CASE STUDY ON THE GALAPAGOS ISLANDS: BALANCE FOR BIODIVERSITY & MIGRATION

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INTRODUCTION

In June 2015, inhabitants of the Santa Cruz and San Cristóbal islands went on a provincial strike against the Ecuadorian government.¹ This strike consisted of thousands of Galapagos residents who were opposed to the recent policies that were being proposed.² One of these policies included the new Special Law of the Galapagos.³ On June 10, 2015, the assembly voted 88-35 in favor of the new law with President Correa vetoing a few provisions.⁴ Subsequently, the new law became effective on June 11, 2015.⁵ As a result of the new law’s passage, there was an immense backlash among the Galapaeanos.⁶ There were plenty of concerns and uncertainty regarding the future of their land. These concerns were best expressed by one of the leaders of the protest, Jairo Gusqui.⁷ In an interview with a local reporter, he discussed what this entire protest was all about: (1) “We are fighting for the right to continue living here, (2) We are worried about our conservation, (3) We

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² Id.
³ Id.
⁶ Id.
⁷ See id.
are worried about big investors building on areas that belong to the national park.” Following the passage of this act, on June 12, 2015, the hashtag “SOS Galapagos” began trending worldwide. An online petition began circulating around social media in order to receive support in having the new law repealed. Part of the petition stated the following: “The government of Ecuador is pursuing a course of selling Galápagos to the highest bidders, regardless of impact on the ecosystem and regardless of the rights of the residents of the Archipelago.” Months after circulation, the petition had received thousands of signatures. Despite such support, the law currently stands while many members of the Galapagos community are taking this law to the Ecuadorian Court to challenge its constitutionality.

In this comment, the author will examine the Special Organic Law of the Galapagos. To better understand the impacts of the law, the comment will examine some of the more notable provisions of the 1998 version, and a few of the amended changes in 2015. Throughout this comment, themes such as migration and preserving biodiversity will be discussed. As we will see, this notion of balancing human needs and ecosystem in the islands is not always straight-forward.

**The Galapagos Islands**

Often referred to as a museum of evolution, the Galapagos Islands has a reputation for being one of the most pristine and natural habitats in the world. 5 million years ago, these islands were formed through constant volcanic activity, with the first islands of San Cristóbal and

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8 *Id.*


10 See *id*.

11 *Id.*

12 *Id.*


Española being created.\textsuperscript{15} Today, the Galapagos stretches approximately 8,000 km with more than 19 main islands.\textsuperscript{16}

Prior to the 17\textsuperscript{th} century, the Galapagos Islands were unknown.\textsuperscript{17} It was not until 1535 that the islands were first discovered by the Bishop of Panama, Tomás de Berlanga.\textsuperscript{18} In his journey from Panama to Peru, his ship drifted to these mysterious islands where he encountered the giant tortoises around the area.\textsuperscript{19} Interestingly enough, this encounter is what led these islands to be dubbed “Galapagos.”\textsuperscript{20} After his inadvertent trip to the islands, Tomás de Berlanga reported these findings to the King of Spain, King Charles V. Subsequently, leading Spain to have nominal ownership of these islands for the next hundred years.\textsuperscript{21}

Over the course of the 18\textsuperscript{th} century, these islands became more known to buccaneers, fisherman, and pirates who were in the business of whaling and hunting.\textsuperscript{22} As a result, some of this human interaction played a pivotal role in the decline of various species within the islands.\textsuperscript{23} For example, it was estimated that the population of giant tortoises declined by 200,000 prior to the 19\textsuperscript{th} century.\textsuperscript{24} This in part was due to hunting but also the introduction of invasive species that consumed these herbivores food.\textsuperscript{25} Moreover, another specie that suffered a blow were seals due to their luxurious fur.\textsuperscript{26} Combining factors such as hunting and the introduction of invasive species led to the disastrous consequence of having species such as the giant tortoise and seals close to the brink of extinction. Not only that, but these problems have been reoccurring themes, which we will discuss in a later portion of this comment.

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\item \textsuperscript{15} Geologic History, GALAPAGOS CONSERVANCY (Jan. 16, 2016), http://www.galapagos.org/about_galapagos/about-galapagos/history/geologic-history.
\item \textsuperscript{16} Melanie Martha, Tourism and the Galápagos Islands: Examining the Relationship Between Ecotourism and the Local Population 4 (2012).
\item \textsuperscript{17} The Galápagos Islands, LONELY PLANET (Jan. 16, 2016), http://www.lonelyplanet.com/ecuador/the-galapagos-islands/history.
\item \textsuperscript{18} Id.
\item \textsuperscript{19} Id.
\item \textsuperscript{21} Id.
\item \textsuperscript{22} Id.
\item \textsuperscript{23} Id.
\item \textsuperscript{24} Id.
\item \textsuperscript{25} Id.
\item \textsuperscript{26} Id.
\end{itemize}
The year of 1832 marked the change of the Galapagos, due to Spain’s failure to enforce their claim to these lands, the two-year-old Republic of Ecuador annexed these islands and later dubbed them the “Archipelago.”27 Subsequently, human settlements began to grow around the parts of San Cristóbal and Floreana.28 However, this was without consequence as the preservation of wildlife continued to become a struggle.29 These problems have been existent now for 4 decades. After realizing the need to preserve the wildlife in these islands, there was a call to action. In 1934, the Ecuadorian government declared the Galapagos a wildlife sanctuary.30 Following this action, in 1959, the government enhanced the Galapagos status as a wildlife sanctuary by designating 97% of the islands as a national park and the other 3% for human settlement.31 These boundaries were not established until 1968.32

