



PROJECT IMPLEMENTATION REPORT (PIR)

for the project:

Safeguarding biodiversity in the Galapagos Islands by enhancing biosecurity and creating the enabling environment for the restoration of Galapagos Island ecosystems

FY21

July 1, 2020 – June 30, 2021

Executing Partners

MINISTERIO DEL
AMBIENTE Y AGUA



Parque Nacional
GALÁPAGOS
Ecuador

AGENCIA DE REGULACIÓN Y
CONTROL DE LA BIOSEGURIDAD Y
CUARENTENA PARA GALÁPAGOS



ISLAND CONSERVATION

Preventing Extinctions



CI-GEF Project Agency



Galapagos
Conservancy
Seeing One of the World's Great Treasures

Project Information

Project Title:	Safeguarding biodiversity in the Galapagos Islands by enhancing biosecurity and creating the enabling environment for the restoration of Galapagos Island ecosystems		
Country(ies):	Ecuador	GEF IDENTIFICATION:	9282
GEF Agency(ies):	Conservation International	Duration In Months:	35
Implementing Agency(ies):	Island Conservation	Actual Implementation Start Date:	February 15, 2019
GEF Focal Area(s):	Biodiversity	Expected Project Completion Date:	March 31, 2022
GEF Grant Amount:	\$3,301,472	Expected Financial Closure Date:	September 30, 2022
Expected Co-financing:	\$18,395,000	Date of Last Steering Committee Meeting:	May 13, 2021
Co-financing made as of June 30, 2021:	\$19,266,000	Mid-Term Review-Planned Date:	June 30, 2020
Date of First Disbursement:	February 15, 2019	Mid-Term Review-Actual Date:	March 26, 2021
Cumulative Disbursement as of June 30, 2021:	\$2,521,058	Final Evaluation-Planned Date:	November 1, 2021
PIR Report Prepared by:	Patricia Leon & Gabriela Vivas	Final Evaluation-Actual Date:	N/A
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The CI-GEF Project Agency Project Implementation Report (PIR) is composed of six sections:

- Section I: Project Implementation Progress Status Summary:** provides a brief summary of the project as well as the implementation status and rating of the previous and current fiscal years;
- Section II: Project Results Implementation Progress Status and Rating:** describes the progress made towards achieving the project objective and outcomes, the implementation rating of the project, as well as recommendations to improve the project performance, when needed;
- Section III: Project Risks Status and Rating:** describes the progress made towards managing and mitigating project risks, the project risks mitigation rating reassessment as needed, as well as recommendations to improve the management of project risks;
- Section IV: Project Environmental and Social Safeguards Implementation Status and Rating:** describes the progress made towards complying with the Environmental & Social Safeguards and the Plans prepared during the PPG phase, the safeguard plans implementation rating, as well as recommendations to improve the project safeguards;
- Section V: Project Implementation Experiences and Lessons Learned:** describes the experiences learned by the project managers and the lessons learned through the process of implementing the project;

SECTION I: PROJECT IMPLEMENTATION PROGRESS STATUS SUMMARY

PROJECT SUMMARY

Invasive alien species are one of the most significant drivers of environmental degradation and species extinction worldwide, and are generally considered the primary cause of biodiversity loss in island ecosystems. When invasive rodents feed on giant tortoise eggs and hatchlings they reduce the number of tortoises available to spread seeds and ‘plant’ the next generation of native trees and shrubs. As canopy cover declines, so do the populations of understory plants that require shading from the harsh tropical sun. The loss of understory vegetation makes landscapes more vulnerable to soil erosion and contributes to declines in soil fertility through mineral leaching. This impairs soil fertility and undermines the capacity of landscapes to be resilient to further perturbations (e.g., extreme weather events, climate change).

The objective of the project is “to safeguard biodiversity in the Galapagos Islands by enhancing biosecurity and creating the enabling environment for the restoration of Galapagos Island ecosystems.” This project aims to safeguard biodiversity in the Galapagos Islands by: 1) enhancing biosecurity across the Galapagos archipelago, 2) solidifying the social license and infrastructure to eradicate invasive vertebrate species from Floreana Island, and 3) translocating a previously extirpated keystone species (giant tortoises) to Santa Fe Island. The project will be carried out through three components:

Component 1: Furthering the development of a state-of-the-art biosecurity system.

Component 2: Solidifying the social license and infrastructure for the protection and recovery of Floreana Island ecosystems.

Component 3: Advancing the recovery of island ecosystems following invasive species eradication through the re-establishment of keystone species (i.e. giant tortoises).

Project success will secondarily lead to a reduction in land degradation, and improve ecotourism opportunities. Consequently, ecosystem services, agricultural production, and economic investments will be better secured on human-inhabited islands in Ecuador and beyond.

PRIOR PROJECT IMPLEMENTATION STATUS

The project started the implementation phase in February 2019. During the past year and a half, we achieved substantial progress towards a comprehensive strategy for ecosystem restoration in the Galapagos Islands. The project made significant progress in all three components including the related safeguard plans. A significant effort was made to start the project on a solid base and in good cooperation with the project partners. In component 1, we accomplished a systematic assessment of the Biosecurity Inspection and Control System and its control points as a solid starting point for all following outputs and related activities of component 1, and the results were handed over to the Galapagos Biosecurity Agency (ABG) for review and definition of the scope of the Action Plan. The assessment included all potential stakeholders that the biosecurity system deals with in aerial and maritime transportation. The assessment revealed significant insights into biosecurity challenges related to the two main transportation systems that connect Galapagos with the mainland and that represent the major routes for the intended or unintended introduction of potential invasive alien species. The findings will allow focusing the action plan on increasing the efficiency of inspection and control of maritime freight and will investigate additional means of interception as well as the feasibility of quarantine prior to departure measures in the maritime freight system. COVID-19 had a significant impact on this outcome because decision-making processes related to the activities of this outcome were significantly protracted and contributed to considerably slower progress than initially planned.

In component 2 the project achieved the construction of 3 chicken coops including the preparation of budget plans, blueprints and construction guidelines, the procurement of construction materials for the construction of all eight planned chicken coops including shipping to Floreana and the procurement of the construction services until the activity was put on hold due to the pandemic. In addition, we achieved sizable progress with the development of the Updated Operational Plan for the Eradication of Feral Cats and Rodents on Floreana Island. The package of operational Risk Management Plans was also updated, until both processes slowed down and almost stalled due to the COVID-19 pandemic. The development of the Operational Plan and the Risk Plans includes a high degree of participation of the Stakeholders and their ongoing discussion with all households and farm owners which is key for a gender-sensitive development of a social license for the Floreana Restoration project. Most of the activities

related to the construction of these documents with the communities were delayed due to restrictions related to COVID-19, especially the suspension of inter-island travel and the obligation to remain in quarantine for 2 weeks upon arrival in Floreana.

In Component 3, the Giant Tortoise Restoration Initiative, in cooperation with the Galapagos National Park, succeeded in transferring 155 young giant tortoises from the Santa Cruz breeding center to Santa Fe Island. In addition, 31 sub-adult tortoises were transferred from Española to Santa Cruz to comply with the quarantine procedures established in the environmental management plan before being shipped to Santa Fe. The project also made significant progress toward increasing the capacity of the Giant Tortoise Breeding Program. A field team of park rangers and scientists located 29 adult giant tortoises, with partial lineage of the Floreana giant tortoise, on Wolf volcano during a 10-day expedition, and transferred them to Santa Cruz where they joined the captive breeding program. The activities related to this component required a great deal of logistics that involved a helicopter and the Sierra Negra ship of the GNPD. This component was not significantly affected by the pandemic.

