help improve the quality of ecolodge developments.

Appendix B

Perception of Importance Ratings

Perception of Importance Ratings for 42 Ecolodge Attributes Among Certified Ecolodges

Ecolodge Attributes	Mean	SD
1 A Variety of Food Selections	3.75	0.95
2 A Variety of Lodging Styles	3.40	1.03
3 Authentic Design, Appropriate to Setting	4.01	1.03
4 Availability of a Particular Species or Habitat	4.25	1.01
5 Availability of Horse-Back Riding Facilities	2.35	1.33
6 Availability of Library and Information Facilities	2.94	1.16
7 Availability of Volcano Viewing	1.67	0.95
8 Availability of Onsite Entertainment	2.12	1.25
9 Availability of Research Facilities	2.12	1.23
10 Availability of River Trips (canoeing/boating/kayaking)	2.48	1.31
11 Availability of Sales and Rental Services for Recreational Equipment	1.97	1.09
12 Availability of Security Personnel	2.97	1.40
13 Availability of Trail Hiking Facilities	4.55	0.77
14 Availability of Trees and Wildflowers	4.64	0.63
15 Availability of Wildlife	4.77	0.47
16 Benefit Local Communities through Provisions of Jobs	3.79	1.17
17 Bird-Watching Facilities and Tours	3.98	1.04
18 Business Facilities and Conference Rooms	1.47	0.93
19 Cleanliness	4.31	0.84
20 Comfort of Bed	4.09	0.88
21 Convenient Location – Easy Accessibility	2.65	1.17

22	Decent Sanitary Condition	4.46	0.71
23	Design Sensitive to Natural and Cultural Environment with Minimal Negative Impact	4.43	0.79
24	Dining and Bar Services	4.11	0.87
25	Efficient Reservation	4.18	0.80
26	Friendliness of Staff	4.49	0.74
27	Guided Wildlife Tours	4.36	0.82
28	High Quality Food	4.32	0.75
29	Knowledgeable Guides	4.49	0.69
30	Local Food, Produced with Local Ingredients	4.07	0.91
31	Meets its Energy Needs Through Renewable Energy Resources	4.06	1.03
32	Nature Interpretation Centre or Conservation Education Programs	3.29	1.24
33	Price	4.05	0.85
34	Private Sleeping Room; Private Washroom	4.59	0.71
35	Quality of the Environment or Landscape	4.63	0.62
36	Recycling of Glass, Paper, and Plastic	4.26	0.87
37	Reputation of Lodge	4.34	0.89
38	Scenery	4.80	0.45
39	Staff Provide Efficient Services	4.43	0.74
40	Uses Alternative, Sustainable means of Water Acquisition and Reduces Water Consumption	3.99	0.94
41	Value of Money	4.50	0.70
42	Certification by the Costa Rican Certification for Sustainable Tourism	3.15	1.28
Overall Mean Importance		3.75	0.23

Appendix C

Perception of Performance Ratings

Perception of Performance Ratings for 42 Ecolodge Attributes Among Certified Ecolodges

Ecolodge Attributes	Mean	SD
1 A Variety of Food Selections	4.62	0.58
2 A Variety of Lodging Styles	4.32	0.80
3 Authentic Design, Appropriate to Setting	4.73	0.57
4 Availability of a Particular Species or Habitat	4.70	0.61
5 Availability of Horse-Back Riding Facilities	3.72	1.23
6 Availability of Library and Information Facilities	3.99	0.84
7 Availability of Volcano Viewing	1.66	0.97
8 Availability of Onsite Entertainment	3.01	1.27
9 Availability of Research Facilities	2.94	1.28
10 Availability of River Trips (canoeing/boating/kayaking)	3.43	1.27
11 Availability of Sales and Rental Services for Recreational Equipment	2.89	1.13
12 Availability of Security Personnel	3.80	1.07
13 Availability of Trail Hiking Facilities	4.82	0.46
14 Availability of Trees and Wildflowers	4.87	0.35
15 Availability of Wildlife	4.83	0.42
16 Benefit Local Communities through Provisions of Jobs	4.60	0.71
17 Bird-Watching Facilities and Tours	4.56	0.63
18 Business Facilities and Conference Rooms	2.38	1.38
19 Cleanliness	4.61	0.61
20 Comfort of Bed	4.32	0.80
21 Convenient Location – Easy Accessibility	3.37	1.11
22 Decent Sanitary Condition	4.75	0.45

