The Galápagos Perspective: Concerns about Life on the Galápagos Islands from the Perspective of Residents of San Cristóbal

By

Danielle Golon

Submitted to the Department of Geography and the Faculty of the Graduate School of the University of Kansas in partial fulfillment for the requirements for the degree of Master of Arts.

Defended: June 22nd 2012

Dr. William Woods, Chair

Dr. Peter Herlihy

Dr. Barney Warf

The Thesis Committee for Danielle Golon certifies that this is the approved version of the following thesis:

The Galápagos Perspective: Concerns about Life on the Galápagos Islands from the Perspective of Residents of San Cristóbal

Chairperson, Bill Woods

Date approved: June 22nd, 2012

Abstract

The Galápagos Islands are known for their unique flora and fauna. These flora and fauna are what attract almost 200,000 tourists to the islands annually; as a result, tourism is the main economic force on the islands. It is important to remember that the Galápagos Islands have a population of 25,000 residents living on five islands. Through 97 surveys and interviews, this study peers into the life of the Galapagueños on San Cristóbal Island and what issues they believe are important there. The study found that residents do not believe that basic human necessities, such as water quality and health care, are being met on the islands. In addition, residents are also concerned about various social issues that are developing on the island, partially due to the tourism industry's presence.

Acknowledgements

There are many people that are responsible for helping make this thesis a reality. First and foremost, I would like to thank my Advisor Professor Bill Woods for providing me the encouragement and guidance I needed to succeed in my graduate studies in the Geography Department at the University of Kansas. I would also like to thank my committee members Professor Barney Warf and Professor Peter Herlihy for always pushing me to work harder and improve as a geography student. In addition, I would like to thank all of my professors at the Universidad San Francisco de Quito and the Galápagos Academic Institute for the Arts and Sciences. In particular, I want to thank Professor Carlos Mena and Professor Christian Melo, for introducing me to previously unknown issues on the islands, and Dr. Fernando Ortega for his invaluable guidance during the first few weeks in San Cristóbal that made this thesis possible. I also extend my heartfelt gratitude to Professor Esteban Suárez for helping me look at issues from a variety of perspectives and for helping me grow and develop, both as a student and as a person, during my time in the Amazon, the Andes, and the Galápagos Islands. Finally, a huge thank you goes to Professor Diego Quiroga for being a wealth of knowledge and inspiration before, during, and after the writing of this thesis. I must also thank my Galápagos family: Sara Zambrano Pérez and Fernando Castillo for their hospitality, patience, and humor during my stay on the islands. Most importantly, I would also like to thank the Galapagueños who took their time to share their stories and thoughts with me.

Table of Contents

Abstract……...…….....iii

Acknowledgements…….....iv

Table of Contents.....v

List of Figures.....vi

List of Tables vii

Chapter 1: Introduction:……...……..……8

Chapter 2: Study Area:…….……..……11

Chapter 3: History…….…….....…14

Tourism:……...…...…...….....…14

The Galápagos Islands:……...…...….....…19

San Cristóbal:……...…...…...…….....25

Chapter 4: Galápagos Islands and Tourism:……..……..….....…...28

Social:…….....……..…...…...28

Tourism Life Cycle:.....29

Economics and Development:.....32

Chapter 5: Methodology:……..…….....37

Chapter 6: Results and Discussion:…….……..…….....41

Chapter 7: Future of the Island…….…….....104

Chapter 8: Conclusion.…….…….....…106

Reference:…….…….…….....108

Appendix A: Survey.....115

List of Figures

Figure 1. Map of the Galápagos Islands. ……....11
Figure 2. Map of San Cristóbal …….....12
Figure 3. Increase of population growth verses tourism growth…….....13
Figure 4. Respondents by gender. ……..……..…….....43
Figure 5. Respondents by age……..…….....45
Figure 6. Respondents by age range…….....47
Figure 7. Respondents by profession…….....49
Figure 8. Respondents based on length of time spent on the island…….....52
Figure 9. Respondents based on reasons for coming to the island……..….....54
Figure 10. Respondents for health…….....57
Figure 11. Response for water…….....62
Figure 12. Response for tourism…….....66
Figure 13. Response for sustainability…….....71
Figure 14. Respondents for the biggest problem found on the island…….....74
Figure 15. Respondents about changes on the island…….....82
Figure 16. Response about beliefs in the future of the islands…….....87
Figure 17. Response to importance of the issue of population size…….....91
Figure 18. Response to importance of the issue of conservation efforts….....94
Figure 19. Response to importance of the issue of tourism. …….....97
Figure 20. Response to importance of the issue of health…….....99
Figure 21. Response to importance of the issue of water quality…….....101

List of Tables

Table 1. Respondents by Gender. ……..... 43
Table 2. Respondents by Age. ……..... 46
Table 3. Respondents by Age Range…….....47
Table 4. Respondents based on Profession..……..... 50
Table 5. Length of Time Spent on the Island by Respondents…….....53
Table 6. Respondents of Reasons for Coming to the Island……...….....54
Table 7. Response of Coming to the Island, based on age, Length of Time Spent on the Island, and Gender……...….....55
Table 8. Respondents for Health. ……...….....57
Table 9. Response for Health based on Age, Length of Time Spent on the Island, and Gender..……..……..…….....58
Table 10. Response for Water……..……....…….....63
Table 11. Response for Tourism……..……...….....67
Table 12. Response for the Importance of Tourism based on Age, Length of Time Spent on Island, and Gender ...……..…….....68
Table 13. Response for Sustainability…….....71
Table 14. Respondents for the Sustainability of Life on the Islands, based on Age, Length of Time Spent on the Island and Gender...…….....72
Table 15. Response of Biggest Problem…….....75
Table 16. Response of the Biggest Problems Found on the Island…….....78
Table 17. Respondents about Changes on the Island…….....83
Table 18. Respondents about Changes on the Island, based on Age, Length of Time Spent on the Island, and Gender……...…….....84
Table 19. Response about Beliefs in the Future of the Islands....….....….....87
Table 20. Response of what the Future will be like on the Island, based on age, Length of Time Spent on the Island and Gender…...…….....88
Table 21. Response to the Importance of the Issue of Population Size.....92
Table 22. Response of Importance of the Issue of Population Size, based on Age, Length of Time Spent on the Island and Gender……..…….....93
Table 23. Response to Importance of the Issue of Conservation Efforts….....95
Table 24. Response of Importance of the Issue of Conservation Efforts, based on Age, Length of Time Spent on the island and Gender…….....95
Table 25. Response to Importance of the Issue of Tourism…….....97
Table 26. Response of Importance of the Issue of Tourism, based on Age, Length of Time Spent on the Island and Gender…..…….....98
Table 27. Response to Importance of the Issue of Health……..…….....99
Table 28. Response of Importance of the Issue of Health, based on Age, Length of Time Spent on the Island and Gender……..…….....100
Table 29. Response to Importance of the Problem of Water Quality…….....101
Table 30. Response of Importance of the Issue of Water Quality, based on Age, Length of Time Spent on the Island and Gender…….....102

Chapter 1:

Introduction

The Galápagos Islands are often considered nature's last untouched reserve. The islands are famously known from Charles Darwin's On the Origin of Species (1859), in which he developed the theory of evolution partially based on the flora and fauna he observed on the islands. Today, the environment that makes the islands special is at risk of becoming endangered because of the increased pressure from the tourism industry. For this reason, many tourists want to visit the islands before their unique characters disappear; however, in doing so, they are causing more environmental degradation. This industry impacts the flora and fauna on the islands; it also factors into the social structure on the islands and deeply affects the lives of local residents.

Tourism is the world's largest industry in terms of employment, "surpassing both international oil and arms sales" (Apostolopoulos 2002:5). An increase in leisure activities and prosperity since the 1940s and a decrease in travel costs, resulted in an increased demand in the tourism market. A combination of travel companies and travel accommodations working with airlines and governments to benefit all parties involved has arisen to meet this demand. An increase in tourism is particularly seen in less developed areas, which are "eager to reap the foreign exchange, investment, income and employment benefits of tourism … [they] exert effort toward economic diversification" (Apostolopoulos 2002:5).

Tourism accounts for the largest part of the Galápagos Islands' Gross Domestic Product (GDP) and is the third largest component of Ecuador's GDP (Zamudio 2005). Galápagos tourism generates approximately 65 million United States dollars annually

(USD) (Epler 2007), and accounts for 50 percent of the Galápagos economy (Quiroga 2011 c).

The population of the islands is estimated at 25,124 based on the 2010 Ecuadorian Census (INEC 2012). Many undocumented residents, however, come to the islands every year, seeking employment. While the islands have a higher income than mainland Ecuador, the influx of in-migrants, Ecuadorian residents who move from one part of Ecuador to another, has decreased the number of available jobs and has caused a riff between long-term residents and the new arrivals. As a result, in 1998, the Ecuadorian government enlisted a new law to help with the growth in population: the Ley Especial de Galápagos or the Galápagos Special Law. This law is designed to prohibit uncontrolled in-migration to the islands and to create a "significant local autonomy in managing economic development and conservation" (Taylor et al. 2009: 3). In addition, the law defined how policies on the islands could be legally established and gave economic preference to local businesses on the islands (Wilen et al. 2000: 6).

According to the Galápagos Special Law, a resident of the Galápagos Islands is differentiated from a resident of mainland Ecuador. That is, residents of mainland Ecuador are not automatically granted residency on the islands. The Galápagos Special Law was first enforced in 1998. Residents who moved to the islands after the law was established are grouped into one of three categories: legal resident, temporary resident, and visitor. The requirements for a legal resident included living on the islands for five consecutive years by 1998 or being a child or spouse of a legal resident (Wilen et al. 2000: 6). The law defines a temporary resident as a resident employed under a one-year contract or performing public services and their family (Wilen et al. 2000: 6). Visitors

consist of all others coming to the islands, who are prohibited from working and are only allowed to stay on the islands for three months a year (Wilen et al. 2000: 6). This law also clearly defines which residents are living on the islands illegally. Many residents living there illegally first came as tourists and decided to stay permanently.

As a result of the growing tourism industry, the islands have seen a rise in population and infrastructure. The health care system on the island is still grossly insufficient and lacks even the most basic necessities. Furthermore, the islands still do not have an adequate system of potable water and sewage disposal. These are challenges that have a huge impact on the quality of life for the local residents as well as the experience of tourists visiting the islands. Tourism has increasingly negative social implications for the long-term residents, such as domestic violence, promiscuous sex, teenage pregnancy, and alcoholism. Consequently, while the tourism industry does have many positive impacts, such as improving the economy and raising awareness of environmental problems, for Galapagueños the negative impacts cannot be ignored.

Chapter 2:

Study Area

Figure 1. The Galápagos Islands. (Source: Google Earth, © 2012 Google, Data LDEO-Columbia, NSF, NOAA, Data SIO, NOAA, U.S. Navy, NGA, GEBCO, © 2012 Cnes / Spot Image.)

Figure 2. San Cristóbal Island. (Source: Google Earth, © 2012 Google, Data SIO, NOAA, U.S. Navy, NGA, GEBCO, Image © 2012 DigitalGlobe).

The Galápagos Islands (Fig: 1) are located approximately 600 miles west of Ecuador and are composed of 120 islands and islets over the Galápagos hotspot. The islands are part of a volcanic chain in the Pacific Ocean and have a total area of 8,000 square kilometers (The Galápagos 2010). The oldest islands date between five and ten million years and the youngest islands are still being formed. The climate is subtropical, with a dry season between June and December and a wet season from January to May (Ministry of Tourism 2010).

The islands are most known for the unique ecosystem of flora and fauna that have been relatively undisturbed due to their geographical isolation. The most known fauna associated with the islands includes Darwin's finches, Galápagos giant tortoises, the

Galápagos sea lions, blue-footed boobies, and the Galápagos sharks. Darwin's finches have been frequently tied to proving the theory of evolution, based on how their beaks have changed and developed over time (Darwin 2008).

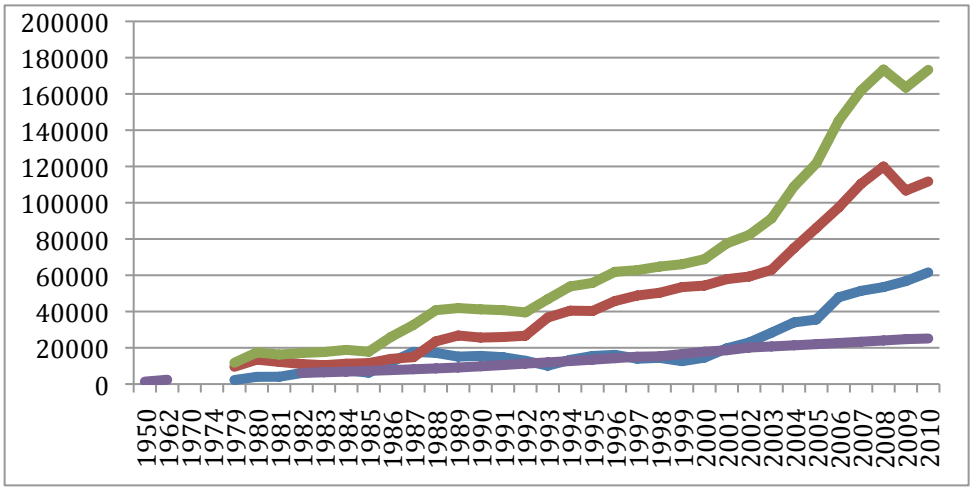

Figure 3. The growth of tourists compared to the growth of residents on the island since 1950. (Graph created by author. Data for graph obtained from Taylor 2002, Epler 2007, INEC 2012 and estimated based on growth percentage.)

Humans inhabit five of the 19 larger islands, or roughly 3 percent of the Galápagos Islands territory. The other 97 percent of land is reserved as National Park (Bassett 2009). The five inhabited islands are Baltra, Isabela, Santa Cruz, Floreana, and San Cristóbal (Fig. 1). Baltra and San Cristóbal are the only islands that currently contain airports (The Galápagos 2010). The exact population on the islands is unknown due to the illegal in-migration brought on by the tourist development; however, estimates are between 25,000 and 40,000. Currently 25,124 residents legally live on the island and almost 200,000 tourists visit the islands annually (Figure 3).

Chapter 3:

History

Tourism

The most common types of tourism found on the island are Nature Tourism and Ecotourism. The sector of Ecotourism morphed from several divisions of the tourism industry into the entity we have today. The International Ecotourism Society declares that ecotourism involves benefiting the local community, protecting nature, raising awareness of issues in the area, and involves tourists that hold themselves accountable for the actions socially and environmentally (Ecotourism 2012). Nature tourism is similar to ecotourism but it focuses more on the tourist traveling to an area specifically for the natural aspects found there. While it can have benefits to the local area, in the form of conservation, it does not necessarily imply all tourists will be environmentally responsible.

To understand ecotourism we should first look at the history behind the tourism industry. While tourism can be dated back as far as ancient Greece, the increased urbanization of the 1750s is when we begin to see tourism spread to a wider audience. Previously, tourism was reserved for the more wealthy members of society (Honey, 1999:7). In the 1750s, many individuals began to move away from their hometowns for the first time Honey 1999: 7). In 1811, the word "tourism" is first used on the Oxford English Dictionary (Honey 1999: 7).

The modernization of tourism rapidly expanded with the urbanization of Western Europe during the Industrial Revolution (Mason 2003: 12). In the 1850s, travelers could

use travelers' checks and money orders through the American Express Company (Honey 1999: 8). However, travel was still fairly limited to areas near the traveler's residence and within the traveler's continent. During the Industrial Revolution there were increased incomes, the introduction of paid vacation time, and more efficient and cheaper ways to travel due to the railroad system. For the first time the masses really began to have money, interest, and time to take vacations. With the increase of work hours also came the belief that recreation was important for the body and mind (Mason 2003: 13). The wealthiest tourists could travel to different continents by boat; however, this took both significant time and money.

There was another push for tourism starting around the 1940s. In the immediate post War World II period, salaries increased and working hours decreased (Mason 2003: 13-14). The tourism industry was revolutionized in the 1940s and 1950s by the introduction of the tourist class air travel from Pan American World Airways in 1948, the creation of commercial air routes between Europe and the United States, and introduction of jet engines in 1957 (Honey 1999: 8). During the 1950s, there were the rise of the automobile and improvements of highways, especially the interstate highway system (Mason 2003: 14). Autos allowed people to have the freedom to plan their own vacations without having to follow schedules or itineraries. The 1970s brought tourism to developing nations with improvements of aircraft carries.

> In the mid-1970s, 8 percent of all tourists were from developed countries, traveling on holidays to developing countries. By the mid-1980s, the number had jumped to 17 percent, and by the mid-1990s it had climbed to 20 percent. (Honey 1999: 8).

Much of the tourism during the 1970s and 1980s was based on concepts of status and image; an ever-changing industry based on which place was popular at a specific time and moment (Mason 2003: 14). The interests of tourists also shifted geographically, so while the trend of the moment may be going to the beach, for many it was specifically going to Jamaica. One year the trend could be going on an African safari in Kenya and the next year the trend could shift to yoga retreats in India and three months later it might be swimming in the Pacific with hammerhead sharks. While this is definitely a large part of tourism today, for the past 20 years tourism has shifted towards attempting to protect the popular destinations and attempting to be more environmentally friendly. There was a trend within the industry of being more concerned with how the places people were visiting were environmentally impacted. This is where we begin to see different types of tourism take place, like ecotourism (Wearing and Neil 1999). Many tourists are now more concerned with where their dollars are going and their impact on their destination, both environmentally and socially. However, it is important to note that many places are not experiencing these types of tourists and are still explored by tourists that are simply there for pleasure and not concerned with how they are impacting their destination.

Today, the tourism and travel industry employs 8.8% (258,592,000 people) of the world's labor force and by 2021 it is expected to employ 9.7% (323,826,000) (World,

Economic Impact 2011: 3). The tourism industry competes with the oil industry for the title of the "world's largest legitimate business"; in 2011, it was projected that tourists spent US $5,991.9 billion or 9.1% of the world GDP (Honey 1999: 9, World 2011: 4). It is expected to increase to 9.6% by 2021 (World Economic Impact 2011: 3). The direct contribution, only including spending of residents and non-residents on tourism activities and government funding towards visitor locations, was expected to be 2.8% of the world GDP or US $1,850.0 billion (World Economic Impact 2011: 3). Tourism directly employed 3.4% of total employment or 99,048,000 people (World Economic Impact 2011: 3) Even in the current economic crisis, the travel and tourism industry has had a positive growth since 2009 (World Economic Impact November 2011: 1). The tourism industry appears to be a large industry that brings money and employment to local economies and focuses on enhancing people culturally, mentally, and spiritually.

However, the tourism industry does have its faults. The first is in the tourists themselves. While many tourists are originally interested in the culture and environment of destinations, many of today's tourists are more interested in having a good time than learning about their destination. These tourists can be destructive to areas through excessive drinking and pollution, as is seen on the islands. Many other tourists often travel to exotic areas and expect the comforts of their homes to be in these areas, for example king-sized beds and flat screen televisions. Tourist destinations have to accommodate the tourists' wishes to remain competitive and this fact often leads to a destruction of the area. While tourism does bring money into the local economy, many of the profits are lost due to leakages.

According to Wearing and Neil (1999), ecotourism can be a source of sustainable development for communities and an incentive for local people to manage and protect the wildlife around them. However, it must include and benefit the local community to help promote environmental justice. They are quick to point out that, frequently, ecotourism can fail at this aspect and in overall long-term health of an area because tourism is inherently built around short-term economic gains. "But getting 'off the beaten track' often means that the track soon becomes a road… And beautiful wild spaces … are extremely fragile and sensitive to human impact, however 'lightly we tread'" (Wearing and Neil 1999: XIIV).

