A. Summary Environmental and Social Review

1. General Project Information and Overview of Scope of IIC E&S Review

On July 25th, 2008, the Dirección General de Aviación Civil (DGAC) authorized the public procurement for the concession of the Seymour Airport ("the airport") on Baltra Island. Corporación América, S.A ("CASA") submitted a winning proposal and on April 15th, 2011, DGAC and Aeropuertos Ecológicos de Galápagos, S.A. ("Ecogal") signed the concession contract. The works included in the concession contract included three phases of civil works: PhaseI/II- construction of a new passenger terminal, a new control tower, widening of the platform; and Phase III - repavement of the runway and taxiways. The Seymour Airport, also known as the Galapagos Ecological Airport, on Baltra Island is the airport which attracts the majority of air traffic to the Galapagos. In December 2012, Seymour Airport became the world's first "green" airport and was certified as "Airport Carbon Accredited Neutrality" by the Airport International Council (ACI) and as "LEED Gold" (Leadership in Energy and Environmental Design) by USGBC (U.S. Green Building Council). It is the first airport in Latin America to be carbon neutral.

The Project consists of financing Phase III under the Concession Agreement, which consists of IDB Invest providing US$22.3 million financing to Ecogal, a company controlled by CASA. This includes the repavement works carried out between 2015 and 2017, as well as the repavement of the entire runway and platform using asphalt (0.10 meters thick), runway edge and threshold lights, and the maintenance of the cement components of the runway and apron to be started in January 2021. From June 1, 2015, the taxiway was reinforced with asphalt (0.075 meters thick) and from June 1, 2017, specific segments of the runway were repaved with asphalt 15 meters wide and 0.5 meters thick.

In June 2018, IDB Invest carried out the Environmental and Social Due-Diligence (ESDD) and visited the Project site consisting of the existing ECOGAL airport and surrounding areas on Baltra, as well as the Island of Santa Cruz. During the site visit, information was obtained through a combination of discussions with ECOGAL, site visit tours to the airport facilities on Baltra, in particular the biosecurity checkpoint areas, the airport desalinization plant, wastewater treatment plant, the terminal, including immigration, security and customs areas, platform and gates. The energy sources, quarry in Santa Cruz, waste disposal and recycling facility in Santa Cruz, and the town of Puerto Ayoreo were also visited as part of the ESDD. In addition, meetings were held with various stakeholders including the National Park of Galapagos, the Charles Darwin Foundation, the National Biosecurity Agency, the Ministry of Tourism, *Camara de Turismo de Galapagos*, the *Consejo de Gobierno* of the Galapagos.

Documents reviewed include the environmental and social assessment compliance audits submitted to the Galapagos Park authorities, Ecogal's environmental and social management system, environmental licenses and permitting, corporate policies and procedures, as well as the independent Biodiversity Assessment report prepared by the Smithsonian for IDB Invest under a master agreement with the Smithsonian. Annual compliance reports of the Environmental Management Plan were reviewed for the following periods: 2015-2016; 2016-2017; and 2017-2018. Various additional documents were also reviewed, such as the following: *Plan de Desarrollo y Ordenamiento Territorial del Canton Santa Cruz* 1 2012-2027; *Plan de Manejo de las Áreas Protegidas de Galápagos para el BUEN VIVIR* 2014; Procedures in cases of aviation accidents and for minimizing impacts on sensitive species, such as iguanas; Procedure for transit accidents;

2016 Annual Report of the *Fundacion Charles Darwin para las Islas Galapagos*; 2017 Report on Iguanas relocated in the perimeter of the airstrip at the airport (*Informe de Iguanas removidas del perímetro de la pista de aterrizaje de la zona aeroportuaria*); 2017 Report on Rodent Control; 2017 Report on Waste Management; 2017 Monitoring Report on Flora and Fauna; 2017 Fuel Management Report, amongst others.

2. Environmental and Social Categorization and Rationale

In accordance with IDB Invest's Environmental and Social Sustainability Policy, the project has been classified as a Category "B", since it is likely to generate the following adverse environmental and social impacts that are described in Section 1.1 c).