In general, the restrictions related to the COVID-19 pandemic have significantly affected the overall progress of the project, halting some activities between March and June 2020. The project expects to make up some of the time lost in fiscal year 21 by implementing adaptation measures such as:

- Continuous review and adaptation of the annual workplan and budget
- Application of adaptive management measures
- Preparing procurement packages in advance to take advantage of time during quarantine
- Purchasing of goods and services from local suppliers when possible and appropriate considering that the project is located on islands with strict travel restrictions.

As well as returning to planned activities once COVID-19 restrictions are relaxed or lifted. However, the pandemic remains a risk for the project's progress.

CURRENT PROJECT IMPLEMENTATION STATUS (FY21)

During FY21 (second full year of implementation), the project made substantial progress towards a comprehensive strategy for ecosystem restoration in the Galapagos Islands. The project made significant progress on all three components, including related safeguards plans. A significant effort was made to advance project activities despite the limitations presented by the COVID-19 pandemic and associated restrictions in the country.

In Component 1, a Strategic Action Plan was developed to determine strategies and prioritize efforts of the Galapagos Biosecurity Agency (ABG) to improve ABG's effectiveness in securing biosecurity. The Action Plan is a key deliverable in this component, as it identifies investments to be made with the GEF, the government, and other sources of funding in terms of equipment and capacity building. The Action Plan identified the need to automate cargo inspection processes for which specialized software, training and equipment were required. Therefore, the development of software was contracted to automate the maritime cargo inspection processes which are known as the main routes for the introduction of invasive alien species. Additionally, equipment, such as printers, tablets and computers were purchased to allow the use of the new software. Finally, the ABG protocols were updated to reflect automation, and to make their application more efficient and effective. In July 2021, ABG staff were trained in the use and application of the new protocols. The project has successfully completed all outputs under this component.

In Component 2, the project achieved the construction of 7 chicken coops and 1 shed, even though the works had to be halted due to the COVID-19 pandemic. In addition, the approval of the Operation Plan of the Ecological Restoration of Floreana Island Project was obtained. Also, eight Risk Management Plans were finalized, consulted with and cleared by the relevant government entities (ABG, Galapagos National Park, Ministry of Agriculture, Ministry of Education, Municipality of San Cristobal, Florana Parish Council). It is especially notable that the Floreana Parish Board and the Municipality of San Cristobal emitted a declaration of support letter for the project, which essentially constitutes a social license for the Floreana project. The development of these documents includes a high degree of stakeholder participation and the ongoing discussion with all households and farm owners is key to a gender-sensitive development to get a social license for the Floreana Restoration project. Finally, the Operation Plan and the Risk Management Plans were approved by the GEF 9282 Project Steering Committee in May (Acta No. 003-2021). Additionally, the Socio-Environmental Impact Study (EISA) is being developed, which began at the end of 2020, and will be

completed by August 2021. With the Operational and Risk management Plans, the approvals from major government entities, and the social license, the project has achieved all enabling conditions needed to start the eradication of introduced predators in Floreana Island. The implementation phase is planned to begin in 2022.

In Component 3, in February 2021, 191 additional tortoises (*chelonoidis hoodensis*) were translocated from the breeding center to Santa Fe Island. Galapagos Conservancy (GC) worked on the development of the ecological monitoring protocol for Santa Fe Island, which will be used as a reference for monitoring other islands in the archipelago. The protocol was approved by the steering committee in May (Acta No. 004-2021). In Santa Fe, the team is using this protocol to monitor the 742¹ juvenile tortoises translocated from the breeding center so far, and 31 sub-adult tortoises translocated from Española Island (sept 2019). Monitoring data will inform ecological restoration processes, including Floreana after the eradication. Furthermore, captive breeding capacity for Floreana tortoises has been expanded in FY21 by work on two fronts: 1) completing the genetic identity analysis of the blood samples collected in Wolf Volcano in January 2020. This genetic analysis completed by Yale University will inform the captive breeding program for Floreana tortoises, contributing to the recovery of the Floreana giant tortoise species. 2) initiating the expansion of the Giant Tortoise Reproduction Centers on the islands of Santa Cruz and Isabela. The work will end in August 2021. This component successfully advances the recovery of island ecosystems following invasive species eradication through the re-establishment of keystone species (i.e., giant tortoises) by: Increasing breeding success through ex situ breeding in improved infrastructure, biological selection, and successful re-introduction to Santa Fe Island. The project is poised to successfully complete all outputs under this component by September 2021.

In general, the project has achieved substantial progress towards a comprehensive strategy to safeguard the biodiversity of the Galapagos Islands through biosecurity and an enabling environment for ecosystem restoration. The project made significant progress in all of three components including the related safeguard plans and is poised to achieve all outcomes. The restrictions related to the COVID-19 pandemic presented problems for the progress of the project, generating delays in the progress of ESIA related workshops in component 2; as well as the expansion of tortoise breeding facilities and trips to the field in component 3. However, the team and project partners sought strategies that have allowed solving inconveniences. Additionally, the good management of the project, and the savings in travel due to COVID restrictions have been reprogrammed to invest in additional equipment and infrastructure for the Floreana community, the ABG and the GNPD.

SUMMARY: PROJECT IMPLEMENTATION PROGRESS STATUS

PROJECT PART	PRIOR FY20 IMPLEMENTATION PROGRESS RATING	CURRENT FY21 IMPLEMENTATION PROGRESS RATING ²	RATING TREND ³
OBJECTIVE	S	HS	Improving
COMPONENTS AND OUTCOMES	S	HS	Improving
ENVIRONMENTAL & SOCIAL SAFEGUARDS	HS	HS	Unchanged

PROJECT RISK RATING⁴

RISKS	M	L	Decreasing
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¹ 742 = 396 (baseline juvenile tortoises released in 2015 and 2017) + 155 released in 2019 + 191 released in 2021

² **Implementation Progress (IP) Rating:** Highly Satisfactory (HS), Satisfactory (S), Moderately Satisfactory (MS), Moderately Unsatisfactory (MU), Unsatisfactory (U), and Highly Unsatisfactory (HU). For more details about IP rating, please see the Appendix I of this report

³ **Rating trend:** Improving, Unchanged, or Decreasing

⁴ **Risk Rating:** Low (L), Moderate (M), Substantial (S), High (H)

SECTION II: PROJECT RESULTS IMPLEMENTATION PROGRESS STATUS AND RATING

This section describes the progress made towards achieving the project objective and outcomes, the implementation progress rating of the project, as well as recommendations to improve the project performance. This section is composed four parts:

- a. Progress towards Achieving Project Expected Objective: this section measures the likelihood of achieving the objective of the project
- b. Progress towards Achieving Project Expected Outcomes (by project component)
- c. Overall Project Results Progress Rating, and
- d. Recommendations for improvement

a. Progress towards Achieving Project Expected Objective:

This section of the report assesses the progress in achieving the objective of the project.

