

IUCN

**REPORT ON THE REACTIVE MONITORING MISSION TO
GALÁPAGOS ISLANDS WORLD HERITAGE SITE
(ECUADOR)
21-25 August 2017**



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³ Gobierno del Régimen Especial de Galápagos.

⁴ Galápagos National Park Directorate.

⁵ Agency for Regulation and Control of Biosecurity and Quarantine for Galápagos.

ACRONYMS

AGROCALIDAD Former «Ecuadorian Agricultural Health Service» or “Sistema Ecuatoriano de Sanidad Agropecuaria” (SESA)

AIM Inter-institutional Management Authority

BTR Brut tonnage register

CCAN Ecuadorian Ministry of Environment National Environmental Catalogue

CCF Community Centre Floreana

CDF Charles Darwin Foundation

FEIG Galápagos Invasive Species Control Fund

GBA Galápagos Biosecurity Agency

GGC Galápagos Government Council

GEF Global Environment Facility

GMR Galápagos Marine Reserve

GNP Galápagos National Park

GNPD Galápagos National Park Directorate

GTO Galápagos Tourism Observatory

INGALA Galápagos National Institute or “Instituto Nacional para Galápagos”

IUCN International Union for the Conservation of Nature

LOREG Special Law for Galápagos or “Ley Orgánica de Régimen Especial para la Conservación y Desarrollo Sustentable de la Provincia de Galápagos”

MA Ministry of Agriculture, Livestock, Aquaculture and Fisheries

ME Ministry of Environment

MFA Ministry of Foreign Affairs

MT Ministry of Tourism

NEA National Environment Authority

NGO Non-Governmental Organisation

OUV Outstanding Universal Value

PMAC Participatory Management Advisory Council

SENPLADES National Secretariat for Planning and Development Policy

SIMAVIS Visitor Management System or « Sistema de Manejo de Visitantes »

SoC State of Conservation

State Party State Party to the WH Convention (Government of Ecuador)

SVM Satellite Vessel Monitoring System

SICGAL System of Inspection and Quarantine of Galápagos or
“El Sistema de Inspección y Cuarentena de Galápagos”

TASMP Tourist Accommodation Supply Management Plan

TSGGC Technical Secretary of the GGC

UNESCO United Nations Educational, Cultural and Scientific Organization

WH World Heritage

EXECUTIVE SUMMARY AND LIST OF RECOMMENDATIONS

At its 40th session, the World Heritage Committee requested the State Party of Ecuador to invite an IUCN Reactive Monitoring mission to the Galápagos Islands World Heritage Site (WHS) (**Decision 40 COM 7B.74, Annex 1**).

The purpose of the mission was to assess the progress achieved by the State Party in addressing various issues, *“in particular those related to biosecurity and tourism”* which were raised by the Committee when it decided to remove the property from the List of World Heritage in Danger, at its 34th Session (**Decision 34 COM 7A.15**).

The mission was in particular tasked with the following:

- evaluate the progress achieved by the State Party with **(1)** the development and implementation of a clear tourism strategy for Galápagos, with a focus on establishing mechanisms to discourage rapid and uncontrolled growth in visitation and **(2)** the completion of the biosecurity chain of inspection and control by establishing dedicated cargo facilities at a single Guayaquil cargo loading dock and by considering Baltra as the only authorized point of entry to the islands to receive cargo from the continent;
- assess whether these issues related to biosecurity and tourism continue to pose a threat the Outstanding Universal Value (OUV) of the property;
- assess any other relevant issues that may negatively impact on the OUV of the property, including its conditions of integrity, protection and management.

This mission was conducted by Hervé LETHIER and Paula BUENO, both representing IUCN, from 21 to 25 August 2017.

Based on several meetings and consultations held with various organisations and individuals in Quito and at the property, the mission concludes that the Galápagos Islands still face important current and potential threats, although significant progress has been achieved since the last Reactive Monitoring mission (2010) in addressing various issues related to the preservation of the OUV and integrity of the property.

The State Party should be acknowledged for its efforts in addressing most issues that were raised by the World Heritage Committee and in the recommendations of the 2010 Reactive Monitoring mission. Despite demonstrated good management and planning, some of the most significant threats to the property’s OUV, such as invasive species and illegal fishing, are above the sole capacity of the park’s directorate, thus requiring both national and international interventions in order to be addressed effectively.

During its visit, the mission felt permanently a strong political will of the public administration and all other stakeholders to progress towards a context where the property’s OUV is fully preserved; many examples of successes and positive achievements are included in this report to illustrate this strong commitment. The efforts made since the last Reactive Monitoring mission in 2010 should, however, be continued and strengthened, in order to translate this strong political will into further operational decisions and towards additional concrete results.

To this end, the mission makes the following recommendations:

Legislation and policy

1. Ensure that all provisions of the LOREG 2015⁶ continue to be implemented and enforced, including those related to biosecurity and those that complement other efforts to halt migration to the Islands, e.g. the “Zero growth” policy.

Governance and management of the property

2. Strengthen human, technical and financial capacities of both the Galápagos Biosecurity Agency (GBA) and the Galápagos National Park (GNP), in the field of prevention and control of invasive species;
3. Improve coordination between strategies and actions of local institutions (GNP, GBA and Galápagos Government Council (GGC), to preserve the property’s OUV, including through the establishment of the GNP Consultative Council as foreseen by the LOREG (art. 22). Accordingly, this Council should be involved in the preparation of the next GNP management plan, as well as in any future management effectiveness and governance assessments;
4. Update the current management plan for the Galápagos National Park by the end of 2018 and ensure that it addresses both socio-cultural and environmental matters, and includes:
 - a. a specific part on the preservation of the OUV of the property;
 - b. a tourism strategy compatible with the preservation of the property’s OUV, with a clear vision, objectives, restrictions and limits, and meeting the principle of sustainability and compatibility with the conservation of ecosystems contained in the LOREG (Title V, Chap. II).

Conservation of natural values

5. In cooperation with the fisheries sector, assess the possibility for expanding the current marine protected area in order to maintain the property’s OUV, including its conditions of integrity, and to better protect the marine resources from illegal fishing;
6. Finalize the zoning of the property, in both marine and terrestrial parts, so as to maintain and protect the property’s OUV most effectively.

Biosecurity and control of invasive species

7. Continue efforts to prevent and control invasive species, prioritizing eradication and control of the worst known invasives, favouring pest-control methods that are ecologically friendly, and monitoring the impacts of their use on native species, so as to maintain the property’s OUV and its natural biological processes;
8. In close coordination between the diverse sectors involved in the implementation of biosecurity measures (customs, GBA, ME/GNP, health departments, etc.), rigorously ensure the respect of the control chain « *prevent-monitor-control* » established by GBA with regards to the risks of invasion by exotic flora and fauna species, and include in the next management plan for Galápagos National Park a continuous and funded programme of activities aimed at minimizing the risks of invasion;
9. Improve and secure the existing facilities and equipments for the storage and quarantine of containers and products, in all air- and seaports on the Galápagos Islands and at all air- and seaports on the mainland that transport goods and people to the Galápagos Islands (including at the new international airport currently being constructed on the mainland), with facilities in Guayaquil requiring the most urgent attention;

⁶ Ley Organica de Regimen Especial de la provincia de Galápagos - LOREG (Registro oficial Suplemento 520 de 11 Jun 2015).

10. Complete the construction of the new veterinary and physico-chemical laboratory of the GBA in Santa Cruz and continue to strengthen the capacities of pest control facilities.

Tourism

11. Clarify and further elaborate on the objective of the recently announced « Zero growth » policy for tourism in the Galápagos Islands;
12. Continue to monitor and document the provision of services, sales offers, trails and maritime routes, and the registration of visitors, together with ensuring appropriate fees for entering the Islands (e.g. increasing entrance fees for the most pressing markets).

Fishing activities

13. Strengthen the current monitoring and control system of vessels so as to ensure day and night monitoring and control of ship traffic, and ensure adequate staffing levels to cover different shifts;
14. Strengthen coordination and cooperation with other governments in the region to jointly combat illegal fishing through appropriate legal agreements.

In conclusion, the mission observed that, despite remarkable efforts to specifically address the most significant threats, the property is still under pressure, partly from threats originating from outside its boundaries, and concludes that further and continued efforts should be made and/or strengthened on a series of critical issues that still require special attention from the State Party, as well as collaboration with other governments in the region. Nonetheless, the values of the property appear to have been preserved so far as the islands have proven their resilience to the many impacts caused by various threats.

1. BACKGROUND TO THE MISSION

1.1 Introduction

The Galápagos Islands are situated in the Pacific Ocean, 1 000 km from the South American continent, in Ecuador. This archipelago and the surrounding marine area have been called a unique “*living museum and showcase of evolution*”; located at the confluence of three ocean currents it is a melting pot of marine species and ecosystems.

Ongoing seismic and volcanic activity reflects the processes that formed this archipelago. These processes together with the extreme isolation of the islands led to the development of unusual animal life that inspired Charles Darwin’s theory of evolution following his visit in 1835.

1.2 Inscription history

The Galápagos Islands were inscribed on the World Heritage List in 1978, under all four natural criteria; the property was then extended in 2001, with the inclusion of the entire Galápagos Marine Reserve (GMR).

Since 1978, the World Heritage Committee has taken a series of decisions regarding this property, the most recent being the Decisions **34 COM 7A.15** (Brasilia, 2010), **35 COM 7B.30** (Paris, 2011), **36 COM 7B.32** (Saint-Petersbourg, 2012), **38 COM 7B.83** (Doha, 2014) and **40 COM 7B.74** (Istanbul, 2016).

Two Reactive Monitoring missions had been previously carried out, in 2007 and 2010. Both concluded that the property was facing significant threats leading the State Party to take drastic measures in order to minimize those threats, maintain the property’s OUV and preserve its integrity.

The property was inscribed on the List of the World Heritage in Danger in 2007 (**Decision 31 COM 7B.35**), then removed from this List in 2010 (**Decision 34 COM 7A.15**). The 2010 Reactive Monitoring mission concluded that significant progress had been achieved with the implementation of a number of corrective measures, but that additional measures were required to fully implement all corrective measures. While in its Decision 34 COM 7A.15 the World Heritage Committee decided to remove the property from the List of World Heritage in Danger, it urged the State Party to “continue to strengthen its efforts to implement all the corrective measures established for the property, in particular:

- a. Completing the biosecurity chain of inspection and control by establishing the latest facilities at a single Guayaquil cargo loading dock, by committing to replacing the current aging and mal-adapted cargo ships with new ships designed to facilitate the application of biosecurity measures, and by considering Baltra as the only point authorized to receive cargo from the continent,
- b. Developing and implementing a clear tourism strategy for Galapagos, with a focus on establishing mechanisms to discourage rapid and uncontrolled growth in visitation and with a careful assessment of the desirability and feasibility of authorizing sports fishing in the islands, the State Party being encouraged to consider the feasibility of temporarily limiting the number of visitors to the islands while such policies are developed and implemented,
- c. Strengthening the Galapagos National Park Service's capacity to deal effectively with challenges to its mandate”.

Upon request from the World Heritage Committee (**Decision 40 COM 7B.74, Annex 1**), the State Party invited an IUCN Reactive Monitoring mission, from 21 to 25 August 2017, to assess:

- if the issues of tourism and biosecurity continued to threaten the OUV of the property;
- if any other relevant issues may negatively impact on the OUV of the property, its integrity, protection and management.

The IUCN Reactive Monitoring mission visited the property and had discussions with national and local stakeholders (**Annexes 2 and 3**), in accordance with the terms of reference of the mission (**Annex 4**).

1.3 Inscription criteria and World Heritage values

The property was inscribed under all four natural criteria; both its terrestrial and marine parts offer sterling examples for each criterion. As adopted by the Committee in 2013 in the Retrospective Statement of OUV (**Decision 37 COM 8E**), the property's OUV has been defined as follows:

- **criterion vii:** the Galápagos Marine Reserve is an underwater wildlife spectacle with abundant life ranging from corals to sharks to penguins to marine mammals. No other site in the world can offer the experience of diving with such a diversity of marine life forms that are so familiar with human beings, that they accompany divers. The diversity of underwater geomorphological forms is an added value to the site producing a unique display, which cannot be found anywhere else in the world;
- **criterion viii:** the archipelago's geology begins at the sea floor and emerges above sea level where biological processes continue. Three major tectonic plates—Nazca, Cocos and Pacific—meet at the basis of the ocean, which is of significant geological interest. In comparison with most oceanic archipelagos, the Galápagos are very young with the largest and youngest islands, Isabela and Fernandina, with less than one million years of existence, and the oldest islands, Española and San Cristóbal, somewhere between three to five million years. The site demonstrates the evolution of the younger volcanic areas in the west and the older islands in the east. On-going geological and geomorphological processes, including recent volcanic eruptions, small seismic movements, and erosion provide key insights to the puzzle of the origin of the Galápagos Islands. Almost no other site in the world offers protection of such a complete continuum of geological and geomorphological features;
- **criterion ix:** the origin of the flora and fauna of the Galápagos has been of great interest to people ever since the publication of the "Voyage of the Beagle" by Charles Darwin in 1839. The islands constitute an almost unique example of how ecological, evolutionary and biogeographic processes influence the flora and fauna on both specific islands as well as the entire archipelago. Darwin's finches, mockingbirds, land snails, giant tortoises and a number of plant and insect groups represent some of the best examples of adaptive radiation which still continues today. Likewise, the Marine Reserve, situated at the confluence of 3 major eastern Pacific currents and influenced by climatic phenomena such as El Niño, has had major evolutionary consequences and provides important clues about species evolution under changing conditions. The direct dependence on the sea for much of the island's wildlife (e.g. seabirds, marine iguanas, sea lions) is abundantly evident and provides an inseparable link between the terrestrial and marine worlds;
- **criterion x:** the islands have relatively high species diversity for such young oceanic islands and contain emblematic taxa such as giant tortoises and land iguanas, the most northerly species of penguin in the world, flightless cormorants as well as the historically important Darwin's finches and Galápagos mockingbirds. Endemic flora such as the giant daisy trees *Scalesia* spp. and many other genera have also radiated on the islands, part of a native flora including about 500 vascular plant species of which about 180 are endemic. Examples of endemic and threatened species

include 12 native terrestrial mammal species and 36 reptile species, including the only marine iguana in the world. Likewise, the marine fauna has an unusually high level of diversity and endemism, with 2,909 marine species identified with 18.2% endemism. High profile marine species include sharks, whale sharks, rays and cetaceans. The interactions between the marine and terrestrial biotas (e.g. sea lions, marine and terrestrial iguanas, and seabirds) are also exceptional. Recent exploration of deep sea communities continues to produce new additions to science.