Ecotourism itself has morphed into a type of tourism that encompasses many diverse groups and activities. This wide range has helped ecotourism be placed on the map and accepted by many organizations and countries as a hot topic of the 1990s to today (Wearing and Neil 1999: xiv). Ecotourism stemmed from the nature conservation movement, that nature is vital to the well-being of humans.

Ecotourism began as an "alternative to [the] increasing threat posed to both the culture and the environment of destination areas by mass tourism, the original emphasis …was on low key, unobtrusive tourism which has minimal impact on natural ecosystems" (Wearing and Neil 1999: 1). Ecotourism falls under a subset of tourism called "alternative tourism" and alternative tourism was created as a backlash to conventional tourism. It is aimed at minimizing the negative impact on nature and culture that can often occur with tourism. Alternative tourism takes tourism to a personal level with direct contact between the tourist and the local community and attempts to build a sense of similarity between the two groups (Wearing and Neil 1999: 2).

While there is debate about where the term ecotourism came from, it is generally accepted that Hector Ceballos-Lascurain coined the term in 1981. Wearing and Neil (1999) declared that originally he used the term turismo ecologico, which was later shortened to ecotourismo in 1983. He frequently used the word in association with PRONATURA, Ceballos-Lascurain was president of this conservation NGO. The word was first printed in an advertisement for a tourism operation run by Ceballos-Lascurain in 1984 (Wearing and Neil 1999: 4). The definition now used was first seen in a paper Ceballos-Lascurain wrote in 1987, "The Future of Ecotourism" (Wearing and Neil 1999:4). To Ceballos-Lascurain, ecotourism was "a form of travel in which the natural environment is the primary focus… it involves travel to unspoilt natural environments. This travel is predominantly for experiencing the natural environment" (Wearing and Neil 1999: 4). From this starting point ecotourism has rapidly expanded to a worldwide phenomenon that celebrates nature and comes at the recent new "green movement." However, this widespread movement also allows for tourism companies, more interested in making money than saving the environment, to take short cuts or keep their old practices and simply add a new label of "eco" to it.

The Galápagos Islands

The islands were first discovered in 1535 by Fray Tomás of Berlanga, of Spain, and were used in the 1600s as a base for pirates attacking the mainland of South America (Wilen et al. 2000: 2). Whalers also used the islands as a base station in the 1700s and 1800s. In the 1800s the islands were used as an area to banish prisoners (Center for Interpretation 1998). The Spanish ultimately lost interest in the islands and did not put up

an effort to keep control of them when Ecuador took possession in 1832 and renamed them “Archipelago del Ecuador” (Wilen et al. 2000).

Once Ecuador had control of the islands, it began to try to establish colonies there. Much of the following information came from the Interpretation Center in Puerto Baquerizo Moreno on San Cristóbal Island, as well as the results of my personal interviews and discussions. In the 1830s, Jose Villamil was declared first Governor of Galápagos and was granted an allowance to establish the first settlement on the islands in Floreana (Center for Interpretation 1998). His form of colonization, however, mixed colonists with criminals and within five years the settlement failed. After this unsuccessful colonization attempt, the islands were still used as a place to send convicts and were used mainly as an area to exploit resources such as fur, seal skin, and tortoise oil (Center for Interpretation 1998). The islands are most known for their appearance in Charles Darwin’s On the Origin of Species, which was published in 1859. The theory of evolution partly stems from Darwin’s observations while on the islands in 1835. In the 1860s, José Valdizán attempted to form another colony on Floreana (Center for Interpretation 1998). His colony consisted largely of farming orchilla, a purple flower, to make dye. The colony lasted eight years before a group of convicts assassinated Valdizan. As a result of repeated failures to establish a permanent colonial settlement, many considered the islands to be cursed (Center for Interpretation 1998).

In 1879, Manuel Cobos founded a hacienda in the highlands of San Cristóbal called El Progreso (Center for Interpretation 1998). His colony was successful and still exists today. In 1889, Cobos built a sugar mill on the island after receiving machine parts from Scotland (Center for Interpretation 1998). He also built a rail system between the

highlands and the port. However, Cobos was known to be tyrannical and an oppressive leader and businessman. His colony was successful, yet colonists had to contend with life-long debt as well as severe punishments, including being killed by Cobos or being banished to another island (Center for Interpretation 1998). In 1904, the people of El Progreso rose up against Cobos and killed him; however, his colony continued (Center for Interpretation 1998). By the 1900s, 500 people lived on the Galápagos Islands (Wilen et al. 2000: 3).

In the 1920s, a group from Oslo, Norway moved to Santa Cruz with easy-to-assemble prefabricated houses and hopes of starting a new world (Center for Interpretation 1998). However, due to the harsh climate and lack of fresh water, most of the Norwegians left the same year. In 1942, the U.S. military occupied the Island of Baltra after the attack on Pearl Harbor (Center for Interpretation 1998). During the same year, the military built the first airport in the islands. When World War II ended, the U.S. closed its base and eventually gave the island back to Ecuador in 1949 (Center for Interpretation 1998).

Because of the awareness of the flora and fauna on the islands, there have been many efforts in conservation and research. In 1964, the Charles Darwin Research Foundation opened the Charles Darwin Research Station. In 1959, Ecuador declared the area to be the Galápagos National Park, and established the National Park Service in 1968 (Wilen et al. 2000: 5). The national park area was designated to 95 percent of the islands in 1969 and was later increased to 97 percent (Quiroga 2011a). In 1979 the Galápagos Island were declared a UNESCO World Heritage Site (Wilen et al. 2000: 5). In the 1990s, the Galápagos Marine Reserve was set up to protect 40 miles of oceanic

area around the islands. Finally, in 1998 the government established the Galápagos Special Law, in order to help control the population growth and protect the fragile ecosystem and environment of the islands.

The 1990s were also a time of controversy on the islands. The economic prosperity brought many in-migrants to not only work in the tourism sector but also to work in the fishing industry. With the increase of legal and illegal fishing, the ocean's resources began to deplete. The depletion is most prevalent in the case of the sea cucumber. Bremner and Perez (2002: 306) state, "The sea cucumber fishing crisis in Galápagos is an example of the potential consequences of rapid migration, growing migration, growing economic competition, and weak regulatory mechanisms." The population of registered fishermen increased from 392 in 1993 to 682 in 2000, although Bremner and Perez (2002) place the actual number closer to 1,200. The sea cucumber market was banned in 1992 due to a drastic decrease of the sea cucumber population. The ban was overturned in 1994 and a quota was placed on the market at 500,000 sea cucumbers annually (Bremner and Perez 2002). With the quota in place, the estimate was that six million sea cucumbers were caught during the season (Bremner and Perez 2002). A ban was placed on sea cucumber fishing again in 1995. As a result the fishing community began to stage protests, such as blocking the tarmac at the airport to prevent flights from landing on or leaving the islands and holding researchers and tortoises hostage (Quiroga 2011 b; Bremner and Perez, 2002). As a result of these protests, the ban was again overturned. The season opened, now with a quota of 4½ million sea cucumbers. This quota was met early and the season was prematurely closed (Bremner and Perez, 2002). The closure of the season was met again with more protests. Today the

fishermen have less of an impact on the community due to their decrease in economic activity because of the depleted resources. Currently many fishermen are transitioning from fishing to working in the tourism sector.

It is unclear when tourism began on the islands, but the most widely accepted idea is that local fishermen brought tourists during the late 1950s and1960s (Quiroga 2011 b). Since then, the tourism industry has expanded to almost 200,000 tourists a year (Número 2010). The Galápagos National Park has kept records of the amount of tourists since 1970, when 4,500 tourists visited the islands (Wilen et al. 2000: 33). In 1979, the number of visitors increased to 11,765 (Ingreso 2009). In 2004, the park saw the number of tourists reach 108,934 (Número 2010). In less than a decade, the number of visitors increased by over 50 percent (Ingreso 2009). In 2010, the Galápagos Islands attracted 173,296 tourists. The largest two visiting countries were 61,574 from mainland Ecuador and 46,093 from the United States (Número 2010). In total, tourists from 143 countries visited the Galápagos Islands (Número 2010). In the ever growing and changing tourism industry, the Galápagos Islands have continued to grow in popularity since tourism began there. The industry only saw a noteworthy decrease in the amount of tourists in 2009 from 173,420 to 163,480 when much of the world was in an economic recession (Ingreso 2009). Typically, the tourism industry is unstable as popular destinations change frequently, but the islands have continued to see a steady increase in tourists almost every year.

According to the Galápagos National Park, internationally, the United States brought the most tourists at 27 percent, followed by Britain at 5 percent, and France and Canada both tied at 4 percent (Número 2010). The amount of tourists coming to the

islands has increased fairly steadily since it was recorded by the Galápagos National Park in 1979, from 11,765 in 1979 to 173,296 in 2010 (Ingreso 2009; Número 2010). The largest group of visitors is females between the ages of 60 and 64, followed by males aged 65-99 (Quiroga 2011). These two groups could be a result of the costs associated with getting to the islands and staying on the islands. However, this is the reverse for Ecuadorians. For the Ecuadorians, the largest group of visitors is males between the ages of 0 and 14, followed by females between the ages of 0 and 14. This is primarily due to elementary school students visiting the islands (Quiroga 2011 b; Mena 2011.)

Today the three most heavily inhabited islands – San Cristóbal, Santa Cruz, and Isabela – are divided into sectors; government, tourism, and fishing respectively. San Cristóbal, with a population of 6,212 in 2006 (Quiroga et al. 2009: 42) and 7,475 today (INEC 2012), is the capital of the archipelago and contains most of the government offices. While tourists do visit the island, its economy is focused more on the public sector (Wilen et al. 2000: 38). Santa Cruz (population approximately 15,393 (INEC 2012)) has the most visitors, a sensitive point for many residents of San Cristóbal, and is geared towards the tourism industry, partly because the Charles Darwin Research Foundation, where Lonesome George, the infamous and last remaining member of his species of giant tortoise of the Galápagos Islands resided until his death on June 24, 2012, is in walking distance from the main port of Puerto Ayora on Santa Cruz Island on Santa Cruz. Isabela Island (population 2,256 (INEC 2012) is composed mainly of fishermen and their families.

According to the 2010 Census (INEC 2012) 52 percent of residents on the Galápagos Islands are male and 42.7 percent of the population is married. In terms of

ethnicity, 81 percent of Galapagueños are mestizo, 7.8 percent are Indian, 7.3 percent are white and 4.2 percent are Afro-Ecuadorian (INEC 2012). The Dependency Index, which measures the population that relies on actively working portion of the population or residents aged under 15 or 65 and older, for San Cristóbal and Santa Cruz Islands is .54 and .61 for Isabela (Quiroga et al. 2009: 44). The average salary on the Galápagos Islands is 772.2 USD per month, with an unemployment rate of 3 percent of males and 7.2 percent of females (Mena 2011). Males have an average of 9.40 years of education and a literacy rate of 98.7 percent, whereas females have an average of 9.61 years of education and a literacy rate of 97.5 (Mena 2011).

San Cristóbal

While tourism on San Cristóbal is not as abundant as it is on Santa Cruz, the island does have many tourism amenities. The island is divided into two main towns, the port on the southwestern part of the island called Puerto Baquerizo Moreno and the highlands of El Progreso. Puerto Baquerizo Moreno consists of various hotels, hostels, stores that provide food, clothing, or cater to tourists' needs, restaurants, government offices, travel agencies, schools, and areas for children to play.

Along the coast of Puerto Baquerizo Moreno exists a boardwalk, known in Spanish as El Malecón. Here many of the tourist shops offer anything from souvenirs, to surfing lessons, to boat tickets to other islands. The Malecón is also the site for frequent events, including Cultural Fridays, where locals celebrate their culture through concerts of singers, dancers, and musicians. Along the Malecón are various docks for tourism and fishing boats, where frequently wildlife, such as the land iguanas and sea lions are seen

walking across the street or lounging on benches. A few streets inland, the island transforms from being designed for tourists to an area for residents. Here is where the local life is evident, with housing and stores geared more toward residents.

Many residents spend their weekends going to one of the beaches or walking around the port. Similar to Spain, during the week, much of the island shuts down around 11 A.M. for lunch and opens again around 2 P.M. There is not a typical, average resident—just as there is not a typical average resident of any country. Some residents choose to spend their evenings singing karaoke and going to bars where tourists spend their time; as for many tourists, every night is a weekend night. Other residents spend their nights in their home with their families. The housing on the islands varies from houses made of cement to houses built from wooden planks with tin roofs. On various streets are bodegas, bakeries, or people running grocery stores out of their homes. It is not uncommon for residents to dry their laundry on the roof of their building or to have chickens or stray dogs in their yards.

El Progreso, the highland area of San Cristóbal, is primarily a farming area with a few restaurants, soccer fields, and other various buildings. Here is where the first colony on the island was created and there is a memorial to the founder. Here is also where water is collected and stored for the island. Near El Junco, a lake near the highlands, are three wind turbines that collect energy for the island. The island uses the wind turbines for much of its energy, but it always has a power generator constantly running as well. This leads to weekly power outages around the island.

As with other societies where tourism is their main source of income, the island of San Cristóbal does seem to be more of a patriarchy, where women are responsible for

cleaning, cooking, and watching the children. As with other island communities, young adults tend to either leave the island after high school to attend college or begin having children around the age of 16. The small community on island has problems with domestic violence, sexual abuse, and drug/alcohol abuse (Torres, 2011).

While the island has a problem with population size, this is not immediately obvious to an outsider. Aside from garbage on the side of the streets and vehicles, the island does not feel crowded. Upon further review, however, the population size lowers the amount of jobs available on the island and increases the human impact on the environment.

Chapter 4:

The Galápagos Islands and Tourism

Social

As the islands are not able to physically produce enough goods to sustain the current population, they must rely on the mainland for food, fuel, and other basic amenities. Tourism, therefore, is the best option for creating an economy on the islands.

The tourism industry offers foreigners the opportunity to experience the natural beauty of the islands, the fauna, and the culture of the local community. While they are on the islands, these tourists will also spend money that will go directly into the islands' economy. The system, therefore, appears to be a win-win situation; however, there are many factors that cause the system to falter. In the case of the Galápagos Islands, funds are more likely to be allocated for the development of tourism instead of water and sewage treatment facilities and health. Tourism development researcher Martha Honey explains that, "Mass tourism often brought overdevelopment and uneven development, environmental pollution, and invasion by culturally insensitive and economically disruptive foreigners" (Honey 1999: 9).

"The increase of tourism has contributed to the attitude of female inferiority...Tourists only see the face of the community; a façade of paradise, removed from reality" (Losinski and Waldorf 2007; 2). This is certainly the case in the Galápagos Islands as most tourists simply interact with locals in souvenir shops, on tours, or at nightclub establishments. Tourists usually are not invited into the homes of locals residents and do not get to know residents on a deeper, more personal level. For these

reasons, it is important to not only look at the islands as a source of natural wonder but to also take into account the population that spends their lives on the island.

Tourism Life Cycle

It is important to remember that the tourism industry, in any given area, has a life cycle. Butler (1980) deems this the "Tourism Area Life Cycle," which indicates a pattern for how tourism in an area begins, increases, plateaus, decreases, and leaves. Butler believes tourism in an area can have a higher chance at survival through understanding and planning around the life cycle.

The first stage of the tourism life cycle is the "exploration stage," an area is first discovered, limited amounts of tourists visit the area and it has limited amounts of amenities for these tourists (Butler 1980: 6). Interaction with the local community is often high at this stage (Butler 1980: 6). In terms of the Galápagos Islands, this stage can be found around the 1950s and 1960s.

The second stage, or the "Involvement Stage" involves an increased amount of tourists coming to the area, a defined season for visitors, and the beginning of development for tourism purposes (Butler 1980: 7). In the case of the Galápagos Islands, this is most likely the stage to be found the late 1970s and 1980s.

The third stage, or the "Development Stage" consists of a "well-defined tourist market area…[where] local involvement and control of development will decline rapidly" (Butler 1980: 8). At this stage, tourists begin to outnumber the amount of residents living in the area. In terms of the Galápagos Islands, this stage represents the late 1980s, 1990s, and 2000s.

It could be argued that the Galápagos Islands are currently in the fourth stage, the "Consolidation Stage," where a large part of the area's economy is tourism. New franchises will begin to the move into the area. This is not the case of the Galápagos Islands, probably due to the isolation of the islands. Tourism numbers will still be high, but growing at a slower rate (Butler 1980: 8).

At the next stage, the "Stagnation Stage," the amount of visitors coming to the island will have plateaued. Problems will escalate environmentally, economically, and socially. New tourists will no longer desire to visit the area (Butler 1980: 8). During this stage a "saturation point" will be met. According to Professor Diego Quiroga, this is most likely the current stage for the islands (Quiroga 2011c).

Typically the final stage for an area is the "Decline Stage." Here the area will lose its charm to other tourist destinations and larger companies will leave, leaving the locals to have more participation in the islands (Butler 1980: 9). Occasionally, a tourist destination can reach a point of "Rejuvenation" if there is a change on the island either through a man-made attraction or though exploitation of new environmental areas (Butler 1980: 9).

In a 2004 follow-up, Butler looked at how the life cycle is relevant today. Butler believes as competition for tourist destination increases, the areas are forced to adapt to tourists needs and desires (Butler 2004: 162). This is certainly the case for the Galápagos Islands as they develop new means of tourist activities and increase hotels, hostels, restaurants, and shops to accommodate tourists. However, Butler reaffirms that, "regulation and responsibility, allied with management, and the crucial realization that…

managed change is almost always inevitable" (Butler 2004: 163). This is an idea the Galápagos Islands will need to adapt to for continued success.

As stated before, tourism started on the Galápagos Islands during the mid-20th century; however, there are differing accounts of how it began. One explanation is that fishermen gave tours of the local sea life to various visitors (Quiroga 2009). Another theory that explicitly uses the word "ecotourism" states that tourism began in the 1960s when two Ecuadorian companies and a New York company joined together to offer cruises to tourists interested in conservation (Honey 1999). The first cruise to the islands, the Lina A, arrived in 1969 (Wilen et al. 2000: 33). In the mid-1970s, specific areas on the islands were designated as tourist sites and in 1978 specific itineraries were created for tourism boats (Wilen et al. 2000: 33). The tourists of the 1960s through the 1990s were interested primarily in the unique fauna and the mysterious history of the islands. However, today that is not necessarily the case. There are still tourists interested in seeing the animals for which the islands are known, but today most are more interested in generic nature tourism instead (Quiroga et al. 2011) and others are interested in what Honey (1999:9) calls the "four S's": sun, sea, sand, and sex.

Many local residents have noticed this trend. Some look forward to the economic benefits of the new type of tourists – for example, many fishermen are in the process of converting their boats from fishing boats to tourist boats, due to the depletion of their fishing resources and increasing tourist populations. Many other residents are nervous or disappointed in the behaviors of tourists coming to the islands. As mentioned before, ecotourism and conservation tourism are beginning to compete with many of the tourists coming to the islands primarily interested in vacationing. With these tourists come

nightly excessive drinking and partying, as well as not following national park laws put in place to protect the ecosystem, such as not touching the animals.