PROJECT OBJECTIVE:	To safeguard biodiversity in the Galapagos Islands by enhancing biosecurity and creating the enabling environment for the restoration of Galapagos Island ecosystems.
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OBJECTIVE INDICATORS	END OF YEAR INDICATOR STATUS	PROGRESS RATING ⁵	COMMENTS/JUSTIFICATION
<p>Indicator a: Each stage of a comprehensive strategy of ecosystem restoration—including enhanced biosecurity, social license for eradication of alien species and the subsequent reintroduction of an endemic species—has been carefully demonstrated, monitored and evaluated, thereby: (i) achieving a state of readiness for future eradication and restoration activities on Floreana Island, and (ii) creating a model process for replication on other key islands in the Galapagos Archipelago.</p> <p><i>Target: Successful demonstration of all stages and documentation of lessons learned.</i></p>	<p>The project is on target to successfully demonstrating the stages of a comprehensive ecosystem restoration strategy by achieving: 1) enhanced protocols, equipment, and capacity for biosecurity, 2) social license for the eradication of invasive predators, and 3) advancing the recovery of island ecosystems following invasive species eradication through the re-establishment of keystone species (i.e., giant tortoises).</p>	IS	<p>Biosecurity: The approval of a Strategic Action Plan has been achieved. Equipment and supplies are purchased and installed. The protocols are up-to-date, automation software has been produced and is in operation, and the capacities have been developed to promote the development of a state-of-the-art biosecurity system.</p> <p>Social License: The eight Risk Management Plans and the Operations Plan of the Floreana Island Restoration project were approved by all relevant government entities and the GEF 9282 Steering Committee. The letter of support for the project was received from the Parish Board and the Municipality of San Cristobal, which reflects the constitutes a major milestone for the social license. The process for the ESIA is well under way and soon to be completed.</p>

⁵ **O**= Overdue; **D**= Delayed; **NS**= Not started on schedule; **IS**= Under implementation on schedule; and **CA**= Completed/Achieved

OBJECTIVE INDICATORS	END OF YEAR INDICATOR STATUS	PROGRESS RATING ⁵	COMMENTS/JUSTIFICATION
			<p>Transfer of giant tortoises: In February 2021, 191 additional tortoises were translocated from the breeding center to Santa Fe Island. Men and women park rangers participated in this translocation, complying with gender inclusion plans. The Steering Committee approved the Ecological Monitoring Protocol that will trace the role of giant tortoises as ecosystem engineers and the ecological restoration process. This experience will inform the future introduction of tortoises to Floreana and other ecological restoration projects. The capacity to breed more tortoises to be reintroduced to Floreana was expanded by:</p> <ol style="list-style-type: none"> 1) increasing the breeding stock with 31 tortoises from Wolf Volcano that had high Floreana genetic content, and 2) completing genetic analysis of the giant tortoises collected in Wolf to inform breeding plans, and 3) advancing the expansion of the breeding centers in Santa Cruz and Isabela.

OBJECTIVE IMPLEMENTATION PROGRESS RATING	JUSTIFICATION
HS	<p>A Highly Satisfactory rating has been given to objective implementation progress. The project has been under implementation for two years and six months. Despite COVID-19 pandemic, the project has been able to continue working and successfully completed all enabling conditions needed to start the future eradication and restoration activities in Floreana Island. It has achieved the translocation of giant tortoises and is implementing the monitoring protocol in Santa Fe Island. Also, biosecurity protocols and activities have been strengthened by project support. It shows excellent progress in all three project components, associated outcomes, and outputs. The project is on track to achieve the objective and to complete all deliverables by December 2021.</p> <p>This project has a very successful governance model, where the executing partners have collaborated and work closely to deliver the different components under the lead of Island Conservation and The Galapagos National Park.</p>

b. Progress towards Achieving Project Expected Outcomes (by project component).

This part of the report assesses the progress towards achieving the outcomes of the project.

COMPONENT 1	Furthering development of a state-of-the-art biosecurity system
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Outcome 1.1:	The number of invasive alien species entering the Galapagos archipelago is substantially reduced
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OUTCOMES TARGETS/INDICATORS	END OF PROJECT INDICATOR TARGET	END OF YEAR INDICATOR STATUS	PROGRESS RATING ⁶	COMMENTS/JUSTIFICATION
Outcome indicator 1.1: Number of invasive alien species intercepted at control points.	A >5% decrease from baseline in the number of pest interceptions and subsequent confiscations of goods due to pest risk across all ports combined.	In 2020, 1,784 seizures of pest risk assets were made in all categories in all ports. (very low due to 73% decrease in tourist arrivals compared to 2019 ⁷ due to COVID-19. In 2019, 4705 seizures of pest risk assets were made in all categories in all ports. In 2014 (baseline), 7,034 seizures were made (see comments/justifications).	CA	<p>Component 1 is a set of successive results and actions based on a systematic evaluation of the Inspection System and Biosecurity Control and its control points. With lessons learned from the evaluation, an Action Plan was prepared aimed at improving the biosecurity system for Galapagos and focused on making changes that do not involve infrastructure spending. Therefore, the action plan focused on increasing the efficiency of shipping inspection and control and investigated additional means of interception, as well as the feasibility of pre-departure quarantine measures in the shipping system. The Action Plan was completed and approved by PSC.</p> <p>Key activities prioritized in the Action Plan were then completed, including:</p> <ul style="list-style-type: none"> • Procurement of improved detection equipment for inspection (x-rays) and freezers for improved quarantine at maritime sites. • Kits to support identification of invasive species and training provided to inspectors. • Protocols were updated to reflect lessons learned from the evaluation and to allow for the automation of the maritime cargo inspection system purchase of equipment (tablets and portable printers) and training to use automation software for inspection and control of the maritime transport system. <p>The remaining system controls will be operational by the end-of-project (EOP).</p> <p>COVID-19 had a significant impact on this outcome until early 2021. The ABG was heavily involved in local containment measures, hence</p>

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⁷ Total de arribos de turistas por año. 2020 y 2019. <http://www.galapagos.gob.ec/estadistica-de-visitantes/>

OUTCOMES TARGETS/INDICATORS	END OF PROJECT INDICATOR TARGET	END OF YEAR INDICATOR STATUS	PROGRESS RATING ⁶	COMMENTS/JUSTIFICATION
				decision-making processes related this outcome was slow. Despite this, ABG and PMU staff have worked hard to manage adaptively and make significant progress to date. Most activities are near completion.

COMPONENT 1 IMPLEMENTATION PROGRESS RATING	JUSTIFICATION	RATING TREND
HS	A highly satisfactory rating has been given to component 1 implementation progress. The indicator target was modified given FY20 PIR explanation and the project is reporting progress towards the updated target. Work on biosecurity has progressed as planned, despite COVID restrictions faced by the project, at the beginning of the fiscal year. The project is on track to complete component 1 by December 2021.	Increasing

COMPONENT 2 Solidifying the social pathway for the protection and recovery of Floreana Island ecosystems

Outcome 2.1: The social license is established for the protection and recovery of Floreana Island ecosystems