1.4 Integrity issues raised in previous reports

At the time of the property's inscription, IUCN concluded that *"the boundaries of the proposed area were not clear, the bibliography was inadequate, and that the support of the Director of national parks was not indicated"*.

More integrity issues were raised in 1994 when the marine extension was nominated, including:

- overfishing and illegal fishing of a wide range of species;
- human pressures from the local population (growing at an estimated rate of 8.5% per year mainly due to immigration) and tourism on both terrestrial and marine resources;
- inadequate management capacity and infrastructure;
- adverse impacts of introduced animals and plants.

The World Heritage Committee called for action aiming at:

- augmenting the management capacity of the property;
- encouraging institutional cooperation;
- strengthening law enforcement;
- conducting research on sustainability of resource use in the Marine Reserve.

Finally, the 2010 Reactive Monitoring mission report provided conclusions on several main points where measures were required in order to maintain of the integrity of the property and developed a Desired State of Conservation for removal of the property from the List of World Heritage in Danger (DSOCR) with the following set of indicators:

- **endemic species:** IUCN Red List status for all endemic bird, reptile and mammal species remains either stable or improves;
- **invasive species:** no new species known to be invasive established on any of the islands. If any new introductions are discovered, a rapid response programme for their immediate eradication must be implemented;
- **exit points:** a single cargo loading port in Guayaquil, with the necessary biocontrol infrastructure and effective processes in place, is established;
- **entry points:** a single cargo entry point on Galápagos, with a feasibility study completed on the possibility of locating this at Baltra. A single inter-continental entry point by air at Baltra (a special case may need to be made for San Cristobal). The Villamil airport not to be put into service as a commercial airport, and to be completely dismantled, or, at the very least, convert the terminal to another permanent use;
- **biosecurity:** independent certified audits of the biosecurity inspection and control measures at continental exit points (Quito airport and Guayaquil airport and maritime terminal), and at Galápagos entry points (ideally a single port and a single airport). All entry and exit points must receive a passing grade from the independent audit;
- **judicial process:** the crew of any captured illegal fishing vessels are effectively prosecuted and legally mandated penalties are applied;

- **immigration control:** the number of permanent residents on the islands to be reported and maintained at current levels or ideally reduced and the number of new temporary resident permits not to exceed 10% of the permanent resident population;
- **tourism management:** a comprehensive tourism strategy for Galápagos is legally adopted and effectively implemented. The strategy should outline in detail how the number of arrivals will be controlled, clearly indicating the upper limit of annual arrivals;
- **financing for introduced species work:** the Introduced Species Trust Fund (FEIG) has reached its \$15M capitalization target and there has been demonstrable effective implementation of an appropriate portfolio of invasive species projects implemented.

The 2010 mission estimated that a period of at least five years was required to achieve the DSOCR; nevertheless, the decision to remove the property from the List of World Heritage in Danger was adopted by the World Heritage Committee in the same year, in 2010.

1.5 Issues addressed in the most recent State of Conservation Report

The most recent report on the state of conservation of the property was submitted by the State Party to the World Heritage Centre in 2016⁷; this report details the activities and the progress made by the State Party up to 2015 in the conservation and maintenance of the OUV of the property and its integrity. Four sections are addressed, where both the analysis and the description of the actions and measures performed through different public policy strategies are presented.

The mission reviewed most of the conclusions of this report during its field visit. The following sections outline the key points reported by the State Party with observations by the mission added on each of them.

1.5.1 Biosecurity

The State Party report provides strategic and technical information on actions aimed at minimizing the risks of propagation of invasive alien species in the property.

Those actions also address climate change through adaptive measures, as well as the role of agriculture in reducing the spread of invasive species by promoting sustainable farming and reducing dependence on food imports to satisfy the local food requirements.

Details are provided in the State Party report on four groups of measures taken:

- **upgrade of the Galápagos Cargo Transport System:** part of the cargo fleet has been renewed in recent years and three old cargo ships⁸ not meeting the adequate standards and characteristics have been replaced by three new and more modern vessels that provide better navigation safety and handling of the products for transportation from Guayaquil to Galápagos. Five other cargo ships are still operating⁹ and using containers. Each vessel is inspected under the quarantine system by the GBA and to date over 85% of the goods are transported in containers that are inspected, the remaining 15% being transported as bulk items. The following measures and decisions have also been taken:

⁷ Pacheco, D.O. and Bustos, W., 2016 - Conservation status report of the Galápagos Archipelago, prepared for UNESCO World Heritage Centre, January 2016, 31 p.

⁸ The Floreana (2 000 t), the San Cristóbal (1 300 t) and the Galapaface (1 600 t) were purposely sunk respectively in January 2015, November 2014 and May 2014.

⁹ Manizales (7000 t), Isla Bartolome (3 900 t), Fusion (1 500 t), Galápagos (1 500 t) and Angelina (2 000 t).

- *adoption of legislation on transport of goods in vessels*: The Ministry of Transport and Public Works (MTO) has approved the standards for transporting goods in vessels up to 100 gross tonnage between the ports of the inhabited islands of the province¹⁰. The ME has the ability to monitor those activities and to ensure that these operations are performed properly;
- *construction of a cargo harbor in Guayaquil*: A study has been carried out by the State Party which identified the best location in Guayaquil to place a new harbor for boats heading to Galápagos. It is expected that the construction of this quarantine control port will contribute to minimizing potential threats of arrival of invasive species to Galápagos by boat, as it has been observed that the most important pressure comes from the continent. This project supported by the MTO is part of the National Secretariat for Planning and Development (SENPLADES); the Project was planned to be implemented in 2016-2017. However, the mission noted that the construction works had not started yet and that funding was not available. No specific allocation from the government has been announced for this project yet;
- *the implementation of environmental standards for vessel operation in the GMR*: the GNP controls and monitors plans of all vessels operating within the Islands, based on its resolution establishing “*the environmental standards for vessel operation in the Galápagos Marine Reserve*”¹¹. This Resolution provides guidelines on environmental standards about solid waste management, liquid waste management, environmental impact mitigation, prevention of introduction of exotic species.
- **an “*Environmental check list*”**: this list is a process of environmental control performed by the GNP on different types of vessels operating within the GMR¹². More than 400 inspections of vessels (hulls and decks) operating in GMR were undertaken by the GNP staff in 2015. After two years of implementation, this control system is seen by the mission as working successfully and contributing to reduce significantly the risk of invasion by new species. This check list is being adapted so as not to duplicate this control with the GBA’s work and to optimize the overall capacities allocated to biosecurity;
- **new resolutions to prevent the introduction of invasive species**¹³: since 2013, the GBA is implementing standards that aim to avoid introduction of exotic species to the archipelago by means of inter-island movements. The mandatory measures include removal of insects from all means of marine transport, civil or military, public or private that are going to or transiting through Galápagos. A similar system is established for controlling all tourist vessels operating in the GMR. Unfortunately, the mission was not able to experience a large boat inspection as initially planned; those controls, in general, are of the highest importance to prevent invasion of species prior to the vessels departing to the GRM, as there is a high risk of pests finding their way onto boats in Guayaquil.

¹⁰ Resolution MTO-SPTM-2015-0127-R dated 19 October 2015.

¹¹ Resolution No.050-2013 from the Galápagos National Park Directorate.

¹² Control based on the Resolution No. 050, mentioned here above, annex 4.

¹³ Resolutions D-ABG-013-011-2013, D-ABG-013-012-2013 and D-ABG-014-012-2013.



Picture 1 – Signalization on the tourism regulation in the Galápagos (Source: EMC2I).



Picture 2 – Control of visitors by the GBA staff at their arrival in the Floreana port (Source: EMC2I).

- **strengthening of the Galápagos Biosecurity Agency (GBA)¹⁴**: set up in 2012¹⁵, the GBA provides the *ex-ante* control in the biosecurity chain through the control of the arrival of invasive species to Galápagos¹⁶. The GBA's mission is to control, regulate, prevent, and reduce the risk of introduction, movement, and dispersal of exotic organisms in Galápagos; its work involves inspection and control at air and seaports, surveillance, monitoring, control of pests and

¹⁴ <http://www.gobiernogalapagos.gob.ec/>

¹⁵ Executive Decree No. 1319 published in the Second Official Registry, Supplement No. 811 on 17 October 2012.

¹⁶ It is a public entity affiliated to the Ministry of Environment and it has a administrative, financial, technical and operative autonomy; based in Puerto Ayora, Santa Cruz Island, Galápagos, this organization has the mandate and capacity to “control, regulate, avoid, prevent and reduce the risk of introduction, movement and dispersion of exotic organisms to the Galápagos Islands that may pose a threat to human health, the economic system or the agricultural activities” (State Party report, 2016). It is present in eight control and inspection sites.

diseases in Galápagos, and rapid response to phytozoosanitary emergencies. This agency focuses on the prevention and control in the cargo sea and airports in Quito, Guayaquil and in each of the inhabited ports in Galápagos, in addition to the work done by the GNP which undertakes a control *ex-post* and which, amongst other tasks, is responsible for the eradication of invasive species present in the property.



Picture 3 – Container control in the Santa Cruz storage area (Source: EMC2I).



Picture 4 – GBA laboratory, Santa Cruz (Source: EMC2I).

Figure 2 provides a selected list of the GBA's most important responsibilities. Over the years, the GBA has become a key partner of the GNP administration in minimizing the potential threats of invasion of new species in the property and in contributing in the preservation of its OUV and integrity. To date, 186 staff members are working in this agency under the authority of the Executive Director, out of which 80% are technical personnel and 20% administrative; the agency is equipped with sophisticated

tools and equipments¹⁷, benefits also from facilities and manage a park of 11 vehicles as well as three dogs trained for controlling the presence of invasive species (**Picture 5**), being the only canine unit of its type.



Picture 5 – Trained dogs and their handlers, GBA, Santa Cruz (Source: EMC2I).

- Protect the biological and sanitary security of the inhabitants of the province of Galápagos.
- Protect all native plants and animals, endemic and domestic species from any sanitary risk within the terrestrial and marine ecosystems.
- Act on the control, management and eradication of introduced and invasive species that are harmful to the ecological integrity and biodiversity, the preservation of public health and to the agricultural activities in the urban and rural zones of the province of Galápagos.
- Justify technically and scientifically the declaration of a sanitary and phytosanitary emergency in the province of Galápagos and to put it forward for the consideration of the Environment Ministry.
- Dictate the opening or closing of control sites in ports, airports or any other place from where people, cargo or luggage can move to Galápagos, either from mainland Ecuador or within the province. The decision as to open or close a site must have a technical or scientific justification.
- Name as Galápagos Quarantine System inspectors, those persons who meet all the established requisites.
- Implement and administer an updated information system on the presence and location of introduced species.
- Develop and put into practice training and information programs for GBA personnel and residents, tourists and transit passengers of the province of Galápagos.
- Control the arrival and sale of agricultural products (fertilizers, agricultural and veterinary products).
- Create a program for the eradication of exotic plant and animal species in accordance with the Total Control Plan of Invasive Species in urban and rural zones.

¹⁷ Ex.: X-ray machines, specialized equipment for the surveillance and control of domestic species (e.g. wasps, ants, rats, cockroaches, cats, dogs, etc.) as well as laboratory equipment that can detect livestock and domestic animal diseases.

- Authorize and control chicken, pig and cattle farms as well as slaughterhouses already existing or to be established in Galápagos.

Figure 1. Selected list of the most important responsibilities of the GBA (Source: State of Conservation Report 2016):

Those actions and efforts have led to date to the prevention and eradication of many invasive species (goats, pigs, donkeys, cats, dogs, rats and fire ants) on various islands, though the property still hosts a large number of alien species, some of them invasive.

The Agency has been able to document control processes and devise procedures for each of its intervention areas (inspection, quarantine, seizure), and a protocol for specialized inspector accreditation. Surveillance patrols are often organised and registration data is coordinated with the national authority, including pet and farm animal census. These apply to both terrestrial and marine areas which means inspections are thoroughly undertaken on vessels, in ports, cargo containers and on persons.

Finally, a Galápagos Invasive Species Trust Fund (FEIG)¹⁸ was created in 2007 with support from UNDP in agreement with the ME and the National Environmental Fund (FAN), for contributing to invasive species control and eradication activities in the archipelago. The returns of this trust fund are used to finance projects and activities aiming to manage the invasive species in the Galápagos and to cover administrative and operating expenses. From 2015 FEIG sources, the fund supports the GBA in nine projects in progress, eleven others supported projects being finalized. This fund provides a highly valuable support to the GBA, amongst other organisations¹⁹, to minimize invasion of exotic flora and fauna species in the property.

1.5.2 Tourism

Tourism development is very high on the State Party's agenda; the government wishes to promote tourism as a policy and the Objective 10 of the « *National Plan of Good Living* » for the period 2013-2017 that notes tourism as a pillar of the transformation process of the economy in Ecuador. The government has also committed to promote the development of responsible tourism and it has very recently announced a « *Zero growth* » objective for tourism on the Galápagos Islands.

This section details nine groups of measures which illustrate this commitment; they can be grouped under following matters:

- **a new Ecotourism Strategic Model (ESM):** this model was adopted in 2010 as the basis for tourism development in the province; it is considered as a public policy and is implemented jointly by the Ministry of Tourism (MT), the GNP and the Galápagos Government Council (GGC). The main elements are related to the governance, the tourism product itself which is called « *Destination re-engineering* », tourism promotion and marketing, and the accommodation supply management plan;
- **a new Galápagos Special Law** adopted in June 2015: this Law regulates and controls tourism growth and development; an executive « *Galápagos Tourism Accommodation Regulation* » adopted in November 2015 details the constraints for tourism while a « *Galápagos Sustainable Development and Land Use Plan* » was approved by the GGC in December 2015. The MT

¹⁸ This Fund should not be confused with the Galápagos Conservation Trust, launched in 1995 and which supports conservation projects/activities in general.