Economics and Development

Local residents are also divided on the issue of the sheer number of tourists visiting the area. In the 1970s, approximately 8,800 tourists visited the Galápagos per year (Quiroga 2009). Today, almost 200,000 tourists visit the islands annually. The increasing arrival of visitors has led to the development of Galápagos hotels, airports, restaurants, 24-hour electricity (starting in 1998), internet (starting in 2000), and housing (Quiroga 2011 c). The Galápagos now host two, soon to be three, airports that support six flights a day, versus fewer than six flights a week in the 1970s (Human Presence 2008).

The islands have also seen an influx of Ecuadorian mainlanders or in-migrants looking for employment, especially in the tourism sector. (Nash 2009). The population doubled from 1990 to 2001 (INEC 2012). The current population is believed to consist of 24,000 legal residents, 1,800 temporary residents, and approximately 5,000 “irregular” or unofficial residents based on the definitions by the Galápagos Special Law (Human Presence 2008). These residents are not able to produce enough necessities such as food, shelter, water, and clothing to sustain those who come to live and work in the tourism market. Therefore, these basic necessities must be brought in via cargo ships and airplanes, which also bring invasive species, oil leaks, and trash.

Despite the fact that tourism brings a large sum of economic revenue to the islands, not much of what is spent on the islands remains there. The majority of the money goes back to the cruise companies and travel agencies. Quiroga (2009) states that

in 2007, tourists on the islands spent 419 million USD, but only 62.9 million USD of that remained in the local economy. Today, approximately 8 percent of the money spent on the islands stays there and 60 percent of the money that stays on the island comes from mainland Ecuadorian tourists (Quiroga 2011 c). Some sources say that 40 percent of island residents work directly or indirectly for the tourism industry, but other sources estimate it is closer to 80 percent (Vanasselt 2000; Heslinga 2003).

Not only are the residents on the island missing out on economic gains, but also the park itself is not benefiting from the revenue. According to Vanasselt (2000), the Galápagos National Park generates 3 million USD per year through tourism, but only 20 percent of that income goes into park conservation. The national park brings money into the island economy through the required national park entrance fee. Visitors age three and above pay an allotted amount based on nationality, profession, and age.

The current fee, according to the Galápagos National Park, for foreign tourists who are older than 12, is 100 USD, while for those 12 and under, the fee is 50 USD (Lozano 2011). Foreign tourists over the age of 12 and nationals of a country belonging to the Andean Community of Nations pay the National Park 50 USD, while for those 12 and under the fee is 25 USD (Lozano 2011). For Ecuadorians over the age of 12 the fee is six USD; for those 12 and under the fee is three USD (Lozano 2011). For non-Ecuadorian students, enrolled at a national education institution the fee is 25 USD (Lozano 2011).

According to the Galápagos National Park, this fee, in addition to the fee for permits and licenses, is used towards conservation of biodiversity of flora and fauna, terrestrial and marine, and benefits the local community by improving basic services,

education projects, sports, health, environmental sanitation, environmental services, and services directly related to tourists (Lozano 2011).

From 2010 to 2011, 21,728,507 USD was collected through the national park (Lozano 2011). According to the National Park, forty percent of this tax goes towards the national park, 25 percent towards municipalities, 20 percent towards the governing council, 5 percent towards the marine reserve, 5 percent towards the ministry of agriculture's program AGROCALIDAD – SICGAL, which monitors tourists coming to the islands to prevent invasive species from entering, and 5 percent goes to the Ecuadorian Navy (Lozano 2011).

A study by Taylor et al. (2003) determined through census data and interviews that residents on the islands do not comprehend how much money is actually brought there through tourism. Thus, many unemployed Ecuadorians come to the islands in search of work without realizing how little money actually goes into the islands' economies and the lack of a job market there.

Aside from mainland Ecuadorians coming to the islands with a false sense of security, tourists wanting to visit islands are given a false sense of reality of the islands. Quiroga (2009) coined the phrase "Galápagos Paradox," which refers to the tourism presence and marketing on and off the islands. He explains that this phenomenon markets the islands as uninhabited and wild. However, this marketing approach attracts more tourists and in-migrants and, over time, the amount of uninhabited area decreases (Quiroga 2009). Another important factor of this paradox is that there are also permanent residents who consider the Galápagos Islands home. Their health and economic concerns are often ignored for the purpose of promoting a pristine area. This mythologized, pure,

uninhabited, area is frequently the image used on brochures about the Galápagos Islands. An Internet search for "Galápagos Tours" will take one to various websites such as www.Galapagosislands.com, which boasts:

> On the Islands, a multitude of animals, by most people only known from the Discovery Channel, are romping about: the main reason for tourists and nature lovers to pay the Galápagos Islands a visit…The Galápagos Islands won't leave you untouched. Travel with us and have the journey of your lifetime amidst playful seals, elegant albatrosses, fiery red Sally Light-foot Crabs, and sneaky Friate (sic) birds Make your dream come true and contact us today! (Galapagos Islands.com 2012)

Flyers and tourism booklets found from tourism companies on the islands state "La Experiencia Única … sólo se la vive una vez" or "The unique experience … only live once" ("Galápagos Islas Encantadas: Surf, Dive, Biking, Kayak, Snorking (sic) Tours a Las Islas Galápagos," n.d.) and:

> The Galápagos Islands constitute one of the most complexes (sic), diverse and unique oceanic archipelagos in the World that still maintains its ecosystems and biodiversity without great alterations. Its location and geographical isolation, as well as its biological wealth and the evolutionary process reflected in its fauna and unique flora, have made them worthy of world recognition (Guia: 8, n.d.).

The Galápagos National Park manages much of the tourism on the island. Areas are designated as visiting places with well-marked paths, including routes that tourism ships and fishing ships must follow (Quiroga 2011 b). Most of the national park area

requires tourists to travel with a national park guide and to obtain permission for visiting and camping out at areas without a guide. The guides are an important part of the national park as they look after parks and ensure that visitors follow rules. Though it used to be more difficult to become a national park guide, the qualifications have decreased recently and today, qualifications include having a high school education and being bilingual (Quiroga 2011 c). The guides are trained in tourism, conservation, biology, and hospitality and are the main interaction tourists will have with local residents (Quiroga 2011 c).

Chapter 5:

Methodology

From September 2011 to December 2011, I had the opportunity to travel to the Galápagos Islands and live with a local family on the island of San Cristóbal. While on the islands, I also enrolled in courses at the Universidad San Francisco de Quito and the Galápagos Academic Institute for the Arts and Sciences. The island is relatively small and the presence of students in this program is known throughout the island. In addition, many islanders expressed a distrust of outsiders, which could have impacted the conversations and interviews I conducted. However, through my proficiency in the Spanish language, I was able to communicate and converse easily with the local population and thus was able to earn the trust of many of the local residents. At the same time, I did occasionally find difficulty interviewing a few residents who expressed that they were uncomfortable being interviewed or answering a survey for someone of my gender and education level.

As a non-resident of the Galápagos Islands and citizen of the United States, there was unavoidable bias in my opinions and survey questions. For example: residents living near me burned their garbage as a solution to be rid of it and did not understand why anyone would be opposed to this method. As someone with a bachelor's degree in Environmental Studies, it was difficult to not be biased against this practice or other practices that negatively impacted the environment. Through my environmental interests, I also have a bias in what kinds of tourism practices should be encouraged or banned

from the islands and in what practices residents should avoid doing. However during interviews, I withheld from expressing my opinions with the interviewees.

I am interested in the opinions and the perspective of life from the Galapagueños' prospective, particularly on San Cristóbal. Much of the research previously done has been on the flora and fauna; the research done on the human inhabitants of the island has focused on a few key issues such as the fisherman protests or the economy. My intent was to branch out of the typical research done and look at other issues that pertain directly to all residents of San Cristóbal Island.

Utilizing both qualitative and quantitative techniques, my research consisted of standardized, open-ended interviews, surveys, and observation. My sample was done though simple random sampling without replacement and snowball sampling. My main sampling method was simple random sampling without replacement. I walked around the islands in various shopping areas, tourist areas, and other high trafficked areas around the port town of Puerto Baquerizo Moreno and the highlands of El Progreso and tried to converse with any resident who was willing to talk with me. Residents were chosen randomly, with the only restrictions being that they were age 18 or older and that they were residents of the island. My approach was to walk up to residents and briefly introduce myself as a graduate student from the University of Kansas. I then explained that for my thesis I was interested in their opinions of life on the islands. I then asked them if they would be willing to be interviewed by me or if they would be willing to take a survey. Residents gained no compensation for completing an interview or survey from me. While snowball sampling is controversial, I decided to use it to reach a larger part of the community that I would not be able normally talk to, based on the distrust of

outsiders and on not having access to every resident. Through combining these two methods, I believe this was the most efficient way to interview the largest number of residents during my time on the islands and that my sampling is a representative representation of the views of residents of San Cristóbal.

After completion of the Ecuadorian Comite de Bioetica de Ecuador (Committee on Bioethics of Ecuador), the ethics board for the Universidad San Francisco de Quito and the country of Ecuador, I started the data collection. I interviewed and surveyed 97 residents. After obtaining verbal consent from participants, I asked for basic identifying information; name, age, gender, and profession. I informed residents that their names would not be used in the thesis. I was concerned there would be some hesitation if residents had to write down their name and submit honest, unfiltered responses. However, I wanted to include their name to ensure I would not interview the same resident twice. After speaking with residents about including names on surveys, and after 59 surveys/interviews (13 of which did not include their name), I decided to remove the name portion from the survey. Although the surveys with the names listed seem to be honest and unfiltered, I had some hesitation or rejection from residents who did not want their name included in the survey. This is understandable due to the size of the community living on the islands and the social structure. Residents were concerned that even though I informed them that their names would not be published, their names would be still attached to the document and others would find out their responses. After I removed the name portion of the survey I looked at the responses to determine if having a name included impacted the surveys. However, the information I received from surveys

with names attached was consistent with the information I received from surveys without names attached.

I developed my survey and interview questions with the guidance of my advisor, Dr. William Woods, and with the help from Professor Fernando Ortega. For consistency, the same questions were used for both the survey and the interviews. I chose to make the questions fairly simple and straightforward, so regardless of their education level, the respondent would understand what I was asking. Questions one through nine were left open ended to receive an honest response from residents without a bias in how the question was asked. The final question, number ten, was a rating system for issues on the island that I learned through previous research. I included this question to see if these issues were still important to residents and which issues residents considered more important or less important. Each question I asked covered a specific area of life on the islands in which I was interested. As I am interested in the opinions and beliefs of residents of the islands, I included questions that accurately covered their needs, wants, problems, and thoughts on where the islands were headed. Overall, I believe that the responses from residents give an idea of what life is like on the island and what is important to residents. It will also show what changes should be made to the islands to ensure resident satisfaction and survival of the islands themselves, as residents are the true guardians of the islands.

Chapter 6:

Results and Discussion

A disclaimer, in the Results and Discussion section of this thesis, responses were translated from Spanish into English. The English response is included here. Ideas expressed are solely the opinions of residents, unless otherwise stated. To protect the identity of the residents surveyed and interviewed, I will simply cite quoted residents as "Respondent 1," "Respondent 2," etc. Results for each section may not equal 100 percent due to rounding.

Whom did I interview?

The surveys and interviews contained a portion for name, gender, age, and profession. Upon completion of the survey collection and interviews I used this data to compare trends between males and females on the island, between different age groups, and to look at how responses differentiated between professions. Throughout the results, "Unknown" is used to classify a resident that responded to a question but did not include either their age, gender, or profession on the survey.

I decided, for the purpose of this thesis, to not include a question regarding the fishermen controversy on the islands. While this is clearly an important issue on the islands, I decided to not explicitly ask about the issue due to time constraints and the abundant existing research. The fishermen's protests have been looked extensively at by Professor Quiroga, and covered by Carol Ann Bassett (2009), among other researchers. I only had three months on the islands and thus I wanted to focus more on issues that have not been extensively covered elsewhere. I gave respondents a chance to list the fishermen controversy in questions five or six on my survey.

Based on the professions of my respondents, it is clear there are perspectives on the islands that my research will not cover; Fishermen, for example. There are also other professions that are abundantly represented such as teachers, and a few, such as agriculturalist, where only one or two participants responded.

Though the representation of the views of island residents in this thesis is reasonably decent, it would be unfair to say it is an accurate representation of all inhabitants of the Galápagos Islands, as people of the other islands have different focuses, goals, and issues. My sample includes students, teachers, housewives, tourism guides, national park guides, store owners explicitly for tourism needs, store owners for local needs, etc. For a complete list, see the Professions section. As previously mentioned, my interview subjects are missing one key component of residents in San Cristóbal: the fishermen. This omission is due to a lack of response from local fishermen residents in my surveys and interviews.

Gender

I chose to include gender on the survey to see if gender was a factor that impacted results.

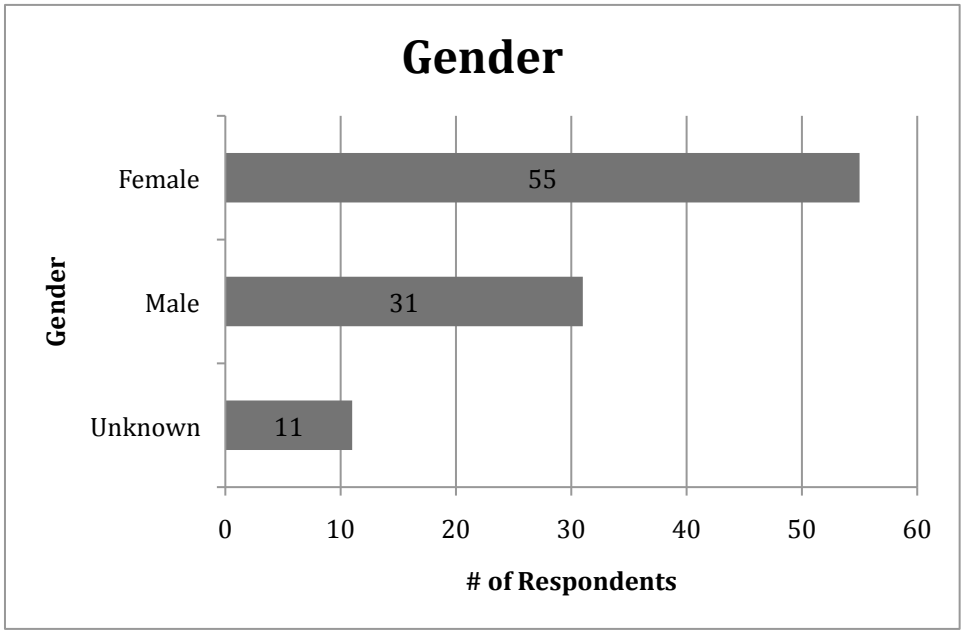

Figure 4. Respondents by Gender.

Gender:	# of Respondents	Percentage of Respondents
Female	55	57%
Male	31	32%
Unknown	11	11%

Table 1. Distribution of Respondents by Gender.

From my surveys and interviews I collected data from 55 females, 31 males and 11 residents who did not include their gender on their survey. Of the 7,475 residents on San Cristóbal, 3,488 residents, or 47 percent, are female. With this discrepancy, 57

percent of survey responses being from females and only 47 percent of females living on the island, there could be a feminine bias in the results.

Age

I included age on the surveys and during the interviews in order to help understand what generation a response was coming from. I wanted to specifically compare younger and older generations, to see if there was a difference in values. The difference of responses based on age could also be a clue into what type of future will happen on the islands, when the current younger generations become older and more influential on the islands.

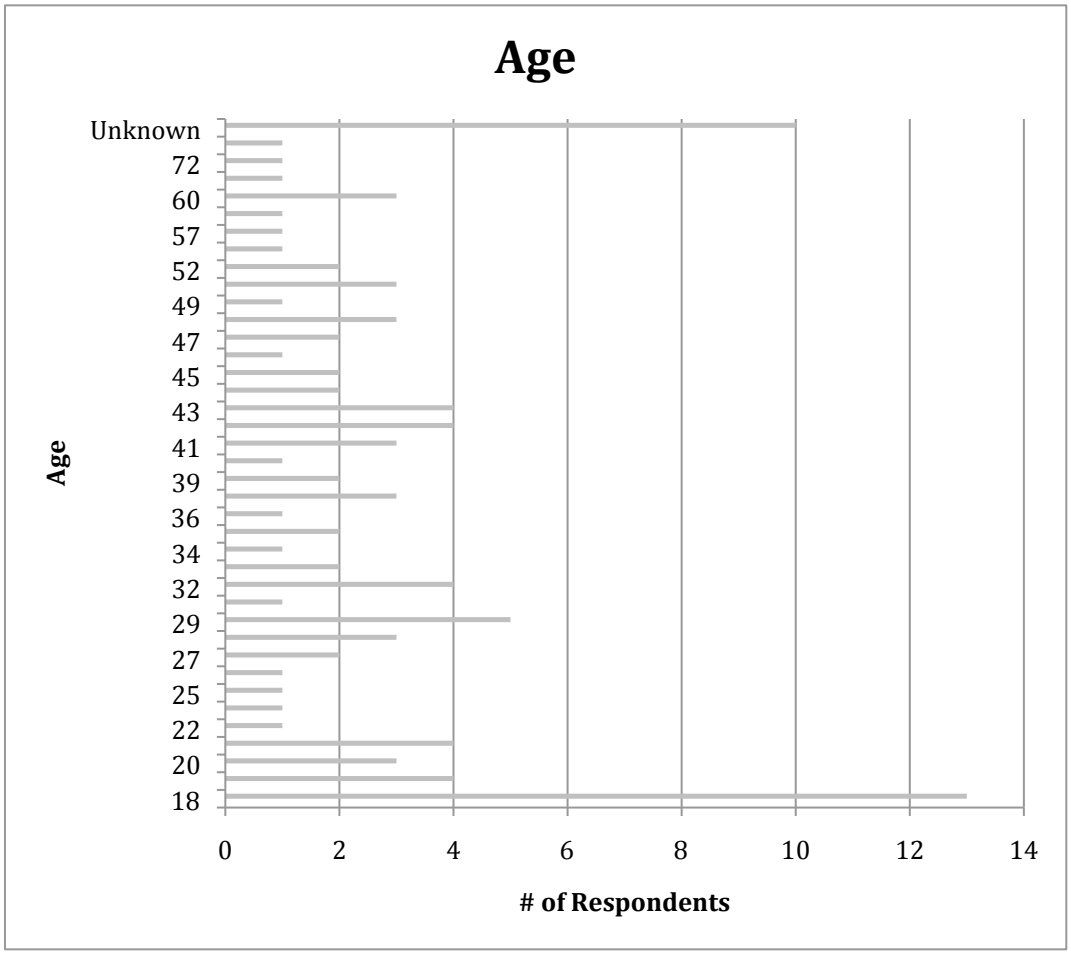

Figure 5. Respondents by Age

Age:	# of Respondents	Percentage of Respondents
18	13	13%
19	4	4%
20	3	3%
21	4	4%
22	1	1%
23	1	1%
24	0	0%
25	1	1%
26	1	1%
27	2	2%
28	3	3%
29	5	5%
30	1	1%
32	4	4%
33	2	2%
34	1	1%
35	2	2%
36	1	1%
38	3	3%
39	2	2%
40	1	1%
41	3	3%
43	4	4%
44	2	2%
45	2	2%
46	1	1%
47	2	2%
48	3	3%
49	1	1%
50	3	3%
52	2	2%
54	1	1%
57	1	1%
59	1	1%
60	3	3%
62	1	1%
72	1	1%
79	1	1%
Unknown	10	10%

Table 2. Respondents by Age.

Age range

For categorization purposes, I combined the ages into an "Age Range." This helped me to identify and compare different generations.