In 1978, the Galapagos received greater recognition when the United Nations and Education and Scientific and Cultural Organization (UNESCO) enlisted it as a World Heritage site,33 essentially it means that the Galapagos Islands are considered to bear an exceptional testimony to a cultural tradition or civilization.34 Further, the Galapagos Islands are considered to have a natural phenomenon or exceptional natural beauty and aesthetic importance.35 The Islands contain both important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation.36 As such, protection of these islands were widen at this time, but there were more issues to resolve. Within the next 2 decades, the problems of human population, invasive species continued to grow so much so that by 1995, there was talk about placing the Galapagos

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27 The Galápagos Islands, supra note 17.
28 Id.
29 See id.
30 Id.
31 Id.
32 A Brief History of the Galapagos, supra note 20.
35 Id.
36 Id.
Islands as a World Heritage Site in danger list. In an effort to reduce some of these problems, groups such as World Wildlife Fund and Group Nucleo pushed for legislation which ultimately led to the Special Law of the Galapagos of 1998.

THE SPECIAL LAW OF THE GALAPAGOS 1998

On March 6, 1998, Ecuadorian President Fabián Alarcón signed the Special Regime Law for the Preservation and Sustainable Development of the Province of the Galapagos. Often referred to as the Special Law, this law contains 73 provisions that aim in furthering the conservation of the Galapagos. The goal of this law is best exemplified by the preamble which states in part the following:

“Therefore, the Ecuadorian State assumed before all the nations of the world the unavoidable and historical commitment to preserve Galapagos... Archipelago for present and future generations... The Ecuadorian state is bound to endure the preservation of national Heritage Sites in Natural, Land and Marine Areas, as well as the developmental of surrounding human settlements and to adopt legal measures aimed at fostering a harmonic relationship with the inhabitants of the province of Galapagos.”

Out of the 73 provisions that are enlisted in this law, the most notable ones include those establishing boundaries within the area, controlling the flux of migration, limiting commercial fishing, setting criteria for tourism construction and defining the authorities that are

38 Id. at 71.
39 Id.
41 Que es deber del Estado ecuatoriano velar por la conservación del Patrimonio Nacional de Areas Naturales, Terrestres y Marítimas, así como por el desarrollo de los asentamientos humanos circunvecinos; y adoptar las medidas legales orientadas a propiciar una relación armónica con los habitantes establecidos en la provincia de Galápagos; Que las zonas terrestres y marinas y los asentamientos humanos de la provincia de Galápagos están interconectados, de tal forma que su conservación y desarrollo sustentable depende del manejo ambiental de los tres componentes; Que es política del Estado ecuatoriano, proteger y conservar los ecosistemas componentes; Que es política del Estado ecuatoriano, proteger y conservar los ecosistemas terrestres y marinos de la provincia de Galápagos, su excepcional diversidad biológica y la integridad y funcionalidad de los particulares procesos ecológicos y evolutivos para el beneficio de la humanidad, las poblaciones locales, la ciencia y la educación;
responsible with enforcing the law.\textsuperscript{42} Article 3 of the law references El Instituto Nacional Galapagos (INGALA) as the governing authority.\textsuperscript{43} This authority is composed of several members consisting of: The Ministry of the Environment, Ministry of Public Finances and Credit, Ministry of National Defense, Ministry of Tourism, Ministry of Foreign trade, Executive Director of INEFAN, the Perfect Galapagos Province, a representative of the municipalities association of Galapagos, President of tourism of Galapagos, President of the committee of the Environment and Natural Defense, and the Governor of the Galapagos.\textsuperscript{44} As we will see later on, due to different bodies of INGALA, enforcement of the law becomes complicated and thus in part ineffective in some aspect.

A. THE MARINA & COMMERCIAL FISHING

Under Article 5 of the Special Law of the Galapagos, the Galapagos Archipelago marina boundaries are extended from 5 miles to 40 miles from the baseline.\textsuperscript{45} This placed a strict limitation for foreigners to conduct large-scale fishing within these areas.\textsuperscript{46} In September 2001, Ecuador’s Constitutional Court upheld the Galapagos Special Law after a challenge to the law’s constitutionality by the Association of Industrial Tuna Fishermen (ATUNEC) with regards to