OUTCOMES TARGETS/INDICATORS	END OF PROJECT INDICATOR TARGET	END OF YEAR INDICATOR STATUS	PROGRESS RATING ⁸	COMMENTS/JUSTIFICATION
<p>Outcome indicator 2.1: The % of residents of Floreana Island who take action for the protection and recovery of Floreana Island ecosystems.</p>	<p>At least 80% of Floreana Island residents take new or improved ecologically sustainable action in areas such as: agriculture, waste management and other areas to be defined in the Floreana Parish Council Declaration.</p>	<p>100% of the residents of Floreana Island are applying sustainable agricultural practices to benefit their crops such as: harvesting rainwater for use in their crops, they do not use chemical fertilizers, they carry out crop rotation, and they carry out waste management.</p> <p>100% of people who are dedicated to raising chickens have adopted ecologically sustainable measures, which allow improving the raising of their chickens.</p>	<p>CA</p>	<p>This result focuses on the strengthening of sustainable agriculture and responsible agricultural production, as part of a more comprehensive strategy towards a sustainable development framework. GEF funds are supporting chicken and pig farming transformation, while co-financing is supporting work related to sustainable livestock facilities, with a number of benefits related to planned eradication work and beyond.</p> <p>A total of 7 chicken coops and 1 pig shed were built that will house chickens and pigs during the eradication phase and allow residents to improve their production, avoiding conflicts between farmers and wildlife. The entire poultry sector is being benefited with these chicken coops, and with the construction of the pig shed begins with the transformation in the production of pigs on the island. With a budgetary remainder of component 2, the construction of two more pig sheds that will benefit part of the sector began. This work was completed in July 2021.</p> <p>The team works in agricultural extension so that producers learn and use eco-sustainable measures for agriculture and livestock farming. Farmers are harvesting rainwater, using manure to fertilize crops, crop rotation has improved.</p>
<p>Outcome indicator 2.2.: The level of participation and support from Floreana Island residents and strategic project partners</p>	<p>100% of Floreana Island residents and strategic project partners participate and</p>	<p>About 100% of Floreana Island residents and strategic project partners participate</p>	<p>CA</p>	<p>The Parish Board of Floreana Island and the Autonomous Decentralized Municipal Government of San Cristobal each issued the document declaring support for the Floreana Island Ecological Restoration Project. These documents are central aspects of the social license.</p>

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OUTCOMES TARGETS/INDICATORS	END OF PROJECT INDICATOR TARGET	END OF YEAR INDICATOR STATUS	PROGRESS RATING ⁸	COMMENTS/JUSTIFICATION
<p>for the plans to eradicate invasive rodents and feral cats, and for the concept of reintroduction of endemic species previously extirpated by invasive species.</p>	<p>demonstrate support for the plans to eradicate rodents and feral cats, and for the concept of reintroduction of endemic species previously extirpated by invasive species.</p>	<p>and demonstrate support for the plans to eradicate rodents and feral cats and for the concept of reintroduction of endemic species.</p>		<p>All residents have participated in the management plan meetings, representatives of the Floreana community and household members, to discuss the operational and management plans and its relationship to their respective property and home.</p> <p>In addition, IC has developed a data collection tool (Fulcrum), which captures and organizes all the information necessary to identify the potential risk and mitigation measures to be implemented in each individual property on Floreana Island. The tool also records and summarizes the data and information collected during the door-to-door consultation process as well as workshops and meetings.</p> <p>The Risk Management Plans for livestock, pets, fresh water, children, fisheries near the coast, commensal rodents and tourism, which were prepared with IC specialists, GNPD technicians, socialized with the Floreana community, and the review of specific plans approved by the Ministry of Agriculture and Livestock, the District Directorate of Education and the Municipality of San Cristobal, these plans were finally approved by the Steering Committee in February/2021; Likewise, the Operations Plan prepared by Island Conservation specialists, including the contributions of the project partners, was presented to the steering committee and approved in April 2021, this document is available in two languages: English and Spanish. The development of both plans included a high degree of stakeholder engagement and discussion with all households and farm owners critical to a gender sensitive development of a social license for the Floreana.</p> <p>With the lifting of restrictions on access to the island and complying with biosecurity protocols, IC technicians and specialists have been able to resume activities prior to eradication.</p>

COMPONENT 2 IMPLEMENTATION PROGRESS RATING	JUSTIFICATION	RATING TREND
<p>HS</p>	<p>A highly satisfactory rating has been given to Component 2. The project is on track with all actions to meet the targets of this component despite COVID. Initial delays due to the COVID restrictions were solved. The stakeholder engagement process in Floreana was successful and all enabling conditions for future implementation of the eradication plan are completed.</p>	<p>Increasing</p>

COMPONENT 3 Advancing the recovery of island ecosystems following invasive species eradication through the establishment of keystone species (i.e. giant tortoises).

Outcome 3.1: Ecosystem processes, particularly seed dispersal, re-initiated across Santa Fe island (2,413 ha) as the result of the translocation of giant tortoises.

Outcome 3.2: Production in captivity of giant tortoises for future translocation throughout the archipelago is significantly increased along with associated capacities.

OUTCOMES TARGETS/INDICATORS	END OF PROJECT INDICATOR TARGET	END OF YEAR INDICATOR STATUS	PROGRESS RATING ⁹	COMMENTS/JUSTIFICATION
<p>Outcome indicator 3.1: Percentage of Santa Fe Island land area where giant tortoises are dispersing seeds.</p>	<p>At least 506 giant tortoises of the species <i>Chelonoidis hoodensis</i> are dispersing seeds on approximately 50% (1,206 ha) of the area of Santa Fe Island.</p>	<p>742¹⁰ giant tortoises of the species <i>Chelonoidis hoodensis</i> are dispersing seeds on Santa Fe Island.</p>	<p>CA</p>	<p>In February 2021, 191 additional juvenile tortoises (<i>Chelonoidis hoodensis</i>) were translocated from the breeding center to Santa Fe Island. These joined the 155 juvenile (between 5 and 7 years old) tortoises and 31 sub-adult tortoises that were translocated to Santa Fe in 2019¹¹. The tortoises will fulfill their ecological role on Santa Fe, by dispersing seeds and opening terrain for native plants to grow. Even though the land iguana fulfills the role of dispersing seeds, they do not do so in the magnitude that giant tortoises achieve.</p> <p>A total of 29 park rangers from the GNPD (26 men and 3 women) and scientists from Galapagos Conservancy participated in February 2021 translocation activity, which reflects a bigger proportion of women than previous expeditions. The released tortoises were microchipped, which will allow long-term population monitoring.</p> <p>Data from monitoring shows that tortoises have dispersed seeds in approximately 50% of the island's surface and there is no competition for resources between tortoises and land iguanas, and both actively contribute to the dispersal, especially of the <i>Opuntia</i> cactus. The steering committee approved the Ecological Monitoring Protocol of the role of giant tortoises as ecosystem engineers.</p>
<p>Outcome indicator 3.2: Number of giant tortoises raised in captivity annually – Santa Cruz Number of giant tortoises raised in captivity annually – Isabela.</p>	<p>In the breeding centers, an enhanced and expanded breeding stock contributes to the following</p>	<p>In fiscal year 2021, a total of 86 Floreana giant tortoises turned 1 year old at the Santa Cruz Breeding Center and a total of 292</p>	<p>IS</p>	<p>The objective of this result is to increase the production of giant tortoises in the Giant Tortoise Breeding Centers in Santa Cruz and Isabela. The readjustment of the breeding centers in Santa Cruz and Isabela will be completed in August 2021, allowing the expansion of breeding capacity in two islands.</p>

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¹⁰ 742 tortoises translocated to Santa Fe results from: 396 (baseline) + 155 (2019) + 191 (2021). Source GC and GNPD

¹¹ These tortoises joined the 396 tortoises that were introduced to the island in 2015 and 2017, as part of the process implemented to restore Santa Fe island.