Figure 6. Respondents by Age Range.

Age Ranges:	# of Respondents	Percentage of Respondents
18-24	26	27%
25-34	20	21%
35-44	18	19%
45-54	15	15%
55-64	6	6%
65 and older	1	1%
Unknown	10	10%

Table 3. Respondents by Age Range.

Profession

I included an option for residents to list their profession to see which sectors were represented in the data and to see how this impacted their responses. The category of residents is based on the specific answer given for occupation during the interview or on the survey. The professions that could be translated into English were translated into English, however, their profession was translated exactly as how residents identified them. However, there were two professions that were listed on surveys that were not translatable: “Povado” and “Lada” This could be a result of either a misspelling on the survey or a slang word for their profession.

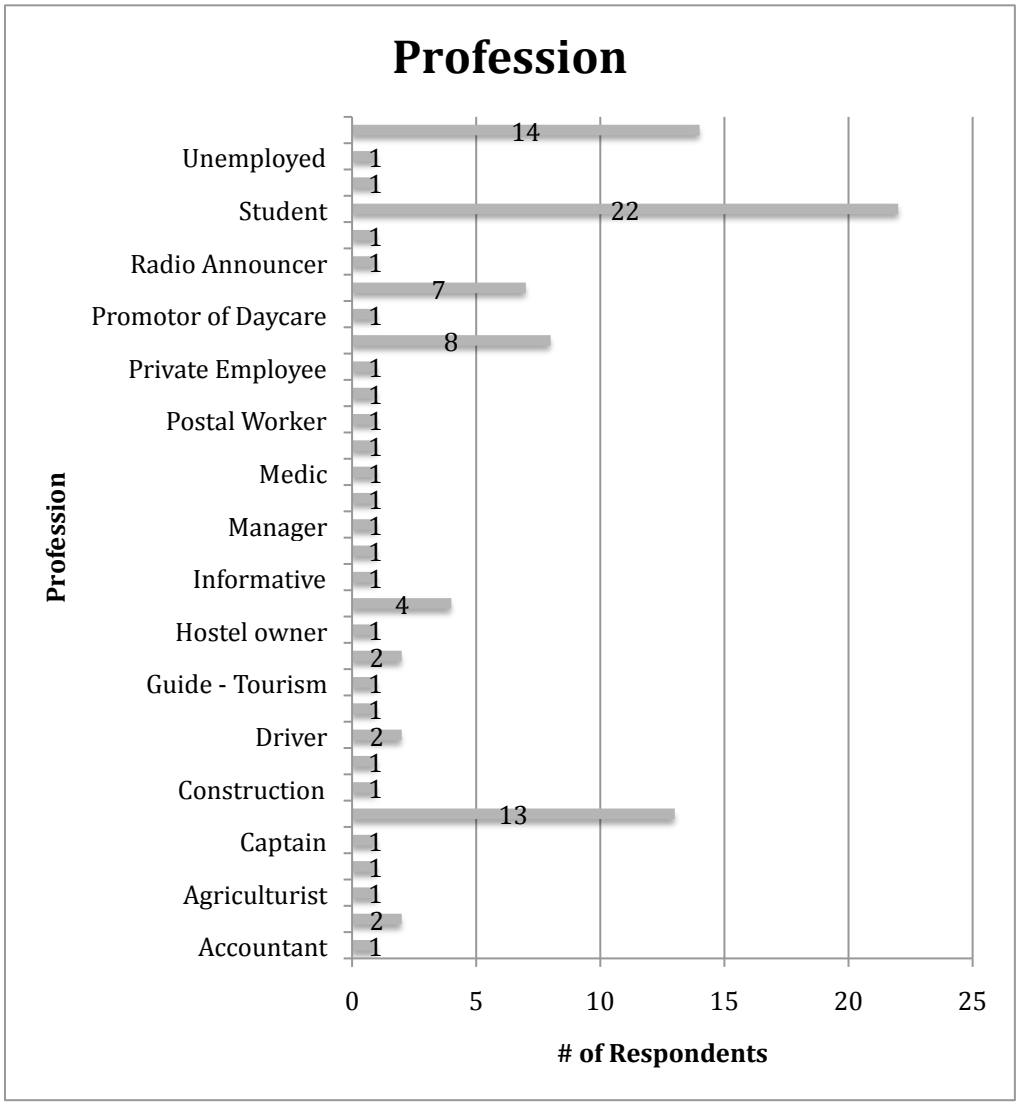

Figure 7. Respondents by Profession.

Profession:	# of Respondents	Percentage of respondents.
Accountant	1	1%
Admin Assistant	2	2%
Agriculturist	1	1%
Business	1	1%
Captain	1	1%
Commercial	13	13%
Construction	1	1%
Dentist	1	1%
Driver	2	2%
Front Desk Attendant	1	1%
Guide- National Park	2	2%
Guide - Tourism	1	1%
Hostel owner	1	1%
Housewife	4	4%
Informative	1	1%
Lada	1	1%
Manager	1	1%
Mason	1	1%
Medic	1	1%
Messenger	1	1%
Postal Worker	1	1%
Povado	1	1%
Private Employee	1	1%
Professor	8	8%
Daycare	1	1%
Public Employee	7	7%
Radio Announcer	1	1%
Secretary	1	1%
Student	22	23%
Travel Agent	1	1%
Unemployed	1	1%
Unknown	14	14%

Table 4. Respondents' Professions.

Length of time on island

I selected this question because I wanted to be able to determine which responses were from native residents, which were from non-native but long-term residents, and which were from non-native residents who recently moved to the islands. Here I define "recently moved to the islands" as living on the islands for less than five years. As there are no people indigenous to the Galápagos Islands, "Native" is defined as people who were born on the island. I believe a comparison between opinions based on length of time living on the islands is not only interesting, but perhaps a key component, and a glimpse into what the future of the islands will be like as they become increasingly inhabited by non-native residents.

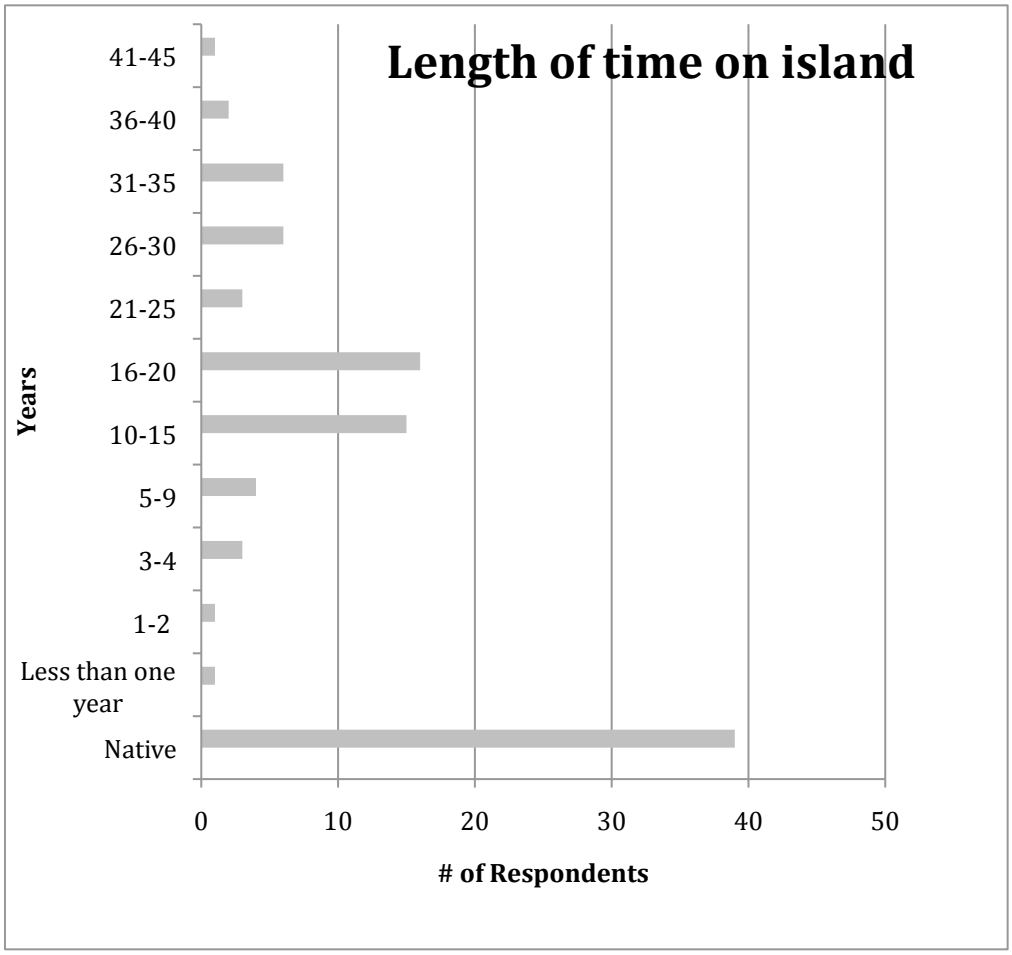

Figure 8. Respondents Based on Length of Time Spent on the Island.

Length of time spent on the island:	# of respondents	Percentage of respondents
Native	39	40%
Less than one year	1	1%
1-2 years	1	1%
3-4	3	3%
5-9	4	4%
10-15	15	15%
16-20	16	16%
21-25	3	3%
26-30	6	6%
31-35	6	6%
36-40	2	2%
41-45	1	1%

Table 5. Length of Time Spent on the Island.

Almost half – 40 percent – of my respondents were native residents. I included this question to see how the responses varied between long-term residents or short-term residents and if there was a correlation. The range of residents' time on the island is enough to decently represent age ranges on San Cristóbal.

Reasons for Coming

The survey and interview questions included a question asking how long residents had lived on the island and why they came to the islands, if they were not born on the islands. It is believed that most residents come to the island for work and I included this question to see if there was validity in that statement. The question was left open ended and then categorized into "Family," "Work," or "Other" reasons based on responses.

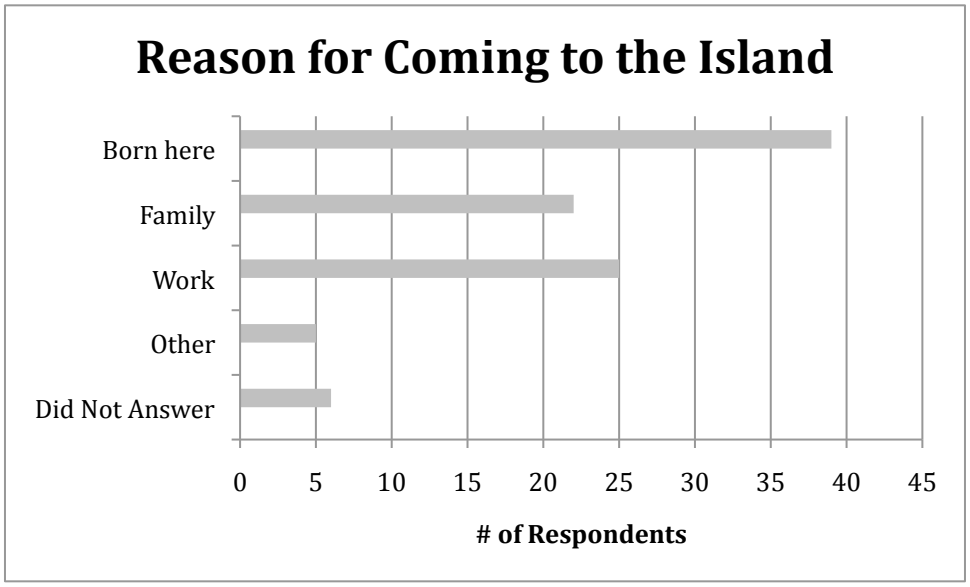

Figure 9. Distribution of Respondents based on Reasons for Coming to the Island.

Reason for Coming:	# of Respondents	Percentage of Respondents
Born Here	39	40%
Family	22	23%
Work	25	26%
Other	5	5%
Did Not Answer	6	6%

Table 6. Reasons for Coming to the Island.

		Reason for Coming to the Island.			
	Born here	Did not Answer	Work	Family	Other
Age					
18-24	17	1	0	8	0
25-34	7	1	6	5	1
35-44	4	1	6	5	2
45-54	5	2	5	2	1
55-64	3	0	2	0	1
65 and older	2	0	0	0	0
Unknown	1	1	6	2	0
Length of time on island					
Native	39	0	0	0	0
1>	0	0	1	0	0
1 to 2	0	0	0	0	1
3 to 4	0	0	2	0	1
5 to 9	0	0	2	2	0
10 to 15	0	2	7	6	0
16 to 20	0	3	6	7	0
21 to 25	0	0	2	0	1
26 to 30	0	1	1	4	0
31 to 35	0	0	3	1	2
36 to 40	0	0	1	1	0
41 to 45	0	0	0	1	0
Gender					
Female	24	2	11	14	4
Male	13	3	8	6	1
Unknown	2	1	6	2	0

Table 7. Response of Coming to the Island, based on age, Length of Time Spent on the Island, and Gender.

I wanted to know what brought residents to the islands, particularly if they came to the islands mainly for work or if they came for a different reason. “Family” means that the resident came for their parents, a significant other (that they are currently with or have since separated), or children. “Other” includes two residents who came to the islands for vacation and decided to not leave the islands, “It was [my] birthday and my sister gave

me a ticket and I stayed" (Respondent 1). One who listed that they came to the islands for the beauty, another that listed the tranquility and lack of industrial contamination as their reason for coming, whereas one listed simply "circumstances of life" (Respondent 2).

Work was the biggest reason that non-natives came to the islands. However, it was not significantly more important than residents who came to the islands for family. It should be noted that while 22 respondents came for family, there is a possibility that their family came for work. Only slightly more females came to the island for their family than for work, 14 as compared to 11. For the male population the reverse true: eight males listed that they came to the islands for work and whereas only six males listed that they came to the islands for family reasons.

More non-native residents came to the islands for work, at 44 percent, than for family, at 39 percent, or other, at 7 percent, and 10 percent not responding. Somewhat surprisingly, no 18-24 year olds listed that they came to the islands for work. Eight listed that they came to the islands for family members. As many of the tour guides and people who worked in the tourism industry generally were younger and working for the industry is glamorized in general, it is surprising that more younger in-migrants did not come to work for the tourism industry. Of the 89 percent of 18-24 year olds who responded, 18-24 year olds are the largest group that came for family. This is understandable as many 18-24 year olds still live with their family. The trend of in-migrants coming to the islands for family reasons decreases as age increases. However, the trend of residents coming to the islands for work is fairly stable.

Health Care

A question on health care was included in the surveys and interviews to see if residents were satisfied with the quality of health care on the island. The question was left open ended for residents and then answers were categorized as Yes if residents only listed yes, Yes with their answer involving the hospital, Yes with their answer involving something else, and no.

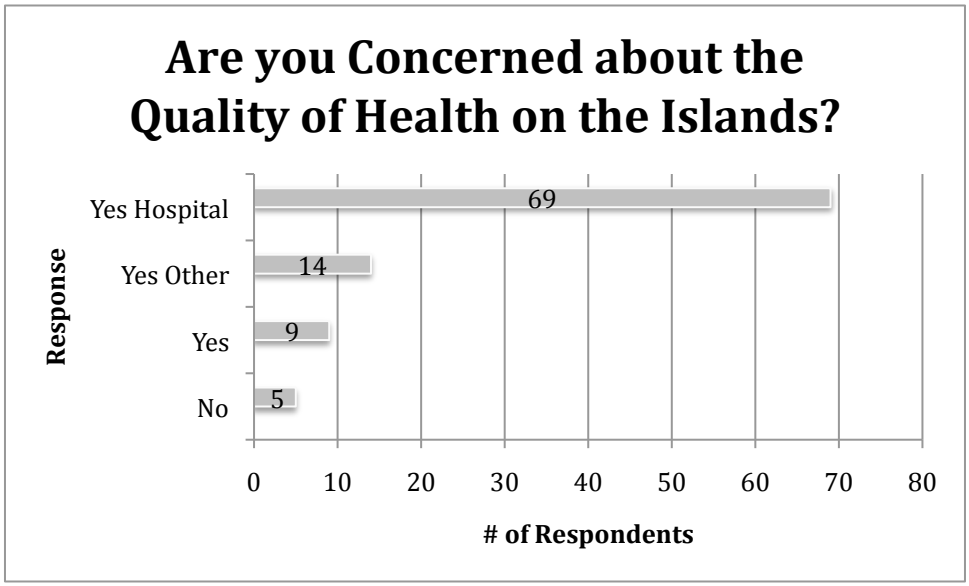

Figure 10. Respondents' Views of Health Care.

Response	# of Respondents	Percentage of Respondents
Yes	9	9%
Yes Hospital	69	71%
Yes Other	14	14%
No	5	5%

Table 8. Responses for Concerns of the Quality of Health Care.

Are you Concerned about the Quality of Health on the Islands?

	Yes	Yes Hospital	Yes Other	No
Age				
18-24	2	19	4	1
25-34	2	15	2	1
35-44	1	14	3	0
45-54	3	9	2	1
55-64	1	3	1	1
65 and older	0	1	0	1
Unknown	0	8	2	0
Length on island				
Native	6	25	6	2
1>	0	0	1	0
1 to 2	0	1	0	0
3 to 4	0	1	2	0
5 to 9	0	3	0	1
10 to 15	1	10	2	2
16 to 20	2	11	3	0
21 to 25	0	3	0	0
26 to 30	0	6	0	0
31 to 35	0	6	0	0
36 to 40	0	2	0	0
41 to 45	0	1	0	0
Gender				
Female	4	39	9	3
Male	4	21	4	2
Unknown	1	9	1	0

Table 9. Responses for Concerns of Health Care Based on Age, Length of Time Spent on the Island, and Gender.

All residents interviewed or who filled out surveys answered the question pertaining to the quality of health on the islands. Private and public employees, on the islands, have social security, which provides access to the health system (Quiroga et al.

2009: 44). The majority of residents (91) are concerned about the quality of health on the islands. This is not unusual as individuals in areas with adequate health care will still be concerned about their personal health. What is unique is that 71 percent of residents interviewed or surveyed explicitly listed their concerns are in relation to the hospital care on the islands.

Of the 97 respondents, 69 explicitly listed the hospital as their concern in the quality of health on the islands. These concerns included lack of specialists,

> "I'm really worried because when you get sick with something seriously, here there are no specialists and the only solution is to travel to the mainland, because if we stay here we run the risk of dying" (Respondent 3).
>
> "When you ask for medicine for the headache, you get it for the stomach" (Respondent 4).

Residents also believe there is a lack of necessary equipment in the hospital, and have a fear acquired from previous trips to the hospital either personally, or though acquaintances' experiences.

The 14 residents who marked "Yes" and gave reasons other than the hospital included in their reasons that it was important to be aware of their health, that there is a poor quality of water and food on the island, or that good health quality on the islands will bring more tourists, and thus more jobs and progress. Others listed environmental factors such as pollution or that the ecosystem in which they lived was very fragile. Yet another listed that their concern was due to the limited size of the island and that disease can spread rapidly in such a small place. Nine residents marked that yes, they were

concerned about the quality of health but did not give an explanation of why they were concerned.

Of the five who listed they were not concerned with the quality of health on the islands, one did not list why he/she was not concerned. One listed that they believed they preserved health a little more on the islands; another agreed saying good health is regular on the islands; one said their environment was healthy; and one stated that there are good professionals on the island but the problem is simple a matter of space to treat patients.