\textsuperscript{43} Id. at tit. I, art. 1.
\textsuperscript{44} Id. at tit I., ch. 1, art. 3-5.
\textsuperscript{45} Id. tit. I, art. 5 (Art. 39.- PRINCIPIOS PARA LA ACTIVIDAD PESQUERA) Las actividades pesqueras en la Reserva Marina de la provincia de Galápagos, se someterán a los principios de conservación, manejo adaptativo y lineamientos para la utilización sustentable de los recursos hidrobiológicos, contenidos en esta Ley y el correspondiente Plan de Manejo.; (Art. 40.- ZONIFICACION PESQUERA) El Plan de Manejo de la Reserva Marina de la provincia de Galápagos definirá la zonificación de uso y las actividades pesqueras permitidas que deberán proteger a las especies vulnerables y frágiles de los ecosistemas insulares, estableciendo medidas, controles y mecanismos que garanticen la conservación de los ecosistemas y el uso sustentable de los recursos, según lo que dispone esta Ley.; (Art Art. 42.- PESCA ARTESANAL) En el área de la Reserva Marina de la provincia de Galápagos está permitida únicamente la pesca artesanal, definida en el correspondiente Plan de Manejo. En dicho plan se permitirá el reemplazo de embarcaciones menores por otras de mayor capacidad, tonelaje y artes de pesca, a fin de garantizar la optimización de la actividad pesquera del pescador artesanal de Galápagos. Este reglamento se elaborará a base del último censo pesquero. Los permisos de pesca serán otorgados por embarcación y podrán ser transferibles de conformidad con el respectivo Reglamento.

\textsuperscript{46} Id.
granting exclusive rights to the locals for fishing based on Article 40. However, despite the law still remaining in place, an issue that presents itself not only in this area, but the overall framework of the law is enforcement. In March 2005, there was a raid, resulting in 7,000 sea cucumbers being illegally harvested in Fernandina Island while another 100,000 were captured on Isabela. Moreover, the popular demand for shark-fin in the Asian market has prompted shark hunting. It is estimated that at least 5,000 coastal pelagic sharks were killed in the Galapagos Marine Reserve between 1997 and 2007. More than half of these fins were confiscated at sea, 19% at landing sites, and 14% at airports and in cargo ships.

B. IS THE GALAPAGOS CAPABLE OF SUSTAINING TODAY’S HUMAN SETTLEMENT?

Once an unknown island, the Galapagos has become subject to this ongoing trouble of conservation. In large part it is due to population growth. As stated previously, the Galapagos Islands designate 97% of the land as a national park, whereas the other 3% is utilized for human settlement. As such, there are limitations placed as to how many individuals may inhabit the area. The only foreseeable alternative is if the boundaries are redefined in which case less of the islands would be designated for national park and it will have the consequence of affecting various ecosystems.

Previously in 1950, the population of the Galapagos was estimated around 1,346. Subsequently, this number increased to 2,391 in 1962.

47 Dee Boersman et al. Living Laboratory in Peril, Gale Academic One File (May 13, 2005).
48 Id.
49 Id.
51 Id.
52 Id.
53 A Brief History of the Galapagos, supra note 20.
54 Id.
55 The Galápagos Islands, supra note 17.
56 See id.
57 See id.
The population proceeded to almost double each decade that by 1990 the population had reached 9,785 inhabitants. Part of the reason for such an increase can be attributed to the development of the eco-tourism business, the availability of more transient transportation which allowed more foreigners to travel to Ecuador and the economic opportunity that presented itself for Ecuadorians to enter the eco-tourism business. Signs of a developing tourism started as early as 1970 when Ecuador began to have charter cruises arrive to the Galapagos. What originally started as 5 cruises at that time turned out to increase to 42 by 1980. Land tourism and eco-tourism continued to prosper due to the aesthetics of the Galapagos, which in turn has brought larger volumes of individuals coming in and out of the islands, however this presented a problem as population growth became unstable.

With the passage of the Special Law of the Galapagos, stricter policies went into effect to control population growth. Pursuant to Article 25, individuals were placed into three different categories: permanent residents, temporary residents and tourists. Article 26 of the law defines a permanent resident as one who is naturally born in the province of the Galapagos, has resided in the province for at least 5 years prior to 1998 or a child of a natural parent born in the Galapagos. Any individual who resides in the Galapagos and does not meet one of these criteria are considered to be a temporary resident within the

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59 Id.
60 Id.
61 Id.
63 Id.
64 Id.
66 See *Id.* at tit. II, art. 25 (Art. 25.CATEGORIAS DE RESIDENCIA) Para efectos de esta Ley se establecen tres categorías de residencia: Residentes Permanentes; 2. Residentes Temporales; y, 3. Turistas y Transeúntes.
67 *Id.* at tit II, art. 26. (Art. 26.- RESIDENTES PERMANENTES) Se reconocerá la residencia permanente a: 1. Los nacidos en la provincia de Galápagos, hijos de padre o madre que sean residentes permanentes; 2. Los ecuatorianos o extranjeros que tengan legalizada su permanencia en el país, que mantengan relación conyugal o unión de hecho reconocida conforme a la Ley o los hijos de un residente permanente en la provincia de Galápagos; y, 3. Los ecuatorianos o extranjeros que tengan legalizada su permanencia en el país, que a la fecha de expedición de esta ley, residan por más de cinco años continuos en la provincia de Galápagos.
meaning of Article 27. As such, temporary residents have to justify their stay through their labor skills while permanent residents have the benefit of working anywhere and engaging in the business of selling products. Meanwhile, individuals that do not fall under these two spectrums are deemed tourists for purposes of Article 29. Being a tourist, individuals are limited to a 90-day stay in the island and can renew their stay for one time so long as their purpose is tourism. In addition, tourists are required to obtain Transit Control Cards from INGALA so that they can keep track of who is coming in and out of the provinces. Unlike a permanent resident or temporary resident, tourists cannot be involved in any business transactions with respect to selling of goods.