¹⁹ Eg.: Charles Darwin Foundation (CDF).

services in Galápagos have also been refreshed and a *Regional Coordinator* has been designated, with autonomy and his own budget. Finally, « *Tourism quality standards* » have also been updated;

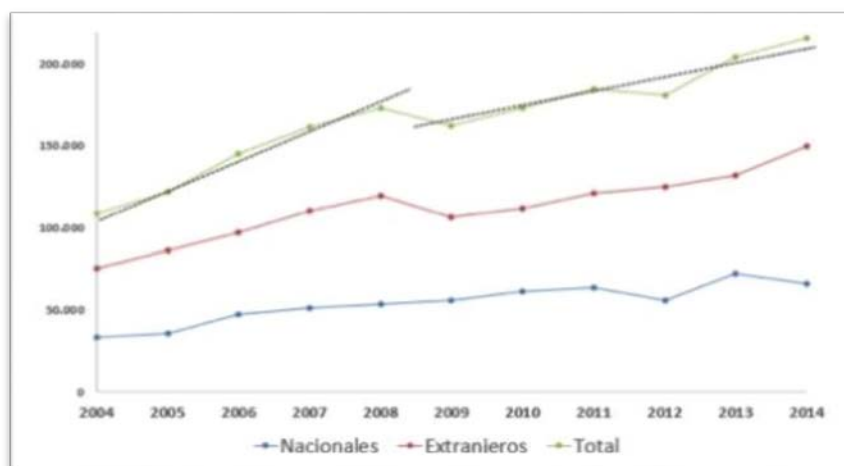
- **a Tourist Accommodation Supply Management Plan (TASMP):** in 2014, tourism accommodations in Galápagos were assessed, showing that around 75% of the 440 inventoried establishments were not officially registered; two thirds of the 329 unregistered establishments were then inspected and 129 eliminated; finally, 311 establishments were in operation in late 2015, registered and meeting the standards and requirements;
- **an environmental licensing mechanism for tourism vessels:** to date, all 84 vessels²⁰ operating with tourists, obtained the license issued by the GNP, in accordance with the *Environmental Management Law*²¹. Subsequently, the vessels owners should send self monitoring reports and/or environmental audits reports to the Environmental Authority;
- **development of community-based ecotourism:** the objective is to empower local population in caring for and protecting the Galápagos ecosystems. A project has started in August 2015 between the Community Centre Floreana (CECFLO) and the ME to promote the sustainable use of natural resources and to develop high quality tourism services in the Northern part of Floreana Island. A co-management agreement was signed on 12 March 2015 detailing how local people would participate in the tourism management process and gain from it. A roadmap has been drafted, defining the technical, administrative and legal provisions. The MT together with the Ministry of Agriculture (MA) are also developing a project called the « *coffee route* » aiming to elaborate an ecotourism product that will allow tourists to learn about the Galápagos coffee making process; this project will lead to establish a process of certification of origin for the Galápagos coffee, train farmers on organic coffee production, market the Galápagos coffee as a high quality and unique coffee in the world, and bridge with several foundations to promote this coffee;
- **monitoring and management of tourism growth and pressure:** tourism growth in the property is one of the biggest concerns; this led the government to set technical, legal and political strategies and to monitor the situation over the years; reliable and complete data were collected showing that tourism growth has continuously increased during the last 10 years (**Graphs 1 and 2**), particularly in-land daily tours, although this tendency seems to have decelerated in the recent past. More than 220 000 tourists visit the property every year, 85% coming from nine countries and more than 50% from abroad²². Regardless of the changes in visitation origins, it is foreseen that visitor numbers will not decrease dramatically in the following years. A « *Galápagos Tourism Observatory* » (GTO) was set up in 2011 as a component of the new tourism model, instrumental in the collection and publication of key data collected through the Visitor Management System - SIMAVIS. The GNP and the GTO administration have started to publish several dashboards²³ based on socioeconomic and administrative indicators, to facilitate the GNP management process and help to elaborate its annual management programme; those dashboards will also facilitate and guide the elaboration of the next GNP management plan.

²⁰ 11 in Isabela, 22 in Cristobal and 51 in Santa Cruz.

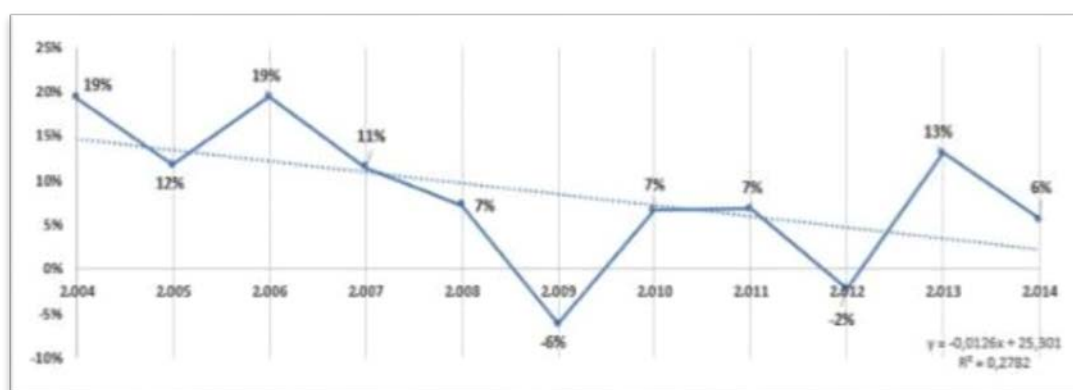
²¹ More specifically in Book VI of the secondary Environmental Law (TULAS) dated 4 May 2015.

²² Source: GNP Administration.

²³ For GNP Naturalist guides information, Visitors to GNP, Monitoring the visting sites, Information on Vivencial fishing.



Graph 1 – Visitation trends in Galápagos, period 2004-2014 (Source: 2016 SOC).



Graph 2 – Galápagos annual growth rate trend, period 2004-2014 (Source: 2016 SOC).

Furthermore, the State Party has also taken the decision to recognize the « *Vivencial fishing* » («pesca vivencial») ²⁴ as a tourism activity considering this activity as an alternative for the local fishing sector to the ban on industrial fishing in the whole Galápagos; this was validated in 2013 by a GNP resolution ²⁵. In 2015, 31 of the 56 permits issued in 2012, were still in use, showing that this activity remains rather low and pushes the local public institutions to build a roadmap in 2015 for its promotion;

- **limitation and regulation of hotel infrastructure:** as mentioned above, the property and the Galápagos archipelago in general, are ecologically sensitive and have limited carrying capacities. New and/or inadequate infrastructure may potentially threaten the property's OUV and degrade its integrity. In 2013, the CGC established a moratorium on new construction in order to update the regulations "to ensure that future development would comply with the construction, social, environmental and tourism criteria and govern properly permits for the building of new infrastructure or the expansion of tourism beds" ²⁶. It is also clearly said in the LOREG 2015 law, art. 72, that "It is prohibited to build new tourism accommodation or to expand the already existing hotels that do not meet what has been stipulated in the Hotel Regulatory Plan as established by the National Tourism Authority".

²⁴ "Vivencial fishing" is an artisanal fishing activity proposed by the local fishermen to tourists, as a way for tourists to closely experience the actual fishing practice within the marine reserve.

²⁵ Resolution 007-2013.

²⁶ Resolution No. 014-CGREG-18-VII-2013 (Source: State Party report 2016).

1.5.3 Governance

The adoption of the new *Galápagos Special Law* in 2015 (LOREG) has been a key achievement, since the 2010 Reactive Monitoring mission²⁷; this Law addresses technically the conservation of the property and its sustainability; most issues and concerns raised by the World Heritage Committee and in the Reactive Monitoring missions are addressed by this Law.

The GNPD has been confirmed as the « *decentralized administrative unit* » in charge of the management of the property and three key and strategic objectives are mentioned in the purposes of the Law:

- conservation of the ecosystems and biodiversity in the province of Galápagos, especially the native and the endemic species, as well as the continuation of the evolutionary processes governing these systems by minimizing human interference;
- establishment of an integrated management between inhabited and protected areas, terrestrial and marine systems, recognizing the interactions between them;
- achievement of a balance between mobility and residence of people to and from the province and between the islands in direct correspondence with the environmental limits of the Galápagos province, regulating and controlling its geographical openness, in accordance with the provisions of the Constitution and the law (State Party report, 2016).

The Park Directorate takes part in the GGC, and coordinates through this instance with the national authorities the necessary steps and policies to maintain the integrity of the islands.

1.5.4 Fishing

The « *Galápagos Marine Reserve Management Plan* » defines the zoning of fisheries and establishes rules and measures including the regime of control, to ensure the preservation of ecosystems and the wise use of the natural resources; this plan has been issued by the ME which is also responsible for keeping records of all fishing vessels that must receive a permit to operate.

The main progress made since the last Reactive Monitoring mission is the ban of sport fishing as a commercial activity and the strengthening of the « *Vivencial fishery* » as a compensation for the local fishing sector for the prohibition of industrial fishing. The Vivencial fishery is now considered as a tourism activity and it is strictly regulated; only a limited number of permits have been issued to local fishermen; more recently, a « *fishing calendar* » has been approved for the 2016-2021 period, regulating the fishing activities within the reserve; this executive regulation was adopted by all stakeholders²⁸ including the fishing sector.

More recent progress made in this sector of activity will be detailed further in the report.

²⁷ Galápagos Special Law dated 11 June 2015.

²⁸ GGC, GNP, MT, Ministry of defense, fishing sector.

2. NATIONAL POLICY FOR THE PRESERVATION AND MANAGEMENT OF THE WORLD HERITAGE PROPERTY

2-1 Protected area and other relevant legislation

NB: most historical information included here below has been drawn from the 2007 and 2010 Reactive Monitoring mission reports.

The chronological history of the park is as follows:

- in 1936, the Galápagos National Park was established with a limited number of conservation measures;
- in 1959, it was then established by Presidential Decree, covering 97% of the terrestrial territory of the islands;
- in 1978, all of the terrestrial territory, including both the GNP and the inhabited areas, was declared a World Heritage site;
- in 1986, the Galápagos Marine Reserve (GMR) was set up, covering 70,000 km² which was extended to cover 133,000 km² in 1998.
- In 2016, the Darwin and Wolf sanctuary is declared and included within the marine reserve.

A central coordination agency called INGALA²⁹ had previously been created as the central technical planning authority. However, in October 2008 Ecuador adopted a new Constitution which resulted in a number of institutional changes, including the abolition of the provincial government. While Galápagos remained a province, it no longer had an elected provincial governor or INGALA. The mandates of these two have been fused and are now implemented by the newly created GGC.

The GGC is now the highest authority responsible for planning, resource management and organization of activities on the islands. It consists of: (1) a representative of the President of the Republic, (2) the ME; (3) the MT, (4) the Ministry of Agriculture, Livestock, Aquaculture and Fisheries (MALAF); (5) SENPLADES; (6) Majors of the three Municipalities of the Archipelago and (7) The President of the Floreana parish (Source: State Party report, 2016).

In 2015 the LOREG Law brought together a number of rules, policies and frameworks that were contemplated in several disseminated instruments, providing a sole normative reference that covers a series of economic, environmental and political aspects of the Galápagos archipelago management.

The LOREG 2015 establishes the legal framework which regulates many aspects of islands' life, uses and activities, including regional planning, inspection and quarantine measures, fisheries management, residency and migration, tourism, agriculture, and waste management.

The LOREG was developed under the framework of sustainable development for the people living on the islands, incorporating participative and adaptive management in order to achieve conservation goals. Included in this law was the concept of "*total control*" of introduced species, anchored in the precautionary principle. While it withdrew many rights that Ecuadorians would enjoy on the mainland³⁰; at the same time, it strove to provide compensation to the people living in such a fragile environment, such as providing subsidies and allowing legal residents fishing and tourism rights not available to non-residents.

²⁹ The "Instituto Nacional para Galápagos" or the Galápagos National Institute.

³⁰ Such as posing restrictions on immigration, imports of goods, where they can live and even keeping of pets, ...

While the LOREG provides a legal framework, it relies heavily on follow-up regulations to spell out in detail exactly how the law is to be applied. One of the most important regulations is the “*Reglamento Especial de Turismo en Áreas Naturales Protegidas*”.

Four Management Plans (MP) for the GNP have been prepared since 1974 with the latest in force since 2005. These incorporate all the forestry, fisheries, tourism and other laws and are developed in a participative manner. For marine issues the JMP³¹ was created to provide a forum for the users of the Galápagos Marine Reserve (GMR), in order to create effective participation and responsibility on the part of the users with respect to the area’s management and to advise the AIM. The JMP includes representatives of the local fishing sector, Galápagos Chamber of Tourism, the GNPS and CDRS.

2-2 Institutional framework

The organigram of the GNP has not changed significantly since the last Reactive Monitoring mission (**Figure 2**); around 320 employees are working full time in the park administration.

