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Assessing the Effects of Ecotourism on the Developing World: A Galapagos Case Study

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Assessing the Effects of Ecotourism on the Developing World:

A Galapagos Case Study

San Cristobal, Galapagos Islands where tourists stay on a nature reserve tending to gardens and learning about the environmental history of the island. (Ife Adelona)
Abstract

Over the past decade, ecological tourism in the Galapagos has gained popularity. The local population of people living in the Galapagos is around 30,000; this includes, permanent residents, temporary residents, and immigrants. Tourist visitation within the 5 human inhabited islands is 200,000 people annually. The romantic idea of a pristine natural environment entices humans from across the globe to visit this World Heritage site. However, the growing attraction of this natural landmark has led to resource exploitation and the commodification of natural landscapes. In recent years, the Galapagos has developed its infrastructure in order to sustain the influx of tourists in the capital city of San Cristobal. This was both necessary and detrimental because it was a logical investment for the tourism industry, but has had negative effects on the conservation of resources on the island. This thesis examines the benefits of tourism-directed ecosystem services in comparison to the well-being of the local people. The tourism industry contributed 53 percent to the GDP in 2007 and this number continues to grow. It is understandable that the government would support such a cause. Capitalism is a driving factor for the introduction of ecotourism in economically vulnerable communities. In this thesis, I examine the history of exploitation of resources in the Galapagos, the true economic benefits and costs of ecotourism, and the political resistance enacted by local people who can no longer afford the resultant higher cost of living. In conclusion, I suggest government policy modifications, such as visitor limits and conservation laws, to combat the negative effects of ecotourism.

Keywords: Ecotourism, Darwinism, political resistance, environmental economics, Galapagos
Table of Contents

Introduction. Ecotourism: An Unsustainable Economic Venture?

Chapter 1. Ecosystem Degradation and Biodiversity Loss from First Contact: Statistical Data

Chapter 2. Historical Elements of Ecotourism and its Effects

Chapter 3. The Economics of Galapagos Ecotourism: The Haves and Have Nots

Chapter 4. Political Nature of Ecotourism and Capitalist Influence

Chapter 5. Policy Recommendations and Solutions for Sustainable Tourism
Introduction. Ecotourism: An Unsustainable Economic Venture?

Last summer, I traveled to the Galapagos and studied sustainable farming in a rainforest reserve high in the mountains. While conducting my research, I was shocked to find that the native people were not enjoying the benefits of this farm as much as tourist were. The farm was built to accommodate tourist and about 95 percent of the people working on the farm were westerners. There were only two Ecuadorian people who worked in the kitchen and English was spoken all day on the property. The Galapagos has been heavily impacted by the rise in tourist groups because it provides a boost in the economy. The reserve only provided two jobs to locals and was a business designed for ecotourists to study the environment. Throughout my thesis, I will examine ecotourism in the Galapagos Islands through a complete analysis of the history, economics, and politics surrounding the development of the archipelago. I specifically look at San Cristobal, the capital city within the volcanic archipelago (see figure 1). This was the first island Darwin sailed to while researching the origin of species. The rich history of San Cristobal has played a large role in its popularity. The island has been heavily affected by the influx of tourists. On the southern tip of the small island there is a research station, a boardwalk with many craft shops, hotels, and restaurants, and an American university that has bought beach-front property for study abroad students. San Cristobal features a port, a naval base, and an airport; essentially there are several modes for tourist to enter the city. The city boasts an enormous amount of history and meaning to conservationists, ecologists, and tourists.
Some conservationists argue that ecotourism positively encourages people to protect natural landscapes. Conservation stations are situated within government protected reserves where scientists can study the changing environment and collect data on possible ways to manage these changes. When people travel to protected areas they are more aware of the importance of environmentalism. Usually, people who are very concerned about the environment travel to biodiverse countries in order to investigate ecology and learn the history of scientific research. Scientific studies on the animals of the Galapagos helped the scientific community to recognize the various types of specialization and adaptations in species. The ecotourism industry provides an outlet for educating conservationists and scientists looking to make a positive impact. Ecotourism also supports the economy in rural areas because it provides a source of income for small business owners. It allows the Galapagos to become a part of the global market.
In contrast to these developments, ecotourism accelerates environmental degradation in order to sustain the influx of people each year. The development of businesses in an urban setting such as San Cristobal can lead to environmental degradation. The primary cause of environmental degradation is human disturbance; “a balance between economic growth and care of the environment is needed in all countries, particularly poor ones, to prevent environmental degradation which results in lost economic output and endangers health” (Abstract).¹ Large crowds of tourists limit resources, such as local grocery stores when there is more of a demand for gift shops and negatively impact the local population. Local people become marginalized in the growing economy and they are unable to maintain a simple lifestyle because living costs eventually rise.

Currently, the local people have been entangled in the politics of property ownership and are now being pushed out because of rising costs. The cost of living is not congruent with the minimum wages offered and many people are living in poverty. While it is a major privilege for foreigners to travel to the Galapagos, some pay as much as $2,000 for a 3 day stay on the island. These tourist dollars are not sustaining the population of the Galapagos, 52 percent of whom live below the poverty line (85).² Some of the local people are beginning to resist politically and protest the tourism industry. Ecological degradation, depletion of resources, and loss of land are factors that stimulate growth in a global market resulting in income disparity. These detrimental effects also raise questions about the sustainability of ecotourism.

I will pull from several sources that evaluate the history of the island and the growth of

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ecotourism. Using the Galapagos as a case study, I will examine resource exploitation and the commodification of natural landscapes, the resultant environmental impacts, and the political uprisings that develop from these initiatives. In conclusion, I suggest policy modifications, such as visitor limitations and conservation laws to combat the negative effects of ecotourism. Programs in which the government works alongside nonprofit organizations could solve the disconnection between the local population and the government. A possible alternative to marginalization could involve providing jobs in science and technology to teach local people about environmental management, instead of funneling them into the hospitality industry. There should be an equal amount of resource allocation to local people and foreigners. The government needs to be transparent with people about the interests of private companies and the money that the economy is gaining from investors. In the subsequent chapters, I will address how ecosystems are degraded by human contact and the history of ecotourism and how it came to be a billion-dollar business. I will also investigate whether the political nature of negotiating protected lands for human use is an effective measure for sustainable development and whether ecotourism can function sustainably when it is powered by capitalism.
Chapter 1. Ecosystem Degradation and Biodiversity Loss from First Contact

The Galapagos islands formed as a result of primary succession. Primary succession is the process of assembling ecosystems on barren landscapes following severe disturbances, such as volcanic eruption, that leave little biological legacy. Volcanic remains formed 13 islands, 5 of which are now inhabited by humans (13). Most environments that begin through primary succession are established by pioneer species. The rock and lava that forms the bedrock is survived by resilient plants such as algae, fungi, and lichen. In the first stages, pioneer species break down rock formations in order to form soil. Pioneer species break down the bedrock over many years by secreting acids and decomposing to thicken soil. This provides the most nutritious environment for vascular plant growth. After colonizing certain areas, the plants normalized areas on the islands to sustain larger plant life. A climax community was reached as trees grew into forests and animals were introduced to the islands. After this process was completed, the islands were able to become fully functioning ecosystems that sustained flora and fauna. Many years after the completion of this process, Darwin examined the plant species that developed in the isolation of the islands, as well as the biodiversity of species.