68 Id. at tit II, art. 27. (Art. 27.- RESIDENTES TEMPORALES) Se reconocerá la residencia temporal a: 1. Las personas que cumplan dentro de la provincia funciones públicas, actividades castrenses, culturales, académicas, técnicas, deportivas, científicas, profesionales y religiosas, mientras dure el ejercicio de los correspondientes cargos o actividades; 2. Las personas que realicen actividades laborales en relación de dependencia por un tiempo de hasta un año, prorrogable por lapsos iguales. Cumplidos los periodos de los contratos caduca la residencia temporal, de conformidad con el Reglamento respectivo; y, 3. El cónyuge o conviviente bajo unión de hecho en los términos de las leyes pertinentes, y los hijos de un residente temporal mientras dure la residencia de su cónyuge, conviviente o padres.

69 Id. at tit II, art. 27.

70 Id. at tit II, art 29. (Art. 29.- TURISTAS Y TRANSEUNTES) En aplicación del artículo 34 de la Ley Especial de Desarrollo Turístico, para efectos de esta Ley, turistas son los visitantes del Patrimonio de Areas Protegidas y de las zonas pobladas de la provincia de Galápagos. Transeúntes son las personas naturales que se encuentran de tránsito en la provincia de Galápagos y no pertenecen a otra de las categorías establecidas dentro del Régimen de residencia de esta Ley.

71 Id. at tit II, art. 30. (Art. 30.- REQUISITOS PARA LOS TURISTAS Y TRANSEUNTES) Las personas naturales que viajen en calidad de turistas o se encuentren de tránsito en la provincia de Galápagos no podrán ejercer ninguna actividad lucrativa y solo podrán permanecer un plazo máximo de 90 días en el año en el territorio provincial, renovable excepcionalmente por una sola vez, de conformidad con las disposiciones que para este efecto se establecerán en el Reglamento.

72 Id. at tit II, art. 31. (Art. 31.- REQUISITOS PARA LOS TURISTAS Y TRANSEUNTES) Las personas naturales que viajen en calidad de turistas o transeúntes a la provincia de Galápagos deberán: 1. Obtener la Tarjeta de Control Tránsito emitida por el INGALA, que será distribuida a través de las oficinas de turismo, agencias de viajes, despacho de las líneas aéreas u otras oficinas de transporte de pasajeros; y, 2. Obtener pasaje aéreo o marítimo nacional, personal e intransferible, de ida y regreso entre el continente y las Islas.

73 Id.
After the passage of the Special Law, the exponential growth of the population began to decline somewhat. A study indicated that population growth decrease to 5.04% annually between the years of 1998 and 2001.\textsuperscript{74} This is slightly less than the 6% growth-rate it had in past years.\textsuperscript{75} Despite this decrease, the population however has not stopped growing.\textsuperscript{76} Another study found that from 1999 to 2005, population increased by 60%.\textsuperscript{77} In recent years, even stricter measures have been imposed as issues of illegal immigration came to light. In 2007, the director of INGALA estimated that 7,000 people were living illegally on the islands.\textsuperscript{78} Due to illegal immigrants coming into the provinces, the Ecuadorian government subsequently implemented a policy known as “Zero people on irregular status in Galapagos.”\textsuperscript{79} This new policy placed a higher emphasis on a system of Transit Control Cards for visitors, a more transparent process for granting permanent and temporary residency status, and penalties such as a 1 year ban from entering Galapagos for those whose status in Galapagos is found to be “irregular.”\textsuperscript{80} In 2009, it was reported that 263 irregular residents were returned to the mainland, 694 were informed of their irregular status, and 257 were banned from returning to Galapagos for a period of one year.\textsuperscript{81}

Taking these statistics into account, a question that is often raised is in what ways can the government mitigate illegal immigration in the absence of transit cards. The resolution by some commentators is education.\textsuperscript{82} The underlying rationale behind this theory is that by locals having a solid education, it can drive those emigrating from the


\textsuperscript{75} Suzi Kerr et. al, Migration and Environment in the Galapagos: An analysis of economic and policy incentives driving migration, potential impacts from migration control, and potential policies to reduce migration pressure, Motu Economic and Public Policy Research (2004).

\textsuperscript{76} See Id.

\textsuperscript{77} Marianita Leon and Geovanny Salazar, Population and Migration in Galapagos, 44, 46 (2012).


\textsuperscript{79} People Today, GALAPAGOS CONSERVANCY (Oct. 17, 2015), http://www.galapagos.org/about_galapagos/people-today.

\textsuperscript{80} Id.

\textsuperscript{81} Id.

\textsuperscript{82} Carl Stepath, Environmental Education in the Galapagos: Where do we go from here? (2009).
mainland out by eliminating job opportunities. The more educated and versed locals are, the more qualified applicants there are for jobs such as tourist guides.