OUTCOMES TARGETS/INDICATORS	END OF PROJECT INDICATOR TARGET	END OF YEAR INDICATOR STATUS	PROGRESS RATING ⁹	COMMENTS/JUSTIFICATION
	<p>numbers of giant tortoises reaching the age of one year:</p> <ul style="list-style-type: none"> In Santa Cruz, at least 400 tortoises from the populations of Española, Santiago, Floreana, Pinzon and Eastern Santa Cruz are expected annually. In Isabela, an average of 300 tortoises annually from the populations of the Sierra Negra and Cerro Azul volcanoes. 	<p>giant tortoises reached 1 year of age at the Isabela Breeding Center.</p>		<p>The genetic analysis of the giant tortoises found in the Wolf volcano of Isabela island was completed, and it is confirmed that they have partial ancestry from the Floreana tortoise, a species that was considered extinct. The genetic quality of the juvenile population will be improved through the acquisition of enhanced breeding stock with partial ancestry of C. Niger for the repopulation of Floreana Island.</p> <p>The 400 (Santa Cruz) and 300 (Isabela) tortoises per year that were expected in each breeding center have not yet been reached, because:</p> <ol style="list-style-type: none"> 1) Due to the pandemic, the work for the readjustment of the Breeding Centers on the islands of Santa Cruz and Isabela was delayed, starting in March/2021, currently the contracted works continue, and the work is estimated to end in August 2021. 2) Similarly, as a result of the mobilization restrictions due to COVID-19, the field trips that the GNPD makes each year to collect eggs on the Santiago and Santa Cruz-east islands (which are then incubated in the breeding centers) were not carried out. This activity will be resumed once the breeding centers have been completed and periods of natural nesting occur. 3) The GNPD has terminated the captive breeding program of the Tortoises of Española island since it has reached its objective. No more giant tortoises of this species will be produced. <p>However, once the readjustments of the Breeding Centers are completed, and as soon as the GNPD resumes the field trips for the collection of eggs, the numbers detailed in the indicator will be reached. This target will most likely be completed in early 2022.</p>

COMPONENT 3 IMPLEMENTATION PROGRESS RATING	JUSTIFICATION	RATING TREND
HS	This component has a highly satisfactory rating. The project completed the translocation of tortoises, and they have an ongoing monitoring process. The monitoring protocols were approved by the PSC. The breeding centers have been expanded and adapted with the project support. The work with captive reproduction is ongoing meeting the target of expanding tortoise populations.	Unchanged

c. Overall Project Results Rating

RATING OF THE IMPLEMENTATION OF THE PROJECT'S GENERAL RESULTS

OVERALL RATING	JUSTIFICATION	RATING TREND ¹²
HS	The project is on track to complete all expected outcomes by December 2021. All three components show significant progress during FY21. The collaboration between the executing partners is outstanding and has facilitated the implementation of all three components of this project.	Increasing

d. Recommendations

CORRECTIVE ACTION(S)	RESPONSIBLE PARTY	DEADLINE
NA		

¹² **Rating trend:** Increasing, Unchanged or Decreasing

SECTION III: PROJECT RISKS STATUS AND RATING

a. Progress towards Implementing the Project Risk Mitigation Plan

This section describes the activities implemented to manage and reduce high, substantial, modest, and low risks of the project. This section has three parts:

- a. Ratings for the progress towards implementing measures to mitigate project risks and a project risks annual reassessment

a. Progress towards Implementing the Project Risk Mitigation and Plan Project Risks Annual Reassessment

PROJECT RISKS	PRODOC RISK MITIGATION MEASURE	MITIGATION MEASURES IMPLEMENTATION	PROGRESS RATING ¹³	COMMENTS/JUSTIFICATION	PRODOC RISK RATING	CURRENT FY21 RISK RATING	RISK RATING TREND ¹⁴
Risk 1: Inadequate consultation with, and engagement by, key stakeholders, including residents of Floreana Island.	The project includes a Stakeholder Engagement Plan (see Appendix IX). Overall, the project has been designed to the government's commitment and its conservation partners', commitment to working together through inclusive, transparent, participatory processes. Further consultations are planned for the full project.	Intensive engagement with stakeholders especially in Component 2, including Floreana residents. This includes consultation with the community on: sustainable agricultural practices; the operational plan for the eradication of invasive rodents and feral cats, and associated risk management plans. In Component 1, all relevant stakeholders have participated in the evaluation of the biosecurity system. The GNP is closely involved in Component 2 and 3 activities.	IS	Ongoing activity. Engagement with the Floreana community will continue beyond the life of this project and will be very strong during next phase (eradication). Significant progress has been made in implementing activities of the Stakeholder Engagement Plan. As a result, there is a high level of mutual confidence between stakeholders, the project management team, and IC staff involved in Component 2, including residents of Floreana. Although restrictions due to the COVID pandemic temporarily halted this process, consultations were resumed once it was possible. continuing with visits to Floreana and working with the community.	Low	Low	Unchanged

¹³ **O**= Overdue; **D**= Delayed; **NS**= Not started on schedule; **IS**= Under implementation on schedule; and **CA**= Completed/Achieved

¹⁴ **Rating trend:** Increasing, Unchanged or Decreasing

PROJECT RISKS	PRODOC RISK MITIGATION MEASURE	MITIGATION MEASURES IMPLEMENTATION	PROGRESS RATING ¹³	COMMENTS/JUSTIFICATION	PRODOC RISK RATING	CURRENT FY21 RISK RATING	RISK RATING TREND ¹⁴
Risk 2: Weak governmental coordination and management capacity.	The project design incorporates the lessons learned from previous projects in ensuring that the GoE is prepared to dedicate the highly-qualified staff needed to ensure project success. Customized institutional arrangements will provide mechanisms for the government to effectively collaborate with other partners in project implementation.	Project is implemented in close cooperation with main project partners ABG and GNP. In Component 1, the Biosecurity Specialist works part of his time directly with ABG's staff in ABG's offices through an institutional arrangement. In components 2 and 3, the fact that the project office is located within the GNP administration building through an institutional arrangement allows a similar close cooperation.	IS	<p>The fact that the project is located on an island with a relatively small population and short spatial distances allows very close and direct cooperation with the main project partners ABG and GNP on a daily basis. These conditionals allowed activities to quickly resume after restrictions related to the COVID pandemic were partly lifted.</p> <p>Good relationships have been built between the EA and government institutions, which strengthens the project work.</p> <p>Close cooperation and coordination with ABG and DPNG is ongoing and will be maintained throughout the eradication phase.</p>	Moderate	Moderate	Unchanged
Risk 3: Government turnover leading to changes in priority.	The project will be nearing completion before the next elections when any new incoming government would take power (approximately May 2021), i.e. nearly all of the project will occur	Change of government took place in May 2021. Most major activities and project committee approvals had been completed prior to this date.	CA	In May 2021, a change in government was made. The main authorities of the GNP and ABG have been reconfirmed in their positions, which facilitates the continuity of the project work and provides an opportunity for the achievements of the project to be consolidated.	Moderate	Moderate	Decreasing