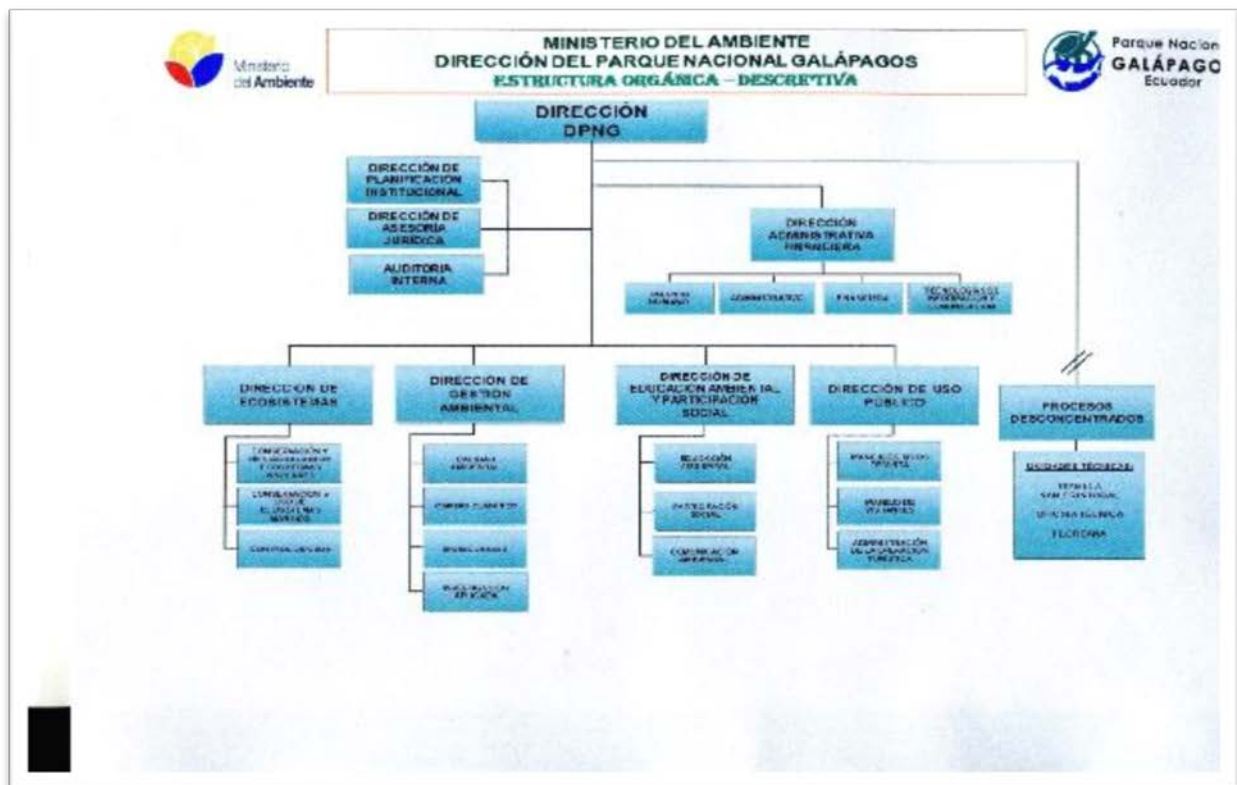


Figure 2 – Organigram of the GNP (Source: GNP).

Since the adoption of the LOREG in 2015, the GNP administration is the administrative unit in charge of the of the conservation and management of the national park and the marine reserve; according to this Law, it « *defines and updates* » the area of the GNP and have competencies on the use, management and utilization of natural resources and activities in all protected areas, including the GMR.

The GNP administration is the deconcentrated service of the ME in the GNP; it is also the competent institution to plan, authorize, monitor and supervise the use of protected areas in Galápagos for

³¹ «Junta de Manejo Participativo» or Participatory Management Board.

tourism, in coordination with the RD for tourism; it is however up to the National Tourism Authority – represented locally by the RD - in coordination with the GGC, to plan, regulate and control the standards for tourism according to the Law on Tourism, in the whole province, outside the protected areas.

The GNP Administration is also responsible for controlling invasive species in protected areas, whilst the GBA has a preventive role in the whole province – only 5% of the GNP responsibilities were transferred to the GBA when it was created.

Finally, the GNP administration must coordinate with local municipalities and other autonomous collectivities to manage waste in the protected areas.

In conclusion, the institutional framework as designed by the LOREG 2015 appears to be rather clear, assigning the conservation and management of the entire property to the GNP administration, under the ME's authority.

The mission takes note, however, that since the last Reactive Monitoring mission, both the Minister of Environment and the Director of the GNP administration have been changed several times; this institutional « *volatility* » may hamper the long term management of the property which requires a long-term vision and approach; it should be minimized in the future and the State Party should be invited to stabilize this framework in the future.

2-3 Management structure

2-3-1 Management plan

The current Management plan has been adopted for the period 2015-2018 after a long participatory process; this plan is conceptually based on the objectives of the « *National Plan for Good Living 2013-2017* » and seeks « *to guarantee the rights of nature and promote a healthy and sustainable environment* »; it gives also a response to the Plan Galápagos 2015-2020³², in particular its objective 7 « *to guarantee the rights of nature and promote a territorial and global sustainable environment* ».

This management plan is organized around four general objectives broken into six thematic programs, considering the Galápagos as a socio-system that must move towards an integrated spatial planning model breaking the dichotomy between conservation and development:

- preserve the ecosystems of Galápagos and its insular and marine biodiversity so as to maintain the ecological services;
- incorporate and articulate the conservation of Galápagos to the territorial plan for the sustainable development of the special regime of Galápagos³³ to enhance a wise use of the ecological services of the ecosystems and their insular and marine biodiversity;
- upgrade and strengthen the management capacities of the GNP to ensure a management which is effective and efficient;
- enhance participatory and inclusive social processes for establishing good living.

³² Plan de desarrollo sostenible y ordenamiento territorial del regime especial de Galápagos 2015-2020 (Ordenanza n°001-CGREG-2015).

³³ Plan de Ordenamiento territorial y desarrollo sostenible del regimen especial de Galápagos (Plan Galápagos 2015-2020, Ordenanza n°001-CGREG-2015).

The current management plan is based on an adaptive management model with regular monitoring and internal evaluation which enable the park to adjust the management according to the progress of knowledge in close coordination with the Galápagos Governing Council.

The plan will be completed by the end of 2018 and the GNP administration has started to evaluate internally the results and gaps and organize all data on the ecological system needed for the preparation of the next plan.

The State Party and the GNP administration should be encouraged to use the IUCN guiding principles for World Heritage management plans in the phase of preparation of the next plan³⁴; this plan should clearly aim to protect the OUV of the property and provide a clear vision for its long-term preservation (20-30 years), although the objectives should focus on what will be achieved within the 5-10 years life time of the plan.

The next management plan should also, at least, contain the following key elements:

- a commitment to implementing the plan to fulfill the obligations under the World Heritage Convention³⁵;
- an initial assessment and factual statement of the condition of the property's natural values;
- the issues and challenges facing the property³⁶;
- the long-term ambition³⁷ for the property, i.e. its vision and objectives;
- the means of delivering the ambition, i.e. the range of management policies and associated actions for the property including zoning plans and spatial analysis of natural and cultural factors within and surrounding the property.

It would be desirable that the management plan stated the need to further protect the marine environment beyond national borders and across the Eastern Pacific Ocean, through international cooperation allowing for a coordinated prosecution treaty that would discourage illegal activity (e.g. fishing, prospection) within and around the Galápagos Islands, as well as other key biodiversity areas in the Pacific.

2-3-2 Zonation

From 2014 to 2016, the zonation of the protected areas was defined in the «*Management plan of the protected areas in Galápagos for the good living*»³⁸, which is still being implemented:

- the zonation of the GNP is currently organized around four zones defined according to a gradient of conservation of the ecosystems: strict conservation zones where all uses and activities are forbidden³⁹, conservation and restoration zones where sustainable tourism is allowed but strictly regulated, impact reduction zones which serve as a buffer zone around the previous ones, and transition zones dedicated to sustainable development;

³⁴ IUCN Protected Areas Programme, Management Planning for Natural World Heritage Properties, Gland, Switzerland: IUCN, 35pp.

³⁵ Factual statement of the extent and conditions of the OUV.

³⁶ With a focus on the following issues: invasive species, human demography, sustainable tourism, legal and illegal fishing, agriculture, and climate change.

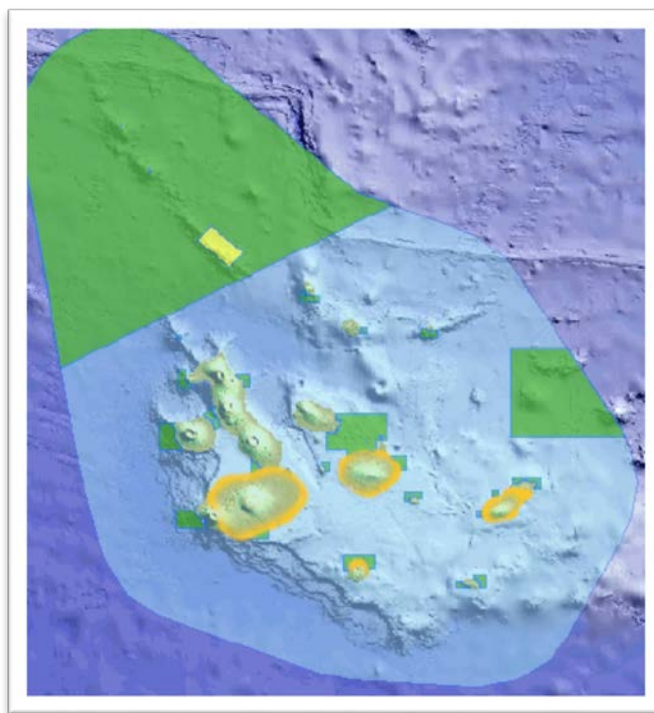
³⁷ The ambition should also be realistic; for instance, the «*eradication*» of some invasive species, *stricto sensu*, might be an unattainable objective and minimizing the risk of invasion could be more reasonable

³⁸ Plan de manejo de las áreas protegidas de Galápagos para el Buen Vivir, 2014 (Acuerdo Ministerial 162).

³⁹ Except for scientific research and invasive species elimination activities.

- the zonation of the marine reserve was established in 1999 and it was organized in three zones: multiple use areas where research, fishing, tourism, navigation were allowed, restricted use areas along the sea coast, and harbour areas.

In 2016, the zonation of both the GNP and the marine reserve⁴⁰ have been revised (**Map 1**) and the “*Darwin and Wolf Sanctuary*” was established⁴¹, with the fishing sector’s agreement; this new zoning has been established on the most up to date knowledge on the location and distribution of threatened marine and coastal species and ecosystems. Large marine areas have been designated where fishing is strictly forbidden.



Map 1 – Zonation of the GNP and marine reserve since 2016 (Source: GNP).

Currently, more than 97% of the total territory of the GNP is strictly protected and fishing is forbidden on 33% of the total territory of the GMR.

Those modifications are seen by the mission as a tremendous improvement of protection and management of the property.

Also, control devices or “Fishing Aggregating Devices” have been installed in the newly zoned marine area, proving to be an effective tool for surveillance of the regulated fishing activity – vivencial fishing- and more of these are likely to be installed in the future.

However, the recent “*Chinese vessel*” incident shows that, while the control and surveillance system function effectively to detect illegal activities, the property remains under pressure from illegal fishing; the footnote below lists the main official declarations made by the authorities from Ecuador about this incident⁴². The expansion of the GMR, in the North and towards the 200 miles line at least, is highly

⁴⁰ Acuerdo ministerial 026-2016.

⁴¹ Decret of execution n°968 dated 21 March 2016.

⁴² On line several official declarations on the illegal navigation of the vessel Fu Yuan Yu Leng:

ME:

<http://www.ambiente.gob.ec/ministro-del-ambiente-condena-la-pesca-de-especies-protegidas-por-barco-chino/>

recommended; this expansion would provide more possibility to the GNP administration and to the State Party to intervene and sanction illegal fishing activities in a key area contributing to the preservation of the property's OUV and integrity.

Once again, the regional and international cooperation to enforce the protection of the marine environment both within and beyond borders is crucial to halt the threat over some of the globally significant features of Galápagos also present in other areas in the Pacific Ocean, that is, coordinated action to conserve species and ecosystems ecologically connected underwater and key for the provision of vital ecosystem services.

2-4 Other international designations

In 1984, the entire Galápagos archipelago was designated as a UNESCO Biosphere Reserve, covering an area of 14 761 844 ha shared in a core zone (65 040 ha), a buffer zone (696 804 ha) and a transition zone (14 Million ha).

In 2002, a part of the property, called «*Humedales del Sur de Isabela* », was recognized as part of the Ramsar List of wetlands of international importance; this site covers coastal (359 ha) and marine (513 ha) wetlands; it includes the «*Poza de Los Diablos* » and other small ponds as well as the beaches, mangroves, and shallow marine waters of the Bahía de Puerto Villamil on Isabel, the largest of the Galápagos islands, within the GNP.

<http://www.ambiente.gob.ec/sentencia-de-5-9-millones-por-reparacion-integral-al-parque-nacional-Galapagos-en-caso-de-fu-yuan-yu-leng-999/>

MAE:

<http://www.cancilleria.gob.ec/ecuador-rechaza-labores-de-pesca-de-especies-vulnerables-y-protegidas/>

National Assembly

<http://www.asambleanacional.gob.ec/es/noticia/51141-pesca-ilegal-y-atentados-en-barcelona-se-trataran-en-el>

<http://www.asambleanacional.gob.ec/es/noticia/51009-en-segunda-sesion-pleno-debatira-conservacion-de-flora-y>

Ministry of Defense

<http://www.defensa.gob.ec/se-inicia-proceso-judicial-a-tripulacion-de-barco-chino-capturado-por-armada/>

<http://www.defensa.gob.ec/ecuador-demanda-derechos-para-proteccion-del-ecosistema-de-Galapagos/>

<http://www.defensa.gob.ec/ecuador-ejecuta-acciones-de-prevencion-frente-a-presencia-de-flota-china-en-las-inmediaciones-de-las-aguas-jurisdiccionales-ecuatorianas/>

<http://www.defensa.gob.ec/ecuador-protesta-formal-a-embajada-china-por-actividades-de-flota-pesquera/>

3. IDENTIFICATION AND ASSESSMENT OF THE MAIN ISSUES

3-1 Management effectiveness

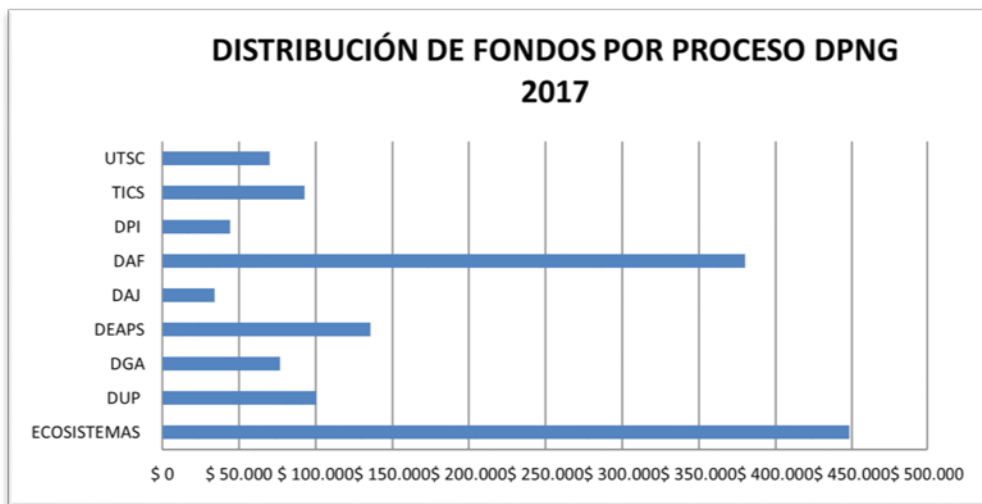
The 2014 management plan considers the results of the 2011 management effectiveness study, which responds to the overall national guidelines for ME evaluation and the RAPPAM tool; 5 main “macro-problems” are assessed for the short, medium and long terms and it was concluded that the national park and marine reserve were in need of a spatial approach for integrated and successful management (PNG, 2014). The current management plan is structured on the basis of the assessment areas, introducing decision-making alternatives to specific gaps in management.