Currently, the Galapagos has approximately 5,200 primary and secondary students through a network of 20 public and private schools on the islands of Santa Cruz, San Cristóbal, Isabela, and Floreana. While there are some facilities provided, the education system is often criticized for being below par to the mainland. Part of the reason is often attributed to a weak curriculum base, inexperience teachers, isolation of the Galapagos archipelago, lack of school funding, and the inadequacy of school infrastructure. As a result of these flaws, the door is open for immigrants from the mainland to compete with locals for job positions and to some extent have an upper hand given the amount of knowledge they possess. Back in 1998, the government attempted to remedy this with a reform of the education system in the Galapagos under the Special Law. Pursuant to Article 32, the law provided for more teacher evaluations, increase teacher pay, funding for more infrastructures, more scholarship opportunities, loans for both teachers and students, and a shift of education focus to the Galapagos and conservation practices. While the Special Law provided for such

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83 See id.
84 See id.
86 Id.
87 Id.
88 See id.
90 Id. at tit. II, art 32 (Art. 32.- PRINCIPIOS DEL REGIMEN EDUCATIVO Y DE LA CAPACITACION) El Régimen Educativo y de la Capacitación en la provincia de Galápagos estará sometido a los siguientes criterios generales: a) El Estado priorizará la capacitación dirigida a las especiales necesidades de la Región Insular en todos los niveles; b) La aplicación de la institucionalización de la Reforma Educativa Integral que incorpore la preservación y conservación ambiental y las características socioeconómicas de la provincia; c) La construcción, tecnificación, mejoramiento y equipamiento de las instituciones educativas de la provincia de Galápagos; y, d) El equiparamiento en las remuneraciones del Magisterio Insular frente a los demás organismos del sector público de la provincia de Galápagos, en conformidad con lo que dispone esta Ley. Los funcionarios de todas las entidades del régimen dependiente nombradas, designadas o contratadas para el ejercicio de funciones en la provincia de Galápagos aprobarán, durante el primer año de funciones, en un curso de capacitación sobre conservación de recursos naturales, protección ambiental y desarrollo sustentable
meaningful reform, many of ideas did not begin to take form until 2008 when the idea of education reform was renewed. At that point, the Ministry of Education implemented a new national curriculum with a strong emphasis on sustainable development, the indigenous concept of sumak kawsay (achieving a harmonious relationship between human beings and their surroundings) and higher-level learning. These recent steps taken by the Ministry of Education show some promise with regards to conservation efforts, but it does not completely resolve the population issue that continues to persist. The 2010 Ecuadorian National Census reports that 25,124 people reside in the Galapagos as of today. It is projected that unless more steps are taken, the population could reach 44,000 by 2020 and 72,000 by 2030.

See also Id. at tit, II, art 34 (Art. 34. Art. 34.- REFORMA EDUCATIVA INTEGRAL) La Reforma Educativa Integral será aprobada por el Ministerio de Educación y Cultura y su formulación estará a cargo de la Dirección Provincial de Educación de Galápagos y el Magisterio Insular formalmente organizado. Para tal efecto contará con la participación de los sectores públicos y privados involucrados. La Reforma Educativa Integral, estará sometida a un permanente seguimiento y evaluación, cuyos resultados los servirán de base para su reformulación y actualización. See also Art. 35.- ACTIVIDADES EXTRACURRICULARES PARA EL MAGISTERIO INSULAR

Los profesionales de la educación que laboren en la provincia de Galápagos, desarrollarán actividades extracurriculares tendientes a la protección del medio ambiente, tales como producción de materiales didácticos de apoyo, organización de grupos de apoyo, organización de grupos ecológicos, culturales, sociales y deportivos, talleres, seminarios de capacitación profesional, actividades de recuperación pedagógicas, procurando fomentar actividades favorables para la comunidad y resguardo de la naturaleza. Los profesionales docentes de la provincia de Galápagos se someterán a procesos evaluativos que permitan garantizar la calidad de educación y el cabal cumplimiento de las actividades complementarias establecidas en el inciso anterior. En virtud de lo establecido en este artículo, incrementarse en dos salarios mínimos vitales el sueldo básico profesional para el magisterio de la provincia de Galápagos, adicionales al establecido en la Leyde Escalafón del Magisterio Nacional. El Ministerio de Finanzas asignará los fondos necesarios para cubrir el correspondiente presupuesto.

91 Education, supra note 85.
92 Id.
95 Mercedes Alvaro, Ecuador reworking Galapagos-protection law, EcoAmericas.com.
C. TOURISM, EXPENSES & INFRASTRUCTURE EXPANSION

In 1970, it was estimated that the number of tourists visiting the Galapagos was at 5,000.\textsuperscript{96} Over the course of the following decades, the growth in eco-tourism attracted a significant amount of people that by the period of 1990-2009, the number of tourists quadrupled.\textsuperscript{97} In a recent 2010 study, the total tourist population was reported to be at 173,977.\textsuperscript{98} This drastic increase in the last 40 years serves to illustrate the rapid growth of tourism.\textsuperscript{99} Today, the tourist sector serves as the main drive of the economic growth in the islands, which account for about two-thirds of the gross domestic product of the Galapagos.\textsuperscript{100} Within the Galapagos, there are now at least 65 hotels in the archipelago that offer 755 rooms.\textsuperscript{101} As a result of these expansions, comes this concern of how much can the tourism business expand before it materially interferes with the ecosystems nearby?