**Darwin, The first Ecotourist.** When Charles Darwin arrived on the island in 1859, as a naturalist interested in furthering his research in medicine, he was not expecting to set the precedent for a destructive method of environmental travel. Darwin joined Captain Robert Fitzroy on the HMS Beagle on a voyage around South America. After this 5-week visit to the Galapagos he reflected on the various species he came into contact with and the intricacies of the specimens. He found a relationship between the genetic makeup of species and their

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geographical patterns. He also found inter-island variations in birds and their physical features. In the many species of birds that he studied, some beaks were larger—more suited for big fruits, while others had smaller beaks suited for small berries. He noticed that the structure of the beak fell in line with the available foods in the region. Darwin’s discoveries of evolution and species differentiation were later widely accepted by the western world. Thus, Charles Darwin has become the face of the Galapagos and essentially popularized it as a tourist destination.

In the years since 1859, when Darwin arrived at the archipelago of the Galapagos, there have been major advances in ecological studies. Until this day, the conservation laboratories established in Darwin’s name are investigating the interactions between animal and plant species, humans, and the surrounding natural environment. This trend has influenced the growth of the ecotourism industry.

After Darwin’s voyage, many scientists from the west came to the islands to collect various specimens for research studies. They collected birds, reptiles, and insects to study genetics and adaptation. This widely varied collection of species severely affected the ecosystem’s balance within the islands. The species differences provided an equilibrium for the ecosystem. When parts of that ecosystem were removed by outside forces such as humans, the food chain and natural interactions were disturbed. The population of various animals dropped to irreversible levels and many species were close to extinction because of human disturbance. According to the Galapagos Conservancy, “the Academy of Sciences holds the record for the largest collection at 76,000 specimens”.

The islands have attracted pirates, whalers, fishermen, scientists, colonists, and tourists—all with social and economic interests that have affected the flora and fauna of the islands. The resulting ecological changes include the decimation of

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populations of birds, giant tortoises, lobsters, sea cucumbers, and whales; the arrival of more than 1,400 new species of plants and animals; and large-scale changes to the near-shore marine and highland ecosystems. The long-term effects of population degradation within the ecosystem are ultimately detrimental to the biodiversity of the island.

**The Colonial Impact.** According to its well-documented history, the Galapagos has experienced years of human contact that have been damaging to the native flora and fauna species that support biodiversity. Biodiversity is negatively affected by the destruction of habitats and subsequent extinction of species; humans play a significant role in efforts to sustain biodiversity. Colonization within the Galapagos followed shortly after Darwin’s discovery when the Ecuadorian government colonized the islands. This period spanned from 1859 to 1959 and was characterized by the establishment of the first permanent human settlements. People from the mainland of Ecuador traveled to and re-established themselves on the islands.

As the Galapagos continued to develop to suit the needs of large populations of people, biodiversity was sacrificed. In Living in the Environment 17th edition Miller argues, the greatest threats to diversity are loss of habitat, harmful invasive species, human population growth, pollution, climate change, and overexploitation. The human activity of deforestation, which is needed to support agriculture and settlement degrades the natural habitat. Colonists would bring seeds with them to plant familiar trees and they would bring animals for food which altered the native ecosystem. As more people traveled to the islands they brought harmful invasive species

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which outcompete the native plant and animal species for food, water, and other nutritional resources. These areas support birds, tortoises, and other animals who use the trees as their food source and homes. In an annual report by the United Nations scientists concluded,

“On San Cristóbal, the original *S. pedunculata* forest had been completely destroyed by 1986 with only a few trees on a steep and inaccessible cliff along a watercourse on the south side of the island remaining” (28). Forests are being cut down to serve economic purposes, but they have great ecological purposes that are constantly overlooked. Studies done by the Charles Darwin Foundation show that “the rapid reduction of Scalesia forest during the early 20th century occurred as a result of direct human destruction for wood and clearing of forests for agriculture on all the inhabited islands” (110). Forests need to be protected as ecosystems that greatly support biodiversity because they offer ecological services, such as regulating air quality and strengthening soil against erosion, that are not found anywhere else. Forests “support energy flow and chemical cycling, purify water and air, store atmospheric carbon, and provide numerous wildlife habitats” (220). The clearing of forests is not the only threat to biodiversity in San Cristobal. Invasive plants and animals were able to flourish on the islands because of evolution, competition, and dispersal patterns. These are the characteristics of the most successful invasive species. Actually, the main threat to terrestrial life on the islands is invasive species. In addition, human population growth in the capital requires more space and resources that negatively impact biodiversity.

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During the establishment of early settlers, colonists were developing an understanding of the natural ecosystem services. The Ecology and Society Journal argues that “the unique native ecosystems began to undergo transformation, especially in the humid highlands of the inhabited islands, where colonists reared livestock and grew crops on the rich volcanic soil. The number of exotic plants and animals increased dramatically, which accelerated the rates of change” (13). There were no prior developments on the island, so people built homes and businesses to sustain themselves. They had to learn the various forms of ecosystem services in order to survive on the island. Infrastructure was rarely supported with government funding. Natural capital in the form of ecosystem services has sustainable value to the survival of humans. Biodiversity within

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species is important to natural capital because, on the most basic level, it supports the natural system which is essentially, life-support; biodiverse ecosystems provide natural services. This explains why humans have been able to survive on the island for many years using the natural resources available to them.

Thus the Galapagos Islands have been exploited for many years and the success of ecotourism in recent years has provided a new model for exploitation. The ecosystem in the Galapagos was thrown off balance with the introduction of foreign species of plants and animals, an increase in human population, and habitat degradation. Early colonists almost hunted the Giant Tortoise to extinction. As shown in Figure 3 the tortoise population depleted each year after the settlement of Europeans.

Figure 3. Tortoise Population Decline. Source: Discovering Galapagos, www.discoveringgalapagos.org
The tortoise population was devastated because colonists used the reptile as a food source. Once the colonists left, they were not able to undo the damage. Giant tortoises were not reproducing fast enough. Marine plants were also devastated by human impact, they came from other countries to the port in Galapagos and altered the near-shore marine ecosystems causing problems such as eutrophication. Seaweed, algae, and other marine life that attached to boats carrying visitors to the island established themselves a keystone species. Research done by the national oceanography center estimates that “the large amount of traffic that already exists combined with the rapid expansion of the ecotourism industry increases the danger of species being transported and invasions occurring” (86). As we will see in the following chapter, ecotourism has a long history with government intervention.