3-1-1 Capacities (human, technical and financial)

Galápagos has served as a model for sustainable finance with the early establishment of a market-based entrance fee system. Current funding levels appear adequate for core management activities. Considerable international funding has been mobilized over the years for multiple activities both within the National Park and Marine Reserve and in the non-park areas of the islands, particularly to address the most important threats to the OUV (i.e. invasive species, illegal fishing)⁴³.

Since 2014, the total amount of external cooperation has increased from USD \$282,500 to USD \$1,338,000, while government allocations have actually been decreasing (USD \$31.987 million in 2014, the highest amount of the decade to USD \$23.780 million in 2016).

Given the increasing demands for patrolling, community work, maintenance of the Observatory, etc., the park’s budget has been reasonably invested in strategic activities mainly related to ecosystems processes (zoning, surveillance, prosecution).



Graph 3 - Distribution of external funds per administration process (Source: GNPD, 2017).

The GBA has a budget of its own and hence is autonomous in defining investment priorities.

Important gaps in staff numbers and training and development have been identified during the past years in the DGNP, especially in the area of control measures (e.g. sanitary controls in ports, vessel

⁴³ PNG, 2014

monitoring). The park has a volunteer programme for 3-month trainees to support key processes within their areas of expertise, and new departments and posts have been created; for tourism, there is a growing force of naturalist guides well trained to lead the maritime and terrestrial tours – which is mandatory. Nevertheless, it seems that field activities such as boat intervention and mainland control (e.g. ports) are still short of personnel, especially in the most populated islands.

The Biosecurity Agency has also managed to secure, in only 5 years, a remarkable amount of fixed-term specialized staff to deploy biological and agricultural procedures inside the islands; nevertheless, more personnel is needed and no budget allocation has been yet announced for the near future.

3-1-2 Coordination between the institutions

The organization and relations with other institutions through the GGC is a break-through in governance to secure the Special Regime is supported both politically and by local populations. As explained in sections 1 and 2, the main governing body encompassing several competencies and liaising with central government institutions is the GGC. The GBA coordinates with the GNPD to define action priorities within the framework of the Galápagos Plan for Sustainable Development and Land-use Planning 2015 - 2020.

In parallel, migration control and enforcement are being handled co-responsibly with national surveillance authorities i.e the armed forces, Navy and Police. Also, prosecution process involves justice instances both at the regional and national level, including those in the provinces and « parroquias », Guayaquil and Quito.

In addition, with the new 2015 law, an advisory body comprised of NGOs and other local organizations is envisioned, although its regulation still needs to be finalized, hopefully, taking into consideration good participatory practice from the former consultative bodies.

3-2 Potential and imminent threats

3-2-1 Biodiversity and integrity of the property⁴⁴

Despite their international recognition and high level of protection, the Galápagos Islands remain extremely vulnerable to environmental change; eighty of the archipelago's native species are categorized as critically endangered by the IUCN Red List, and 164 are considered threatened with extinction⁴⁵.

All islands and associated marine ecosystems are being impacted by four main inter-related threats:

- invasive alien species;
- climate change;
- population growth;
- tourism development⁴⁶.

⁴⁴ Some of the information presented in this section has been drawn from the Gef-6 Project Identification Form (Pif) « *Safeguarding biodiversity in the Galápagos Islands by enhancing biosecurity and creating the enabling environment for the restoration of Galápagos Island ecosystems* », 2017.

⁴⁵ <http://www.iucnredlist.org/>; Roque-Albelo 2007; Tye 2007.

⁴⁶ The World Bank estimates that tourism contributed \$1,039,000,000 to the country's economy in 2012, the majority of which was generated in the Galápagos Islands; <http://data.worldbank.org/country/ecuador> and 70% of the tourism national product would come from visiting the protected area (Com. pers. ME).

An additional threat that has not been measured in impact so far is the illegal fishing activity in the surroundings of the protected areas, which targets emblematic species such as sharks and turtles.

Biological invasion is generally seen as the greatest threat to biodiversity in the Galápagos⁴⁷.

Hundreds of invasive alien species are already well established within the Galápagos archipelago, some of them having arrived with seafarers more than 100 years ago, whilst others have been introduced within the last decade. Some of those species have already had significant ecological impacts in the property, like several mammals⁴⁸, the black rat (*Rattus rattus*), the Norwegian rat (*Rattus norvegicus*), the mouse (*Mus musculus*)⁴⁹, feral cats (*Felis catus*), goats (*Capra hircus*)⁵⁰, pigs (*Sus scrofa*) and donkeys (*Equus asinus*)⁵¹, as well as a gecko (*Phyllodactylus reissii*), fire ants (*Solenopsis geminata* and *Wasmannia auropunctata*)⁵² and other insects⁵³. More recently, other species have also invaded the property, with substantial impacts on birds⁵⁴, reptiles, plants⁵⁵, wildlife in general⁵⁶, and also economy and human health⁵⁷: yellow fever mosquito (*Aedes aegypti*)⁵⁸, Mediterranean fruit fly (*Ceratitidis capitata*), the giant African land snail (*Achatina fulica*), Philornis (*Philornis downsi*), blackberry (*Rubus niveus*)⁵⁹ and grape algae (*Caulerpa racemosa*). Overall, it is estimated that 19 species of non-native vertebrates are established⁶⁰, 543 terrestrial invertebrate species have been introduced, of which 55 are considered harmful or potentially harmful to native biodiversity⁶¹; 640 plant species have been introduced, most with unknown potential impacts⁶² and a minimum of 17 marine invasive alien species are now present.⁶³

It was observed that some species, especially rodents, can re-appear after long periods of time without being spotted.

⁴⁷ Watkins and Cruz 2007; Helmsley Charitable Trust's Galápagos Strategic Plan 2012; <https://www.worldwildlife.org/ecoregions/nt1307>.

⁴⁸ Carrion, V. and all, 2011 - Archipelago-Wide Islands Restoration in the Galápagos Islands: Reducing Costs of Invasive Mammal Eradication Programs and Reinvasion Risk.

⁴⁹ Carrion V, and Harper G.A., 2010 - Introduced rodents in the Galápagos: colonisation, removal and the future.

⁵⁰ Campbell, K. and Donlan, C.J., 2005 - Feral Goat Eradications on Islands.

⁵¹ Carrion, V and all, 2007 - Feral Donkey (*Equus asinus*) Eradications in the Galápagos Galápagos Conservation Action.

⁵² Causton, C.E. and all, 2006 - Eradication of the little fire ant, *Wasmannia auropunctata* (hymenoptera: formicidae), from Marchena Island, Galápagos: on the edge of success?

⁵³ Causton, C.A. and all, 2006 - Alien Insects: Threats and Implications for Conservation of Galápagos Islands.

⁵⁴ Sharon L. and all - Patógenos y parásitos: una amenaza creciente a la conservación de la avifauna de Galápagos;

Uzcátegu, G.J and all - Viruela aviar en especies silvestres (Passeriformes) en la isla Santa Cruz Galápagos, Ecuador; Wikelski, M. and all, 2004 - Galápagos Birds and Diseases: Invasive Pathogens as Threats for Island Species; Deem, S.L., 2011 - Diseases of poultry and endemic birds in Galápagos: implications for the reintroduction of native species.

⁵⁵ See Campbell, K.J. and all, 2005 - Increasing the efficacy of Judas goats by sterilisation and pregnancy termination; Campbell, K.J. and all. 2004 - Eradication of feral goats *Capra hircus* from Pinta Islands, Galápagos, Ecuador.

⁵⁶ Bataille, A. and all, 2009 - Natural colonization and adaptation of a mosquito species in Galápagos and its implications for disease threats to endemic wildlife; Cunningham, A.A. and Daszak, P, 1998 - Extinction of a Species of Land Snail Due to Infection with a Microsporidian Parasite.

⁵⁷ Bataille, A. and all, 2012 - Host selection and parasite infection in *Aedes taeniorhynchus*, endemic disease vector in the Galápagos Islands; Bataille, A. and all, 2011 - Adaptation, isolation by distance and human-mediated transport determine patterns of gene flow among populations of the disease vector *Aedes taeniorhynchus* in the Galápagos Islands.

⁵⁸ Bataille, A., 2009 - Evidence for regular ongoing introductions of mosquito disease vectors into the Galápagos Islands.

⁵⁹ Buddenhagen, C.E, 2006 - The successful eradication of two blackberry species *Rubus megalococcus* and *R. adenotrichos* (Rosaceae) from Santa Cruz Island, Galápagos, Ecuador.

⁶⁰ 9 species of mammals, 4 species of birds, 3 species of reptiles, 1 species of fish, and 1 species of amphibian (Phillips et al. 2012).

⁶¹ GBA 'Consolidating the system of preventing, controlling and eradicating invasive species in the Galápagos Islands' approved by National Planning Authority (2013).

⁶² Tye, 2007.

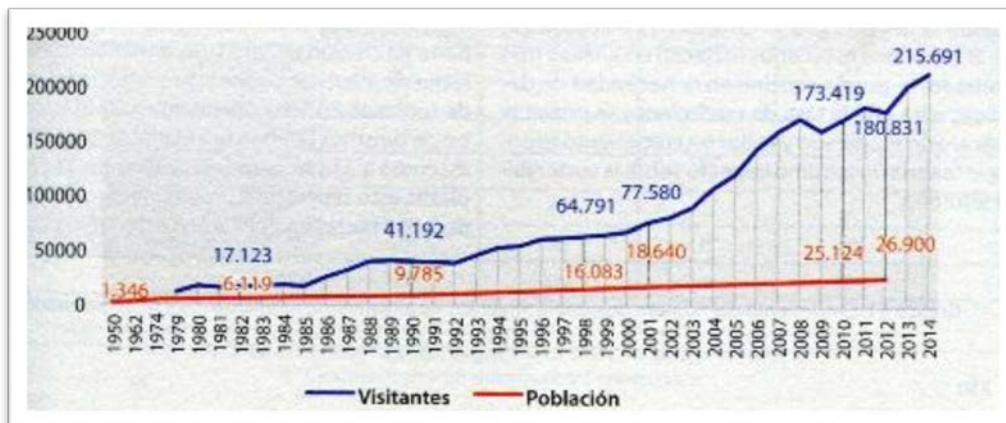
⁶³ Keith et al. unpublished data (another 30 species are awaiting analysis).

In 2012, the GNP undertook an archipelago-wide analysis of the presence and impact of invasive alien species⁶⁴. Since the last Reactive Monitoring mission, the GNP has eradicated introduced rodents from Pinzón, Rábida, and ten smaller islands (over 2,300 ha total) and improved its capacity to implement larger, more complex rodent eradication projects; at the same time, those eradication programs have demonstrated the capacity of natural landscapes to recover once the pressures by the invasive alien species have been removed.

With regards to impacts on the property's OUV, according to the information provided to the mission, the state of conservation of most species and ecosystems has not degraded drastically since the last Reactive Monitoring mission, even though the full integrity of the property becomes more and more questionable due to the human pressure.

However, one species of turtle has been lost since the last Reactive Monitoring mission (*Geochelone abingdoni*) and at the same time another species of turtle (*Chelonoidis elephantopus*) considered extinct for 150 years, seems to have reappeared recently according to research work.

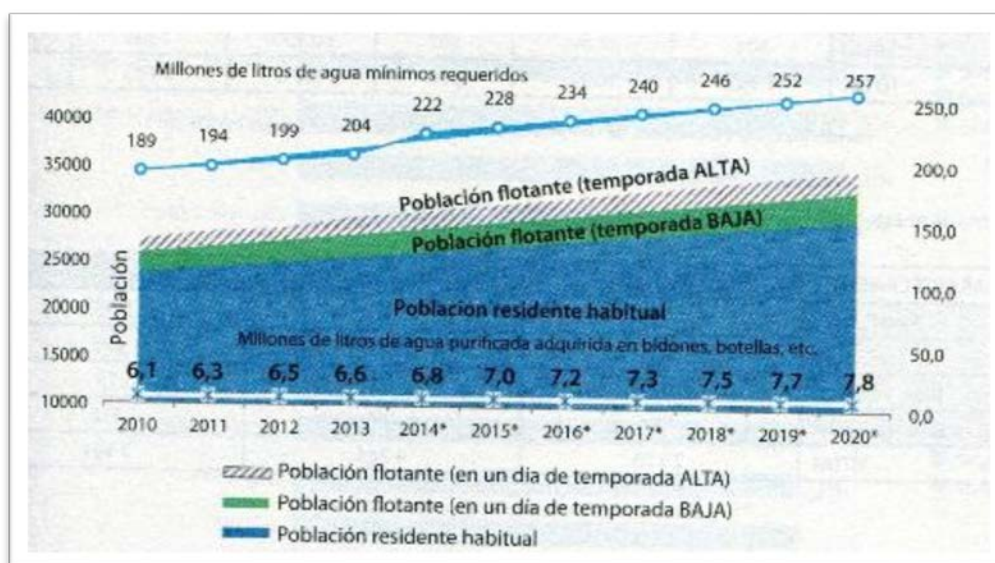
The demographic pressure has indeed tremendously increased in the archipelago during the last decades (**Graph 4**);



Graph 4 – Comparison of seasonal and permanent populations growth in the archipelago in the period 1990-2014 (Source: GNP in Plan Galápagos 2015 - 2020).

If not controlled, this demography can potentially threaten the property's OUV and integrity, directly affecting the natural features for which the area was inscribed on the World Heritage list, and indirectly impacting on natural resources, such as water which is very scarce and less and less abundant, and the demand is growing quickly (**Graph 5**) - and the ecological services provided by the ecosystems.