The 1998 Special Law of the Galapagos addressed some limits to new tourists’ infrastructures.\textsuperscript{102} Article 49 stated that the construction of such infrastructures be authorized by INGALA and such jobs be delegated to permanent residents.\textsuperscript{103} In addition, the law required that

\begin{footnotesize}
\begin{enumerate}
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\item Id.
\item Marianita Leon and Geovanny Salazar, Population and Migration in Galapagos, 44, 47 (2012).
\item See id.
\item Julia Novy, supra note at 73.
\item Id.
\item Id. tit. IV, ch. 2 art 49 [La construcción de nueva infraestructura turística, requerirá la autorización del Consejo del INGALA que será otorgada únicamente a residentes permanentes y además deberá: a) Producir beneficios locales;b) Garantizar la calidad de los servicios turísticos conforme al Reglamento Especial de Turismo en Areas Naturales Protegidas; c) Garantizar que el impacto a los ecosistemas de la provincia de Galápagos sea mínimo, mediante el correspondiente estudio de impacto ambiental y plan de manejo; y, d) Establecerse en las zonas expresamente permitidas dentro de la planificación y zonificación según conste en los correspondientes Planes de Manejo, Plan Regional y normas ambientales.; see also Art. 48.- FOMENTO DEL TURISMO CON PARTICIPACION DE LA COMUNIDAD LOCAL Para efectos de asesorar al Parque Nacional Galápagos y al Ministerio de Turismo, en la planificación y coordinación de las actividades turísticas con participación de la comunidad local, se conforma la Junta Consultiva con instituciones públicas y privadas de la provincia de Galápagos. Su integración y funcionamiento se establecerá en el Reglamento General de Aplicación de esta Ley y en los respectivos Planes de Manejo. Todas las
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such construction be made in furtherance of local benefits, comply with regulations of tourism in natural areas that are protected, guarantee minimal impacts towards the Galapagos ecosystem, and be established in areas that are expressly permitted.\textsuperscript{104} Article 49 arguably provided this type of safeguard that had some oversight over construction and allowed permanent residents some equal footing in terms of jobs. However, the recent 2015 version of the Special Law changed all that when the article 49 provision was stricken.\textsuperscript{105} As a result, the locals became concerned on how infrastructures will be managed and the impacts that new development would pose to the Galapagos.\textsuperscript{106} In addition, the concern of locals competing for jobs in the market due to more foreign companies being involved in eco-tourism was another problem cited.\textsuperscript{107}

In response to these ongoing concerns, the ministry of Eco-Tourism published an article explaining life after the Special Law of 2015.\textsuperscript{108} The Ministry maintained that the law will not change the pre-requisite condition made for infrastructures.\textsuperscript{109} Citing as their authority, the Ministry of Eco-tourism referenced Article 72 of the new Special Law which provides the following: “Any new infrastructure cannot not
exceed 35 rooms / maximum capacity of accommodation is for 70 people. The size of each building will be determined based on a detailed and careful study.” This must be approved by the Governing Council of the Special Regime of the Province of Galapagos.”

Despite the Ministry responding and attempting to clarify, it has not affected the public’s view of the Galapagos being turned into a foreign capital. This view is held due to the fact that subsequently after the law was passed, a ban was lifted on twenty infrastructure projects and oil drilling was now allowed in the previously off-limit Yasuni national park. Now, the concept of mega-infrastructures being installed is chilling, but what is worse is the drilling permit. Historically, the Galapagos has suffered great loss of species due to previous oils spills. In 2000, the Galapagos had an oil tanker called the Jessica spill over 160,000 gallons of diesel oil and 80,000 gallons of oil hit the Galapagos coast. As a result of the spill, thousands of species were killed in the process. In particular, a study yielded from a geology indicated that the within a few months of the spill, as many as 15,000 Galapagos Iguanas died. Unfortunately, the effects of this spill only were furthered in 2001 as another oil spill occurred off the coast of the Galapagos. Part of these spills would contribute to the Galapagos being marked as a World heritage site in danger by 2007.

110 Se prohíbe la construcción de nueva infraestructura de alojamiento turístico o la ampliación de la infraestructura existente que no cumpla con lo dispuesto en el Plan de Regulación Hotelera que establezca la Autoridad Nacional de Turismo. El Plan de Regulación Hotelera deberá realizarse en función del estudio de capacidad de acogida del medio físico ambiental realizado por la Autoridad Ambiental, estudios de carácter socio cultural, de oferta turística y otros estudios que para el efecto se establezcan. Deberá estar aprobado por el Pleno del Consejo de Gobierno del Régimen Especial de la provincia de Galápagos y articularse con el Plan para el Desarrollo Sustentable y Ordenamiento Territorial del Régimen Especial de la provincia de Galápagos.


112 See id.

113 Martha Supra at 62.


115 Id.

116 Id.
Despite these two oil spills and the environmental impact, oil drilling continues to occur. Part of the reason can be attributed to Ecuador’s economy reliance on oil. This reliance in a sense is both a luxury and a curse. It seems clear however that if the choice was between the environment and oil, the government would choose the latter. Recently, President Correa and the government signed contracts with the Chinese company Andes Petroleum on January 25, 2015 to explore two oil-concession areas in southeastern Ecuador known as blocks 79 and 83. The blocks, which formed part of a 2012 auction of oil concessions, collectively cover the vast majority of Sapara indigenous territory. One of them, block 79, overlaps in addition with a small portion of Sarayaku territory, locals say, though the government denies this.