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Chapter 2. Historical Elements of Ecotourism and its Effects

Ecotourism is the act of traveling with an environmental consciousness. Ecotourism has become popular in the past few years because of an increased awareness about environmental changes and human impact. Breaking the term down involves separating ecological from tourism. Ecological meaning the study of how organisms interact with their environment or the relationship between humans and their natural surroundings; the word tourism meaning to travel for pleasure or take a vacation. People have started to travel for educational purposes in order to learn about the way other cultures interact with their environment.

The Origins of Ecotourism. The term ecotourism was first coined in 1983 by an accomplished environmentalist architect and overall expert in the field of tourism. His name is Hector Ceballos-Lascurain and he was not surprised when his observations about the development of nature tourism garnered attention. He was an avid traveler and was interested in the human's interaction with nature. He defined ecotourism as “tourism that involves traveling to relatively undisturbed natural areas with the specific objective of studying, admiring, and enjoying the scenery and its wild plants and animals, as well as existing cultural aspects (both past and present) found in those areas” (91-92)\textsuperscript{13}, meaning the person who practices ecotourism has the opportunity to immerse him or herself in nature the way that most people cannot enjoy in their routine urban existences. As an architect interested in eco-design, Hector examined the approach to nature that best captured human’s experiences. Nature is perceived as freeing oneself from the confines of the civilized world and nostalgically reconnecting to the natural world. The evolution of man has forced us to separate these two entities and choose between civilized and

natural. Hector separated the act of tourism from the act of ecotourism because the latter requires one to be keenly aware of the natural environment and conservation issues that plague it.

**Ecotourism Policy: Executive Decree 607.** Going back in time to 1934, with push back from many naturalist institutions, “the government of Ecuador adopted Executive Decree 607, protecting key species, regulating collections, and controlling visiting yachts” (43). This decree aimed to curb the effects of humans on the native flora and fauna of the island. The government recognized key ecosystem services and began protecting them by enacting policy to regulate their benefits. The attempt to regulate collections was a direct way to tell whalers, fur sealers, fishermen, scientists, colonists, and tourists that they should not remove flora and fauna from the island and avoid introducing new species. Executive Decree 607 was a law that could potentially reset the balance of the ecosystems affected by travelers. This law illustrates the exclusivity of the island because it included a clause regarding visiting yachts. At the time, most visitors traveled to the island by yacht or private boat; Ecuadorians from the mainland were struggling to see their families a short distance away. The only other way to travel to the islands was by cargo ship which would visit every three months. Foreigners had money to pay taxes for their entrance to the protected islands, while Ecuadorians were denied access. Similar to past history, foreigners who visit today are elite members of western society and pay a 150-dollar tax to enter; upon entry they are only cautioned to respect the environment. Most are not conscious of the environmental impact of traveling and their influence on resource depletion, inflation, and overall environmental sustainability. The government has taken measures to combat environmental ignorance by establishing nature preserves to protect the island's natural habitats from negative influences.

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Ecotourism Policy: UNESCO. In order to enforce these protections, the Galapagos National Park (GNP) was established by the government in 1959 to preserve all areas that had not yet been colonized. The government declared 97 percent of the islands as national park space leaving the other 3 percent as human inhabited islands such as Santa Cruz, San Cristobal, and Isabela. The GNP is the oldest national park in Ecuador. The extensive history has required more responsibility for the government to protect and preserve fragile environments. In 1979 the park was declared a UNESCO World Heritage Site, which made it imperative for park rangers and managers to maintain standards and regulation set by UNESCO. People were hired in important positions such as superintendents, park rangers, and park services to support conservation efforts. Wilderness conservation efforts began around 1959 and lasted until 1998, as a response to increasing pressure from international organizations to adopt measures that would protect the Galapagos Islands from threats to its biodiversity.

The declaration of the Galapagos as a new province of Ecuador in 1973 opened the door to a wider array of social conflicts characterized by the discourse between conservation and sustainable development objectives. During this period, conservation policy was guided primarily by international scientists and influenced by foreign institutions. Economic growth encouraged immigration from mainland Ecuador, essentially an abandonment of agricultural lands as the rural population moved to new coastal villages on the islands, this led to a wave of invasive species arrival.

In 1996, the World Conservation Union adopted Hector’s definition of ecotourism with minor changes that were added in 1993. The definition that is still used today became, “environmentally responsible travel and visitation to relatively undisturbed areas, in order to enjoy, study, and appreciate nature (and any accompanying cultural features both past and
present that promotes conservation, has low negative visitor impact, and provides for beneficially active socio-economic involvement of local populations. The term adopted by the IUCN has multiple implications that we must unpack before moving forward. Notice that travel is continued for the benefit of humans to enjoy and appreciate nature. This is a solely anthropocentric view of the use of natural environments. This philosophy becomes even clearer as ecotourism develops because the wants of humans are valued over the preservation of natural environments. As mentioned in the 23rd chapter of Living in the Environment, the environment has no economic value in a neoclassical capitalist economic sense, except for the use of its resources to produce consumer goods. This view needs to be countered with environmentalist’s view, which are protective of the sustainable use value of diverse habitats. Natural environments are valued to humans as purely aesthetic and recreational. In addition to this observation, the IUCN also incorporates socio-economic improvements as a defining factor for ecotourism. This clause illustrates the capitalistic drive behind the ecotourism industry. Ecotourism must promote socio-economic growth, meaning the proceeds from tourist can allow locals to have a stake in the global market.

An example of the damages this can cause to the ecosystem can be shown through a hypothetical situation of a local businessman who offers eco-tours to see marine wildlife. There are many boating excursions provided by fisherman in the Galapagos who promote ecotourism and adventure tourism. Locals have noticed a demand in tourist who want to see marine life, while they study, enjoy, and admire the natural environment. The now eco-tourists are supporting socio-economic growth of a small business owned by a local. The boat brings these people to coral reefs surrounding the island and small inlets where they can get prime views of

blue-footed boobies, sea lions, and marine iguanas. Without concern of the environmental impact of boat emissions or conservation of the marine environment, the business grows to 8 trips a day. Ultimately, disrupting the habitat, scaring away animals, and disturbing the feeding habits and nesting sites with human presence. Unfortunately, the support of a local business ends up destroying conservation efforts. Essentially, capitalistic components of ecotourism become detrimental to sustainability and conservation.