⁶⁴ GNP, 2012 - Control and Eradication of Priority Invasive Species to Reduce the Vulnerability of Endemic and Native Species of the Galápagos Islands. Also Deem, S. and all, 2011 - Checklist of Galápagos Pathogens and Parasites.



Graph 5 – Trends and estimation of water consumption in the Galápagos on the 2010-2020 period (Source: GGC in Plan Galápagos 2015-2020).

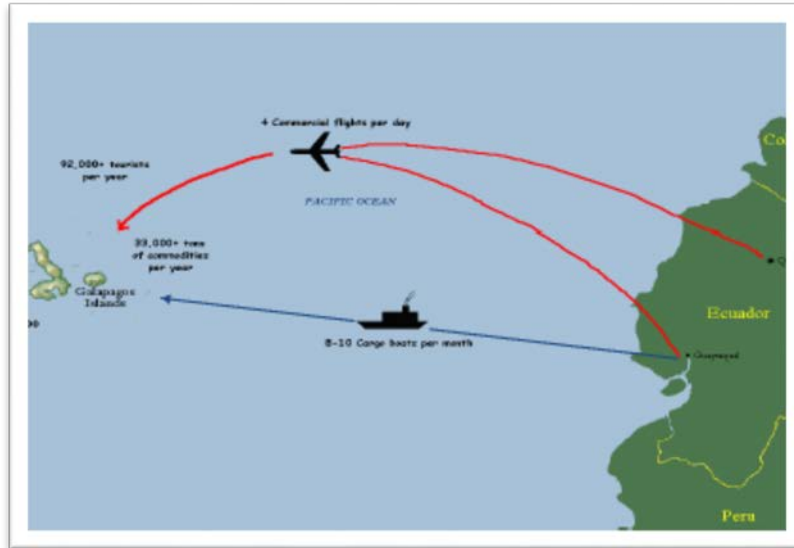
The State Party is fully aware of this complex situation and it works on a sustainable development model for the province, seeking to minimize those threats to the property but also the risks for the local permanent population, in the mid and long terms. The recent announcement by the government to adopt the «Zero growth» objective for tourism in the archipelago, gives a strong signal of the political will of the State Party to stop and reverse this demographic tendency and preserve the biodiversity and integrity of the property. This however needs to turn into a planning instrument.

3-2-2 Invasive species control

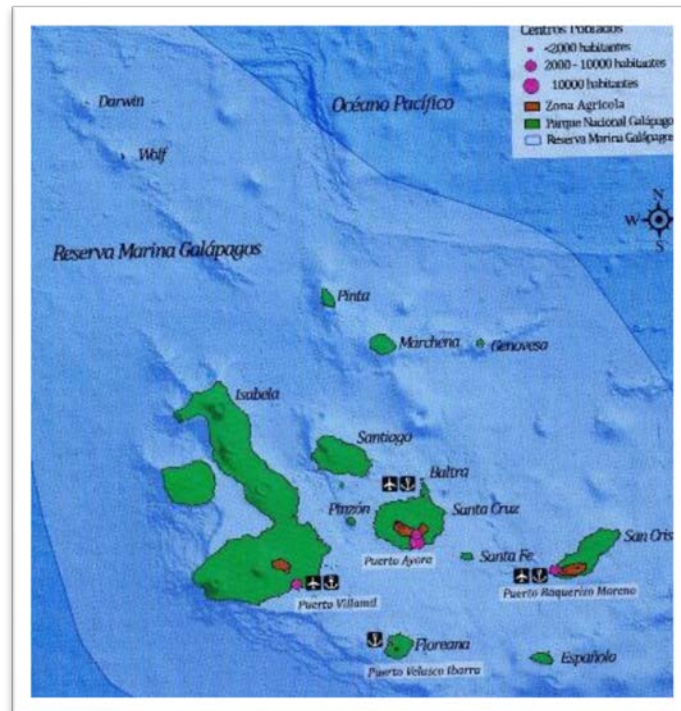
As explained in section 2, «La Agencia de regulacion y control de la bioseguridad y cuarentena para Galápagos» (GBA) was set up in 2012⁶⁵; this agency controls, regulates, prevents and minimizes the risks of introduction and dissemination of exotic species in the Galápagos, and ensures the inspection and control of all airports and harbours connected to the Galápagos⁶⁶ (Guayaquil and Quito) (**Map 2**) as well as the four small harbours and three airports located in the archipelago (**Map 3**).

⁶⁵ Decreto ejecutivo 1319.R.0811, dated 17 october 2012, art. 1.

⁶⁶ Decreto ejecutivo n°1657, dated 2000, art.94.



Map 2 – Air and sea connections between the continent and the Galápagos archipelago (Source: GNP).



Map 3 – Location of the transport facilities in the property (Source: GNP).

A strategic institutional Plan⁶⁷ has been adopted for the 2015-2018 period; this plan sets the general objective of the GBA: « *protect the native endemic and domestic fauna and flora species living in the terrestrial and marine ecosystems of Galápagos from any sanitary risk, including those introduced and being of economic, social or agricultural interest, and preserve the biological and sanitary security of the inhabitants of the Galápagos* ».

⁶⁷ Plano strategico insitucional 2015-2018 para Galápagos.

This plan details a list of ten strategic objectives aimed at minimizing the risk of introduction of exotic species in the property by developing inspection, prevention, quarantine and control activities in the whole archipelago, as well as in key sites on the continent, airports and harbours.

In addition to those preventive activities, the GNP implements *ex post* activities aiming to eradicate invasive species in the park and marine reserve territory; for instance⁶⁸ control and eradication programmes have been implemented successfully by the GNP on vertebrates (goats⁶⁹, donkeys, wild boars⁷⁰, rodents⁷¹), fish (tilapias⁷²), snails (achatine), insects (fire ants⁷³, flies⁷⁴ and mosquitoes) as well as flora species (blackberries).

The GNP administration has elaborated a new project of control and eradication of the priority invasive species to reduce vulnerability of endemic and autochthonous species in Galápagos⁷⁵; however, funding has yet to be found for its implementation.

The establishment of the Agency is a major advancement in translating political commitments into actual regulation efforts and has proven to be exemplary even for many countries in the region and abroad. Hence, its processes, personnel and facilities deserve larger investments both from governmental budgets and from other sources that may or may have not been considered – e.g. technical cooperation, other sources of self-funding.

In conclusion, despite the efforts to date, the results remain fragile and the situation is still critical; the control of the invasive species will still require, from both institutions, continuous and tremendous efforts and support to address this challenge.

The mission considers that both agencies should develop greater capacities in the future to strengthen their actions against invasive species to enable them to control – if not eradicate definitely – those species.

3-2-3 Tourism development

According to the LOREG 2015, the sustainable tourism in Galápagos must be developed on the models of nature-based tourism and ecotourism, compatible with the conservation of the ecosystems; this Law regulates tourism activities in general and establishes the rules for the attribution of permits to the tourism operators in the property and in the province, as well as the conditions under which they can operate.

The national authority in charge of environment – the Ministry of Environment – is responsible for the programming, authorization, control and supervision of the tourism uses and activities in the natural protected areas, in coordination with the National Tourism Authority. Outside the natural protected

⁶⁸ Sevilla, C., no dated – La problemática de las especies introducidas en las islas Galápagos y el estado actual de su control, 28pp.

⁶⁹ Plaza Sur, Santa Fe, Rabida, Espanola, Marchena and Pinta islands as well as on Volcano Alcedo in the 70ties and 90ties and Isabela (from 1961 to 2008).

⁷⁰ Santiago (2001).

⁷¹ Rabida, Bartolome, Gran Felipe, Plaza Norte, Beagle Oeste, Beagle Sur, Bainbridge 1, 3, 5 and 6, Sombrero Chino Islands (2011), as well as in Pinzon and Plazas Sur (2012).

⁷² San Cristobal (laguna del Junco).

⁷³ Marchena (1988).

⁷⁴ Mosca de la fruta (*Philornis Downsi*).

⁷⁵ « Proyecto de control y erradicación de especies invasoras prioritarias par la reducción de la vulnerabilidad de especies endémicas y nativas de la islas Galápagos ».

areas, this authority which is represented in the Galápagos province by « *Regional Coordinator* » must also coordinate with the GGC.

Tourism activities have increased exponentially during the last twenty years (more than 13% per year in the 2000-2014 period); the Galápagos have been visited by some 224 000 tourists in 2015, compared to 77 000 in 2000 and 173 000 tourists in 2010 when the last Reactive Monitoring mission was organized⁷⁶. However, this trend seems to have reversed in the recent years, due to the cumulative effects of the economic recession in the country, the elimination of airlines fuel subsidies in 2012 as well as the impacts of the earthquake and the strengthening of the USD dollar in 2016. It is expected that the number of visitors has increased again in 2017 due to diversification of markets (i.e. Asian) and services offered (i.e. daily tours).

Those data can be compared with other similar protected areas that supported a higher tourism growth in the 2007-2015 period (**Table 1**).

Área	Country	N. visitors in 2015	Period 2007 - 2015
Parque Nacional Isla del Coco	Costa Rica	2 957	+7,51%
Reserva Nacional Tambopata	Perú	45 350	+6,67%
Parque Nacional Tayrona	Colombia	333 965	+6,43%
Archipiélago Fernando de Noronha	Brasil	90 522	+5,79%
Complejo Arqueológico Machu Picchu	Perú	1 282 515	+5,38%
Parque Nacional Galápagos	Ecuador	224 745	+3,72%

Table 1 – Comparison of number of visitors between several areas from the region, period 2007-2015 (Source: GTO).

Tourism activities are strictly regulated in the property and they are organized according to the visitor management system, « *SIMAVIS* » (**Figure 3**) set up in 2011; this system provides the GNP administration information and means for managing the tourism uses and activities and minimizing the pressures according to the property' capacities and sites sensitivity:

- 291 hotels were accredited in 2015⁷⁷, meeting the qualification and quality standards⁷⁸;
- 74 tourism vessels are registered or licensed and comply with the environmental requirements;
- tours are restricted to 180 terrestrial and marine « *sites* » designated by the GNP administration; the number of groups of visitors acceptable at each site is fixed according to the site sensitivity.

⁷⁶ Plan Galápagos 2015-2020.

⁷⁷ 311 tourism establishments in total, compared to 440 which were operating before 2014.

⁷⁸ Source: GTO.



Figure 3 – SIMAVIS Concept (Source: GNP).

In addition to those measures, a moratorium on construction of new tourism constructions and expansion of existing ones, was introduced in 2013⁷⁹; new building and operating standards were also adopted in 2014⁸⁰ and a maximum of 35 rooms and 70 beds for the new hotel infrastructure was fixed⁸¹. Three amongst the 21 projects⁸² of construction of new facilities presented in 2015, have been authorized by the government⁸³.

Finally, the GNP has been working on development of a sustainable community tourism programme in Floreana with the local community; this project is supported by the government and it has been initiated by the population which has set up a cooperative having the legal personality, the “*Centro Comunitario Floreana–CECFLOR*” and a created company⁸⁴ in 2016, aiming to promote and market a community model for sustainable tourism; this model is based on developing green tourism local activities, for one, two or three days, and offering local products and services provided directly by the community’s members.

A « *Galápagos Tourism Observatory* » (GTO) was also set up in 2011, as part of the SIMAVIS; this observatory provides the government, including the GNP administration and other stakeholders from this sector, with a platform for information, study, research and monitoring of tourism in the province and in the property; this observatory is accessible online⁸⁵ and provides only key data on trends, state and activities; detentions made by the GBA are also reported in the platform, which can also be complemented with the information on divers located in Dive-Stat⁸⁶.

Based on the data and figures available and provided to the mission by the GTO, the discussions held with the local stakeholders led to the following conclusion and recommendations for the future⁸⁷:

⁷⁹ GGC Res. N°014- CGREG-18-VII-2013.

⁸⁰ GGC Res. N°021-CGREG-29-VIII-2014.

⁸¹ GGC Res. N°040-CGREG-10.XII-2014.

⁸² 2 in Santa Cruz (30 + 20 beds) and 1 in Floreana (32 beds), all of them outside the property and presented by local residents.

⁸³ GGC Res. N°030-CGREG-04-IX-2015.

⁸⁴ « *Floreana Post Office tours Cía. Ltda*”.

⁸⁵ <http://www.observatorioGalapagos.gob.ec/>.

⁸⁶ <http://www.darwinfoundation.org/es/noticias/2017/2/7/divestat-conociendo-en-profundidad-los-buzos-de-ga/>

⁸⁷ Izurieta, J.C., 2017 - Comportamiento y tendencias del turismo en Galápagos entre 2007 y 2015, Observatorio de Turismo de Galápagos, Ministerio de Turismo.

- establish touristic sites outside protected areas;
- improve quality and standards;
- limit the number of visitors in the Galápagos;
- coordinate with the Ministry of Tourism and the private sector on the guidelines for tourism promotion.

In summary, all those decisions and measures show a strong will from the State Party to control the development of tourism in the Galápagos and to consolidate a model of tourism in the province that is sustainable and fully compatible with the preservation of the property's OUV and integrity.

Furthermore, a critical political agenda is being constructed by the State Party to build up a “*zero growth*” scenario for Galápagos, including provisions on hotel licensing and services; specific plan is not yet being implemented but according to the discussions held during the visit of the mission, there would be a governmental political consensus for a growth stabilization of tourism in the future in the Galápagos.

However, this objective should be clarified and elaborated further, in a tourism strategy for the Galápagos, as requested several times in the past by the World Heritage Committee and now initiated with the tourism management plan 2012; the political and administrative process should be accelerated by the State Party so that a clear vision, objectives, restrictions and limits for tourism are included in the next GNP management plan, in line with the principles contained in the LOREG 2015 and meeting the World heritage Convention requirements.