PROJECT RISKS	PRODOC RISK MITIGATION MEASURE	MITIGATION MEASURES IMPLEMENTATION	PROGRESS RATING ¹³	COMMENTS/JUSTIFICATION	PRODOC RISK RATING	CURRENT FY21 RISK RATING	RISK RATING TREND ¹⁴
	during a single presidential cycle. Finally, the project executing agency is well versed in executing projects in a less-stable environment.						
Risk 4: Various biological risks associated with tortoise translocation, including vectoring plant seeds among islands, disease risk, invasion risk, etc.	In light of the several risks associated with tortoise translocation, during the Project Preparation Grant (PPG), an Environmental Management Plan (EMP) was developed. Together, the elements of the EMP provide an effective set of risk mitigation measures for Component 3 activities.	The EMP includes a detailed risk management for Component 3 and its activities. The Giant Tortoise Restoration Initiative follows strictly the suggested risk mitigation measures that were incorporated into the project design or that are managed through ongoing monitoring.	IS	The Giant Tortoise Restoration Initiative is managed by professionals with decades of experience in Giant Tortoise breeding and restoration. The team is familiar with all the standards applied for the translocation of Giant Tortoises between islands. The tortoise monitoring protocols are part of the long-term risk mitigation measures. Monitoring of tortoise translocation is an ongoing activity which will go on beyond the life of this project.	Moderate	Low	Decreasing
Risk 5: COVID-19 pandemic		The Project Management Team in cooperation with IC put a multitude of mitigation measures in place:	IS	The project team is strictly following government, IC, and CI GEF imposed COVID-19 guidelines. Activities have been summed up when Floreana opened for visitors with PCR testing. The	N/A	High	Unchanged

PROJECT RISKS	PRODOC RISK MITIGATION MEASURE	MITIGATION MEASURES IMPLEMENTATION	PROGRESS RATING ¹³	COMMENTS/JUSTIFICATION	PRODOC RISK RATING	CURRENT FY21 RISK RATING	RISK RATING TREND ¹⁴
		<ul style="list-style-type: none"> - Revision and adaptation of annual workplan and budget - Application of adaptive management measures - Preparing of procurement packages upfront where possible and appropriate during contagious phase - Procurement of goods and services from local suppliers where possible and appropriate - Update existent and prepare new management tools. 		<p>adapted project management and an updated procurement list were discussed and agreed with CI-GEF. The pandemic caused a delay in the execution of project activities.</p> <p>We are assuming that no more 'stay-at-home' orders will be given in Galapagos, since cases are very low and most of the adult population has been vaccinated. However, the risk still exists and active management of potential COVID related circumstances needs to remain an ongoing activity until project closure.</p>			

OVERALL RATING OF PROJECT RISKS	JUSTIFICATION	RISK RATING TREND ¹⁵
L	A low rating has been given to the project risks. The PMU team has been implementing the mitigation for each risk in a timely manner. Government changes and COVID restrictions have not affected the project deliverables given the actions taken by the project team to mitigate these risks.	Decreasing

Recommendations

MITIGATION AND CORRECTIVE ACTION(S)	RESPONSIBLE PARTY	DEADLINE
Continue monitoring risks and implementing mitigation measures as needed until the project is completed	PMU	December 2021

¹⁵ **Rating trend:** Increasing, Unchanged or Decreasing

SECTION IV: PROJECT ENVIRONMENTAL AND SOCIAL SAFEGUARDS IMPLEMENTATION STATUS AND RATING

This section of the PIR describes the progress made towards complying with the approved Environmental and Social Safeguard plans, as well as recommendations to improve the implementation of the safeguard plans, when needed. This section is divided in three parts:

- a. Progress towards Complying with the CI-GEF Project Agency’s Environmental & Social Safeguards
- b. Overall Project Safeguard Implementation Rating
- c. Recommendations

a. Progress towards Complying with the CI-GEF Project Agency’s Environmental & Social Safeguards

MINIMUM SAFEGUARD INDICATORS	PROJECT TARGET	END OF YEAR STATUS	PROGRESS RATING ¹⁶	COMMENTS/JUSTIFICATION
PROTECTION OF NATURAL HABITATS 1. Number of Hectares of natural and/or critical natural habitats loss or degraded.	0	0	IS	<p>In total, 346 juvenile giant tortoises and 31 sub-adult giant tortoises have been transferred to Santa Fe Island. There are currently 742 <i>Chelonoidis hoodensis</i> tortoises in total roaming Santa Fe Island. All released tortoises in Santa Fe are equipped with microchips to monitor the long-term population.</p> <p>In addition, 46 fenced control areas and 182 sampling points were established to monitor ecological changes associated with turtle translocation in Santa Fe. Given that all released giant tortoises are young or sub-adult and the current total population is small, it is too early to show possible loss or degradation of critical natural habitats, which could also be confirmed by comparing sampling points in turtle release areas and fenced control areas.</p>

¹⁶ O= Overdue; D= Delayed; NS= Not started on schedule; IS= Under implementation on schedule; and CA= Completed/Achieved

<p>ACCOUNTABILITY AND GRIEVANCE MECHANISM</p> <p>1. Number of conflict and complaint cases reported to the project's Accountability and Grievance Mechanism.</p> <p>2. Percentage of conflict and complaint cases reported to the project's Accountability and Grievance Mechanism that have been resolved.</p>	<p>0</p> <p>0</p>	<p>0</p> <p>0</p>	<p>IS</p>	<p>Posters explaining the accountability and grievance mechanism were produced and posted in the project office and in the offices of local project partners: IC, ABG, GNPDP, GC and the Floreana Community Council. At Floreana, we held a meeting with local actors and representatives of local institutions. So far, no complaints have been received.</p> <p>Non-Applicable</p>
<p>GENDER MAINSTREAMING</p> <p>1. Number of men and women who participated in project activities (e.g. meetings, workshops, consultations).</p> <p>2. Number of men and women who received benefits (e.g. employment, income generating activities, training, access to natural resources, land tenure or resource rights, equipment, leadership roles) from the project.</p>	<p>Women account for at least 30% of persons participating in project meetings, workshops or consultations.</p> <p>Women account for at least 30% of persons trained and/or receiving other benefits.</p>	<p>Men 365</p> <p>Women 239 (39.6%)</p> <p>Men 92</p> <p>Women 58 (38,67%)</p>	<p>IS</p> <p>IS</p>	<p>Numbers don't include regular meetings with ABG and GNPDP staff.</p> <p>Numbers represent meetings with ABG staff at inspection points and stakeholders of biosecurity system, stakeholders, households and farmers on Floreana and Park Rangers and scientists involved in Component 3.</p> <p>This category refers to the chicken coops that are currently being constructed on Floreana. These chicken coops have already been delivered as donations to farmers.</p>

<p>3. Number of strategies, plans (e.g. management plans and land use plans), and policies derived from the project that include gender considerations (this indicator applies to relevant projects).</p>	<p>All strategies, plans and policies developed with the support of the project will include gender considerations.</p>	<p>9 Risk plans and Floreana Operation Plan.</p>	<p>IS</p>	<p>Only the donation of the two additional 2 pig pens is pending</p> <p>The Operational Plan and the Risk Management plans include gender considerations.</p>
<p>STAKEHOLDER ENGAGEMENT</p> <p>1. Number of government agencies, civil society organizations, private sector, indigenous peoples, and other stakeholder groups that have been involved in the project implementation phase on an annual basis.</p>	<p>At least 15 annually</p>	<p>17</p>	<p>IS</p>	<p>C1 ABG, GNP, CGREG, PCL, TAGSA, Panismar, Storeocean.</p> <p>C2 GNPD, ABG, CGREG, Municipality of San Cristobal, Captaincy of Port, MSP, MdE, MAG Amazonas School.</p> <p>C3 GNPD, Scientists from different research institutes.</p>