While all Performance Standards are applicable to this transaction, IDB Invest's environmental and social due diligence indicates the investment will have impacts, which must be managed in a manner consistent with the following Performance Standards.

- IFC PS1 – Assessment and Management of Environmental and Social Risks and Impacts
- IFC PS2 – Labor and Working Conditions
- IFC PS3 – Resource Efficiency and Pollution Prevention
- IFC PS4 – Community Health, Safety and Security; and
- IFC PS6 – Biodiversity Conservation/Sustainable Management of Living Natural Resources.

3. Environmental and Social Context

The Project is located in Baltra, also known as South Seymour, which is part of the Galapagos Islands, an area internationally recognized for its biodiversity. The Galapagos Islands are a natural patrimony of humanity, a biosphere reserve, a RAMSAR site, a national park, a marine reserve, and a whale sanctuary. These areas are well known around the world and eco-tourism is a very important component for its development and conservation. The Galapagos Islands have zones with different use intensities, including rural and urban areas, and areas with absolute protection. Its unique biodiversity attracts tourists from all over the world.

Baltra of South Seymour is a small flat island created by geological uplift. Due to its size and topography, the island receives very limited, seasonal rain. Its arid vegetation consists of prickly pear cactus, palo santo and palo verde trees, among others. During World War II, Baltra was used as a US air base to patrol the Pacific Ocean and protect the Panama Canal. The impact on the island was significant and remains of buildings, including an old airfield, can still be seen today. The island continues to have a small Ecuadorian military base. However, there are presently no communities or inhabitants on the island of Baltra.

The Galápagos Islands have the aim to be managed as a socio-ecosystem, where the local human populations and the natural systems are managed as a single unit. The land is managed with the aim of conserving the ecological integrity of the different types of ecosystems, improving the quality of human life, and sustainably using the natural capital. Management plans are the result of a broad process of citizen participation.

To promote sustainable development in the Galapagos Islands, the government from 2007-2017 authorized the development of the Seymour Airport in Baltra, also known as the Galapagos Ecological Airport (ECOGAL). The airport, which is located on Baltra Island connects via ferry to the island of Santa Cruz across the Itabaca Channel, transporting local residents and tourists. The

only other airport that receives flights from the continent is San Cristobal Airport on San Cristobal Island.

ECOGAL's airport has a runway 2400 m long by 30 m wide. The airport was designed for a total traffic of 800,000 passengers per year, with a peak year capacity of 1,000 passengers (arriving and departing). Current passenger traffic is approximately 450,000 passengers (arriving and departing) per year, with an estimated peak hour traffic of less than 450 passengers per hour flying in three type of A32—2000 aircraft. The existing terminal building was constructed by Ecogal in 2015 and consists of a one level building with an operational area of 6,000 square meters.

4. Environmental Risks and Impacts and Proposed Mitigation and Compensation Measures

4.1 Assessment and Management of Environmental and Social Risks and Impacts

a. E&S Assessment and Management System

The Company is in the process of developing an integrated Environmental and Social Management System based on the requirements established by ISO 14001 and has plans to obtain ISO 14001 certification in 2018. The objectives and scope of the ESMS are in the process of being defined; Ecogal will develop key performance indicators (KPIs), evaluation systems, and document control processes. The ESMS will also clearly reference the documents that define the management system, which including Environmental and Social Impact Assessments (ESIA), environmental licenses and permits, environmental management plans, operations and maintenance manuals, social and environmental responsibility plans and any other relevant documents. In addition, as per the request of IDB Invest, Ecogal should develop an Occupational, Health and Safety management system.

b. Policy

The Company has an environmental policy that includes objectives regarding quality, protection of the Galapagos islands ecosystems, mitigating risks of contamination, greenhouse gas emissions, and working with society and other stakeholders to reduce greenhouse gas (GHG) emissions. Ecogal's success in making the airport carbon neutral and achieving LEED certification are evidence of the Company's commitment to implementing its environmental policy.

c. Identification of Risks and Impacts

Given that the Project consists primarily of repaving and maintaining areas within the existing footprint of the airport, an Environmental and Social Impact Assessment (ESIA) was not required by the National Park of Galapagos for Project. But rather, the existing Environmental Management Plan was adapted to include the Phase III activities and will be followed.