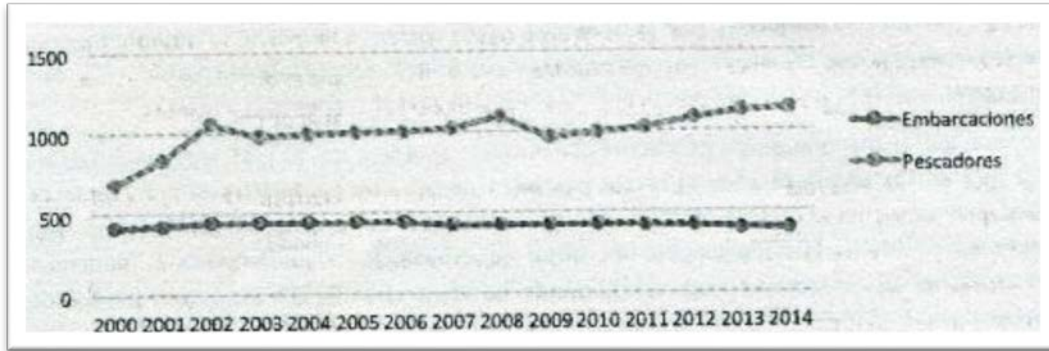
3-2-4 Fishing

The context has significantly changed and improved since the last Reactive Monitoring mission. Industrial fishing is forbidden in the whole archipelago and catch areas have been zoned in a participatory process with local fishermen:

- « *sport fishing* » has been forbidden, as recommended by the 2010 Reactive Monitoring mission report,
- « *Vivencial fishing* » was recognized as a tourism activity⁸⁸ in 2013; this activity is strictly regulated and monitored; it looks well adapted to the property's capacities, and is seen by the artisanal fishing sector as a compensation for their efforts to preserve the archipelago and its natural marine resources;
- a « *fishing calendar* »⁸⁹ has been adopted, in agreement with the fishing sector, to guarantee that the artisanal fisheries are sustainable; fishing areas, seasons, tools, bag limits are regulated;
- in 2015, a total of 56 permits were issued but 31 only are apparently used in reality;
- the new zonation of the property and the establishment of the marine sanctuary have substantially increased the size of no-take zones;
- the number of boats has remained stable since the last Reactive Monitoring mission (**Graph 6**).

⁸⁸ GGC Res.n°007-CGREG-2013 dated 18 January 2013.

⁸⁹ « *Calendario pesquero, 2016-2021* ».



Graph 6 – Number of boats registered by the GNP (Source: GNP).

Furthermore, the GNP controls navigation in the whole territory of the property and its surroundings.

This system combines the monitoring of all small boats for tourism and artisanal fisheries which are equipped with a beacon provided by the GNP administration (**Picture 6**), with a more sophisticated satellite vessel monitoring system (SVMS) in which every national and foreign vessel over 20 BTR (Brut tonnage register) is equipped on board with a GPS beacon, so that its exact location as well as administrative information on the boat and its owner can be checked and monitored, both inside and outside the property. The GNP staff is available seven days per week to control the situation.



Picture 6 – Beacon provided by the GNP administration to small boats (Source: EMC21).

During its visit, the mission witnessed an illegal navigation case of a foreign storage vessel in the GMR, transporting 300 tons of endangered species of fish; the vessel was spotted by the GNP administration, thanks to its sophisticated control system and then boarded by the navy; an official process was initiated based on accusation of transportation and possession of illegal cargo.

This incident shows how illegal fishing is still a matter of concern for the preservation of the property's OUV and integrity, on its territory but also in its surroundings, within the territorial seas of the State Party as well as in the whole region in general. The damages caused by this vessel have been estimated at USD \$36 Million⁹⁰.

Illegal fishing is a potential threat for the property and the State Party must address this issue as much as it can, having in mind that this affects not only the Galápagos archipelago but also many other regions in the world, including the whole South and Tropical Oriental Pacific region.

From the mission's standpoint, this issue should be addressed also at the regional level and dealt with by the international community; it could be raised at the next IUCN World Conservation Congress and at any other appropriate technical and political instances (e.g. International Marine Protected Areas Congress).

3-3 Main progress made since the last report to the World Heritage Committee

Positive development and improvement occurred since the the last Reactive Monitoring mission; the progress made has been evaluated by the mission, on the basis of the recommendations of the 2010 Reactive Monitoring mission:

3-3-1 Invasive alien species

- *Establishment of a single cargo loading port in Guayaquil, with the necessary biosecurity infrastructure and processes in place.*

Progress made: the best location to build the new harbour has been identified and approved, and the structural and architecture design has been completed; however, the construction of this facility has not yet started in absence of funding; the State Party should be urged to accelerate this process and provide appropriate budget in the nearest future;

- *Replacement of the current aging and maladapted cargo ships with new ships designed to facilitate the application of biosecurity measures.*

Progress made: all cargo ships have been changed and the new cargos transport only containers which facilitates the control of the products before they enter the Galápagos archipelago. However, this control remains difficult and uncertain; specimen of exotic flora and fauna species as well as pets, are still found sometimes in the containers, showing that the control chain should still be improved and that the storage and quarantine facilities should be secured;

- *Systematic application of the internationally certified bio-security practices, with regular independent compliance audits, at cargo loading and off-loading points, and on cargo ships.*

Progress made: important progress has been made since the last Reactive Monitoring mission at each step of the control chain in order to improve the overall context and prevent the introduction of new invasive species in the property. The GBA has issued strict rules, manual and control processes to minimize the risk of invasion by new species; furthermore, the capacities of this

⁹⁰ Source: GNP Administration.

agency have increased substantially over the years in its short existence. The Government of Ecuador should be acknowledged for its efforts; however, there is still some progress to be made in (1) securing and properly adapting the areas where the containers are stored for their control, as well as (2) strengthening the technical and financial resources allocated to those controls. Amongst other measures, trained dogs controls should be established and strengthened at each international airport and port facility connected with the archipelago which is still not the case, and the protocol of intervention should be revised: the authorities involved, measures to be taken in case of an invasive specimen is identified, external personnel present during the inspections;

- *Institution of a capacity-building programme for the biosecurity inspection agency (Agrocalidad) with the support of the highest quality international biosecurity inspection officials, including a focus on dogs trained in detecting organic matter:*

Progress made: the GBA was established in 2012⁹¹ as a public entity placed under the authority of the ME. This agency has its administrative, technical and financial autonomy; it is based in several locations in the province⁹² and its mission and internal processes have been established⁹³. The staff has a high level of training, and at the time of the mission, 3 dogs trained on organic products were available.

- *Strengthening of the budget for Agrocalidad in Galápagos:*

Progress made: efforts have been made to improve the situation since the last Reactive Monitoring mission but the budget of the GBA is still considered by the agency administration as insufficient and should be increased; the mission did not have access to more detailed data and figures on the budget of the GBA.

- *Conducting of a feasibility study of selecting Baltra as the only Galápagos port authorized to receive cargo directly from the continent, so that international quality biosecurity inspection facilities may be concentrated there and be more effective.*

Progress made: this project has not progressed substantially; the State Party has not yet identified the best location for this new facility; nevertheless, the current facilities located in Baltra and Santa Cruz, are functioning and the control of products is still undertaken there and currently, efforts are concentrated in the inspection before the ships leave Guayaquil;

- *Ensuring that the Villamil air terminal is not put in service as a commercial airport and consideration of the possibility of dismantling it, or at the very least, converting it permanently to another use.*

Progress made: Villamil is a very small air terminal used only for intra-islands air connections; it does not receive directly products from the continent and the risk of invasion by exotic species from this facility appears minimal; the mission did not have direct access to it but reviewed the use frequency through secondary information;

⁹¹ Executive Decree n°1319 (Second official registry, sup. n°811 17 October 2012).

⁹² Puerto Aroya, Santa Cruz (headquarters), and Loreana (port), Isabela (Aeropuerto), San Cristóbal (Aeropuerto), Santa Cruz (Aeropuerto de Baltra), Guayaquil (Aeropuerto José Joaquín de Olmedo) and Muelle de carga "Store Ocean" (Pradera II) and Quito (Aeropuerto Mariscal Sucre).

⁹³ Res. N°2 29 July 2013.

3-3-2 Tourism

- *Development and implementation of a clear tourism vision and strategy for Galápagos, with a focus on establishing mechanisms to discourage rapid and uncontrolled growth in visitation and to guide future decision-making processes.*

Progress made: the government has recently taken a strong political decision to adopt the objective « *zero growth* » in the Galápagos for tourism; this new vision which looks to go in the right way, is not yet implemented and it has not been elaborated further as it has been only recently agreed at a high level. The State Party should be urged to provide a clear definition of this objective and to detail how it will be reached concretely in the future. Furthermore, despite the progress made since the last Reactive Monitoring mission in controlling the tourism activities in the property, tourism development remains a potential threat for its OUV;

- *Conduction of a feasibility assessment for imposing an upper limit to the number of Park entrance permits awarded annually, which would help improve the conditions under which the State Party could develop and implement effective tourism management mechanisms:*

Progress made: the number of park entrance permits has been growing over the last years; 224 000 people visited the park in 2016. At the time of the mission, discussions were still going on at the governmental level, to further elaborate a clear strategy on sustainable tourism (see here above). It is recommended that the World Heritage Committee reiterate its previous decisions and urge again the State Party to adopt a tourism strategy fully compatible with the preservation of the OUV of the property and its integrity in the nearest future; this strategy should be part of the next GNP management plan in preparation;

- *Decision of a moratorium on the current unregulated practice of “sport fishing” until such a time as i) the official vision and policy for tourism in this property is finalized and, should this allow for sport fishing ii), sufficient scientific evidence is obtained demonstrate how sport fishing could proceed to ensure the property’s Outstanding Universal Value is not compromised (e.g. intensity, seasonality, zonation, licensing).*

Progress made: « *sport fishing* » is no longer allowed in the GNP, but « *Vivencia fishing* » is practiced which is artisanal, does not put high pressure on the property and on the fish resources; the current fishing regulations outline conditions and rules which appear appropriate and sufficient to preserve the property’s OUV and fish resources. The marine reserve has also been expanded since the last Reactive Monitoring mission ensuring a better protection of the marine ecosystems and minimizing the risks of over exploitation of fish resources; it is managed by the GNP Directorate.

3-3-3 Governance

- *Clarification of communication between the Governing Council and the Director of the GNP, in regard to the management of the National Park and Marine Reserve as well as on all policies affecting the Park.*

Progress made: the current situation is clear: the GNP administration has full competency on the GNP and on the marine reserve (MR) conservation and management; this institution regulates all uses and activities and leads the eradication of invasive species in both protected areas, whereas the GBA is responsible for all activities and measures for preventing invasion of exotic species in coordination with the GGC which has an overall political mandate in the whole province⁹⁴;

⁹⁴ See LOREG, Title II, Chap. I to IV and <http://www.gobiernogalapagos.gob.ec/>.

furthermore, the GNP Directorate is part of this governing body in which decisions are jointly taken.

- *Establishment of effective participatory mechanisms which have been painstakingly developed in the past (e.g. the Junta de manejo participativo) should not be discarded in the establishment of new governance structures*

Progress made: the GNP administration seems to have close, permanent and excellent contacts with the NGOs and the civil society from Galápagos; those local stakeholders make a considerable contribution to improving the level of knowledge about the property and to conserving its values and integrity. Furthermore, it was the unanimous opinion of the NGOs met during the mission visit that the GNP administration had made significant efforts and progress since the last Reactive Monitoring mission. It is expected that the GNP administration will continue those efforts in the future and will adopt a participatory approach for the preparation of the next management plan according to the LOREG. The mission considers that the formal establishment of the GNP « *consultative council* » stipulated in the LOREG (art. 22) should help to strengthen and secure this cooperation in the long term, although in the opinions consulted this will not have the same decision-making scope that the former board had. The State Party should be invited to set up this Council and replicate the positive lessons learned out of the past structure.

- *Engage a recruitment process for the Technical Director of the Governing Council fully transparent and competence-based.*

Progress made: a « *Technical Secretary* » has been hired, under the authority of the President; the mission has not met them but was directly introduced to the President of the GGC -who was Minister of Environment of Ecuador in the past- and some high level technical staff.

- *Strengthening of the judicial processes regarding environmental infractions in such a way as to effectively discourage illegal fishing.*

Progress made: this recommendation is just as pertinent today, considering the incident with the Chinese vessel « *Fu Yuan Yu Leng* » arrested within the property during the visit of the mission with 300 tons of endangered species of fish on board; the prosecution process was managed properly, ending with penal sanctions. Although this is, so far, an isolated incident inside the property, the truth is the threat is latent right across its borders and along the whole Pacific Ocean.

4. CONCLUSIONS AND RECOMMENDATIONS

The State Party should be acknowledged for its efforts in addressing most issues which were raised in the recommendations of the 2010 Reactive Monitoring mission report as well as by the World Heritage Committee.

Furthermore, during its visit, the mission felt permanently a strong political will of the public administration and all other stakeholders to progress towards a context where the property's OUV and main natural features are fully preserved; the present mission report provides several examples of positive achievements illustrating this political will. Additional efforts should however be undertaken in order to translate this will into further operational decisions and towards more concrete results.

To this end, the mission makes the following recommendations:

Legislation and policy

1. Ensure that all provisions of the LOREG 2015⁹⁵ continue to be implemented and enforced, including those related to biosecurity and those that complement other efforts to halt migration to the Islands, e.g. the “zero growth” policy.

Governance and management of the property

2. Strengthen human, technical and financial capacities of both the Galápagos Biosecurity Agency (GBA) and the Galápagos National Park (GNP), in the field of prevention and control of invasive species;
3. Improve coordination between strategies and actions of local institutions (GNP, GBA and Galápagos Government Council (GGC)), to preserve the property’s OUV, including through the establishment of the GNP Consultative Council as foreseen by the LOREG (art. 22). Accordingly, this Council should be involved in the preparation of the next GNP management plan, as well as in any future management effectiveness and governance assessments;
4. Update the current management plan for the Galápagos National Park by the end of 2018 and ensure that it addresses both socio-cultural and environmental matters and includes:
 - a. a specific part on the preservation of the OUV of the property;
 - b. a tourism strategy compatible with the preservation of the property’s OUV, with a clear vision, objectives, restrictions and limits, and meeting the principle of sustainability and compatibility with the conservation of ecosystems contained in the LOREG (Title V, Chap. II).

Conservation of natural values

5. In cooperation with the fisheries sector, assess the possibility for expanding the current marine protected area in order to maintain the property’s OUV, including its conditions of integrity, and to better protect the marine resources from illegal fishing;
6. Finalize the zoning of the property, in both marine and terrestrial parts, so as to maintain and protect the property’s OUV most effectively.