**Industry Growth.** The term that once brought people together within nature to explore their surroundings and open their consciousness about environmental issues has been “misused and abused” according to its founder. Ecotourism is the fastest growing sector of the tourism industry growing annually by 10-15% worldwide. Governments have implemented guidelines for local communities to manage natural resources and preserve the ecosystems at risk, but there continues to be deviations. Ecotourism is consumer driven, so the damages to the natural environment are not weighed as heavily against the benefits to humans and the economy. According to Martha Honey, “international lending and aid agencies under the banner of sustainable rural development, local income generation, biodiversity…pump millions of dollars into projects with ecotourism components” (7).16 Year after year, more money is put into the development of ecotourism programs in the Galapagos. The Charles Darwin Foundation (CDF), an international scientific organization, was created with foreign funding to conduct research and to advise national authorities regarding conservation efforts and management of the islands. The CDF was able to implement successful programs to preserve native biodiversity, especially through captive breeding of endangered species and active control of invasive organisms. The CDF is currently implementing a green project that will help restore plants that have been

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impacted by invasive species. The researchers have developed a technology that uses rainwater to grow native plants in arid areas. The National Park Director hopes to develop a Green Galapagos by 2050. This means increasing the presence of native plants and restoring the ecosystem. These are some of the effective projects done by foreign institutions.

Some lawmakers argue that these financial resources are being channeled away from other projects that could contribute to more sustainable and realistic solutions to pressing social and environmental problems. According to a study done by a researcher in the Galapagos with an interest in the impact of tourism and local ideas regarding the industry, most participants did not find the economic benefits as equitable. There are illegalities that arise in the business and it threatens the overall conservation of the island.

**Results of Qualitative Analysis**

<table>
<thead>
<tr>
<th>Types of Sustainable Tourism</th>
<th>Important Factors to consider</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental</td>
<td>Tourism is currently a threat to the conservation of the island ecosystem</td>
</tr>
<tr>
<td>Environmental</td>
<td>In general, there is a lack of environmental awareness or desire for progress regardless of costs (environmental, social, economic)</td>
</tr>
<tr>
<td>Economic</td>
<td>There is greater competition for participation in tourism among small businesses, resulting in a pressure on natural resources, less economic benefits, declining quality, socio-environmental conflicts</td>
</tr>
<tr>
<td>Economic</td>
<td>Local economy highly dependent on goods and services</td>
</tr>
<tr>
<td>Economic</td>
<td>Residents perceive the profit situation as inequitable although the tourism business remains profitable.</td>
</tr>
<tr>
<td>Social</td>
<td>Migration remains promising and at the same time a factor of permanent conflict</td>
</tr>
<tr>
<td>Social</td>
<td>Permanent conflict between conservation proponents and developers. Conservationists blame residents for ecological unsustainability on populated islands. Residents argue that in the name of conservation we want to avoid socio-economic development of the local community.</td>
</tr>
</tbody>
</table>
Social Regulation and control are a difficult task given the permanent conflict that results in illegality and informality that are detrimental to the local economy and the quality of services.

Figure 3. Results of Qualitative Analysis done in the Galapagos.

In contrast to this view, some conservation programs have seemed to make big changes. Increasing social conflicts and ecological degradation led to a focus on conservation-development balance, that began with the participative elaboration and passing of the Galapagos Special Law (GSL) in 1998. The GSL became a key legal instrument that granted the province special status, including severe migratory restrictions, a new inspection and quarantine system, and a new institutional framework that enhanced ecosystem protection. The government wanted to support development on the island without hindering the ecological systems in place. Therefore, increasing public investment in the islands triggered a phase of economic development. These patterns expanded in the early 1980s and 1990s with the development of the lobster and sea cucumber fisheries, which generated a “gold-rush” scenario in the islands. It was probably the first attempt to tackle the complexity of the problems of Galapagos. The GSL created the Galapagos Marine Reserve (GMR), which is provided with an innovative participatory management regime. The GSL also included several other advanced measures intended to bridge the existing gap between conservation and development interests. A Galapagos Regional Plan was endorsed in 2003, establishing major guidelines to achieve a balance between economic growth and biodiversity conservation.

Scientists have noticed rising extinction rates of plants and animals in the largely


populated cities around the world because of habitat degradation. These extinction rates exceed the natural background extinction rate by 1000 times more for some species.\textsuperscript{19} In general terms, this means that half of the world's animal and plant species could vanish by the end of the century.\textsuperscript{20} The Galapagos could very well follow this trajectory if the government relies on tourists for economic stimulation. The influx of tourists will lead to habitat degradation and many of the endemic species will be lost. This is terrifying to think of because all species are important to the functioning of their ecosystem. The degradation of species in the plant and animal kingdom compared to an exponential growth in the human population illustrates the shifted system perpetuated by the tourism industry. The resources are over exploited, animals are threatened, and biodiversity is not a priority for the government.

In Ecotourism and Sustainable Development: Who Owns Paradise? Martha Honey critiques the promises of the ecotourism industry providing wealth to rural communities while simultaneously helping to preserve pristine environments. This conclusion is oxymoronic because the industry relies on humans’ interaction with nature, which will inevitably alter the environment. Honey sites a study that stated “tourism…is the driving force which, directly and indirectly dictates the pace and types of changes that are occurring in the islands” (105).\textsuperscript{21} The natural surroundings for the local people become a commodity that will be modified to suit the needs and interests of the economy. Honey asserts, “ecotourism is the core of many Third World Nations economic development strategies and conservation efforts. As depicted in the chart below tourism has a huge impact on a nation’s economy. These benefits exist all across the

\textsuperscript{19} Miller, \textit{Living in the Environment: Principles, Connections, and Solutions 17\textsuperscript{th} Edition}, 192.
\textsuperscript{20} Ibid., 192.
\textsuperscript{21} Honey, \textit{Ecotourism and sustainable development: Who owns paradise?}, 105.
Figure 4. Ecotourism offers aesthetic pleasures, educational resources, and recreational

So, rural communities must sacrifice their pristine environment to grow wealthy in the global market. In general, tourism is an activity that should be maintained using a balance between environment and development in biosphere reserves. In the case of Galapagos, tourism is one of the main risk factors to the conservation of biodiversity, due to the exponential increase in the number of the human population.

About 20 years ago, Costa Rica began focusing on ecological conservation, allowing it to transition from a country with one of the highest deforestation rates to one with the lowest. If implemented in the Galapagos, this could be an effective measure to combat problems faced by marine life.

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22 Ibid., 105.
Not only are the species residing in forests in danger, but the inhabitants of coral reefs are also threatened by humans. Humans may be the causes of the problem, but we also have the potential to create a solution. If we begin to talk about these issues in powerful settings, laws may be enacted and species can be protected. The US endangered species act is a perfect example of the powerful effects of communication. If the environment becomes part of the larger conversation, the people will fight for change in the way we treat our resources and ecosystems that provide these resources. In addition, the UN Millennium Ecosystem Assessment helped environmental experts identify key ecosystem services that provide numerous ecological and economic benefits. Living in the Environment also points out humans are degrading 60 percent of the earth’s natural services in various ecosystems around the world. So not only are we exploiting the economic value, in doing so we also exploit the sustainable use value. From these findings scientists have developed four-approaches to hastening the recovery of ecosystems; restoration, rehabilitation, replacement, or creating artificial ecosystems.