In 2009, prior to the construction of the terminal and upgrades to the airport, an Environmental Impact Assessment and Environmental Management Plans were prepared for the Expansion and Improvement Project of the Airport. These studies were approved by the National Park of Galapagos and an environmental license (*Licencia ambiental No. 591*) was emitted on May 31, 2011.

In addition, IDB Invest's appraisal considered environmental and social management plans for the Project and gaps between these plans and IDB Invest requirements. Corrective measure intended to close these gaps within a reasonable period of time, are summarized in the Environmental and Social Action Plan (ESAP) agreed to with the Company. The Project is expected to be designed, constructed and operated in accordance with International Finance Corporation (IFC) Performance Standard (PS) objectives, national regulations, the World Bank Group General Environmental, Health and Safety (EHS) Guidelines, and the concession contract.

i. Direct and indirect impacts and risks

Some of the key impacts and risks of the repaving works related to this Project include: impacts from waste disposal, water use, and wastewater disposal. Indirect impacts could result in the following risks: increase in tourism to the Galapagos islands, increase in roadkill on Baltra of the yellow iguana, and impacts from extraction of material for the runway. Other ongoing risks and impacts of an existing airport are related to: noise impacts, air quality impacts, safety issues, and introduction of invasive species through aircrafts and passengers.

ii. Cumulative impact analysis/Analysis of Alternatives

There are no anticipated cumulative impacts related directly to the repavement of the runways. Regarding analysis of alternatives, an analysis was carried out to determine the type of material to be used for repaving. In this case, asphalt was considered the best alternative, particularly given that concrete would have required much more water, which is scarce on the Galapagos Islands. In terms of the Project location, no other alternatives would have been feasible as the Project needs to be carried out at the existing ECOGAL airport site. The repaving activities are proposed in previously paved areas within the airport's existing footprint.

d. Management Programs

The EIAs and EMP (The "environmental studies") include environmental and social management plans and programs, which ECOGAL has been implementing since the airport expansion and modernization project began.

The following plans and programs are included in each original EIA and the updated EMP:

i. Prevention and Impact Mitigation Plan *(Plan de Prevención y Mitigación de Impactos*);
ii. Contingency Plan (*Plan de Contingencias*);
iii. Training Plan (*Plan de Capacitación*);
iv. Occupational, Health and Safety Plan (*Plan de Seguridad y Salud Ocupacional*);
v. Waste Management Plan (*Plan de Manejo de Desechos*);
vi. Community Relations Plan (*Plan de Relaciones Comunitarias*);
vii. Restoration Plan for Affected Areas *(Plan de Rehabilitación de Áreas afectadas*);
viii. Closure Plan (*Plan de Abandono y Entrega del Área*);
ix. Monitoring and Supervision Plan (*Plan de Monitoreo y Seguimiento*).

e. Organizational Capacity and Competency

Ecogal consists of approximately 67 staff members (98% of whom are from the Galapagos Islands). The Company's current Environmental and Social (E&S) advisor is a highly-qualified consultant with extensive knowledge of the sensitive ecosystems and biodiversity of the Galapagos Islands, particularly biodiversity, as well as an in depth understanding of permitting obligations and actions required. This E&S advisor reports directly to ECOGAL's Senior Manager. In addition, there is a Human Resources (HR)Manager and another HR staff who are part of ECOGAL's team and are responsible for labor issues, as well as health and safety of employees. ECOGAL also employs a staff member working on Corporate and Social Responsibility and social issues. In addition, ECOGAL works closely with a variety of conservation initiatives, such as the Charles Darwin Foundation and others on conservation projects that ECOGAL has carried out.

f. Emergency Preparedness and Response

ECOGAL has a set of policies and procedures for emergencies and contingencies. These include specific plans for response to natural disaster risks and extreme weather events, amongst others. The Emergency and Contingency Plan contains information about how to respond to different emergencies and ECOGAl shares and coordinates the Emergency Plan with others (i.e. Marina on Baltra, Firefighters of Puerto Ayora, *Consejo de Gobierno Galapagos*, *Parque Nacional Galapagos*, National Police and *Hospital Republica de Ecuador*, etc.).