Currently there are limited health care options for residents of San Cristóbal. The primary health care option for residents is the local hospital, Oskar Jandl. It is the property of a local church and scheduled to be closed in the near future, when the new hospital opens. Residents are concerned with the current hospital because it lacks basic necessities and health care standards. In addition, the physicians that work in the hospital are typically from mainland Ecuador and are completing their residency. Once their residency is completed, they will leave the islands. Thus, many residents do not have a long-term trust with the physicians at the hospital.

While the hospital does contain some specialists, the hospital does not contain specific equipment that the specialist needs to treat patients. In other cases the hospital is equipped with a piece of medical equipment, but not a specialist to use the equipment. For example, one of the doctors took me on a tour of the hospital and pointed out an Electrocardiogram machine that was not used because a cardiologist was not on staff. Residents also have the option of paying to visit a clinic in the naval base; foreigners with urgent cases can also use this clinic. Even though there are a few local doctors, for

example, orthodontists and an obstetrician, much of the local population chooses to go to the continent for treatment.

> From experience, when I was 8 years old I almost died from a simple ear infection, although I am still alive, I left with stomach damage for life. I'm still [suffering from the complications of] this and I, also like the Galapagueños, have to travel to the continent to find out if we are good or not (Respondent10).

According to my surveys, most residents with serious health conditions, basic health concerns, or pregnancies resort to returning to the mainland to be treated, which is expensive and can be a deadly choice due to the length of travel.

A new hospital is being built in Puerto Baquerizo Moreno that is scheduled to have Cuban doctors with more specialties, more equipment, a helicopter landing pad, and more space. The new hospital was scheduled to be open in February 2012; however, as of July 2012, it has yet to open. While this new hospital will be a large improvement to the current system, local doctors and residents have some concerns. The new hospital is being built near the coast and, in the event of a natural disaster, such as a tsunami, most residents retreat to the high lands. Thus many residents question the location and usefulness of the hospital. In addition to the location, the doctors that will be staffing the hospital will be from Cuba and there will still be a problem with the lack of trust that the current hospital is experiencing. However, residents are optimistic that once the new hospital is open it will be an improvement from the Oskar Jandl hospital.

Water

This question was added to the survey after the initial round of interviews and surveys was conducted. The question was included due to an overwhelming response from residents about the quality of water on the islands. I included the question because I wanted to learn more about how residents use water on the islands and what exactly their concerns were. This question was also pertinent due to the development and improvements to the existing water infrastructure that occurred while I was there.

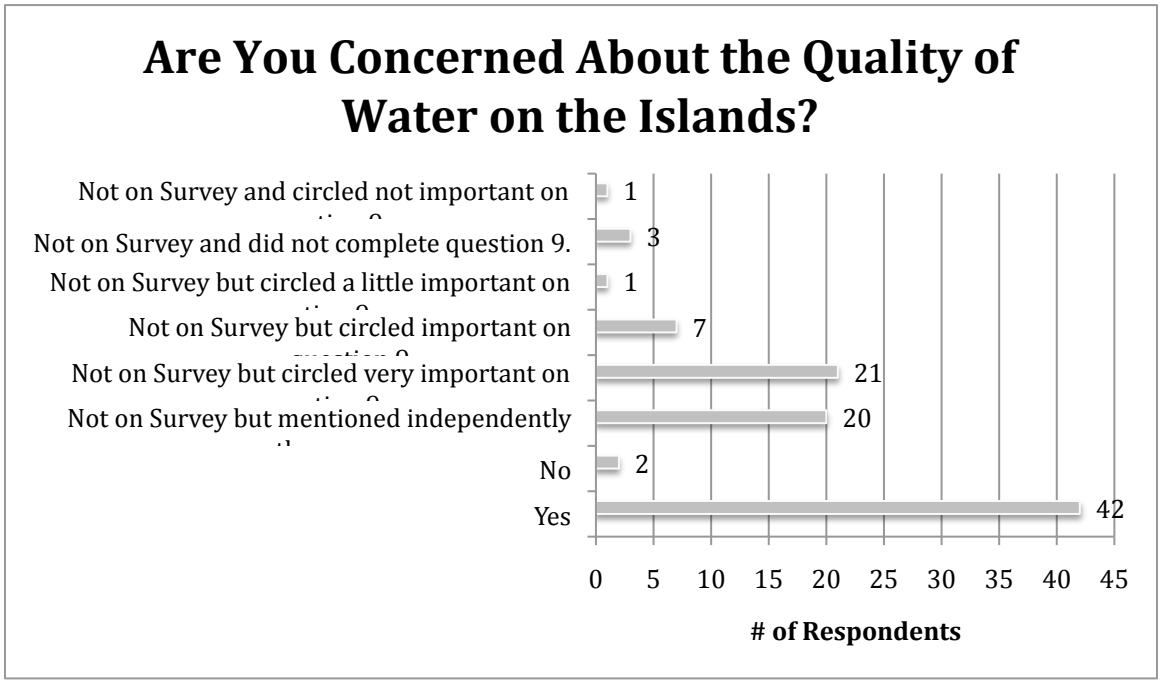

Figure 11. Responses for Concerns about the Quality of Water.

Response	# of respondents	Percentage of respondents
Yes	42	43%
No	2	2%
Not on Survey but mentioned independently on the survey.	20	21%
Not on Survey but circled very important on question 9	21	22%
Not on Survey but circled important on question 9	7	7%
Not on Survey but circled a little important on question 9	1	1%
Not on Survey and did not complete question 9.	3	3%
Not on Survey and circled not important on question 9	1	1%

Table 10. Responses for Water.

In the surveys that did not explicitly have a separate question about water, 58 people listed water as a concern in a section on the survey; 35 listed the quality of water to be either a very important (25), important (7), or a little important (2) issue for them in the final question on the survey, where they were asked to rank issues on the islands. A total of 16 people listed it as an important issue (15 very important, 1 a little important) and included the quality of water as a concern in another section on the survey. Three people listed water as a concern in another section on the survey, but did not answer the ranking question. Three people did not mention water on the survey and did not complete the ranking section and one person did not list water on the survey and answered that water quality was “not important”. Thus, due to the number of respondents that listed their concern of water on the survey, I decided to include a question specifically about water in order to determine the explicit concerns about the quality of water on the islands.

I found that 95 out of 97 islanders responded that they were concerned about the quality of water on the islands. These concerns stem from concerns about the quality of water, illnesses due to consuming or bathing with tap water, and prices of purchasing water bottles. “The water is not potable and thus there exists a grand quality of bugs and we all have been sick, all the members of our family” (Respondent 7).

Of the two who said they were not concerned about the quality of water on the islands, one listed that they were not worried because of the new potable water service being installed and that they did not know of anyone who was sick from the water and the other believed that no one had been sick due to the water.

Water consumed on San Cristóbal Island is fresh water, whereas water consumed on other islands is brackish. The main source of potable water on all of the islands is through a bottle system. However, as previous research (Walsh et al. 2010) has shown, the porous, low quality, plastic bottles are cleaned with contaminated water and, thus, they themselves are often contaminated and contaminate the water they carry. The other source of water on the island is local tap water. The local water treatment plant on San Cristóbal is located near the highlands and renovations were completed in the fall of 2011. However, the new system of treatment simply filters the water three times, but does not actually treat the water. While it is an improvement in the water system, the water produced is not tested for parasites and thus testing would need to be conducted before the water could be called potable.

In 2008 a study was done on water quality in Santa Cruz, San Cristóbal, and Isabela islands (Lopez 2010:103-107). Monthly water quality monitoring began on the islands in 2005 on Santa Cruz and subsequently in 2007 for San Cristóbal and Isabela.

The water consumed on the islands is currently monitored by the Galápagos National Park. The study focused on nine sites: San Francisco Crevice (Santa Cruz), Ninfas Lagoon (Santa Cruz), Municipal Plant (San Cristóbal), House in Progreso (San Cristóbal), House in Port (San Cristóbal), Manzanillo (Isabela), House (Isabela), and the Municipal dock (Isabela). The focus was on nine parameters: fecal coliform (nmp/100ml), hydrogen potential (pH), dissolved oxygen (mg/l), salinity (mg/l), turbidity (NTU), temperature, nitrite (mg/l), nitrate (mg/l), and total phosphorous (mg/l). Acceptable levels were established by the national environmental legislation of TULAS (Texto Unificado de la Legislación Ambiental Secundaria). The study found that eight out of the nine parameters were met, with the exception of fecal coliform. The requirement set by TULAS permitted 600 colonies per 100 ml for drinking water; the World Health Organization recommends zero colonies per 100 ml. All three islands studied had at least one site that contained fecal coliform levels at higher than the TULAS standard, particularly during the month of April. This could in part be a result of the wet season the islands experience during this time. The randomly selected house in Puerto Baquerizo had 433 colonies per 100 ml, which increased by 283 colonies since the initial monitoring in 2007. The municipal plant on San Cristóbal found zero colonies per 100 ml; however, the Colegio San Francisco Cervice, which provides 70% of water by the municipality to their local population, found 1,236 colonies per 100 ml. López and Rueda recommended that two sites, Crevice in Santa Cruz and Manzanillo in Isabela, be closed and no longer used for human consumption. The authors also concluded that there is an inadequate management of water run-off in Ninfas Lagoon. The authors did not make any recommendations for San Cristóbal but they stated that parameters should

include biological parameters such as phytoplankton, zooplankton, chlorophyll, and organic carbon. When I spoke with physicians on the San Cristóbal, they expressed that patients come to the local hospital system with gastrointestinal complaints that they believe are linked to parasites and to the tap water consumed.

Tourism

I decided to ask a question about residents' opinion on tourism because tourism is one of the most important issues on the island, as it is the main economic activity and is the main income for many Galapagueños. I was curious to see what residents' opinions of tourism and tourists were. Many people on the island use tourism and ecotourism interchangeably and do not differentiate between the two. Thus, I included both words on my survey.

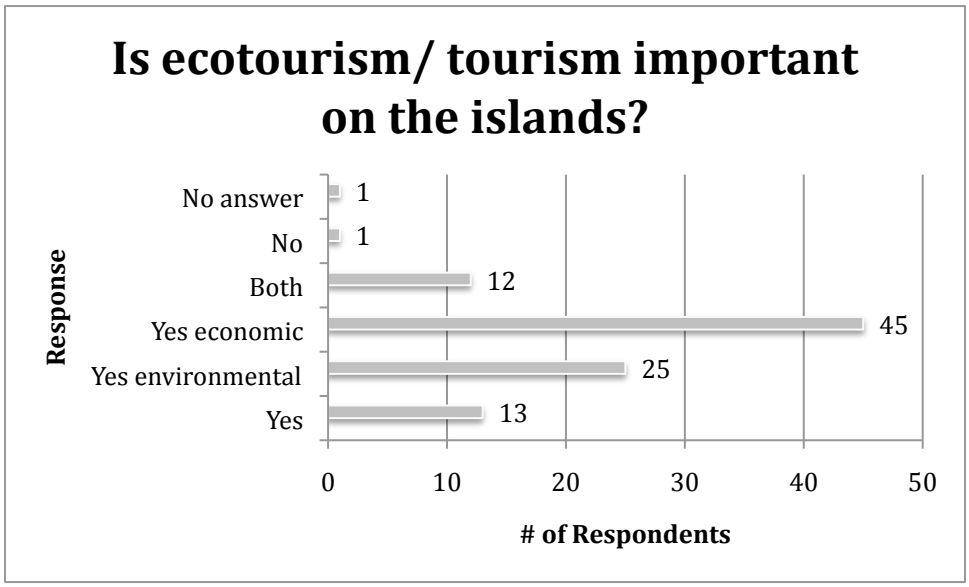

Figure 12. Responses for Significance of Tourism.

Response	# of respondents	Percentage of response
Yes	13	13%
Yes environmental	25	26%
Yes economic	45	46%
Both	12	12%
No	1	1%
No answer	1	1%

Table 11. Response for Tourism.

Importance of Tourism on the Islands.

	Yes	Environmental	Economic	Both	No	No Answer
Age						
18-24	4	8	10	4	0	0
25-34	5	6	5	4	0	0
35-44	1	3	11	3	0	0
45-54	1	5	8	1	0	0
55-64	1	1	3	0	1	0
65 and older	0	0	2	0	0	0
Unknown	1	2	6	0	0	1
Length on island						
Native	5	10	19	5	0	0
1>	0	0	0	1	0	0
1 to 2	0	1	0	0	0	0
3 to 4	1	1	1	0	0	0
5 to 9	1	0	3	0	0	0
10 to 15	2	9	3	1	0	0
16 to 20	2	3	9	2	0	0
21 to 25	0	0	2	1	0	0
26 to 30	0	0	5	1	0	0
31 to 35	1	0	2	1	1	1
36 to 40	0	1	1	0	0	0
41 to 45	1	0	0	0	0	0
Gender						
Female	8	14	25	7	1	1
Male	4	7	15	5	0	0
Unknown	1	4	5	0	0	0

Table 12. Responses for the Importance of Tourism based on Age, Length of Time Spent on the Island, and Gender.

The results were dived based on responses that indicted why tourism was important on the island: “strictly economic reasons,” “strictly environmental reasons,” “both economic and environmental reasons,” “yes tourism is important with no reason given,” “no tourism is not important,” and no answer.

For tourism, I wanted to see specifically how different generations viewed the importance of tourism. However, there is not a significant difference between age and belief in importance of tourism. As well, there is not a significant difference between length of living on the islands and the importance of tourism or gender and the importance of tourism.

The data show that 97 percent of residents believe that tourism is important on the islands. Forty-six percent of residents listed tourism as important strictly due to economic measures. “It is life for us, money for power and business” (Respondent 5). “If there is no tourism here, there is no life here” (Respondent 8).

Thirty-seven residents listed some environmental reason for the significance of tourism on the islands. Under this category falls conservation of the flora and fauna, education about the flora and fauna, to share the beauty of the islands, and to inform the global population about the islands in general. “We help to preserve and highlight the great treasure we have and in turn helps different species of animals and plants that exist on the islands” (Respondent 9).

The one resident who did not believe tourism was important on the island was concerned with where the money from the tourism industry was going. “It is in the hands of the few rich, accumulating more and more, becoming lords and masters owning the islands, rising unemployed population and the poor turn to crime” (Respondent 10).

These views could be alarming for the future of the islands; the majority of residents do not see or are not interested in the environmental value tourism can have in the area. If residents do not have a concern for the environment in a fragile place such as the Galápagos Islands, it would be easy for the environment to rapidly depreciate there. If

tourism companies are more interested in the economic aspects, there is a chance that they are more willing to ignore laws set in place to protect the wildlife and conservation areas on the island. Since the tourism market relies so heavily on their environmental surroundings, it is important to maintain these surroundings. Uncontrolled tourism could lead to fauna migrating to other areas and the flora to die off. The environment would be more secure if residents were concerned with adding more preservation aspects to the existing tourism practices.

Sustainability

Originally I was interested in if life on the island was sustainable or not, and if residents believed that life on the island was sustainable or not. With the islands' isolated location, it is important for the islands to be able to sustain themselves, in the event that a ship scheduled to arrive on the island is unable to come. However, the longer I stayed on the island the more I realized most Galapagueños are not able to define "sustainable" and everyone's definition of "sustainable" is different, just as globally there is not one unified definition of "sustainable" but many conflicting definitions. Therefore, if this research were to be repeated, I would not include this question.

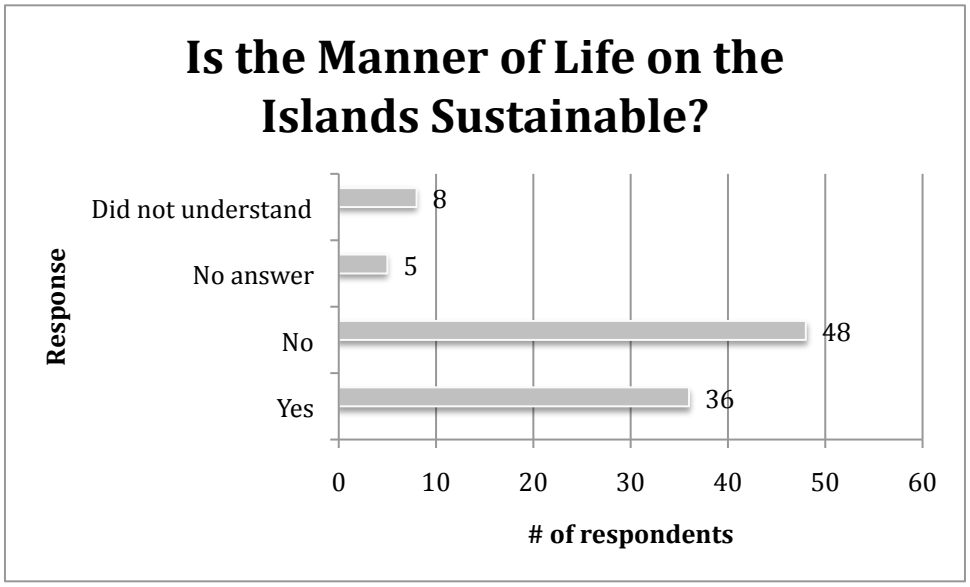

Figure 13. Responses for Sustainability on the Islands.

Response	# Of respondents	Percentage of responses
Yes	36	37%
No	48	49%
No answer	5	5%
Did not understand	8	8%

Table 13. Responses for Sustainability on the Islands.

Is the Manner of Life on the Islands Sustainable?

	Yes	No	Did Not Understand Question	No Answer
Age				
18-24	11	13	2	0
25-34	7	9	3	1
35-44	5	10	3	0
45-54	4	10	0	1
55-64	2	3	0	1
65 and older	2	0	0	0
Unknown	5	3	0	2
Length on island				
Native	17	15	4	3
1>	1	0	0	0
1 to 2	1	0	0	0
3 to 4	2	1	0	0
5 to 9	1	1	1	1
10 to 15	4	11	0	0
16 to 20	5	9	2	0
21 to 25	1	2	0	0
26 to 30	1	5	0	0
31 to 35	1	3	1	1
36 to 40	1	1	0	0
41 to 45	1	0	0	0
				97
Gender				
Female	18	30	4	3
Male	13	14	4	0
Unknown	5	4	0	2

Table 14. Responses for the Sustainability of Life on the Islands, based on age, Length of Time Spent on the Island and Gender.

Forty-eight out of the 97 residents surveyed/interviewed did not believe life on the island was sustainable, only 36 believed that life on the island is sustainable. However, it was shown in data that definitions of sustainability are not consistent. Some residents believe that the islands were sustainable because they relied on tourism, “Yes because in tourism there are seasons where they are many foreigners [coming to the islands]”

(Respondent 27) “People are already putting up their own shops, hotels, restaurants, locations, and we are having major economic status” (Respondent 11); whereas other residents listed tourism as the reason for why the islands are not sustainable. “We rely heavily on products from the mainland, tourism is managed from outside, despite [us] living on the islands” (Respondent 12). In addition to tourism, economic concerns also stem for reasons listed on why life on the islands is unsustainable. “Life is very expensive, so most of its population living on debts, falling into the hands of loan sharks, professional un-employing the youth” (Respondent 10).

Due to the conflicting responses, it is not appropriate to deem whether or not life is sustainable on the islands.

Biggest problem

As an outsider, it is easy to declare which problems are the most detrimental on the island; however, I included this question because I wanted to know explicitly what the residents thought were the major tribulations.