Chapter 3. The Economics of Galapagos Ecotourism: The Haves and Have Nots

The Galapagos as an economic system benefits from its history, its biodiversity, and its local population. The Galapagos government generates income from tourist spending, college students interested in independent study, and scientists gathering data on the changes in the environment. The well-known history of the Galapagos provides newcomers with a vested interest in learning more about the plants and animals that Darwin encountered on his voyage. Residents of the Galapagos have learned to support themselves through business ventures that serve the needs of tourists such as lodging, food, and excursions. Unfortunately, people who are not interested in the hospitality field are left to fend for themselves in an economy that doesn’t provide an outlet for them. The government’s heavy reliance on tourism has forced some people into poverty as the population in the capital city increases.

Business Capital vs. Human Capital. In the introduction of the UN Millennium Assessment on Ecosystems and Human Well-being a group of scientists concluded, “businesses interact with ecosystems and ecosystem services in two important ways: they use services and they contribute to ecosystem change.”

Businesses that develop in the capital city, San Cristobal, use the available natural resources to sustain themselves and subsequently contribute to changes in the environment. A major service that seems endless to developers is the human capital. People come to the city looking for well-paying jobs and contribute to population growth. Business contribute to ecosystem change by providing job opportunities, maintaining water accessibility, and extending the urban zone for people who want to settle in an area with easy access to the beach. Historically, modifications to the environment that are used to

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convenience humans can be potentially detrimental to future generations. For example, cutting down trees in the forest to provide agricultural opportunities will have negative impacts in the future when carbon levels rise due to urban development. Trees are needed for carbon sequestering and provide oxygen to the earth. If land is not governed sustainably, businesses will exploit natural resources for economic gain.

Nature plays a role in the Galapagos economy because the abundance of natural resources contributes to an improved quality of life. The economy is boosted by a strong natural foundation, and the Galapagos relies on funding from scientific studies, travel, and tourism. According to a study done by Bruce Epler at the Charles Darwin Foundation, from June 2005 to May 2006, the Galapagos GDP was a total of 185.8 million dollars (figure 5).²⁶

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Ultimately, the economy of this region depends on the use of tourism (53%), public income tax (38%), and non-governmental funding (5%). Ecuadorians must assess what the natural environment offers toward their economic capital in order to value it against these earnings.

An economic system has three major components, natural capital, human capital, and manufactured capital, which all come together to satisfy people's needs and wants. Natural capital is the world’s accumulation of natural resources that are dependent upon a healthy functioning environment. The way the government views the economy and compares it to that of other markets is directly related to the value they put on natural capital. Business developers are beginning to understand that the practice of sustainability is more than a quick way to boost the economy. If introduced as a profitable venture, sustainability practices can easily be adopted by local businesses. Business owners must realize that there is a social responsibility to effectively use natural capital. Ecosystem services can be classified as natural capital as they provision and regulate the natural system that sustains humans.

According to the Journal of Business ethics, “sustainability is concerned with the impact of present actions on the ecosystems, societies, and environments of the future. Such concerns should be reflected in the strategic planning of sustainable corporations” (61). The major selling point of sustainability practices is long-term goal setting and generational accessibility to natural resources.

Additionally, human capital exists in the form of labor and development opportunities. The local population must be innovative and work together to find new modes of capital accumulation. In a capitalist system, there are people who own businesses and people who work

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under business owners. Human capital is needed to keep businesses profitable and contribute to the economy. The input of the local population heightens the value of natural capital by giving it economic purpose and creating demand of modified resources. For example, tourism serves as an income for small businesses who work in travel, hospitality, and restaurants. This income contributes to the overall GDP and helps the country grow in a global market.

Ecotourism uses natural and human capital to build manufactured capital within the tourism industry; conversely the manufactured capital is created by the interaction between human capital and natural capital. The manufactured capital is the gain profited from equipment and factories which support the human and natural capital working together. Economies everywhere are struggling to manage resources effectively because economic growth is not seen as sustainable. The economy is a money operated system and it is hard to attach a dollar sign to ecosystems. Infrastructure such as hotels and gift shops are built in the capital city to support this economic endeavor; the ecosystem serves as the foundation of the development of urban areas. The Sigma project asserts, “manufactured capital enables an organization to be flexible, responsive to market or societal needs, innovative and faster in getting its products and services to market” (51).²⁹ Hotels and gift shops are types of manufactured capital needed to accommodate the tourist industry brought to the island.

These methods of economic development have been in place for many years, whalers and fisherman provided human capital in the past. Their jobs have changed with the times and they are now tour guides and excursionists. The economy which is supported by human capital, natural capital, and manufactured capital as previously discussed will be longer-lasting if each

component is sustainably maintained. Natural capital across the globe is being consumed at alarming rates, but each region has a different mode of consumption. In addition, the combination of nature and human activity allow the economy to grow because humans are able to skillfully manage natural resources.

People are no longer going to hunt in the Galapagos, but they are visiting to learn and experience the history. If people were not interested in the aesthetic pleasure, education, and recreation offered by the ecotourism industry it would not be as profitable.

The Ecuadorian government should assign value to the products they invest in for development, to change the way they operate around the environment, and to assess if ecotourism produces more than it consumes. Without an abundance of forests, there would be no clean air and without a stable economy, there would be a low-functioning society that trades most things and is dependent on other economies. There would be no innovation, no investments in new environmentally sustainable technologies, and no lobbying for environmental policy. Both trees and economies are irreplaceable and economic growth can be sustainable, if we get rid of this disastrous cycle of degradation and depletion of the environment for economic gain.

In addition, the Ecuadorian government must control pollution and resource use by balancing the population of tourists and tackling poverty within the capital. This could begin with the “shifting from the current material-flow economy to a service-flow economy”\textsuperscript{30} that supports sustainability practices, instead of the overuse of natural materials. This shift would eventually reduce the overuse of resources and waste mentality in the city. As business owners begin to change their ideology toward available outlets for profit, they can find more ways to implement efficiency. Local labor in the Galapagos is highly populated by the tourism industry.

Even though there are many jobs in the hospitality industry, poverty exists at high levels. A study done by the Galapagos Conservancy found, “78 of every 100 inhabitants are in poverty, compared to 47 of every 100 in the urban areas” (86).\textsuperscript{31} Poverty accounts for some of the environmental problems the government faces today especially with its contributions to resource use, population growth, and environmental degradation. It is much easier to offer job training when working with companies that reuse their products, and outsource them to private and public sectors which need their services. The United Nations Millennium Assessment explains, “It is in business’s self-interest to take a leadership role in reducing poverty, improving human well-being, and protecting the environment. Doing so will help secure stable and safe societies, preserve open and free markets, ensure access to critical resources, provide new product and business opportunities, and avoid abrupt social changes” (5).\textsuperscript{32}

In less-developed countries the urban population is increasing because of economic support established by a government that rewards those who live in the city and can contribute to the GDP. Many people move to the city seeking out economic opportunities in hopes of building the tourism industry. The growth of people in these areas, puts a stress on the environment in many ways such as, improper waste management, air pollution, and poverty. The amount of waste produced by city-dwellers in less-developed countries increases each day and exceeds several tons. There have been examples of sewage polluting water sources and trash broken down by incinerators contributing to air pollution. These pollutants lower the quality of life and contribute to health problems in many areas.\textsuperscript{33} Poverty in less-developed cities has reached an alarming rate. An essential part of eliminating poverty would also be elevating the status of women in impoverished places by granting the opportunity for extended education. This would also affect

the women's ability to delay the start of a family by seeking education first. As a domino effect, the fast-growing population in the capital would decline and ecological footprints would also be reduced. A graph formulated by students at the University of Brussels (Benitez-Capistros et al., 2014) illustrates these impacts and subsequent changes to the environmental structure (figure 6).