g. Monitoring and Review

The Environmental Management Plans (EMP) include variables for monitoring the implementation of the diverse plans, including monitoring and reporting on the following included in the Environmental Audits carried out of the airport:

i) Environmental issues such as fuel management, oil/water separators, maintenance of the desalinization plan and wastewater treatment plant, sludge management, monitoring of quality of treated wastewater, management of wastewater from the desalinization plant, management of rainwater, training on management of iguanas in the runway area, waste management, reforestation and monitoring of flora and fauna in the project area, control of rodents and egrets, noise monitoring, maintenance of vehicles, maintenance of roads, speed signage with velocity limits, maintenance of air conditions, solar panel and energy usage.

ii) Occupational health and safety (OHS) related issues including fire safety systems, use of personal protective equipment and training, and accident reports.

ECOGAL's prepares an annual Environmental and Social Monitoring Report reporting on their level of compliance with the EMP, including an update on the topics mentioned above. In addition, every two years ECOGAL is required to hire an external consultant to prepare an audit report. These reports are submitted to the the National Park of the Galapagos for their review.

h. Stakeholder Engagement

i. Stakeholder Mapping

Ecogal has effective systems and management capacity in place to successfully carry out stakeholder engagement. The Company effectively engages with the community and authorities from the Cantón Santa Cruz, Provincia de Galápagos, which is where most tourists arrive after catching the ferry from Baltra. Ecogal also engages with government

agencies and others in the region, such as the following: National Park of Galapagos, Charles Darwin Foundation, *Gobierno Municipal de Santa Cruz*, *Ministerio de Medio Ambiente*, *Ministerio de Turismo* and *Ministerio de Obras Públicas*, amongst others.

ii. Disclosure of Information

Ecogal discloses their Environmental Policy, as well as information on what they have done to become the first ecological airport in the world, achieving LEED Gold, the highest certification that currently exists to recognize sustainable construction. They are also committed to informing the public through their website and relevant stakeholders on their ongoing project activities.

iii. Consultation

Given the low impacts of repaving the runways, consultation for this Project was not deemed necessary since the Project is on the existing footprint of the airport. However, prior to the improvement and expansion of the airport in 2009 and as part of the ESIA for that expansion process several consultation events and meetings were held with stakeholders identified in section 1.1. h above. There are no communities located on the island of Baltra, where the airport is situated.

iv. Indigenous Peoples

The Project documentation and site visits indicate that there are no indigenous people affected by the Project.

i. External Communication and Grievance Mechanisms

Ecogal has a system in place to accept grievances through Ecogal's website and their offices at the airport.

4.2 Labor and Working Conditions

a. Working Conditions and Management of Worker Relationships

i. Human Resources Policies and Procedures

Ecogal has documentation in place regarding its management of human resources (HR), which includes the following: an Internal Work Regulation (Reglamento Interno de Trabajo) that covers measures to ensure compliance with HR laws and addresses working hours, overtime and night work, vacation, medical support, occupational risks, worker code of conduct, among others; and a Code of Ethics and Procedures for Stakeholder Engagement a Human Resources Manual. Collectively, this documentation covers the key elements required by PS2.

ii. Working Conditions and Terms of Employment

Ecogal provides reasonable working conditions and terms of employment. It was observed during the site visit that Ecogal also offers a safe working environment with access to drinking water, restrooms, eating areas, emergency medical kits, etc. There have been no accidents reported to date. The company hires primarily local employees and 98% of the employees are from the Galapagos islands. Any time Ecogal needs to hire an employee, the job posting must first be advertised to residents of the Galapagos Islands and only if there are no qualified persons available locally is the Company able to hire someone from outside of Galapagos.

iii. Workers' Organizations

Ecuadorian labor law provides for the right of workers to form and join unions of their choice, to bargain collectively and to strike. However, at this time Ecogal employees have not joined any unions.

iv. Non-discrimination and Equal Opportunity

Ecogal's Code of Ethic includes an explicit commitment to respecting the principles of non-discrimination and equal opportunity prohibiting discrimination based on race, gender, national origin, religious creed, and other physical or intellectual factors.