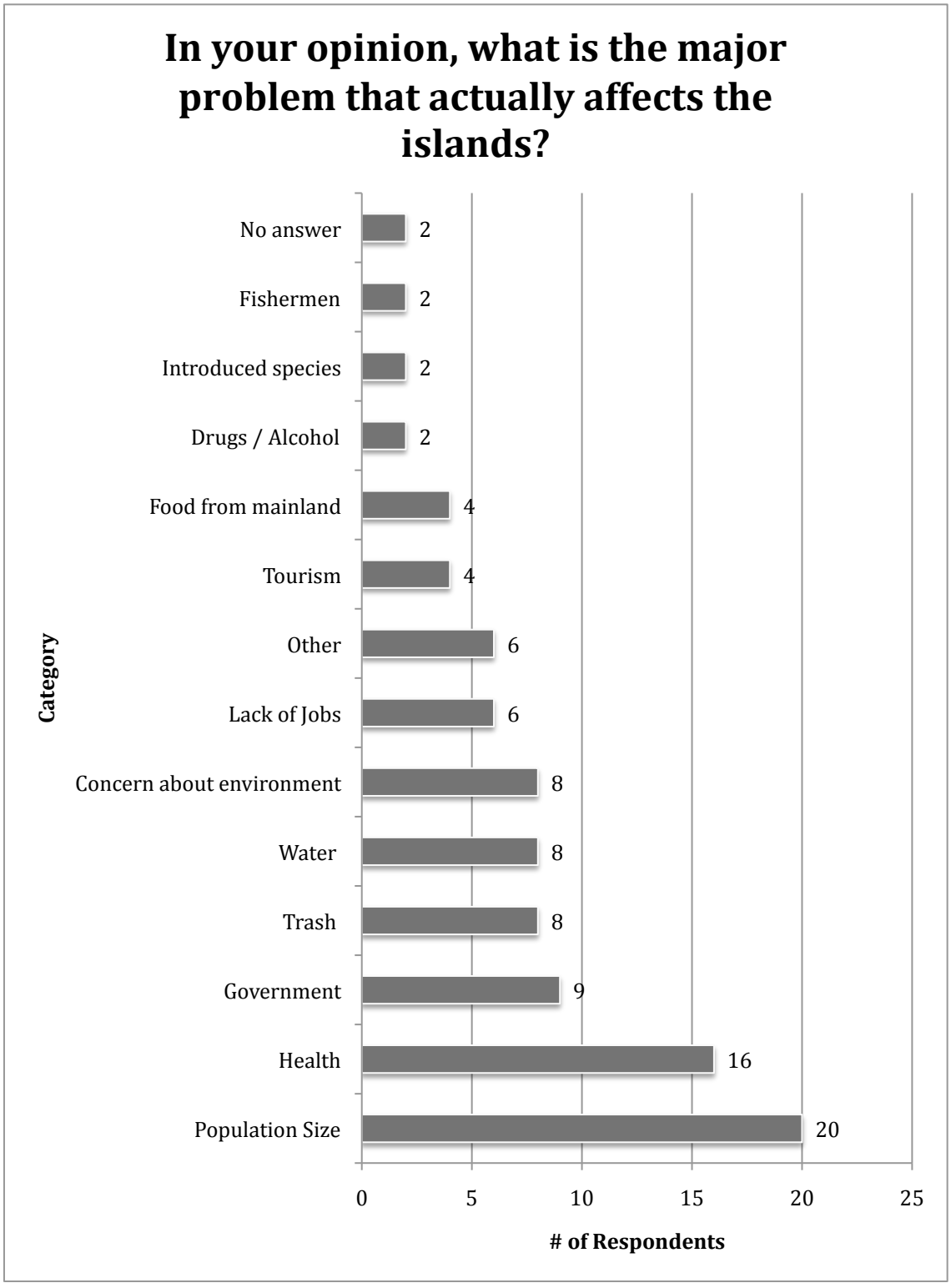

Figure 14. Respondents for the Biggest Problem Found on the Island.

Response	# of Respondents	Percentage of Respondents
Population size	20	21%
Health	16	16%
Concern about the Environment	10	10%
Government	9	9%
Trash	8	8%
Water	8	8%
Lack of Jobs	6	6%
Other	6	6%
Tourism	4	4%
Food from mainland	4	4%
Drugs / Alcohol	2	2%
Fishermen	2	2%
No answer	2	2%

Table 15. Response of Biggest Problem.

It should be noted that "Other" includes issues that were brought up by only one resident. They include: lack of education, lack of awareness, lack of services, lack of transportation to the continent, pollution from cars, and a tsunami.

Health includes both issues of health in general and issues of health with the hospital.

The most commonly listed problem on the island is population size with 20 resident responses. Residents listed that overpopulation was the main problem on the island. Many residents seem to believe that the government should not allow more people to move to the islands and that they should deport some of the recent in-migrants.

The increase in population size also leads to other problems that were listed as main problems. I chose to leave them in a separate category because the problems can also exist independently. "The biggest problem we face is the migration of many people from Ecuador that reach the islands illegally and take jobs away from native people of the

island, besides the over population" (Respondent 9). The population size also stems into concern about the environment as the overpopulation creates more people using and trampling the area. Residents also stated concerns about the recent in-migrants to the islands: "We have lots of new people coming to the islands and [they] are often thieves and bad people who hurt [others] and do not care about Galápagos" (Respondent 13).

The second most common listed problem was health on the island. As previously discussed, health on the island is important due to the lack of the efficient health care, the small size of the island and spread of disease, and the non-potable water used for cooking and bathing.

The third highest problem was the category of concern about the environment. Here "Concern about the environment" includes responses that explicitly stated concerned about the flora, fauna and other environmental aspects; extinction of animals, introduced species, conservation issues, and contamination.

The fourth highest problem listed was government control, residents listed there was not enough government control on the islands. Many residents listed that there needs to be more government control and that more control will help with all of the other problems listed. Specifically, residents want more government control of trash, tourists, health care, municipal development, and drugs and alcohol abuse.

The other aspect of government was that residents had concerns about the politicians on the island through either corruption or lack of interest about the people living there. "[The main problem is] administrative corruption in all levels [that] is taken as natural for future generations" (Respondent 10). Residents believed that many politicians are only interested in helping the islands around election time and once they

are elected, they will ignore the issues they promised to fix. “The authorities do not take control, they don’t feel like responding, [they] only [respond] during elections” (Respondent 14).

There is a tie for the fifth most important issue between trash and water. As water has been already sufficiently discussed I will focus on the issue of garbage. There is not a lot of room on the island to store garbage, especially as the majority of the island area is preserved as national park, and trash must be shipped back to the mainland. However, while I was living there residents who worked in the waste management plant in the highlands said they were concerned because the trash was accumulating at the plant and they were uncertain when the trash would be picked up again. While walking along the roads on the island, it is common to see trash that has been thrown on the ground. The government has created a program for trash, recyclables, and compost through a system of color-coded trashcans. Green trashcans are for organic materials, blue trashcans are for recyclables, and black trashcans are for inorganic trash. The materials from the green trashcans are placed into a large composting pile in the waste management area. Compost is later sold to residents for their gardening needs or donated to programs. While this is a progressive system for trash management, there is a lack of enforcement in the color-coded system. Frequently, residents walking along the street throw trash in whichever bin they find, regardless of the color.

Other residents ignore the color-coded system altogether and dispose of trash in a different way. I witnessed a child’s mattress, plastic chairs, and other items purposefully burned in a trash pit in a yard in Puerto Baquerizo Moreno. While I did not witness solid trash being thrown into the ocean, this is how the islanders dispose of sewage, and

residents discussed this as one of their concerns: “The major problem that affects the islands is the trash we throw in the sea it is bad because it destroys part of the ecosystem and the animals” (Respondent 15). As discussed earlier, water is a problem on the island due to the lack of quality and the expensive water bottle system. “The water because it is not potable and it is a vital liquid” (Respondent 7). Thus, it is not surprising to see some residents list it as the biggest problem on the island.

Many locals do not see how tourists live when they are not on the islands. Through talking to residents I found that, this has lead some islanders to think that the actions of the tourists while on the islands are similar to how tourists live their daily lives in their home country. This brings up issues of envy and jealously and a belief that the world outside of the island is primarily rich, lazy, and on a permanent vacation mode. This is one explanation for the distrust and distain of outsiders by some local residents, which I mentioned in the methodology section.

In terms of food from the mainland, the island relies on outside forces bringing support to the islands. Residents concerns with food from the mainland are that occasionally the food on the ship from the mainland is rotten, expensive, and sometimes late.

As mentioned before, the majority of problems are interconnected and stem from the overall issue of population size. Thus, this is one of the areas that needs to be primarily dealt with to help with all the other problems in the area.

Other problems

After identifying which problem residents believe is the largest problem on the island, I included this question to see what other problems exist on the islands. Perhaps there is an issue that has not been looked at and has recently developed on the island.

Response	# of respondents	Percentage of respondents
Social	15	10%
Water	14	10%
Lack of Jobs	13	9%
Population Size	12	8%
Concern about Environment	11	8%
Tourism	10	7%
Contamination	9	6%
Trash	9	6%
Government	8	6%
Drugs / Alcohol	7	5%
Lack of Education	7	5%
Economic	6	4%
Health / Hospital	5	3%
No Answer	5	3%
Fishermen	2	1%
Cars	2	1%
Electricity	2	1%
Oil spills	2	1%
Lack of transportation to continent	2	1%
Dogs	2	1%
Amenities from mainland	2	1%
Airplanes	1	1%

Table 16. Response of Other Problems Found on the Island. As residents answered with more than one other problem, the total of responses is above the sample of 97.

Here it should be noted that "population size" not only includes people concerned about overpopulation, but also includes one response that was concerned about deportation of their relatives.

The term "Economic" includes residents concerned about living expenses, wealth distribution, and tourism economic leakages.

The most common response for other problems was social. The term "Social" includes: Gangs/Violence, Teenage Pregnancy, Sex, Rape, Abuse, Robbery, Children (concern about how they will grow up and not being enough areas for them to play), Family Violence, Ignorance, and Lack of Community.

Social problems have been increasing recently and residents believe the increase could be related to the in-migrants coming to the island. As mentioned before, many residents see newer residents as thieves, alcoholics, and abusers. The Center for Comprehensive Care and Development found that 50 percent of children in the Galápagos Islands are victims of "physical and psychological" punishment and estimates that eight out of 10 women on the Galápagos Islands also suffer from the same problems (Torres 2011). From January to October of 2010 there were 2,103 cases of child abuse/family violence on the islands (Torres 2011).

On the island there is a high rate of teenage pregnancy. Residents expressed that once a student is finished with schooling on the island, they usually choose between leaving the island for college or starting a family. Residents state that it is very rare for a student to return to the islands upon completion from a university. Of the younger residents that remained on the island, residents said that females typically become pregnant around the age of 16-18 as they see this as the next stage for their lives.

Residents stated that the boyfriends of these girls then often turn to drinking, drugs, gangs, or sex with tourists as a way to deal with the stress in their lives.

Part of these social problems stem from the "macho culture" that exists in Latin America in general, and part stems from the excessive alcohol drinking seen on the islands. Due to the islands small nature there is concern for residents to speak up against violence on the island. However, many residents believe more education and more resources geared towards protecting victims of domestic abuse or alcohol abuse on the islands could decrease the occurrence of these problems.

In recent years the number of cars on the island has been increasing. Before cars were used mainly by the park for tourism, and as taxis, but now many residents own their own cars as well. Residents were concerned about vehicle pollution, the number of cars on the island, and vehicle safety on the road.

Of the other categories: residents who mentioned electricity are concerned about power outages, as they are still frequent on the island. Residents' concern over oil spills is probably related to the Jessica oil spill of 2001, which released oil in the marine area, contaminating the water and animals in the area, and oil spills from other boats. In terms of dogs, residents' concerns about are due to the amount of unclaimed dogs that roam around the island. Residents believe that these dogs impact the local ecosystem.

Changes seen on the Island

I was interested in what changes residents noticed on the island since they have been living there. I also wanted to see what kinds of development have been occurring on the island. Is the government working more towards development of municipalities or

towards development of tourism? Knowing changes that have occurred on the island will help to understand if the needs of residents are being met and where the future of the island will be going.

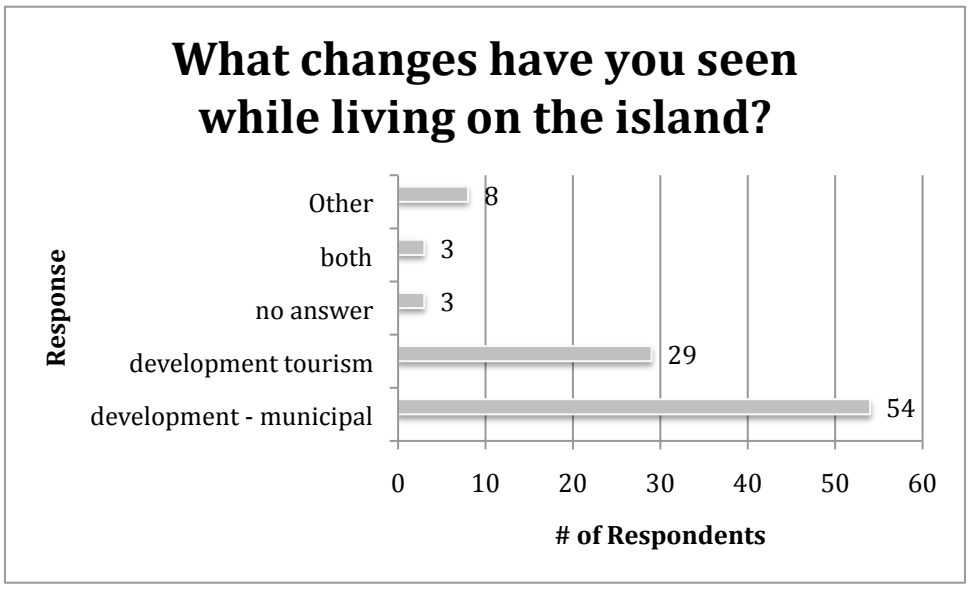

Figure 15. Respondents' Views about Changes on the Island.

Response	# of respondents	Percent of respondents
Development of municipal	54	56%
Development of tourism	29	30%
No answer	3	3%
Both	3	3%
Other	8	8%

Table 17. Respondents' Views about Changes on the Island.

What changes have you seen while living on the island?					
Age	Municipal	Tourism	Both	Other	No answer
18-24	16	6	1	3	0
25-34	9	7	0	3	1
35-44	8	8	1	0	1
45-54	10	3	0	1	1
55-64	4	2	0	0	0
65 and older	1	0	0	1	0
Unknown	6	3	1	0	0
Length on island					
Native	24	9	0	4	2
1>	1	0	0	0	0
1 to 2	0	0	0	0	1
3 to 4	0	2	0	1	0
5 to 9	4	0	0	0	0
10 to 15	7	6	1	1	0
16 to 20	10	3	1	2	0
21 to 25	2	1	0	0	0
26 to 30	1	5	0	0	0
31 to 35	3	2	1	0	0
36 to 40	2	0	0	0	0
41 to 45	0	1	0	0	0
Gender					
Female	27	20	2	4	2
Male	20	6	0	4	1
Unknown	7	3	1	0	0

Table 18. Responses about Changes on the Island, based on age, Length of Time Spent on the Island, and Gender.

Primarily, most respondents noticed either municipal development or tourism development, but few listed noticed development of either both municipal and tourism, or listed other types of changes. “Other” includes: awareness of people, destruction of natural resources, everything, lack of rain, new generation cares more about environment,

and increase in trash. These are social or environmental changes people are noticing. "New generations are related more to the islands and want to take care of them" (Respondent 19).

Here "municipal development" includes: government structure, 24-hour electricity, development of streets, increase in population, increase in cars, and an increase in schools. These are the developments that will help the local people. Though even with these necessary changes, some are still concerned with the development. "The infrastructure, the airport, everything is constructed with cement and now there are not natural things" (Respondent 16). "[I've noticed] nothing important, only the physical structure of the island but not what matters such as sewers among other things" (Respondent 6). There is also concern that, while there is municipal development, it is not geared towards what the islands really need, such as development of the new hospital, improved water treatment, or other necessary changes.

"Tourism development" includes development of tourist shops, hotels, the boardwalk, and items that were described as decorations. "[I]'ve noticed its glitter, physical embellished for tourism such as the Malecón, comfort, lighting, docks, location of tourist sites, hotels" (Respondent 10). While these developments can help bring more tourists to the islands, many residents have noticed the development of these items and question why these developments are occurring. "The changes have been decorations but not for the health" (Respondent 17). Development of tourism will also help with the economy on the islands but some residents worry about the intentions with the development. "The authorities have always been concerned about business quality but the

important thing is to have good basic services (electricity, water, health)" (Respondent 18).

Based on the results, it does seem that some problems on the islands are being met. For example, the lack of education is being met with the increase of schools being developed. However, as mentioned before many necessary developments have not been occurring rapidly enough on the islands. They are being put behind the development of the tourism industry.

Future of the islands

I included this question to see how residents viewed the island and what they saw as its future. Is the future of the Galápagos Islands to continue with a large tourism industry or to scale back tourism and include more activities that are economically secure and long lasting on the islands? I was especially interested in long-term and native vs. short-term responses. As the growing population is short-term residents, it will be interesting to see their responses, as it will indicate the feelings of the larger group of residents living in on the islands in the future.

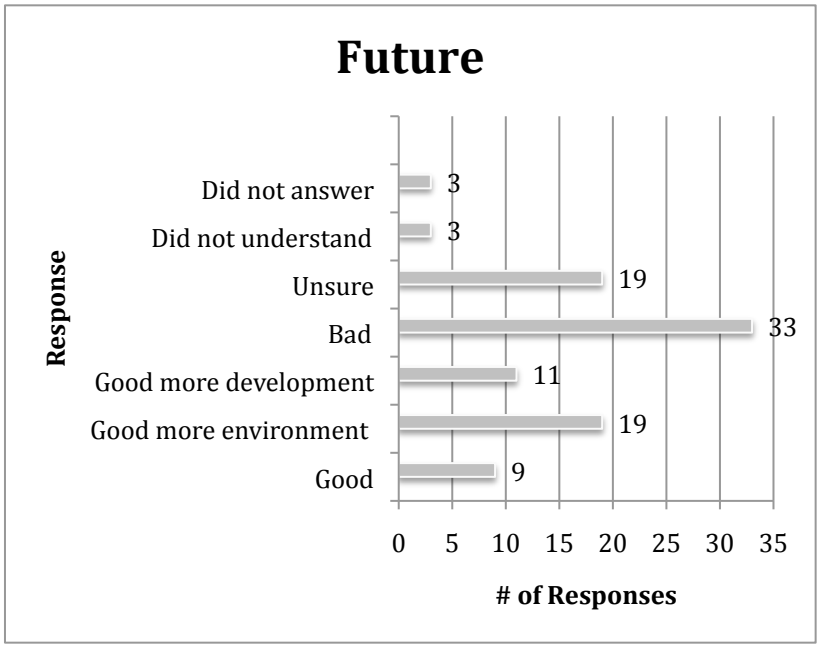

Figure 16. Response about Beliefs in the Future of the Islands.

Response	# of Respondents	Percentage of Respondents
Did not answer	3	3%
Did not understand	3	3%
Unsure	19	20%
Bad	33	34%
Good, more development	11	11%
Good, more environment	19	20%
Good	9	9%

Table 19. Response about Beliefs in the Future of the Islands.

What do you believe the future of the island will be like?