D. HUMAN IMPACT

Previously I alluded to the consequences of increased human interaction in the Galapagos. This takes the form of pollution, invasive species and climate change. With respect to invasive species, this problem has been a reoccurring theme that dates back to early human settlement in the islands. As centuries have passed, the rise of population has sparked a sudden increase of invasive species and an increased list of endangered species within the island. It is estimated that more than 1,200 alien species have been introduced to the Galapagos. Some of these alien species include goats, dogs, pigs, as well as an array of plants and insects. An alarming statistic has been the rate of the invasion of these creatures which is estimated to be

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118 Id.
119 Id.
120 Id.
121 Id.
124 Steven Ambrus, Invasive species: A battle on many fronts (Jun. 1. 2010).
125 Juliet Eilperin, Invasive Species Threaten Galapagos’s Diversity, Washington Post (Feb. 27 2006).
126 Id.
100,000 times faster than before the first human settlements. As a result, at least 19 endemic animal and bird species have been driven to extinction and dozens are considered endangered including the Galapagos Hawk and Galapagos Fur Seal.

The effects of the black rat, and goats can be seen as notable examples of how invasive species have affected the area. For instance, the black rat is a common creature within the pacific area and their numbers have rapidly increased over the years, in some part due to foreigners. As such, their arrival has killed off the tortoise population on the Pinzon Island, and has made it impossible for the tortoise population to reproduce. As a result, a sub-category of tortoises became extinct within the mid 2000’s. Another example are the goats who have grazed various parts of the islands down to a desert and destroyed resources of other species that inhabit the area. Invasion of foreign species in general can cost up to billions of dollars to invest in projects to remove. In a 40-year battle to eliminate the effects of the goats, the Ecuadorian government spent roughly $5.2 million to clear them from the islands of Isabela. In 2007, the project succeeded in eliminating these invasive species. Despite such a victory, the battle to combat invasive species continues. As long as travel continues, the persistent risk of invasive species exists and natural selection will take its course, affecting the island with whichever specie can survive.

Aside from the cost associated with invasive species, there is the indirect result of pollution. Given that the industry of Eco-Tourism has been booming for the last 50 years, there has been an increase of cruises traveling to the islands. This is turn has created more air pollution through waste and greenhouse gas emissions such as carbon dioxide. In terms of waste, we can look no further than the island of Isabel who has shared an increase from 40% to 86% of organic waste from 1990 to 2008. Other islands such as San Cristóbal had their landfill spaces filled

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127 See id.
128 Id.
129 Id.
130 Id.
131 Id.
133 Id.
134 Id.
135 Id.
136 Id.
and had to create additional ones to compensate for the waste produced.\textsuperscript{137} As a result, there is more air pollution and contamination of water which increases the harm more to sea ecosystems in the Galapagos.

Related to the Eco-Tourism is the indirect release of carbon dioxide emissions which have strengthen El Nino Affect due to global warming effects.\textsuperscript{138} The end result is more species being adversely affected by the conditions such as the seabird population of flightless cormorants and Galapagos penguins.\textsuperscript{139} For instance, the 2004 penguin population was estimated to be less than 50% of that prior to the strong 1982–1983 El Nino event.\textsuperscript{140} As a result, the emissions of carbon dioxide released from cruises and other vehicles by human interaction has played a role in declining species and altered ecosystems within the area.

E. NEW WAGE CALCULATION

Another concern raised by the locals as a result of the amended changes of the Special Law includes wages. Previously, public employees received a wage increase of 100% whereas private employees had a 75% increase.\textsuperscript{141} The new revision to the existing law surrounding compensation is now based on the consumer price index.\textsuperscript{142} What this means is that an index would be based on the average prices for a “basket” of regularly-purchased products, along with other items such as technology products.\textsuperscript{143} These prices are converted to a percentage, which is then multiplied by salaries established by the Ministry of Labor Relations.\textsuperscript{144} Locals have concerns about the retroactivity of this law given the high cost of living in Galapagos.\textsuperscript{145} One of the arguments cited by those opposed to the new law has been that the Ecuadorian Constitution does not allow retroactivity.\textsuperscript{146} Any

\textsuperscript{137} Id.
\textsuperscript{139} Id.
\textsuperscript{140} Id.
\textsuperscript{141} Id.
\textsuperscript{142} Mercedes Cabrera, \textit{Tense environment in the Galapagos by Bill of Special Regime}, Ecuador Times (Jun. 5, 2015).
\textsuperscript{143} Id.
\textsuperscript{144} Id.
\textsuperscript{145} Id.
\textsuperscript{146} Id.
effort to change a public employee’s compensation would thereby affect a “right” of theirs. A competing argument for oppositionist is the disproportionately that the locals make within the Eco-Tourism industry. A studied show that approximately 26% of the profits are designated to foreign companies such as cruises, 25% go to the Galapagos national park and approximately 6% go to the locals. Given the current status of the revenue breakdown, it is understandable why there are outcries by locals with the new amendment to the Special Law. Policies such as these can decrease an incentive to conserve the land arguably if locals are not gaining any benefit from the Eco-Tourism business themselves. Given this, there could possibly be more to the law than at face value. Since the population increase has been a struggle, the potential of this new policy can serve to eliminate some locals from their own land by force if they cannot be able to meet the living standards of the Galapagos. In addition, with the loss of article 49 and private companies receiving more funds than actual locals in Eco-Tourism, it would seem that a consumer based index would not be ideal to a large majority of the population.