v. Retrenchment

Retrenchment is not anticipated to apply to the Project.

vi. Grievance Mechanism

Ecogal will develop a workers' grievance mechanism and will conduct awareness training sessions to inform workers about the grievance mechanism. This mechanism will also include the procedures to document and register the responses to feedback and grievances received.

b. Protecting the Workforce

i. Child Labor/ Forced Labor

Ecogal's Internal Regulation on Work does not currently address the issues of child labor and forced labor. However, it plans to include explicit language on this in its International Regulation on Work in accordance with Ecuadorian law, detailing that it does not permit the hiring of minors, ii) promotes labor standards consistent with the voluntary performance of all types of work or services, prohibiting forced or coerced labor, and iii) sets a minimum age of 18 years for all types of work, and iv) does not permit children to be employed in any manner that is economically exploitative, interferes with their education or potentially endangers their physical, mental or social development.

c. Occupational Health and Safety

Ecogal has has developed an Occupational, Health and Safety Rules (Reglamento de Higiene y Seguridad) that also includes an Occupational, Health and Safety Policy based on national legislation. Ecogal is undertaking measures to develop an integrated Occupational, Health and Safety Management System.

d. Workers Engaged by Third Parties

ECOGAL has requirements in place to ensure that contractors are also required to comply with ECOGAL's environmental, occupational health and safety requirements. Ecogal also has procedures for monitoring workers' conditions and the upholding of labor rights by contractors and subcontractors.

4.3 Resource Efficiency and Pollution Prevention

a. Resource Efficiency

Ecogal has been implementing the resource efficiency and pollution prevention measures included in the ESIA, EMP and Greenhouse Gas Emissions (GHG) reduction plan. ECOGAL's Seymour Airport received the LEED GOLD certification because of its design

and construction. Many strategies have been implemented to achieve this award. The airport: 1) uses natural lighting and ventilation, reducing energy consumption; 2) works 100% with renewable energy (photovoltaic panels installed on the terminal walkways [35%] and windmills [65%]), minimizing its dependence on external sources; 3) reduces water consumption, recovers rainwater, treats water used and reuses it; 4) recycles waste, reused more than 80% of old airport material; and 5) is recovering affected areas with endemic flora. In addition, ECOGAL is carbon neutral and is in the process of obtaining the ISO14001 certificate.

i. Greenhouse Gases

A baseline study was conducted to quantify GHG emissions from the Project. According to a baseline review conducted in 2016 by an ISO 14065 accredited company, Ecogal is expected to emit 6,406 tCO2eq per annum, which is offset allowing the airport to be carbon neutral. Direct emissions account for 255.40 tCO2eq, 111.10 tCO2eq are from indirect energy sources and 6,039.30 tCO2eq are from mainly from indirect emissions from aircraft and vehicles. The airport was designed in a way to maximize energy efficiency, which contributes to lowering GHG emissions.

ii. Water Consumption

The airport obtains potable water for the terminal from its desalinization plant and its water for irrigation of the gardens is obtained from treated wastewater that is recirculated, allowing for zero discharge from the wastewater treatment plant. Asphalt will be used for repaving the runways because the use of concrete would have required more water, which is a scarce resource on the Galapagos Islands.

b. Pollution Prevention

i. Wastes

The Environmental Management Plans include the details of how solid waste, hazardous materials and liquid effluent from the airport are managed. Devimar is implementing measures to reduce contamination of surface water including achieving zero discharge of wastewater. Airplanes do not discharge their blue wastewater from the planes; therefore, only wastewater from the airport bathrooms and sinks are discharged to the wastewater treatment plant and subsequently recirculated for use within the airport, such as irrigation of vegetation on the airport grounds. Oil/water separators are also in place in kitchen areas, and areas where any fuel is located, such as in the area of the back-up generator and desalinization plant. In addition, these small quantities of fuel are stored in areas with the appropriate containment. It is important to note that airplanes do not refuel at the Seymour airport reducing the risk of fuel spills.