Figure 6. Drivers–Pressures–State–Impact–Responses (DPSIR) framework for the Galapagos
Islands. The black arrows represent the causal and systemic chains of events between the
different levels of the DPSIR framework and relevant interactions of environmental impacts.
Due to the driving forces of economic degradation such as tourism, immigration, and economic
growth, pressures on the environment begin to build causing problems such as decreases in water
quality, biodiversity loss, and land use changes. It is pertinent that the Ecuadorian government
make a safe transition to sustainable economics in order to find other long-term solutions to
environmental problems, sustainable development is a gateway for other possibilities. The
interaction between the various components of the economic system is similar to that of the
general societal system. The laws that govern a democracy are endorsed by the political
economy of freedom and capitalism. In this society, the government has the power to protect
public interests through law making. If the citizens of the country were to show their common
interest in the environment and sustainable economic development, more policies would be made
in their favor. Unfortunately, the corporations with the most money overshadow the interests of
the environmental public, so this leads to habitat destruction and biodiversity loss. As policies
toward environmental programs are created, a formula must be followed to enact change; such as
recognition of a problem, formulation of a solution, implementation of various solutions, and
monitoring or adjustments to experimental solutions. In a Democracy, the people govern
themselves through elections and with such complex problems happening in the environment
people will develop their own ideas about challenges with opening Pandora’s box.
Today, many of the environmental topics are controversial and people within the government are
influenced by outsiders with their own agenda. The simplest principle to live by in this situation
would be the humility principle, which is touched on in Chapter 24 of Living in the
Environment. Miller states, “our understanding of nature and how our actions affect nature is
quite limited” (640). We must recognize our effect on nature and our duty to protect it for ourselves and future generations. We cannot protect it with fences and physical boundaries, we must also enact laws and policies that exemplify our sentiments.

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Chapter 4. Political Nature of Ecotourism and Capitalist Influence

Ecotourism is a way for people to explore remote regions without leaving a carbon footprint and travel with environmentally conscious ideals, but as the tourism industry grows these essential principles have been lost to the demand of capitalism. Ecotourism is defined as “tourism directed toward exotic, often threatened, natural environments, especially to support conservation efforts and observe wildlife”.35 People want to be able to experience nature in a way that conveniences them. The International Ecotourism Society believes it is possible for people to visit unique environments without leaving a print, but while traveling to these countries I have seen very different results.

The Galapagos has been heavily impacted by the rise in tourist groups because it provides a boost in the economy. It is somewhat of a contradiction to insinuate the ability for humans to explore a natural environment without making a lasting impact. If an environment is threatened, the best option is not to open it to the public. The public presence will cause a rise in the risk of destruction. Ecotourism has become a commercial business, which has served the government in a similar way to Non-governmental organizations. It is a business that puts the needs of the private organization before those of the local community and environment. The ecotourism industry supplied 53 percent of the GDP in the Galapagos in 2007.36 This money influences the government to invest in further opportunities for the industry to grow. The return on investment in the industry is exemplified by the rise in GDP.

Ecotourism in the Galapagos fuels capitalism in the sense that it has become an industry privately owned for profit. Capitalism can be defined as “an economic and political system in

35 “Tourism” (Oxford Dictionary).
36 Bruce Epler, "Tourism, the economy, population growth, and conservation in Galapagos." Charles Darwin Foundation (2012).
which a country's trade and industry are controlled by private owners for profit, rather than by the state”.

In the Galapagos Islands, ecotourism is a fast-growing industry that supplies most of the nation’s Gross Domestic Product, affecting the island’s economic standing in the global market. In a letter to the director of the UNESCO World Heritage Center, an assembly of Galapagos residents said: “We are gravely concerned that the Government of Ecuador is pursuing a course of selling Galapagos to the highest bidders, regardless of impact to the ecosystem and regardless of the rights of the residents”. The tourist organizations are widely owned by private companies that are in competition with each other to provide the most authentic experience of exploration. The public has little control over the growth of this industry, but oversees the natural environments are used by groups like UNESCO and World Wildlife Fund (WWF).

Capitalism thrives on production, consumption, and waste. As the population increases in urban areas, continual public access to resources becomes necessary for the purpose of consumption. The Galapagos has been affected by this global urbanization movement as many people have come to the ports to find work in the tourism and hospitality business. The global market for ecotourism has been created to enforce urbanization in certain places that have sensitive ecosystems. The ecotourism industry is detrimental to the local and indigenous land use. This massive migration stems from the movement of capitalist ideologies from the developed world to inspire economic growth in other parts of the world. Capitalism is fueling a global economic market which promises economic stability, without mentioning the long term effects of the changes to landscape and culture.

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37 “Capitalism” (Oxford Dictionary).
Currently, the Ecuadorian government is heavily influenced by the corporate agenda. Economists believe that environmental awareness hinders economic growth because ecosystem services cannot be measured quantitatively. In actuality, the economy cannot grow if the resources used in the Galapagos such as clean water supply, capture fisheries, and natural climate regulation are used unsustainably. As touched on in previous chapters throughout this thesis, ecosystem services are very important to the success of the economy. Efforts to regulate the degradation of the natural environment in the islands has been combated by the government who is unsympathetic to environmental concerns. The environmental sector lost most of its government funding and the laws and regulations put in place to preserve natural landscapes were not honored. People are still pushing for support from environmental lobbying groups like Greenpeace and WWF, but the competition is hard when you are going against big corporations who have more money and can prove fast development is more profitable than sustainable development.