23	Design Sensitive to Natural and Cultural Environment with Minimal Negative Impact	4.82	0.43
24	Dining and Bar Services	4.74	0.49
25	Efficient Reservation	4.56	0.68
26	Friendliness of Staff	4.92	0.27
27	Guided Wildlife Tours	4.75	0.60
28	High Quality Food	4.82	0.38
29	Knowledgeable Guides	4.84	0.51
30	Local Food, Produced with Local Ingredients	4.68	0.54
31	Meets its Energy Needs Through Renewable Energy Resources	4.82	0.43
32	Nature Interpretation Centre or Conservation Education Programs	4.05	0.93
33	Price	4.10	0.84
34	Private Sleeping Room; Private Washroom	4.82	0.48
35	Quality of the Environment or Landscape	4.88	0.34
36	Recycling of Glass, Paper, and Plastic	4.76	0.51
37	Reputation of Lodge	4.76	0.51
38	Scenery	4.96	0.23
39	Staff Provide Efficient Services	4.87	0.36
40	Uses Alternative, Sustainable means of Water Acquisition and Reduces Water Consumption	4.70	0.58
41	Value of Money	4.57	0.65
42	Certification by the Costa Rican Certification for Sustainable Tourism	4.53	0.82
Overall Mean Performance		4.31	0.31

Appendix D

Difference between Perception of Performance and Importance for 42 Attributes

Difference between Perception of Performance and Importance for 42 Ecolodge Attributes Among Certified Ecolodges

Ecolodge Attributes	Importance	Performance	Difference (P-I)
1 A Variety of Food Selections	3.75	4.62	0.87
2 A Variety of Lodging Styles	3.40	4.32	0.92
3 Authentic Design, Appropriate to Setting	4.01	4.73	0.71
4 Availability of a Particular Species or Habitat	4.25	4.70	0.45
5 Availability of Horse-Back Riding Facilities	2.35	3.72	1.37
6 Availability of Library and Information Facilities	2.94	3.99	1.05
7 Availability of Volcano Viewing	1.67	1.66	-0.01
8 Availability of Onsite Entertainment	2.12	3.01	0.89
9 Availability of Research Facilities	2.12	2.94	0.83
10 Availability of River Trips (canoeing/boating/kayaking)	2.48	3.43	0.95
11 Availability of Sales and Rental Services for Recreational Equipment	1.97	2.89	0.92
12 Availability of Security Personnel	2.97	3.80	0.83
13 Availability of Trail Hiking Facilities	4.55	4.82	0.28
14 Availability of Trees and Wildflowers	4.64	4.87	0.24
15 Availability of Wildlife	4.77	4.83	0.06
16 Benefit Local Communities through Provisions of Jobs	3.79	4.60	0.82
17 Bird-Watching Facilities and Tours	3.98	4.56	0.58
18 Business Facilities and Conference Rooms	1.47	2.38	0.91
19 Cleanliness	4.31	4.61	0.30
20 Comfort of Bed	4.09	4.32	0.23

21	Convenient Location – Easy Accessibility	2.65	3.37	0.71
22	Decent Sanitary Condition	4.46	4.75	0.28
23	Design Sensitive to Natural and Cultural Environment with Minimal Negative Impact	4.43	4.82	0.39
24	Dining and Bar Services	4.11	4.74	0.63
25	Efficient Reservation	4.18	4.56	0.38
26	Friendliness of Staff	4.49	4.92	0.43
27	Guided Wildlife Tours	4.36	4.75	0.39
28	High Quality Food	4.32	4.82	0.50
29	Knowledgeable Guides	4.49	4.84	0.34
30	Local Food, Produced with Local Ingredients	4.07	4.68	0.61
31	Meets its Energy Needs Through Renewable Energy Resources	4.06	4.82	0.76
32	Nature Interpretation Centre or Conservation Education Programs	3.29	4.05	0.76
33	Price	4.05	4.10	0.05
34	Private Sleeping Room; Private Washroom	4.59	4.82	0.23
35	Quality of the Environment or Landscape	4.63	4.88	0.25
36	Recycling of Glass, Paper, and Plastic	4.26	4.76	0.50
37	Reputation of Lodge	4.34	4.76	0.42
38	Scenery	4.80	4.96	0.16
39	Staff Provide Efficient Services	4.43	4.87	0.44
40	Uses Alternative, Sustainable means of Water Acquisition and Reduces Water Consumption	3.99	4.70	0.71
41	Value of Money	4.50	4.57	0.07
42	Certification by the Costa Rican Certification for Sustainable Tourism	3.15	4.53	1.37
Overall Mean Importance		3.75	4.31	0.56