	Bad	Good	Unsure	Did not understand	No answer	Good more environment	
Age							
18-24	10	5	1	1	1	6	
25-34	6	3	5	0	1	4	
35-44	9	0	4	0	0	3	
45-54	3	0	5	0	0	3	
55-64	2	0	1	1	0	2	
65 and older	2	0	0	0	0	0	
Unknown	1	1	3	1	1	1	
Length on island							
Native	13	4	7	2	1	11	
1>	1	0	0	0	0	0	
1 to 2	0	0	1	0	0	0	
3 to 4	0	0	0	0	1	1	
5 to 9	1	0	1	0	0	0	
10 to 15	7	1	3	0	0	1	
16 to 20	4	3	4	1	0	3	
21 to 25	1	0	0	0	0	0	
26 to 30	3	0	1	0	0	1	
31 to 35	1	1	1	0	1	2	
36 to 40	2	0	0	0	0	0	
41 to 45	0	0	1	0	0	0	
Gender							
Female	21	6	10	1	2	10	
Male	11	2	5	1	0	8	
Unknown	1	1	4	1	1	1	

Table 20. Response of what the Future will be like on the Island, based on age, Length of Time Spent on the Island and Gender.

"Good, more environment" means residents believed the future would be positive and they hoped there would be less tourism development, less population growth, and

more efforts to conserve the natural habitat. “There is a ‘fight’ between those who conserve and those who just want to use to make money [the future] will depend on who has the power” (Respondent 19). Others wanted to see a reverse of development. “Most of the people need to move back to Continental Ecuador because the economy is not able to sustain the population. Its primary source is tourism, without animals there is no tourism, if we don’t conserve the animals” (Respondent 20).

Residents under the category “Good, more development” believed the future would be positive, and listed that they were interested in more development on the island and an increase in economic resources. “If they know how to exploit in a good way, I see the island as one of the best sites in the world for tourism and ecotourism” (Respondent 21).

The residents who fall under the category of “Good” listed islands will have a good future in general. “I see the Galápagos, better than before” (Respondent 3).

Of the residents who listed “Unsure,” they were uncertain about what the future of the island would be. “Well if we preserve, it will help a prosperous future, but the way the islands are going it soon will cease to be the wonderful place it is” (Respondent 9). Many residents thought that the future would be good but only if the authorities took more control. “If there is no consciousness in control entry of people, very negative” (Respondent 22). “It will be good for everything but [only] if the authorities work together and do not fight” (Respondent 23). Others who were unsure, expressed concern that the Galápagos Islands will turn into just another typical island destination. “If we conserve it, we maintain it. But it is also possible it will become a small Hawaii”

(Respondent 24). “If there is not control we will just end up a place for pleasure and fun like the Carribbean” (Respondent 25).

Finally “Bad” indicates residents who responded with a negative view of the future of the islands. Some of the negative view dealt with social issues, “A lot of pain in reality. Many guys are involved in drugs, many girls have children starting around 16, the authories ignore it. I hope but I don’t know” (Respondent 26). Many residents also listed that increase of population as why the believed the future will be negative.

The majority of residents believe the future of the island will be negative due to the population issues and social issues previously discussed before. Residents believe these issues will only be amplified in the future. This is of concern as these are issues that are not being talked about on the islands, but there is no set action as of yet to prevent or decrease these problems.

Following issues

The following are questions I knew were deemed to be important on the island, based on previous research conducted by other researchers. I included these questions because I wanted to see if they were still issues on the island. I was also interested in seeing which issues were more pertinent to residents at the time of the interviews and surveys.

As population size has been previously discussed, the main issue with population size is that it is increasing on the islands. In terms of conservation efforts this was to see if residents believe conservation was important on the islands. Tourism is the largest economic force on the island but I wanted to see how residents ranked its importance

with other areas on the island. The health issues are the issues previously discussed, the hospital system and low quality of health care available on the island. Finally, water also discusses issues previously mentioned; the lack of potable water, illnesses due to drinking the tap water, and the high cost of bottled water.

It should be noted that not all residents responded to this portion of the survey or interview, and some residents only responded to a select few issues on this portion. In the future, the questions being asked in this section should be clarified more for residents.

Population size

The growing population size on the island has been frequently studied, economically. I included this question to see if residents still viewed the population size as a problem.

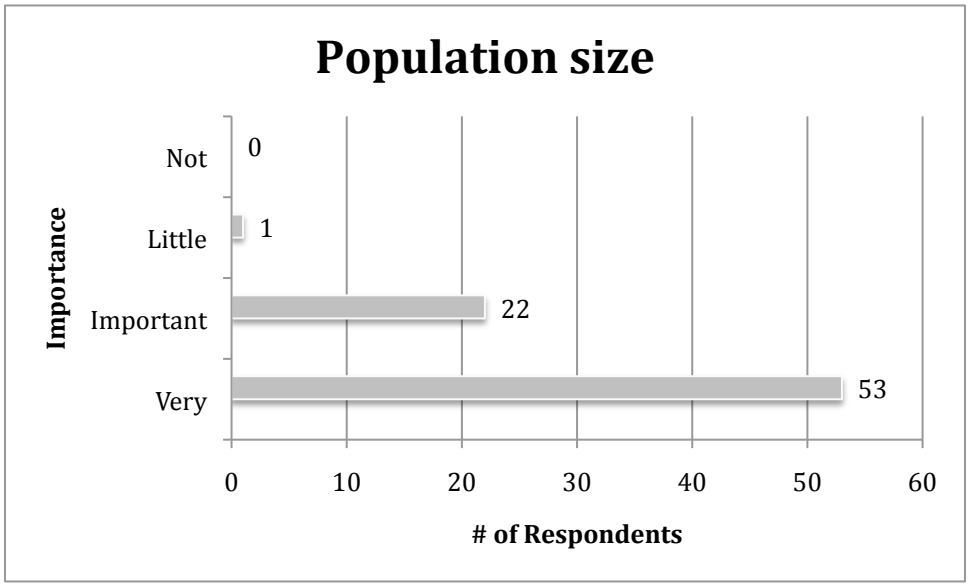

Figure 17. Response to Importance of the Issue of Population Size.

Importance	# of Respondents	Percentage of Respondents
Very	53	55%
Important	22	23%
Little	1	1%
Not	0	0%

Table 21. The Response to the Importance of the Issue of Population Size.

The Issue of Population Size					
	Very	Important	Little	Not	No answer
Age					
18-24	13	7	0	0	6
25-34	12	6	0	0	2
35-44	9	3	1	0	5
45-54	7	4	0	0	4
55-64	3	1	0	0	2
65 and older	0	2	0	0	0
Unknown	5	1	0	0	4
Length on island					
Native	22	12	0	0	5
1>	0	0	0	0	1
1 to 2	0	0	0	0	1
3 to 4	2	1	0	0	0
5 to 9	4	0	0	0	0
10 to 15	7	5	0	0	3
16 to 20	6	2	0	0	8
21 to 25	1	2	0	0	0
26 to 30	3	1	1	0	1
31 to 35	3	0	0	0	3
36 to 40	1	0	0	0	1
41 to 45	0	1	0	0	0
Gender					
Female	33	11	1	0	10
Male	11	12	0	0	8
Unknown	5	1	0	0	5

Table 22. Response of Importance of the Issue of Population Size, based on Age, Length of Time Spent on the Island and Gender.

Clearly, population size is a large concern for Galapagueños, regardless of how long they have lived on the islands. It is interesting that while most residents have a problem with the increasing population size, no resident with whom I talked to was willing to be the one to leave the island. Most residents, regardless of age, gender, or length of time lived on the island; consider population size to be an important problem.

The results of this question are similar to the results of the question regarding the major problem on the island. However, in terms of the ranking system, the importance of population size ranks lower than other issues (conservation efforts, health, and water) on the island.

Conservation efforts

Through researching the conservation efforts, the fishermen debate, and other issues, I wanted to see where residents stand on conservation efforts. Do residents in general believe conservation on the islands important or menial? I was especially interested in this question based on age and length of time spent on the island. Would the generation that has lived on the island longer than the national park think conservation efforts were important or an annoyance and not necessary?

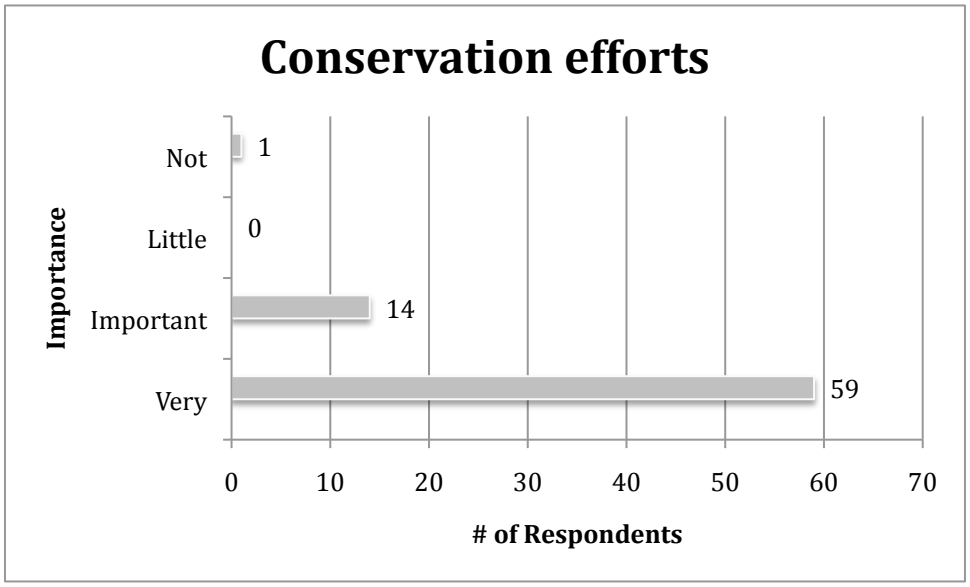

Figure 18. Response to Importance of the Issue of Conservation Efforts.

Importance	# of respondents	Percentage of respondents
Very	59	61%
Important	14	14%
Little	0	0%
Not	1	1%

Table 23. Response to Importance of the Issue of Conservation Efforts.

The Issue of Conservation Efforts					
	Very	Important	Little	Not	No answer
Age					
18-24	19	1	0	0	6
25-34	14	4	0	0	2
35-44	12	2	0	0	4
45-54	10	1	0	0	4
55-64	2	2	0	0	2
65 and older	0	2	0	0	0
Unknown	2	2	0	1	5
Length on island					
Native	27	8	0	0	4
1>	0	0	0	0	1
1 to 2	0	0	0	0	1
3 to 4	2	1	0	0	0
5 to 9	3	1	0	0	0
10 to 15	9	2	0	0	4
16 to 20	8	0	0	1	7
21 to 25	2	1	0	0	0
26 to 30	4	1	0	0	1
31 to 35	3	0	0	0	3
36 to 40	1	0	0	0	1
41 to 45	0	0	0	0	1
Gender					
Female	38	6	0	0	11
Male	18	7	0	0	6
Unknown	3	1	0	1	6

Table 24. Response of Importance of the Issue of Conservation efforts, Based on Age, Length of Time Spent on the Island and Gender.

Most residents, 59, regardless of age, gender, or length of time spent on the island, believe that conservation on the island is "very important." As residents are surrounded by nature on the island and the natural area impacts their lively hoods, it is not difficult to understand why conservation would be important to islanders. Conservation efforts will help to maintain the natural world on the island. After the question previously asked regarding the importance of tourism on the island, the result from this question shows that even though many residents listed tourism as being important for strictly economic aspects, residents are still concerned with preserving the natural world on the island. In terms of the ranking system, conservation efforts had the most responses of very high.

Tourism

I included Tourism on the ranking chart to see how important tourism was in relation to other issues on the island. Were there issues on the island that residents believed were more important than tourism or that needed to be focused on more than tourism?

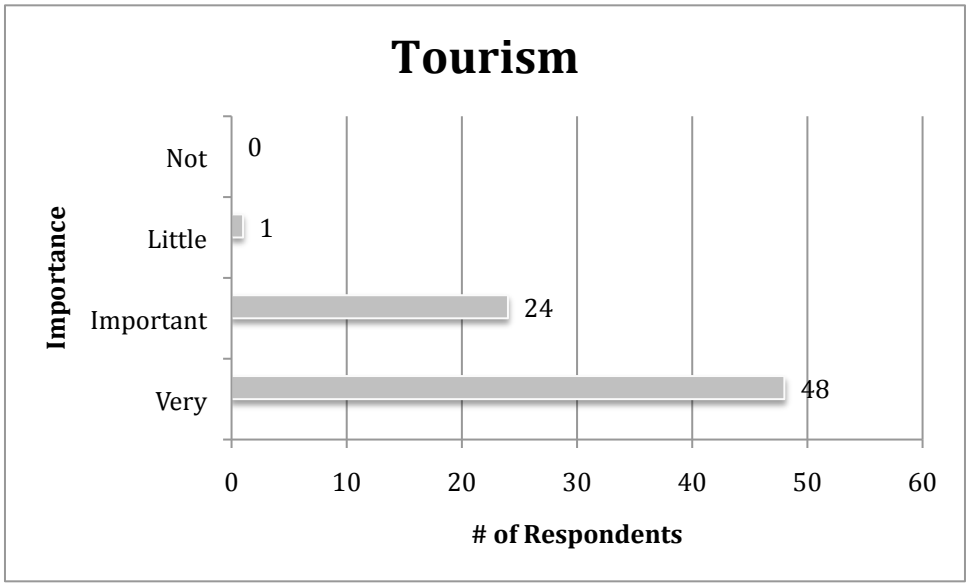

Figure 19. Response to Importance of the Issue of Tourism.

Importance	# of Respondents	Percentage of Respondents
Very	48	49%
Important	24	25%
Little	1	1%
Not	0	0%

Table 25. Response to Importance of the Issue of Tourism

The Issue of Tourism					
	Very	Important	Little	Not	No answer
Age					
18-24	13	7	0	0	6
25-34	12	6	0	0	2
35-44	9	3	1	0	5
45-54	7	4	0	0	4
55-64	3	1	0	0	2
65 and older	0	2	0	0	0
Unknown	5	1	0	0	4
Length on island					
Native	22	12	0	0	5
1>	0	0	0	0	1
1 to 2	0	0	0	0	1
3 to 4	2	1	0	0	0
5 to 9	4	0	0	0	0
10 to 15	7	5	0	0	3
16 to 20	6	2	0	0	8
21 to 25	1	2	0	0	0
26 to 30	3	1	1	0	1
31 to 35	3	0	0	0	3
36 to 40	1	0	0	0	1
41 to 45	0	1	0	0	0
Gender					
Female	33	11	1	0	10
Male	11	12	0	0	8
Unknown	5	1	0	0	5

Table 26. Response of Importance of the Issue of Tourism, Based on Age, Length of Time Spent on the Island and Gender.

As tourism comprises a large part of the economy and workforce on the islands, it is not surprising that 49 residents ranked tourism as important. However, in comparison to all the other issues in the ranking system, the importance of tourism ranks fairly low, though it ranks the highest in the category of "important."

Health

As health was clearly listed by residents as a large problem on the island, I wanted to see how important it was as compared to other issues.

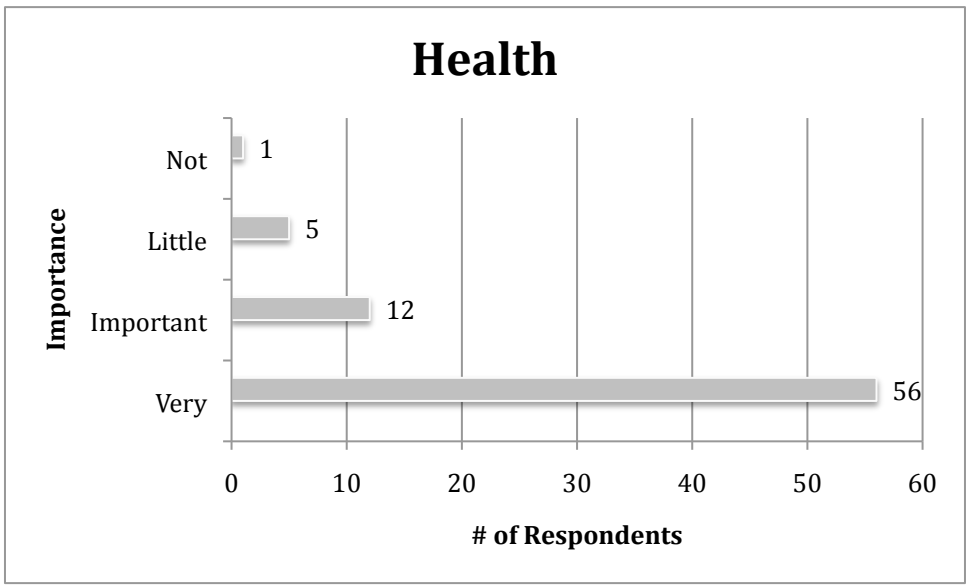

Figure 20. Response to the Importance of the Issue of Health.

Importance	# of Respondents	Percentage of Respondents
Very	56	58%
Important	12	12%
Little	5	5%
Not	1	1%

Table 27. Response to Importance of the Issue of Health.

The Issue of Health					
	Very	Important	Little	Not	No answer
Age					
18-24	15	4	1	0	6
25-34	15	1	2	0	2
35-44	10	1	1	1	5
45-54	9	2	0	0	4
55-64	3	1	0	0	2
65 and older	0	2	0	0	0
Unknown	4	1	1	0	4
Length on island					
Native	26	7	1	0	5
1>	0	0	0	0	1
1 to 2	0	0	0	0	1
3 to 4	1	1	1	0	0
5 to 9	4	0	0	0	0
10 to 15	7	2	3	0	3
16 to 20	8	0	0	0	8
21 to 25	2	1	0	0	0
26 to 30	4	0	0	1	1
31 to 35	3	0	0	0	3
36 to 40	1	0	0	0	1
41 to 45		1	0	0	0
Gender					
Female	37	5	2	1	10
Male	15	6	2	0	8
Unknown	4	1	1	0	5

Table 28. Response of Importance of the Issue of Health, Based on Age, Length of Time Spent on the Island and Gender.

It is not surprising that 56 residents listed health issues on the island as important. This issue was so important to residents, some commented they wished there was a "Super Important" category for the issue. What is surprising is that four residents listed it was only a little important and one resident listed it was not important. However, based on the responses for the original question about health on the islands, these numbers fit to those responses. In the ranking system, with the rank of "very important," health ranks

second highest only behind conservation efforts. It should be noted that a few residents decided to create their own category of "super, very, important," however, these responses were grouped with very important.

Water quality

Here I included how important is the issue of water quality in relation to other issues on the island.

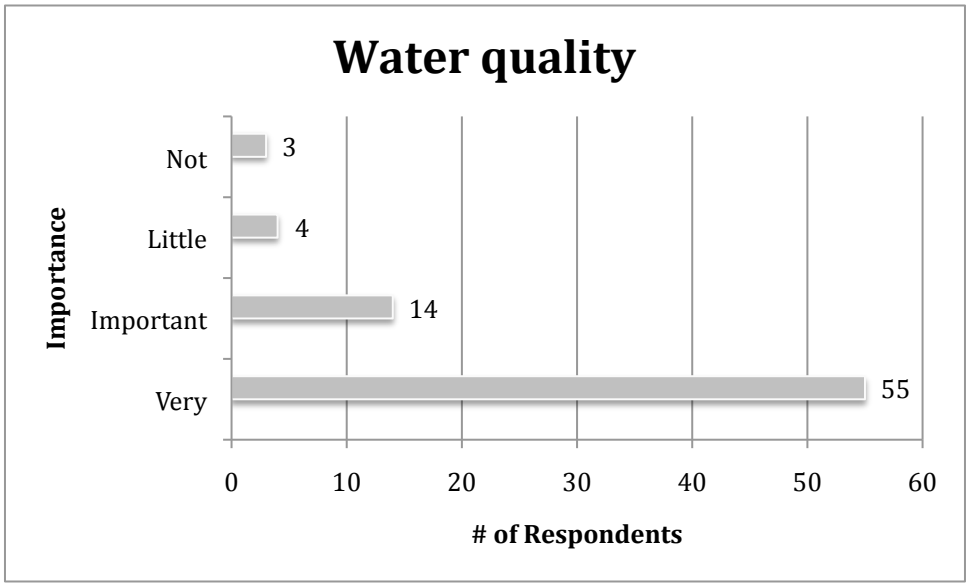

Figure 21. Response to Importance of the Issue of Water Quality.