The local environments are maintained by farming subsidies and research programs. The farm I lived on during my stay was built to accommodate eco-tourists and about 95 percent of the people working on the farm were westerners. Some of the tourists paid 1,600 dollars to stay for a week at this reserve. The owner of this land partners with a not-for-profit (NGO) organization headquartered in Washington, D.C. that provides study abroad arrangements to community organizations. The company works within a system of U.S. based programs in developing countries to increase tourism in the region and capitalize on natural resource management. The eco-tourists are exploited for their money and free labor, as they are under the impression that the work they are doing is helping the local environment; while the land is exploited for larger monetary gain. Eco-tourists paid between 800 and 1,600 dollars per week to
experience undisturbed wildlife and natural features of a worldly novelty, under the guise of improving quality of life in a small remote farm. The eco-tourists spent their days farming in an attempt to maintain a sustainable landscape, clearing bushes with machetes and creating paths to make the natural wonders within the rainforest more accessible to tourists. Each day eco-tourists get three meals; work on a large plot of land stripping away the invasive species of plants, and take part in hikes. There was not much education provided about the history of the island or details of the community organizations relation to the private organization. These foreigners came with preconceived notions of the pristine natural landscape, and are left with these idealistic views, until they are combated by local people. While I worked on the farm, taxis were on strike and people were protesting the development of the island. The local people were attempting to challenge Western notions of sustainable development; tourists see the Galapagos as a remote island unaffected by their actions. These notions are similar to the ideas of Non-governmental organizations; they come into villages and take over local landscapes. They believe their work helps the people live in better conditions, but it is just a way of assigning themselves as managers and giving them power of the development of foreign land.

The Non-Governmental Organization (NGO) as a private company, strips people of the right to make their own choices about land development and the management of natural resources. The management of resources in sustainable development projects is left to those with power; the actions of developers are not responsive to citizen’s views or concerns. Ecuador attempted to combat these actions by establishing, “Executive Decree 16, enacted in June 2013, [giving] the government authority to sanction organizations from deviating from the objectives for which they were constituted, for engaging in politics and for interfering in public policies in a
way that contravenes internal and external security or disturbs public peace".39 This law was explicitly created to regulate civil society and NGOs to register with the state. NGOs depoliticize themselves by following a neutral position between the demands of the state and the demands of local people.

NGOs, after conducting research on the successes of local development have the ability to inform public policy makers. They navigate negotiations with the state to gain funding and permits for their presence. In a book on the anti-politics machine of development, Ferguson states,

“political parties almost never appear in the discourse of the Bank and other "development" institutions, and people are considered an undifferentiated mass, a concept which reduces political and structural causes of poverty to the level of individual "values"” (178).40

There is an effort by the private organizations to enter every country into the global market. They want to alleviate poverty in certain regions without addressing the unequal distribution of wealth and money in a capitalist system. The globalization efforts are political in nature because these efforts attempt to use power in order to decide the common fate of all. There is an unspoken clarity amongst private companies that development is good and sustainable development is even better because it is environmentally conscious. Sustainable development also brings developing countries into the global market through the exploitation of natural resources, which is heavily supported because it fuels capitalism.

The cost of living increased as more people began to visit the island; prices were inflated and deals were hard to find. Many news sources were not reporting on this issue, but during my

stay there was a taxi strike and protesters demonstrating their disappointment in the rise of living costs. On June 12th, 2015 a law was overturned by congress stating that people living on the island could earn twice the wages of those on the mainland and national park boundaries would be altered to accommodate development. The Ministry of the Environment in the Galapagos has a large interest in foreign-funded development. The new law stated the equal wages would be given to those living on the mainland and the island, even though the island as a tourist destination has a higher cost of living. The cost of living is 10 percent more, so it was a detrimental change for families wanting to stay on the island. The new law could possibly be altered to provide wages that coincide with the cost of living index, but the government hasn’t determined what that is yet. Taxis on the mainland of Ecuador are paid more than those on the Galapagos Islands. According to an article in the Galapagos Digital Newspaper, Jairo Gusqui, leader of one of the protest groups, said, “we are not only protesting because of the salaries. We are fighting for the right to continue living here,” saying that the law could harm Galápagos in other ways. Due to shipping costs gas is more expensive, so the taxi drivers are not making much of a living. In addition to the high gas prices, cars on the island are taxed because of their carbon emissions. People are upset by this because they are servicing tourists, but made to pay a higher price. Humans cannot live within an ecosystem using modern tools, such as cars, without impacting the environment. The taxation on cars does not change the overall impact of carbon dioxide emissions on the island. It is also deemed necessary for taxis to drive around the island in order to accommodate the tourists going from the shore further into the island. The capitalistic and human demands of taxi drivers disrupt the natural environment. This is a clear example of the way demands of the economy can challenge environmental ideals.

The law discussed in the newspaper article also stated that private sector employees could
gain a 75 percent subsidy from their work in the tourism industry. People are drawn to this increase in earnings and consequently their work supports the development of private industries on the island. This forces the people of the area to sacrifice their moral wants for the needs of a growing economy. Everyone must be able to service tourists; labor is centered around western benefits. This impact has also stretched across the globe with the advent of the globalization movement. In the article, Maria Elena Keegan, the owner of a tourist fishing business said, “We are appealing to UNESCO because we are worried about the law making it easier to build hotels in San Cristóbal.”41 People living on the island are in fear of the commercialization of their environment.

People who live outside of the major ports are encouraged to use their land to grow native plants and destroy invasive plants. On the nature reserve, we planted red berries that are native to the island and a major food source for tortoises. We cut down invasive mora bushes with machetes and planted tropical fruits like pineapples, oranges, and lemons. In a developing country, by giving locals freedom over their own progress, these changes can go a long way, but it mostly goes toward the private company. In the Green Dots, Pink Hearts reading, Brosius states,

“such institutions [private companies] inscribe particular forms of discourse, simultaneously creating certain possibilities and precluding others, privileging certain actors and marginalizing others” (36).42

Many private institutions center their work around the improvement of local communities. They do not interact with these communities and subsequently marginalize them with lack of knowledge on their living needs. Foreigners visit the island and support the private companies as

41 Tayler Dolven, New Ecuadorian Law Threatens the Galapagos Islands, Say Residents, VICE, June, 2015.
they are more familiar with the western ways of living. Private organizations that wish to capitalize on the growing ecotourism industry are creating possibilities for travelers to engage with the natural environment. In turn, they are forcing the local people into hospitality jobs and depleting their resources. While locals attempt to make a living with low wages and scarce resources, people are coming in everyday from other countries depleting the available resources. Both of these groups give money to the state to maintain natural flora and fauna on the island for the spectacle of tourists. It is an institution that is being controlled by forces that are not local to the islands. Essentially, it is consumer driven capitalist growth through tourist interest in the environment. The Green Dots, Pink Hearts article touches on this assessment. These underdeveloped areas are considered for potential economic development, without the consideration of the local population.

“Accompanying this is another critical dynamic: a shifting pattern of marginalization and privileges that occurs as the terms of a debate shift. Who is listened to, ignored, or regarded as disruptive, and in which contexts?” (50)\(^{43}\)

While people were protesting changes to the order of their state they were ignored by the government and mainstream media. In contrast, private organizations and their advertisers are in the government’s ear. They are able to control the outcome of the growth in the ecotourism industry because private organizations have a stake in the outcome. Capitalism affects the growth of the ecotourism industry because the labor force is altered to fit the demands of the economic system. The largest industry on the island is tourism. This requires manpower from hospitality, food, tourist guidance, and many others. Hotels, restaurants and other entertainment areas were in construction and furthered the change in reality of locals. The transformation of local

landscapes impacts the local perception of the power of industry. The reality of locals shifted once they realized someone was directing them on how to manage their land. The free market economy allowed this transaction to take place because there are no regulations on the private management of tourist destinations. The government must obey the organizations giving them money so they tell local people to preserve the natural environment.