<p>2. Number persons (sex-disaggregated) that have been involved in project implementation phase (on an annual basis).</p>	<p>At least 100 men and 100 women annually.</p>	<p>Men 365 Women 239 (39.6%)</p>	<p>IS</p>	<p>The ABG officials who have participated in the development of the processes, the software and the training are a large number of people who participated in the execution. Park rangers participating in component 3 field trips also represent a significant number. Finally, the Floreana community that has participated in ESIA workshops and has received support and benefits in the agricultural area.</p>
<p>3. Number of engagement (e.g. meeting, workshops, consultations) with stakeholders during the project implementation phase (on an annual basis).</p>	<p>At least 12 annually</p>	<p>36</p>	<p>IS</p>	<p>Since project start, 26 engagements with stakeholders have taken place. The number does not include regular meetings with GNPD and ABG.</p>
<p>4. Percentage of stakeholders who rate as satisfactory the level at which their views and concerns are taken into account by the project (<i>responsible party for measuring this indicator is CI-GEF Agency and this will be undertaken by the consultant hired by the CI-GEF Agency to conduct the MTR and Final Evaluation</i>).</p>	<p>>95%</p>		<p>IS</p>	<p>To be undertaken by the consultant hired by the CI-GEF Agency to conduct the MTR and Final Evaluation.</p>

b. Information on Progress, challenges and outcomes on stakeholder engagement

Since the beginning of the project, significant progress has been made in stakeholder participation, especially in Components 1 and 2. Component 3 has a very specific objective that mainly involves officials from the Galapagos National Park. In Component 1, all possible stakeholders have been involved in the evaluation of the biosecurity inspection and control system, in the Action Plan and in the definition of the new operational processes. They have provided valuable information and it is hoped that the participation of inspectors in the development of these tools will result in more applicable tools. In Component 2, all potential stakeholders actively participated in the review and discussion of Risk Management Plans, Sustainable Agricultural Practices, and Environmental Impact Studies. The stakeholder engagement process was significantly affected by the COVID pandemic due to social distancing, inter-island travel restrictions, etc. With the lifting of restrictions and compliance with the biosecurity protocols, it has been possible to resume certain meetings in which the active participation of the Floreana community is needed, thus allowing us to continue with the objectives of component 2. The management committee has served as a space to have the main project stakeholders in continuous communication and to monitor progress towards results.

c. Provide information on the progress towards achieving gender sensitive measures/targets

The overall participation of women (stakeholders, households, and farmers) was around 35%. Although the relatively high participation of men is largely due to the high number of the GNPD park rangers and ABG inspectors who participated in Component 3 training workshops and field trips. If these inspectors and rangers are not considered, the participation of women goes up to 47%. This shows that a purely quantitative approach to measure the impact of project activities on gender mainstreaming must be disaggregated to generate relevant information. Stakeholders in Components 1 and 2 are represented by women in key positions who have a great influence on the implementation of the project. Therefore, it is recommended to complete the numerical indicators with qualitative information. The Project Management Team has 3 female employees and one male; the Project Management Committee has 2 female members and 3 male members, the Project Steering Committee had 3 female members and 3 male members.

d. Overall Project Safeguard Implementation Rating

SUMMARY: PROJECT SAFEGUARD IMPLEMENTATION RATING BY TYPE OF PLAN

SAFEGUARDS TRIGGERED BY THE PROJECT (delete those not applicable)	CURRENT FY21 IMPLEMENTATION RATING	RATING TREND
Accountability and Grievance Mechanisms	HS	Unchanged
Gender Mainstreaming Plan (GMP)	HS	Unchanged

SUMMARY: PROJECT SAFEGUARD IMPLEMENTATION RATING BY TYPE OF PLAN

SAFEGUARDS TRIGGERED BY THE PROJECT (delete those not applicable)	CURRENT FY21 IMPLEMENTATION RATING	RATING TREND
Stakeholder Engagement Plan (SEP)	HS	Unchanged
Protection of Natural Habitats	HS	Unchanged

OVERALL PROJECT SAFEGUARD IMPLEMENTATION RATING

RATING	JUSTIFICATION	RATING TREND
HS	Monitoring protocols have been established to measure the ecological impact caused by the translocated tortoises. The grievance mechanism has been established and communicated to stakeholders. The project continues to surpass its gender targets and the operational and risk management plans include gender considerations. The target for stakeholder engagement has also been surpassed and the project maintained engagement despite the limitations imposed by the pandemic.	Unchanged

e. Recommendations

CORRECTIVE ACTION(S)	RESPONSIBLE PARTY	DEADLINE
The project is encouraged to provide qualitative information with the quantitative data for gender mainstreaming. Please provide any preliminary findings on the ecological impact in the final report.	PMU	December 2021

SECTION V: PROJECT IMPLEMENTATION EXPERIENCES, KNOWLEDGE MANAGEMENT AND LESSONS LEARNED

Required topics

1. Knowledge activities / products (where applicable), as described in the knowledge management plan approved in the Executive Director's endorsement/approval

Lessons learned:

The planned knowledge outputs produced by this project are captured in output 3.2.3: *Scientific and technical findings reported in peer reviewed and popular literature*. In this output: 1 Book Chapter has been published, 1 peer reviewed Article accepted to a scientific journal (Restoration Ecology) and 1 presentation for an international event have been prepared.

- Use this link to find the chapter in the Galapagos Giant Tortoise– 1st edition 2020: [Galapagos Giant Tortoises](#). Describes lessons learned from ecological restoration using replacement species.
- Due to normal rules of peer reviewed publications, the article cannot be shared prior to official publication, so no link is included here.

In addition, the Field Monitoring protocol, approved by the project's Steering Committee is a key knowledge tool in terms of what to do and not to do for the purpose of ecological monitoring of island restoration processes. For now, it will be used to monitor the role of tortoises as ecosystem engineers on Santa Fe Island, but it will be adapted and used on Floreana after the eradication takes place. This protocol will also be used by the Galapagos National Park for ecological monitoring on other islands of the archipelago.

Although Component 2 did not have specific knowledge outputs, important knowledge products have been produced with co-financing. Several peer-reviewed articles and general publications were produced that are not specific to GEF support, but refer to the Floreana Island restoration effort, to which the GEF project contributes:

Blogs:

- <https://www.islandconservation.org/community-led-rewilding-floreana-galapagos/>
- <https://www.islandconservation.org/sustainable-development-communities-removing-invasive-species/>
- <https://www.islandconservation.org/island-journey-dive-restoration-floreana-island-galapagos/>

Publications:

- Cayot L.J., Campbell K.J., Carrion V., Chapter 19 – Invasive species: Impacts, control, and eradication, Editor(s): Gibbs J.P., Cayot L.J., Washington Tapia Aguilera, In Biodiversity of World: Conservation from Genes to Landscapes, Galapagos Giant Tortoises. Academic Press (2021). Pages 381-399. ISBN 9780128175545. <https://doi.org/10.1016/B978-0-12-817554-5.00009-5>

Because this project had very specific, high quality lessons learned outputs, the project did not plan a broad project summary to identify lessons learned from all components. However, with remaining funds, a document that summarizes the project achievements and collects broad lessons learned has been planned for fiscal year FY22.

Additional topics (please choose two)

2. Scientific and technological issues

A standard protocol was developed and tested in the field for ecological monitoring. This protocol will enable the evaluation of the health and status of translocated Galapagos tortoises at the individual level, as well as the overall population growth and dispersal, and interactions of tortoises with other species, particular the plant community. Specifically, the protocol includes biannual monitoring, survival rates, body condition, growth rates, habitat-use and dispersal will be measured through mark-recapture methods. Interactions with other species, including seed dispersal and habitat change attributable to tortoises, will be measured via studies of diet (inferred from fecal samples) and foraging ecology of tortoises (observational studies) as well as vegetation response and habitat use by other animals inside and outside of areas from which tortoises are excluded. Opuntia cactus represents a keystone species for the entire vertebrate community on Santa Fe Island, and a major focus of both tortoise and terrestrial iguana foraging: demographic studies of Opuntia across a gradient of tortoise density will enable tracking Opuntia response to tortoise re-establishment.