Importance	# of Respondents	Percentage of Respondents
Very	55	57%
Important	14	14%
Little	4	4%
Not	3	3%

Table 29. Response to Importance of the Problem of Water Quality.

The Issue of Water Quality.

	Very	Important	Little	Not	No answer
Age					
18-24	17	2	1	0	6
25-34	13	3	1	1	2
35-44	10	2	1	1	4
45-54	10	2	0	0	3
55-64	2	2	0	0	2
65 and older	1	1	0	0	0
Unknown	3	1	1	1	4
Length on island					
Native	27	7	1	0	4
1>	0	0	0	0	1
1 to 2	0	0	0	0	1
3 to 4	0	2	1	0	0
5 to 9	4	0	0	0	0
10 to 15	7	2	2	1	3
16 to 20	7	1	0	1	7
21 to 25	3	0	0	0	1
26 to 30	4	0	0	1	0
31 to 35	3	0	0	0	3
36 to 40	1	0	0	0	1
41 to 45	0	1	0	0	0
Gender					
Female	38	4	2	1	10
Male	15	8	1	1	6
Unknown	3	1	1	1	5

Table 30. Response of Importance of the Issue of Water Quality, Based on Age, Length of Time Spent on the Island and Gender.

Again, water quality on the islands is an issue that is extremely important to residents. Many residents consider water to be vital to a healthy life on the islands. Thus, it is not surprising that 53 residents listed quality of water as important. I am however surprised that nine residents listed water quality at the low end of the spectrum of concern

with little importance or not important. Perhaps these residents have had no health problems related to the water or are satisfied with using bottled water for consumption.

Conclusion of Results

Through looking over the data, it is clear that there are overriding themes that are important to residents. These topics of high importance are primarily health care, water quality, population size, and social issues. Many residents believe economic development of tourism is taking precedence over these issues. It can be argued that these issues are being addressed, especially with the development of the new hospital and the recent installation of a new water filtration plant. Yet, in the case of the new hospital, completion of the new facility has taken far longer than promised. While the new water system is an improvement from the previous system, it still has its flaws.

The two social categories (population size and social issues) are both being examined on the island. There are currently discussions occurring on the island to determine the best way to control the population growth. Residents believe there needs to be more education to help control the social issues (primarily violence, teen pregnancy, and alcohol abuse). Due to the interconnected social structure on the island, many residents do not feel comfortable reporting or discussing domestic violence. However, an increase in education about these issues on the island could help facilitate a larger discussion on the island on what the issues are, how to notice if there is a problem, how to solve the social problems, and how to possibly prevent the problems from occurring in the future.

Chapter 7:

Future of the Island

As the residents directly impact the future of the island, I believe there is a need to further explore residents' needs and opinions. Based on the results of my surveys and interviews, it is clear that many residents are not satisfied with how human life has developed on the island. There needs to be an increased effort to support health care. There also needs to be a better system of potable tap water, which is measured for parasites. There should be stricter laws developed to help curb the increase in population. As many residents are concerned about the lack of jobs, increasing the population will only increase the stress already placed on local job applicants. An increase in population will also lead to more reliance on the limited resources already found on the island or resources being shipped into the island, which can lead to oil spills, introduced species, and more illegal residents.

In addition, I believe there should be stricter monitoring of natural park areas, with more education for tourists and locals. Personally, I witnessed many tourists and locals not following the laws of the park areas, such as touching the animals, taunting the animals, and throwing garbage on the ground. These rules are clearly stated at the entrances of the National Park areas and on the islands in general. However, with more, perhaps required, education for tourists and more educational resources for locals, I believe these problems can be reduced.

From my experience living on the islands and talking to residents, I am somewhat concerned that eventually they will become similar to other tropical islands that rely on tourism. Through talking to the local residents, it appears as if tourism takes precedence

over important social and environmental issues. In addition, the tourism industry is only growing and expanding in different ways to attract more tourists. While the tourism industry will continue to develop on the island, it is important that it does not stray far from its environmental roots. While residents are worried the island will become another typical, tropical, tourist destination, I believe the islands have two factors that will protect them from this fate a little longer: their unique fauna and their geographical isolation.

For the future of research on the islands, I believe the most important issues to address are water quality and health issues relating to water, the health care system on the islands, and the social issues that have been developing on the island and how tourism impacts those issues. Research should be expanded to interviewing more residents on San Cristóbal and include residents of the other islands in the archipelago. Increasing the amount of participants in the study and broadening the research to encompass Isabela, Santa Cruz, Baltra, and Floreana will give a much greater and more detailed perception of life on the Galápagos Islands. This is especially true of Santa Cruz, as it is the most populated island and is the island with the largest amount of tourist visitors each year.

Finally, while this research focused more on the opinions of residents, further research should also compare the municipal budget and the tourism budget on the island. Due to the limited time, I was not able to explore the budget of the island but this would most certainly give valuable information to compare to the responses of residents.

Chapter 8:

Conclusion

Though geographically isolated, the Galápagos Islands have seen a large change since their known existence. From pirates, to whalers, to prisoners, to Darwin, to tourists, these islands have had a deep impact on the world and have been profoundly impacted as well. The islands are known for being an area where little change has occurred to the unique flora and fauna and yet, because of these very plants and animals, the islands have changed drastically in the past 50 years.

The Galápagos Islands have gone from fewer than 10,000 tourists a year in the 1960s to almost 200,000 tourists in 2010 and have a resident population rapidly increasing over 25,000 legal residents. Tourism is the main economic force on the islands and a force that cannot and economically should not be stopped. However, the needs and wants of the residents on the islands can no longer be ignored over the needs and wants of tourists visiting the islands.

It is interesting to note that the Galápagos Islands, though geographically isolated, still suffer from many problems that are being seen globally. My research focused specifically on San Cristóbal Island. It was found that many residents believe San Cristóbal lacks basic health standards such as an adequate health care system and potable water. Many residents have become sick due to the inadequacy in these services. The research also found that residents desire more government control and implementation of more projects for garbage on the island, tourism, conservation and National Park protection, population control, and social issues. As with previous issues mentioned, I

believe more education and educational resource centers on the islands, in regards to these topics, could significantly decrease these problems. This is especially true in regards to the social problems on the island, as many residents prefer to keep quiet about the problems due to the island's small, interconnected structure.

Most surprisingly were the results for the tourism industry. While it is the main economic force on the islands, I was surprised only one resident explicitly stated that they were against the tourism industry. However, it is disconcerting that the majority of residents expressed that tourism was important on the islands strictly for economic reasons.

As, for the foreseeable future, the tourism industry will continue to grow and develop. I believe further research on how the industry impacts the lives on the local population is necessary, not only for San Cristóbal but for the Galápagos Island as a whole. I also believe further research into the issues that were brought up in this thesis is also necessary. The islands would especially benefit from a project that focuses on the issues that residents believe are being ignored explicitly including: water quality, health care, and the social problems.

References

"About the Galápagos Islands." Galapagos Islands .com -. 2012. <http://www.Galapagosislands.com/Galápagos/about-Galápagos.html>.

Apostolopoulos, Yiorgos, and Dennis John Gayle. Isló and Sustainable Development: Caribbean, Pacific, and Mediterranean Experiences. Westport, CT: Praeger, 2002.

Bassett, Carol Ann. Galápagos at the Crossroads: Pirates, Biologists, Tourists and Creationists Battle for Darwin's Cradle of Evolution. Washington, D.C.: National Geographic, 2009.

Bremner, Jason and Jaime Perez. "A Case Study of Human Migration and the Sea Cucumber Crisis in the Galápagos Islands." AMBIO: A Journal of the Human Environment 31.4 (2002): 306. GEOBASE. <http://www.bioone.org/doi/abs/10.1579/0044-7447-31.4.306>.

Butler, R.W. "The Concept of A Tourist Area Cycle of Evolution: Implications for Management of Resources." The Canadian Geographer/Le Géographe Canadien 24.1 (1980): 5-12.

Butler, Richard. "Chapter 13: The Tourism Area Life Cycle in the Twenty-First Century." A Companion to Tourism. By Alan A. Lew, Colin Michael Hall, and Allan M. Williams. Malden, MA: Blackwell. 2004. 159-69.

Center for Interpretation. 1998. Exhibit by the Galápagos National Park. San Cristóbal Island, Puerto Baquerizo Moreno.

Darwin, Charles. On the Origin of Species. New York: Oxford UP, 2008.

"Ecotourism Definition." The International Ecotourism Society.

The International Ecotourism Society, 2012. <http://www.ecotourism.org/book/ecotourism-definition>.

"Ecuador & Galápagos Islands Location & Geography." Ecuador& Galápagos Official Travel Information and Travel Guide. Ministry of Tourism of Ecuador, 11 Oct. 2010. <http://www.ecuador.travel/en/about-ecuador/ecuador-location-and-geography/ecuador-location-and-geography.html>.

Epler, Bruce. Tourism, the Economy, Population Growth, and Conservation in Galápagos. Rep. Puerto Ayora: Charles Darwin Foundation, 2007.

Guia Informativa Turistica. Puerto Ayora: Ministerio De Turismo.

Heslinga, Jane. "Regulating Ecotourism in Galápagos: A Case Study of Domestic – International Partnerships." Journal of International Wildlife Law & Policy 6.1 (2003): 57-77.

Honey, Martha. Ecotourism and Sustainable Development: Who Owns Paradise? Washington, D.C.: Island, 1999.

"Human Presence." Galápagos Conservancy. 2008. 20 Apr. 2011. <http://www.Galapagos.org/2008/index.php?id=59>.

"INEC Aporta Datos Estadísticos Para La Discusión Del Proyecto De Reforma a La Ley De Régimen Especial De Galápagos." Instituto Nacional De Estadística Y Censos. Instituto Nacional De Estadística Y Censos, 6 Mar. 2012.

Ingreso De Turistas a Galápagos (1979-2009). 2009. Rep. Dirección Del Parque Nacional Galápagos.

López, Javier, Danny Rueda. 2010. Water Quality Monitoring System in Santa Cruz, San Cristóbal, and Isabela. In: Galápagos Report 2009-2010. Puerto Ayora, Galápagos, Ecuador.

Losinski, Sarah, and Ashley Waldorf. "Tourism's Affects on Women's Rights in San Cristobal, Galápagos Islands." Michigan State University, 2007.

Lozano, Ginger. "Entry Tax to Protected Areas." Direccion Del Parque Nacional Galápagos. Galápagos National Park and the Ministry of Environment, 19 Dec. 2011. <http://www.Galapagospark.org/nophprg.php?page=programas_turismo_tributo>.

Map. "Galápagos Islands" Google Earth. © 2012 Google, Data LDEO-Columbia, NSF, NOAA, Data SIO, NOAA, U.S. Navy, NGA, GEBCO, © 2012 Cnes / Spot Image.) Web.

Map. San Cristóbal Island. Google Earth. © 2012 Google, Data SIO, NOAA, U.S. Navy, NGA, GEBCO, Image © 2012 DigitalGlobe). Web.

Mason, Peter. Tourism Impacts, Planning and Management. Amsterdam: Butterworth Heinemann, 2003.

Mena, Carlos. Lecture. Political Ecology 637. Galápagos Academic Institute for the Arts and Sciences. San Cristóbal, 13 October 2011.

Nash, Steve. "Ecotourism and Other Invasions." BioScience Feb. 2009: 106-10.

Número De Visitantes Que Ingresaron a Galápagos Año 2010. Rep. Galápagos National Park.

Quiroga D, Mena C, Karrer L, Suzuki H, Guevara A, Murillo, JC. 2011. Dealing with Climate Change in the Galápagos: Adaptability of the Tourism and Fishing Sectors. In Climate Change Vulnerability Assessment of the Galápagos

Islands. 2011. Eds. I. Larrea and G. Di Carlo. WWF and Conservation International, USA.

Quiroga, Diego, Carlos Mena, Juan Carlos Murillo, Alexandra Guevara, Haruna Suzuki, Paul Cisneros, and Jimena Sasso. Galápagos Marine Area (MMA) Socioeconomic and Governance Assessment: Final Report. Rep. Quito: Universidad San Francisco De Quito and Conservacion Internacional Ecuador, 2009.

Quiroga, Diego. "Crafting Nature: the Galápagos and the Making and Unmaking of a "Natural Laboratory"" Journal of Political Ecology 16 (2009): 123-40.

Quiroga, Diego. Lecture. Human Ecology and Martitime Communities 385. Galápagos Academic Institute for the Arts and Sciences. San Cristóbal, 6 December 2011a.

Quiroga, Diego. Lecture. Human Ecology and Martitime Communities 385. Galápagos Academic Institute for the Arts and Sciences. San Cristóbal, 8 December 2011b.

Quiroga, Diego. Lecture. Human Ecology and Martitime Communities 385. Galápagos Academic Institute for the Arts and Sciences. San Cristóbal, 13 December 2011 c.

Respondent 1. Personal interview. 2011.

Respondent 2. Personal interview. 2011.

Respondent 3. Personal interview. 2011.

Respondent 4. Personal interview. 2011.

Respondent 5. Personal interview. 2011.

Respondent 6. Personal interview. 2011.

Respondent 7. Personal interview. 2011.

Respondent 8. Personal interview. 2011.

Respondent 9. Personal interview. 2011.

Respondent 10. Personal interview. 2011.

Respondent 11. Personal interview. 2011.

Respondent 12. Personal interview. 2011.

Respondent 13. Personal interview. 2011.

Respondent 14. Personal interview. 2011.

Respondent 15. Personal interview. 2011.

Respondent 16. Personal interview. 2011.

Respondent 17. Personal interview. 2011.

Respondent 18. Personal interview. 2011.

Respondent 19. Personal interview. 2011.

Respondent 20. Personal interview. 2011.

Respondent 21. Personal interview. 2011.

Respondent 22. Personal interview. 2011.

Respondent 23. Personal interview. 2011.

Respondent 24. Personal interview. 2011.

Respondent 25. Personal interview. 2011.

Respondent 26. Personal interview. 2011.

Respondent 27. Personal interview. 2011.

"Statistic of Visitors to the Galápagos." Dirección Del Parque Nacional Galápagos. 7 Aug. 2010. 21 Apr. 2011. < http://www.Galapagospark.org/onecol.php?page=turismo_estadisticas>.

Taylor, J. Edward, George A. Dyer, Micki Stewart, Antonio Yunez-Naude, and Sergio

Ardil. "The Economics of Ecotourism: A Galápagos Islands Economy - Wide Perspective." Economic Development and Cultural Change 51.4 (2003): 977-997. J STOR.

Taylor, J. Edward, Jared Hardner, and Micki Stewart. "Ecotourism and Economic Growth in the Galápagos: An Island Economy-wide Analysis." Environment and Development Economics 14.02 (2009).

"The Galápagos Islands." Ecuador & Galápagos Official Travel Information and Travel Guide. Ministry of Tourism of Ecuador 23 Oct. 2010.

Torres, Arturo. "La Violencia Intrafamiliar Cobra Graves Dimensiones En Galápagos." El Comercio. El Comercio Ecuadora, 2 Oct. 2011. <http://www.elcomercio.com/sociedad/violencia-intrafamiliar-Galapagos-islas_0_568743173.html>.

Vanasselt, Wendy. "Ecotourism and Conservation: Are They Compatible?" Earth Trends (2000): 1-3. Google Scholar.

Walsh, Stephen J., Amy L. McCleary, Benjamin W. Heumann, Laura Brewington, Evan J. Razkowski, and Carlos F. Mena. "Community Expansion and Infrastructure Development: Implications for Human Health and Environmental Quality in the Galápagos Islands of Ecuador." Journal of Latin American Geography 9.3 (2010): 137-59.

Wearing, D. and Neil, J. Ecotourism: Potential, Pitfalls and Possibilities. London, Butterworth-Heinemann. (1999).

Wilen, James E., Micki Stewart, and David F. Layton. Economic

Analysis of the Galápagos Marine Reserve Resources Management Plan. Rep. Davis: University of California, 2000.

World Travel and Tourism Council, comp. Travel and Tourism Economic Impact 2011. London: World Travel and Tourism Council, 2011. PDF.

World Travel and Tourism Council. "Economic Impact on Travel and Tourism Update November 2011." (2011). < http://www.wttc.org/site_media/uploads/downloads/4pp_document_for_WTM_RGB.pdf>

Www.Galapagosislasencantadas.com. “Galápagos Islas Encantadas: Surf, Dive, Biking, Kayak, Snorking Tours A Las Islas Galápagos”. Isla San Cristóbal: Www.Galapagosislasencantadas.com.

Zamudio, Gabriel. From Sustaining Tourism to Tourism Sustainability: An Analysis of the Voluntary Policy Instruments for Tourism Sustainability Used by the Marine Tour Operator Sector in the Galápagos Islands. Diss. Lund University, 2005. Sweden: Lund University, 2005.

Appendix

A. Survey given out on the islands.

Hola, mi nombre es Danielle Golon y soy una estudiante de la Universidad de Kansas de Los Estados Unidos. Estoy viviendo aquí y escribiendo mi tesis. My tesis es sobre los opiniones de la vida en las islas. Por favor ¿Podría completar este encuesta para mi? A pesar de que la encuesta le pide su nombre, yo no lo usaré en mi tesis. Si usted tiene alguna pregunta adicional por favor, envíeme un correo electrónico a danielle.golon@gmail.com. ¡Gracias!

Nombre: Género: Edad: Ocupación:

1. ¿Cuánto tiempo ha vivido en las Islas Galápagos y que lo trajo a las islas?

2. ¿Está usted preocupado por la calidad de la salud en las islas?

   Si___ No____ y porque?

3. ¿Está usted preocupado por la calidad del agua en las islas?

   Si___ No____ y porque?

4. ¿Cree usted que el ecoturismo o tourismo en las islas es importante?

   ¿Por qué si?

   ¿por qué no?

5. ¿Cree usted que la manera en que las personas viven en las islas, es sostenible? Podria explicarme por favor

6. En su opinión, ¿cuál es el mayor problema que afecta actualmente a las islas?

7. ¿Cuáles son otros problemas que se ve en las islas?

8. Mientras usted ha estado viviendo en las islas, cuáles han sido los mayores cambios que ha visto?

9. ¿Como cree usted que será el futuro de las islas?

10. ¿Cómo siente usted la importancia de los siguientes problemas?
    muy importante, importante, poco importante, nada importante.
    Por favor siéntase libre para explicar su respuesta.

    a. Tamaño de la población mi i pi ni
    b. Los esfuerzos de conservación en las islas mi i pi ni
    c. Turismo en las islas mi i pi ni
    d. Salud en las islas mi i pi ni
    e. La calidad del agua en las islas mi i pi ni