In a way, the policy itself is neutral but has a discriminatory effect to many Galapaneos; one of the many reasons that this policy is being challenged. The problem however to receive a remedy can be rough due to the judicial system in place. It is no secret that the public perception of the judiciary system of Ecuador is corrupt. There are cases cited where judges have taken on bribes to give favorable verdicts to the government. To make matters worse, the corruption was originally something the president campaigned in their term of 2007 but has diminished over the years due to interest in “business.”

F. Problem with the Governing Body

As I mentioned earlier, Article 3 references El Instituto Nacional Galapagos (INGALA) as the governing authority with enforcing the law. Previously, the Galapagos did not have a form of authority to

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147 Id.
149 Id.
150 Id.
oversee the islands. Such lack of leadership hindered any development and furtherance of conservation due to lack of enforcement of current regulations at the time. Ironically, the creation of this board has led to some similar results. One of the problems often cited with the governing body is the amount of entities that are involved. Due to INGALA being already composed of 22 organizations, it becomes combobulated with delineating tasks and accountability for what goes on. Much more, in 2007 there were more than 50 central government organizations and 9 local organizations involved with decision-making responsibilities in Galapagos. In turn, this has rendered some of policies of LOREG ineffective due to lack of enforcement. In any event, critics often state that a more simplified board composed of lesser individuals would prove to be more efficient in that respect.

While it appears that lessening the amount of organization involved can pose a solution, there is another thing to consider. One of the major criticisms of Ecuador is politics and the danger of political pressure. The Correa Administration has been at many times accused of being corrupt. This is significantly important in that the federal government is often charged with appointing positions such as director of the Galapagos National Park. According to some interviews conducted with non-public sector leaders, the drastic changes in director position for the Galapagos National Park in the last 20 years is attributed to political pressure to some degree. For instance, the 13th director that served in that time frame was removed due to a strict enforcement of the Special Law because their actions were deemed averse to “business interest.” As I previously alluded to earlier in the article, this tension of preserving biodiversity is met with balancing human desires. The

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153 Id.
154 Id.
156 Id.
158 See Id.
160 Id.
161 Id.
162 Id.
desirability of gaining GDP and preserving the land is a mutual relationship in a sense, but overexploitation of the land can produce consequences of deteriorating the region.

CONCLUSION

The Ecuadorian Constitution recognizes rights of two entities, individuals and nature. The events that have taken place in modern times and the actions of the Ecuadorian Government in passing the Special Law of the Galapagos illustrates the importance of preserving biodiversity in the area. However, this notion of preserving biodiversity is met with the conflict of human interest. For example, the Galapagos has a mutual relationship with humans in the Eco-Tourism industry. Tourists come in, revenue is generated, and parts of it are given to the National park to further aid in conservation. However, that relationship is strained due to some of the consequences of that growth such as pollution, invasive species invading habitats of other natural born species, violation of the laws and this dispute over indigenous rights. As we have seen, the Special Law on paper is a c raft that is more pro-active in maintaining the island. It has altered the direction of the Galapagos since the late 1990’s with attempts to reduce population growth with stricter policies with regards to citizenship, tourism business, construction, and preserve the marina.

In part, the law has been successful due to groups such as the Charles Darwin Foundation who oversee some of the functions of the Galapagos National Park. However, because the Galapagos is a destination for tourism, population growth will not end. We already have seen that if the trend continues, population will continue to grow until a point that the government may have to re-consider redefining the boundaries. Efforts to avoid this can be best served by improving education within the region, simplifying the current board to have effective decision-making and continue monitoring the status of who comes in and out of the island.

The current problem that is faced is the new legislation that has stemmed as a result of the amended changes of the Special law in 2015. The removal provision of Article 49 has rendered uncertainty to the construction of tourist hotels. Given that some of the previous restrictions were removed, it is debatable whether the government can go all out on mega construction projects in their discretion. While it is argued that certain acts require them to act in accordance, it is subject to the board and enforcement of it. As we discussed, there have been
occasions cited where the government has acted in what was best for business. Considering that was a lift for oil drilling in the Yasuani Park, the removal of directors based on strictly enforcing the Special Law, the future of the Galapagos remains unclear. Ecosystems may continue to be disrupted and possibly the natural beauty of the Galapagos can seize if such treatment continues.

The new law as we saw also implicates a question of migration. More specifically the consumer price index is a controversial measure. While at first glance it seems that it affects just income, it has the potential for much more. It can serve as a deterrent for population growth at the expense of those who cannot properly adjust to the high living standards of the Galapagos. Given that the revenue of ecotourism is divided into 6% for locals, and that now the new law does not require that jobs be given to locals, the chances of being able to reside in the island is slimmer for those in the lower class in the islands. It unfairly undermines their rights by applying retroactive law but also set up for foreign companies to invest and take the indigenous jobs as well.

In effect the new law is a backwards step for locals and the land. With the added concern of politicized decision, anything can happen in the matter of the Galapagos. The law has been in effect for a couple months now and is currently being challenged by several members towards its constitutionality. One way or the other the future of the Galapagos remains at stake and it’s up to the citizens to take action to preserve their land.