Ecogal collects solid waste in bins (identified as organic, recyclable, and non-recylable) within the terminal following the classification scheme used by the Canton Santa Cruz. The waste generated from the airport is then sent to Santa Cruz to be handled through the *Sistema de Gestion Integral de Residuos* (GAD)/ Integrated Waste Management System used by the Muncipality of Santa Cruz. This also includes waste generated from hangars and the fire station, which are also classified and sent to the GAD. IDB Invest observed during its visit to the GAD recycling center in Santa Cruz that is a well-functioning facility.

Initial noise modeling (using the Integrated Noise Model (INM)) done as part of the ESIA, as well as ongoing noise monitoring indicate that noise is within the permisable limits. In addition, human receptors on Baltra are limited given that the island is uninhabited. The airport is not designed to accommodate larger aircraft; the largest type of aircraft Seymour airport currently services are A319, A320 and B737, which have lower noise and air emission impacts compared to larger aircraft.

4.4 Community Health, Safety and Security

a. Community Health and Safety

i. Infrastructure and Equipment Design and Safety

The conditions of the airport are certified by the government office of the Civil Aviation Directorate (DAC - *Dirección de Aviación Civil*). The agency charged with managing and approving air frequencies to the islands is the National Council of Civil Aviation (*Consejo Nacional de Aviación Civil*). Since the airport expansion was completed in 2012, no accidents have occurred.

The rainy season in the Galapagos is from December to May, but rain rarely presents a problem for the incoming or outgoing flights. Prevailing wind directions are from south-south-east to south-east, with cross winds 14.95% of the time mostly from 12:00 to 12:30 noon. The geology of the area is mainly volcanic rock with porous stones. The structures of the airport are designed following Ecuadorian Seismic Code due to the potential for earthquakes. The Galapagos Islands are formed by a set of volcanoes, most of which are active, and eruptions of ashes have been recently reported. Due to the prevailing winds, the location of the airport at Baltra Island is free of the influence of such eruptions from Fernandina Island. On June 6, 2018, “La Cumbre” Volcano located in the Fernandina Island registered eruptive activity. According to the National Park, the last time La Cumbre erupted was on September 4, 2017. On June 21, 2018, the Park reported that the lava flows from La Cumbre were subsiding. Despite previous activity at La Cumbre in no instance has the volcano’s activity had an impact on the airport’s operations. Fernandina island is more than 150 kilometers west of Baltra. The dominant winds run south-north so there is little chance that the ashes will affect the airspace of Ecogal. On June 26, 2018, seismic and eruptive activity were registered for the Sierra Negra volcano on Isabela Island. Some of the surrounding populations were evacuated but have since been allowed to return. This volcano posed no problems for the Galapagos airport. Ecogal has Emergency Preparedness Plans in place as described below.

ii. Hazardous Materials Management and Safety

Ecogal has detailed procedures for the storage, handling, and management of hazardous materials. The emergency preparedness plan has detailed procedures for handling chemical spill events.

iii. Ecosystem Services

The repavement project will not affect the ecosystem services of Baltra or the Galapagos Islands, particularly as Baltra is uninhabited. The airport has conservation measures in place to ensure the sustainability of the fragile ecosystems of the Galapagos, therefore activities such as fishing, agricultural and tourism activities on the islands are not anticipated to be impacted by the Project.

iv. Community Exposure to Disease

As the Project plans to rely primarily on local workers, an influx of nonlocal workers employed by the Project that could introduce new diseases to the region is not anticipated. The airport also has training in place for its workers to prevent the spread of HIV and other diseases.

v. Emergency Preparedness and Response (EPR)

Ecogal has an EPR Plan in place, which identifies and describes the risks and the management practices. The Plan addresses the approach to different risk scenarios including aviation accidents, fires, natural disasters, accidents in the workplace. The roles and responsibilities associated with how to coordinate with other stakeholders on the Galapagos islands are also defined.