The act of fueling capitalism and funding political agendas often are intertwined. There is a certain need to produce and gain surplus in a capitalist economy, as the definition relies on fluctuations in supply and demand. On a global scale, economic growth is illustrated by gross domestic product (GDP). As the ecotourism industry grows in the Galapagos, multiple laws have been enacted in order to involve the government in environmental affairs and economic pursuits.
Chapter 5. Policy Recommendations and Solutions for Sustainable Tourism

There are several steps that the Galapagos government must take in order to change the negative effects of tourism. Improvements in the economy of developing countries are driven by the growth of the economy. The goal of sustainable development is to utilize available resources in order to gain security (food, financial, or other) for developing countries. Galapageños, or people from the Galapagos, want an adequate quality of life and a stable economy. The economic advantages of development can bolster political support for those who want to expand the Galapagos as a tourist destination. The World Commission on Environment and Development (WCED) research states, “[sustainable development accepts] conventional notions of continued economic growth as the path to improved human welfare [which] is highly anthropocentric and dependent on the difficult-to-define concept of "needs" (66). Essentially, the WCED recognizes the government’s efforts to improve the economy through conventional methods like capitalist interest in the tourism industry. In a capitalist economy improved human welfare is a result of economic expansion. This ideology is centered around the needs of humans and does not acknowledge detrimental effects of capitalism on the environment. Sustainable development creates detrimental effects due to the capitalist distribution of natural resources and human capital within local communities. In a case such as local people living in the Galapagos Islands, there are large investments in the development of the tourism industry. Subsequently, local people are forced to assimilate to demands of economy or they will be displaced. After investments were made into the development sector, there was an increased Gross Domestic Product, but local people saw none of those benefits. The ecotourism industry must consider the

future of local populations. In addition to considering the financial health and economic
development of local people, in order to be truly sustainable, ecosystems and biodiversity must
be maintained to ensure a healthy environment.

The habitat of the Galapagos is fragile and local residents and government are the best
people to make sure natural resources are preserved. The amenities built by foreign development
countries make it convenient for tourist to have access to resources like they have in their home
country, but it has changed the landscape and altered resource distribution. When private
cOMPANIES come to the Galapagos hoping to build resorts and hotel accommodations, resources
such as clean water and taxi transportation are stretched to benefit tourists. The tourism industry
has globalization the western world view that nature is at our disposal. Resources should be
redistributed to accommodate locals and tourists equally to ensure local vitality and sustainability
for future growth.

The involvement of private and foreign businesses influences the structure of the
economy in this society. The island is managed by foreign and local environmental industries.
These outside forces create the reality of people looking for work on the island. The people on
the island have to select jobs that fit the demand, which means the economic balance of supply
and demand decides their ability to make a good living. An overwhelming number of people are
studying hospitality management because this is the major industry in their immediate
environment. Some people forego secondary and higher education altogether to work in the
restaurant and hotel industry since there is a higher supply of these jobs. Essentially, the island is
stripped of its history and culture, being reduced to resources for foreign exploitation. The
Galapagos Islands serve as a resource for the government, environmental organizations, tourists,
and local people.
Tourism in the Galapagos has grown considerably in the last few decades. From approximately 4000 visitors in 1970, the number of tourists has increased to roughly 60,000 per year. According to an analysis by the Ministry of Environment, a total of 215,691 tourists entered Galapagos during 2014, up 6% from 2013. Of these visitors, 70% (149,997) were from foreign countries. Of course, as the number of visitors increase, preservation of the islands becomes necessary. Increased attention on the Galapagos Islands, through numerous private and scientific trips, has led to the first steps towards conserving the multiple islands. In 1966, an analysis of the Galapagos situation, The Snow and Grimwood Report, recommended that the Government establish a National Park Service and, in 1968, the Government of Ecuador appointed the first two park conservation officers, Juan Black and Jose Villa. These conservation officers were the first government-appointed preservationists whose duty was to protect the nature of the islands.

Policy recommendations facing the Galapagos moving forward, include those related to biodiversity preservation, economic equality, and political involvement. The biodiverse environment of the Galapagos requires protection from private developments in order to be preserved. It is the government’s duty to protect biodiversity from destruction as put forth by the Environment and Development Committees of Ecuador. The government should implement a cap on the number of tourism related business developments that disrupt natural forest patterns or animal nesting grounds. When ecosystems are protected by law, private developers will be legally forced to comply with practices of sustainability and biodiversity protection. If a business decides to leave the island for other ventures, the land will not be wasted and trade agreements can begin between tourism companies. This regulation process will exemplify the Galapagos as a

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46 Epler, "Tourism, the economy, population growth, and conservation in Galapagos."
place to invest in for the future. A cap on the amount of land sold to these development projects will boost the market as demand rises and supply is limited.

Economic equality can be achieved through provisioning of the job sector by the government. The jobs available in the Galapagos are heavily reliant on business owners who cater to the various interests of tourists. The government should provide for jobs and invest in education for Ecuadorians who are studying biology, ecology, marine science, and environmental science. Education in these fields should be subsidized by the government for local people, to maximize their job opportunities. Galapageños will then be able to make more money and provide research for the future. Subsidizing programs such as science education will be an investment in the protection of the environment for years to come. People born and raised on the island will have a meaningful connection to the island and conservation techniques they develop through studying the environment will strengthen that bond to their homeland.

Additionally, educated residents will have more of an interest in the political changes. Positions in the government should be held for local residents. This will allow people to voice their opinion and build a true democracy where everyone is represented. The government must begin to recognize that ecotourism, within the framework of sustainable tourism, can promote job creation and education. The resulting solution has the potential to improve livelihoods in local communities, achieve the Millennium Development Goals (MDGs) as well as contribute to the sustainable development and protection of biodiversity by encouraging communities and tourists to preserve natural and cultural heritage. The United World Tourism Organization underlines the importance of establishing national policies and investments for promoting ecotourism, and encourages governments to use it as a tool for poverty alleviation and environmental protection. It calls on international financial institutions and the UN system to
provide adequate support for programs relating to ecotourism and on strengthened partnerships for providing adequate capacity-building and training for people involved in the sector.

The ecotourism industry has significantly depleted resources around the globe because it is driven by an inequitable capitalist free market economy. Organizations infiltrate developing countries and exploit the land and resources to suit the needs of tourists. Tourists come into the environment, consume the resources, produce waste, and leave nothing but their payment for this unique experience. This exchange is detrimental to local living conditions, the environment, and local economy. A new model must be developed to benefit the environment and provide a genuine non-exploitative experience for tourists. It is the role of government, private industry, and local people to work together to develop this new model that will benefit indigenous culture and sustain resources for future generations.
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