Biosecurity and control of invasive species

7. Continue efforts to prevent and control invasive species, prioritizing eradication and control of the worst known invasives, favouring pest-control methods that are ecologically friendly, and monitoring the impacts of their use on native species, so as to maintain the property’s OUV and its natural biological processes;
8. In close coordination between the diverse sectors involved in the implementation of biosecurity measures (customs, GBA, ME/GNP, health departments, etc.), rigorously ensure the respect of the control chain « *prevent-monitor-control* » established by GBA with regards to the risks of invasion by exotic flora and fauna species, and include in the next management plan for Galápagos National Park a continuous and funded programme of activities aimed at minimizing the risks of invasion;
9. Improve and secure the existing facilities and equipments for the storage and quarantine of containers and products, in all air- and seaports on the Galápagos Islands and at all air- and seaports on the mainland that transport goods and people to the Galápagos Islands (including at the new international airport currently being constructed on the mainland), with facilities in Guayaquil requiring the most urgent attention;

⁹⁵ Ley Organica de Regimen Especial de la provincia de Galápagos - LOREG (Registro oficial Suplemento 520 de 11 Jun 2015).

10. Complete the construction of the new veterinary and physico-chemical laboratory of the GBA in Santa Cruz and continue to strengthen the capacities of pest control facilities;

Tourism

11. Clarify and further elaborate the objective of the recently announced « zero growth » policy for tourism in the Galápagos Islands;
12. Continue to monitor and document the provision of services, sales offers, trails and maritime routes and the registration of visitors, together with ensuring appropriate fees for entering the islands (e.g. increasing entrance fees for the most pressing markets).

Fishing activities

13. Strengthen the current monitoring and control system of vessels so as to ensure day and night monitoring and control of ship traffic, and ensure adequate staffing levels to cover different shifts;
14. Strengthen coordination and cooperation with other governments in the region to jointly combat illegal fishing through appropriate legal agreements.

In conclusion, the mission observed that the property is still placed under high pressure, partly from outside its boundaries, and could be potentially threatened in the future, if further and continued efforts are not made and/or strengthened on a series of critical issues that require a special attention from the State Party, as well as from the other governments from the region and abroad. Illegal fishing might become the most critical issue for this property in the future.

ANNEXES

ANNEX 1

Decision: **40 COM 7B.74** Galápagos Islands (Ecuador) (N 1bis)

The World Heritage Committee,

1. Having examined Document WHC/16/40.COM/7B.Add,
2. Recalling Decisions **34 COM 7A.15**, **35 COM 7B.30**, **36 COM 7B.32**, and **38 COM 7B.83**, adopted at its 34th (Brasilia, 2010), 35th (UNESCO, 2011), 36th (Saint Petersburg, 2012) and 38th (Doha, 2014) sessions respectively;
3. Welcomes the progress achieved by the State Party in implementing the recommendations of the 2010 Reactive Monitoring mission;
4. Notes the progress achieved by the State Party in addressing solid waste management and requests the State Party to continue its efforts to establish an effective system of solid waste management and to also improve the management of sewage on land and sea;
5. Also requests the State Party to provide further information regarding the recent rezoning of the marine part of the property announced in March 2016, in view of evaluating the impacts on threats from illegal fishing raised in previous Committee decisions;
6. Expresses its concern that comprehensive and effective management responses, in particular as regards the fundamental and related challenges of biosecurity and tourism, continue to require further strengthening of current efforts and urges the State Party to fully implement the requests made by the Committee when it decided to remove the property from the List of World Heritage in Danger at its 34th session, including:
 1. Development and implementation of a clear tourism strategy for Galápagos, with a focus on establishing mechanisms to discourage rapid and uncontrolled growth in visitation;
 2. Completion of the biosecurity chain of inspection and control by establishing the dedicated cargo facilities at a single Guayaquil cargo loading dock and by considering Baltra as the only authorized point of entry to the islands to receive cargo from the continent;
7. Further requests the State Party to invite, before its 42nd session in 2018, an IUCN Reactive Monitoring mission to the property to assess the progress achieved in addressing these pending issues;
8. Requests furthermore the State Party to submit to the World Heritage Centre, by **1 December 2017**, an updated report on the state of conservation of the property and the implementation of the above, for examination by the World Heritage Committee at its 42nd session in 2018.

ANNEX 2

AGENDA OF THE MISSION

AGENDA (21-25 de Agosto)			Día/Hora
Institución	Dirección Quito	Temáticas Abordar	Lunes 21
CGREG	Calle Checoslovaquia E10-195 y Av. Eloy Alfaro, Edificio Cuarzo, Piso 4	Crecimiento Demográfico	8:30-9:30
		Estrategia de Turismo sostenible	
		Discusión sobre la Ley Orgánica de Régimen Especial de Galápagos	
MAE-Ministerio de Relaciones Exteriores-Instituto de Patrimonio Nacional-DPNG	Calle Checoslovaquia E10-195 y Av. Eloy Alfaro, Edificio Cuarzo, Piso 4	TEMAS DIVERSOS	11:00
Institución	Temáticas Tentativas	Temáticas Específicas	Martes 22
Movilización desde Quito a la Isla de Baltra-Santa Cruz			8:00-12:30
Dirección del Parque Nacional Galápagos	Manejo Sostenible de Recursos y Conservación de la biodiversidad	Zonificación y manejo de recursos marinos	14:00
		Control de las Especies Invasoras en las Áreas Protegidas	
		Tourismo Sostenible, regulación de visitante y pesca vivencial	
		Manejo de las Áreas Protegidas de Galápagos	
		Calidad Ambiental en Galápagos	

Institución	Temáticas Tentativas	Temáticas Específicas	Miércoles 23
Dirección del Parque Nacional Galápagos	Salida Técnica de Monitoreo	Visita a la Isla Seymour para observar sistema de manejo de visitantes, el control de especies introducidas y el manejo de especies	9:00
Agencia De Regulación Y Control De La Bioseguridad Y Cuarentena Para Galápagos	Bioseguridad	Cadena de inspección y control de bioseguridad (muelle de carga de Guayaquil, Baltra como el único punto autorizado de carga, punto de inspección)	14:00-17:00
Institución	Temáticas Tentativas	Temáticas Específicas	Jueves 24
DPNG	Visita Técnica	Centros de Crianza	9:00-12:30
		Sala de Monitoreo y Control	
		Sistema de Cuarentena de Galápagos	
Charles Darwin		Reunión con ONGs sobre contribuciones al manejo de los valores patrimoniales del PN Galápagos	14:00-18:00
Conservación Internacional			
Galápagos Conservancy			
Sea Sheperd			
WWF			
Institución	Temáticas Tentativas	Temáticas Específicas	Viernes 25
DPNG-Island Conservation-Junta Parroquial de Florena	Visita Técnica de Monitoreo	Monitorear la estrategia de turismo comunitario sostenible, la recuperación ecológica y manejo de especies endémicas y control de especies invasoras	7:00-17:00
			Sábado 26
Regreso desde Baltra-Quito			

ANNEX 3

LIST OF CONTACTS

Organization	Position	Name	Mail
GALÁPAGOS NATIONAL PARK			
PNG	DIRECTOR DEL PARQUE NACIONAL GALÁPAGOS	WALTER BUSTOS NAVARRETE	wbustos@galapagos.gob.ec
	RESPONSABLE PROCESO CONSERVACION Y RESTAURACION DE ECOSISTEMAS INSULARES	CHRISTIAN SEVILLA	csevilla@galapagos.gob.ec
	DIRECTOR DE GESTIÓN AMBIENTAL	JORGE CARRION	jcarrion@galapagos.gob.ec
	DIRECTORA DE USO PÚBLICO	VERONICA SANTA MARIA	vsantamaria@galapagos.gob.ec
	RESPONSABLE PROCESO ADMINISTRACION OPERACION TURISTICA	EDDY ARAUJO	earaujo@galapagos.gob.ec
	DIRECTOR DEAPS (Educación Ambiental y Participación Social)	LORENA SANCHEZ	ksanchez@galapagos.gob.ec
	RESPONSABLE DEL PROCESO CONSERVACION Y USO DE ECOSISTEMAS MARINOS (acting Director)	HARRY REYES	hreyes@galapagos.gob.ec
	RESPONSABLE DE SUBPROCESO DE MONITOREO DE ECOSISTEMAS MARINOS	EDUARDO ESPINOZA	eespinoza@galapagos.gob.ec
	DIRECTOR PLANIFICACIÓN INTITUCIONAL	CHRISTIAN VEGA	cvega@galapagos.gob.ec
	RESPONSABLE DE PROYECTOS DE INVERSION Y RELACIONES INTERNACIONALES	MARIA SOL ESPINOSA	msepinosa@galapagos.gob.ec
	VETERINARIA	ANDREA LOYOLA	aloyola@galapagos.gob.ec
	GUARDAPARQUE INSULAR- RESPONSABLE DEL CENTRO DE CRIANZA	FREDDY VILLALVA	fvillalva@galapagos.gob.ec

OTHER INSTITUTIONS			
ABG	DIRECTORA EJECUTIVA	MARILYN CRUZ	marilyn.cruz@abgalapagos.gob.ec
	SUB-DIRECTOR DE PLANIFICACIÓN INSTITUCIONAL	MARTIN ESPINOSA	martin.espinosa@abgalapagos.gob.ec
	DIRECTORA DE NORMATIVA Y PREVENCIÓN PARA LA BIOSEGURIDAD	MONICA RAMOS	monica.ramos@abgalapagos.gob.ec
	DIRECTORA DE VIGILANCIA Y CALIDAD DE LA BIOSEGURIDAD	VIVIANA DUQUE	viviana.duque@abgalapagos.gob.ec
OBSERVATORIO DEL TOURISMO	COORDINADOR RESPONSABLE	JUAN CARLOS IZURIETA	juan.izurieta@turismo.gob.ec
JUNTA PARROQUIA L FLOREANA	PRESIDENTE	MAX FREIRE	juntaparroquialfloreana@gmail.com
	RESIDENTE FLOREANA	CLAUDIO CRUZ	-
NON GOVERNMENTAL ORGANIZATIONS			
CONSERVATION INTERNATIONAL	GERENTE DEL PROGRAMA GALÁPAGOS	MARIANA VERA	mvera@conservation.org
	EXPERTO DE PESQUERIA	JERSON MORENO	jmoreno@conservation.org
	GERENTE REGIONAL DE PESQUERIAS	MAURICIO CASTREJON	mcastrejon@conservation.org
FUNDACION CHARLES DARWIN	COORDINADORA DE ASUNTOS INTERNACIONALES	JOHANNA CARRION	johanna.carrion@fcdarwin.org.ec
	GESTOR ADMINISTRATIVO	DIEGO NUNEZ	diego.nunez@fcdarwin.org.ec
	ECOLOGO PESQUERO	JOSE WAIM	jose.waim@fcdarwin.org.ec
GALÁPAGOS CONSERVANCY	GIANT TORTOISE RESTORATION INITIATIVE	WASHINGTON TAPIA AGUILERA	wtapiaa@gmail.com
ISLAND CONSERVATION	CEO ISLAND CONSERVATION	KARL CAMPBELL	karl.campbell@islandconservation.org
	MANAGER LEGAL Y ADMINISTRATIVO	CAROLINA TORRES	carolina.torres@islandconservation.org
SEA SHEPHERD	DIRECTOR DE OPERACIONES	GODFREY MERLEN	merlenway@gmail.com
WWF	OFICIAL DE ECOTOURISMO	MARIA CASAFONT	maria.casafont@wwf.org.ec
	OFICIAL DE OCEANOS & COSTAS	JORGE RAMIREZ	jorge.ramirez@wwf.org.ec

ANNEX 4**TERMS OF REFERENCE****IUCN Reactive Monitoring mission****Galápagos Islands (Ecuador)****21-25 August 2017**

At its 40th session, the World Heritage Committee requested the State Party of Ecuador to invite an IUCN Reactive Monitoring mission to the Galápagos Islands World Heritage Site (**Decision 40 COM 7B.74**, Annex 1). The objective of the monitoring mission is to assess the progress achieved by the State Party in addressing a number of pending issues, in particular those related to biosecurity and tourism, which were part of the requests made by the Committee when it decided to remove the property from the List of World Heritage in Danger at its 34th session. The mission will be conducted by Mr. Hervé Lethier and Ms. Paula Bueno representing IUCN.

In particular the mission should undertake the following:

1. Evaluate the progress achieved by the State Party with the:
 - a. development and implementation of a clear tourism strategy for Galápagos, with a focus on establishing mechanisms to discourage rapid and uncontrolled growth in visitation;
 - b. Completion of the biosecurity chain of inspection and control by establishing the dedicated cargo facilities at a single Guayaquil cargo loading dock and by considering Baltra as the only authorized point of entry to the islands to receive cargo from the continent;
2. In light of this evaluation, assess whether the issues related to biosecurity and tourism continue to pose a threat to the Outstanding Universal Value of the property;
3. In line with paragraph 173 of the *Operational Guidelines*, assess any other relevant issues that may negatively impact on the OUV of the property, including its conditions of integrity and protection and management.

The State Party will facilitate necessary field visits to key locations. In order to enable preparation for the mission, the State Party should provide the following items in appropriate format, including web links, to the World Heritage Centre and IUCN as soon as possible and preferably no later than one month prior to the mission:

- a) An updated information regarding the development and implementation of a tourism strategy for Galápagos, including any relevant documents;
- b) Most recent figures on visitors numbers;
- c) Any relevant documents concerning existing and planned biosecurity regulations;
- d) The most recent version of the management plan(s) for the property;

The mission will hold consultations with the relevant Ecuadorian authorities, particularly the Ministry of Environment, Gobierno del Régimen Especial de Galápagos, the Agency for Regulation and Control of Biosecurity and Quarantine for Galápagos, the Galápagos National Park Directorate. In addition, the

mission will hold consultations with a range of relevant stakeholders, including: representatives of the Charles Darwin Foundation, non-governmental organizations (NGOs), as well as relevant scientists, researchers and experts.

Based on the results of the above-mentioned reviews, assessments and discussions with the State Party representatives, authorities and stakeholders, the mission will prepare a concise report on the findings and recommendations within six weeks following the site visit, following the attached Reactive Monitoring mission report format (Annex 3). The mission's recommendations to the Government of Ecuador and the World Heritage Committee will have the objective of providing guidance to the State Party that will ensure the ongoing conservation of the property's OUV. It should be noted that recommendations will be provided within the mission report and not during the mission implementation.