Ecogal's Fire Station is classified as CAT 8 (SSEI, *Servicio de Salvamento y Extinción de Incendios*). The equipment of the fire station is property of DAC and includes:

- 2 Oshkosh Fire Fighting Units
- T1500 gallons of water and 200 gallons of A3FFF foam
- T 3000 gallons of water and 400 gallons of A3FFF foam
- One ambulance
- 3 tanks water storage for a total of 90 cubic meters
- 25 tanks with 55 gallons storageeach
- 5 firefighters, including 2 drivers
- Simulation event is carried out every two years
- 2 government helicopters

b. Security Personnel

Ecogal has an agreement in place with government security forces, including the Ecuadorian Air Force (*Fuerza Aerea de Ecuador*) and the National Police given that they provide the airport with security and are responsible for any physical threats to the safety of people in the airport, including being responsible for confiscating any arms that may enter through the airport. The *Fuerza Aerea* currently has one office and two safety personnel within the airport to deal with security issues. No security forces are directly contracted by Ecogal. However, the company does have 16 employees who are responsible for aviation safety.

4.5 Land Acquisition and Involuntary Resettlement

Given the Project involves repaving the runway within the airport boundaries, no land acquisition is necessary and there is no involuntary resettlement.

4.6 Biodiversity Conservation and Natural Habitats

a. Modified, Natural and Critical Habitat

i. Legally Protected Areas and Internationally Recognized Areas

Although the Project takes place in a legally protected area with international recognition, the area of the project is already disturbed and would qualify as Modified Habitat per PS6, but with some important biodiversity values within this habitat. The runway is already established, and the proposed platform development would occur in areas already disturbed.

All items related to biodiversity of the project that have been considered for management in the Environmental Management Plan are currently addressed properly and are on track. No serious delays or commitments not fulfilled were found. However, reporting should improve on the status of the indicators as they change in time. Recommendations on how to quantify the indicators described to determine if mitigation actions are successful have been included in the Environmental and Social Action Plan (ESAP).

The Project will not impact any critical natural habitat.

ii. Invasive Alien Species

Ecogal has worked closely with the Charles Darwin Foundation under the Galapagos Verde 2050 to reforest habitats surrounding airport facilities that were affected by previous human use. This reforestation is being carried out with native plant species (i.e. cactus, parkinsonian) that would benefit native iconic fauna (e.g. Darwin bees, land iguanas). An innovative biodegradable cocoon called Groasis was used to plant saplings, given that it conserves water and collects rainwater.

The rising number of tourists and migrants to the Galapagos Islands increases the risk of introducing exotic species that could affect the biodiversity of the Islands. Since approximately 1500 exotic species have already been introduced to the Islands, government officials have a clear objective not to increase that number of exotic species and to control as best as they can what has been introduced. The Biosecurity Agency for the Galapagos Islands reviews via x-rays all luggage and bags that tourists bring to the islands. They also require that all aircrafts be fumigated upon arrival before passengers de-plane to avoid the introduction of invasive insects. In addition, there is a requirement that all incoming aircraft be thoroughly cleaned and vacuumed at their place of origin (i.e. Guayaquil or Quito) to avoid the introduction of invasive species. Ecogal also has footbaths in place that passengers walk through before entering the airport to disinfect the soles of their shoes, which is another measure to prevent the introduction of invasives. The Biodiversity Agency also has a comprehensive program for shipments from the continent that bring food and supplies (although it can be improved by increasing the number of people involved in the inspections). As tourism increases, more shipments from the continent to supply food increases risks of introducing exotic species. It is very important that the Biodiversity Agency maintain practices for checking for plant/insects coming with tourists and to improve management and increase the number of people inspecting cargo bound for the Galapagos Islands at the exclusive port in Guayaquil.

b. Management of Ecosystem Services

The ecological functions of the island and marine ecosystems of Galapagos generate benefits to humans. Among the most important services are clean water, flood and

erosion control, pollination, nutrient recycling, soil fertility, aesthetic and recreation. None of these would be directly or indirectly affected by the project.

c. Sustainable Management of Living Natural Resources

Ecogal has developed a variety of measures, included in the Environmental Management Plans to mitigate impacts on fauna.

The Galapagos land iguana (*Conolophus subcristatus*) became extinct on Baltra in the middle of 1950s due to a combination of habitat destruction resulting from the construction of the U.S. air base, predation by dogs and cats, and lack of vegetation devastated by introduced goats. Land iguanas were reintroduced to the island in the 1990s from a population that was translocated to North Seymour Island in the early 1930s. During the 1980s, iguanas from North Seymour were brought to the Darwin Research Station for a captive breeding program that successfully produced the reintroduced iguanas. Currently, land iguanas can be seen either on the road to the airport and on the runway, obtaining heat. To reduce the land iguana's proximity to the runway, ECOGAL 1) repositions individuals to areas far from airport within the island, and 2) removes vegetation (low-growing plants, shrubs and cactus pads that the iguanas like to eat) along the two sides of the runway. In addition, Ecogal will collaborate with local authorities to implement and enforce speed limits and minimize car transit to minimize roadkills that could potentially be related to an increase in transit on roads.

In addition, Ecogal will continue removing introduced egrets occasionally found in ponds of water on Baltra as they are exotic to the islands and could pose a risk of animal strikes.

d. Protection and Conservation of Biodiversity

Given that there is the potential that tourism would increase with the improvement of the airport, IDB Invest analyzed this risk. Political and economic decisions in the Galapagos Islands are directed by the Governing Council, with representatives of agriculture, tourism and fisheries sectors, and by the authority of the Galapagos National Park. All activities are governed by the Galapagos National Park master plan, revised every 15 years, and with a recent version of 2017. The islands have a strict control of immigration and locals have preference for employment on the Galapagos Islands.

Tourist activity in Galapagos was originally characterized by ships with licenses to have beds at sea, a model towards high-end tourism. As the tourist demand continued to increase and the cruise model was stable, a tourism model that operates in population centers with informal hotels has increased considerably in the last ten years. In addition, there is pressure for the economic benefit from tourism to be distributed among the four inhabited islands (Santa Cruz, San Cristobal, Isabela, Floreana), with tourists entering one of the islands and leaving from another.

The Galapagos National Park has many opportunities for tourists (84 operators and 64 sites to explore in the marine reserve). The protected areas have a zoning that includes a network of sites to visit. They also have a visitor management system tool that integrates different opportunities for public use and the management of the impacts of the tourist activity. The acceptable visitors load measured as the number of groups visiting a site at the same moment defines the number of visitor groups to ensure a satisfactory experience.

Current tourism is at about 240,000 tourists/year, and the potential for growth is high and could double. Tourists can (1) experience day trips or 5-6-day trips on the high seas to visit

remote islands, (2) appreciate the terrestrial (bird watching, hiking) as well as the marine wildlife (snorkeling, diving, surfing), and (3) enjoy each island for what it has to offer. One of the main limiting factors is the number of flights to the islands (peak between 9 and 11 AM, with low use in the afternoon). Nocturnal flights are prohibited (to avoid impacts on animals with nocturnal activities).

Some conservation groups consider that the carrying capacity of tourists has been reached already. There are too many introduced species that are causing major changes to the ecosystems and tourism, and the food transported from the continent increases the potential to introduce new, exotic species. Given that the continued introduction of invasive species is a growing problem, Ecogal plans to coordinate closely with the Biosecurity Agency to ensure that controls are in place at the airport to prevent the introduction of exotic species and more generally will work closely with the Charles Darwin Foundation as well on any campaigns or initiatives to minimize the spread or introduction of invasive species. These biosecurity controls at the airport will be prioritized.

4.7 Indigenous Peoples

The Project documentation does not identify indigenous peoples as being affected by the Project.

4.8 Cultural Heritage

Given that the Project involves repaving previously paved areas within the existing footprint of the airport, the risk of impacting cultural heritage has not been identified.

5. Local Access of Project Documentation

Avenida de las Américas
Aeropuerto Internacional de Guayaquil
Guayaquil, Ecuador

6. Environmental and Social Action Plan (ESAP)

See ESAP file on IDB Invest website.

B. Contact Information

For inquiries about the Project, contact:

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For inquiries and comments to IIC, contact: IIC's Communications Group

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For project inquiries, including environmental and social questions related to an IIC investment, please contact the client or the IIC using the contact information provided above. As a last resort, project affected communities have access to the IIC Independent Consultation and Investigation Mechanism.

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