The protocol will facilitate the DPNG and its partners' efforts to manage the repopulation of adult tortoises on other islands, including Floreana. The protocol will provide information for other programs in which a proxy species is used to restart ecological restoration processes. Española tortoises, the closest genetic relative and of the same saddleback morphology, are used as ecological analogs for the extinct Santa Fe tortoise to re-initiate ecosystem processes on Santa Fe Island. Hence, the protocol will produce scientific data to inform the hypothesis: *ecosystem processes, particularly seed dispersal, re-initiated across Santa Fe Island (2,413 ha) as the result of the translocation of giant tortoises.*

3. Project institutional arrangements, including project governance

- a. Project governance has worked smoothly during FY21. Having a Project Management Committee as a space for project partners to discuss project progress and make decisions has worked well. However, there has been very little difference between the decisions made by the Project Management and the Project Steering Committees. In practice, both committees are discussing almost the same issues, and are repetitive.
- b. It is considered that in this project and in subsequent GEF projects in Galapagos would be sufficient to have a single management/decision-making committee, composed of the Director of the PNG, Executive Director of the ABG, representative of MAAE before the GEF, and a representative of the Executing Agency. It is not required to have an additional decision-making body. This committee in conjunction with the fluid relationship that specialists and the project manager have with government partners is sufficient to ensure good coordination of the project.
- c. The Ministry of Public Works is responsible for the infrastructure issues that will need to be addressed in the future to improve the biosecurity of the islands. They are barely present in the Galapagos and were not involved in the project. Although they are not part of the key entities executing this project, they should be included in the sharing of results and lessons learned from this project to reinforce the message that prioritizing funds for the port infrastructure for cargo from the mainland to Galapagos and in Galapagos is very important.

APPENDIX I: PROJECT ANNUAL IMPLEMENTATION PROGRESS RATING

Rating		Overdue (O)	Delayed (D)	Not started on schedule (NS)	Under implementation on schedule (IS)	Completed/Achieved (CA)
Highly Satisfactory (HS)	HS	0%		100%		
Satisfactory (S)	S	20%		80%		
Moderately Satisfactory (MS)	MS	40%		60%		
Moderately Unsatisfactory (MU)	MU	60%		40%		
Unsatisfactory (U)	U	80%		20%		
Highly Unsatisfactory (HU)	HU	100%		0%		

- **Highly Satisfactory:** 100% of the indicators: a) have been completed/achieved, b) are under implementation on schedule, and/or c) have not started but are on schedule, according to the original/formally revised Project Annual Workplan for the project. The project can be presented as an example of “good practice” project,
- **Satisfactory:** 80% of the indicators: a) have been completed/achieved, b) are under implementation on schedule, and/or c) have not started but are on schedule, according to the original/formally revised Project Annual Workplan for the project; except for only 20% that are delayed and/or overdue and need remedial action,
- **Moderately Satisfactory:** 60% of the indicators: a) have been completed/achieved, b) are under implementation on schedule, and/or c) have not started but are on schedule, according to the original/formally revised Project Annual Workplan for the project; while 40% are delayed and/or overdue and need remedial action,
- **Moderately Unsatisfactory:** 40% of the indicators: a) have been completed/achieved, b) are under implementation on schedule, and/or c) have not started but are on schedule, according to the original/formally revised Project Annual Workplan for the project; while 60% are delayed and/or overdue and need remedial action,
- **Unsatisfactory:** only 20% of the indicators: a) have been completed/achieved, b) are under implementation on schedule, and/or c) have not started but are on schedule, according to the original/formally revised Project Annual Workplan for the project; while 80% are delayed and/or overdue and need remedial action, and
- **Highly Unsatisfactory:** 100% of the indicators: a) are overdue, and/or b) delayed in their implementation, according to the original/formally revised Project Annual Workplan for the project.

APPENDIX II: RISK RATINGS

Rating	
Low (L)	L
Moderate (M)	M
Substantial (S)	S
High (H)	H

- **Low Risk (L):** There is a probability of up to 25% that assumptions may fail to hold or materialize, and/or the project may face only modest risks.
- **Moderate Risk (M):** There is a probability of between 26% and 50% that assumptions may fail to hold or materialize, and/or the project may face only modest risks.
- **Substantial Risk (S):** There is a probability of between 51% and 75% that assumptions may fail to hold and/or the project may face substantial risks.
- **High Risk (H):** There is a probability of greater than 75% that assumptions may fail to hold or materialize, and/or the project may face high risks.

APPENDIX III: PROGRESS TOWARDS ACHIEVING PROJECT EXPECTED OUTPUTS

INDICATORS	PROJECT TARGET	END OF YEAR INDICATOR STATUS	PROGRESS RATING ¹⁷	COMMENTS/JUSTIFICATION
Outcome 1.1 The number of invasive alien species entering the Galapagos archipelago is substantially reduced				
Output Indicator 1.1.1: Action Plan accepted by the Project Steering Committee (PSC).	One document approved by the Project Steering Committee (PSC).	The Action Plan was completed and approved by the Project Steering Committee (PSC).	CA	Action Plan approved by the Project Steering Committee (PSC).

¹⁷ **O**= Overdue; **D**= Delayed; **NS**= Not started on schedule; **IS**= Under implementation on schedule; and **CA**= Completed/Achieved

Output Indicator 1.1.2: % of detection equipment identified in the Action Plan purchased and installed inadequate infrastructure.	10% of equipment identified in the Action Plan purchased and installed.	Procurement of some consumables and small detection equipment completed.	CA	The donation to ABG of all acquisitions was carried out. Small purchases can be made in FY22 to optimize budget execution.
		RX equipment acquisition completed.	CA	This activity corresponds to output 1.1.2.
		ABG's freeze chamber overhaul process completed.	CA	This activity corresponds to output 1.1.2.
		The process of contracting the Environmental Impact Study and Updating of the Management Plan contracted and in execution.	IS	This activity corresponds to output 1.1.2.
		The process of adaptation of burial site in the sanitary landfill with contract and in progress.	IS	This activity corresponds to output 1.1.2.
		Software development to automate the inspection system is running as scheduled.	IS	This activity corresponds to output 1.1.2.
		The purchase of automation equipment is finalized.	CA	The purchase and donation of the automation equipment were carried out.

<p>Output Indicator 1.1.3: % of Action Plan recommendations regarding Protocols and capacity building targets implemented.</p>	<p>20% of the recommendations implemented.</p>	<p>The update of protocols to establish steps, guidelines, responsibilities and functions is completed.</p> <p>20% of the recommendations implemented.</p> <p>The development of workflow diagrams and other materials to help implement the protocols is underway.</p> <p>Training workshops were held to understand the updated protocols with ABG inspectors.</p>	<p>CA</p> <p>NS</p> <p>CA</p>	<p>This activity was from the Action Plan. A second version of the protocols focused on means of transport will be carried out.</p> <p>This activity was part of the Action Plan. The flowcharts will be printed and placed at the inspection points.</p> <p>Training courses were given for ABG inspectors in the 4 populated islands and Quito and Guayaquil.</p>
<p>Outcome 2.1 The social license is established for the protection and recovery of Floreana Island ecosystems</p>				

<p>Output Indicator 2.1.1: The % of male and female of farmers that implement ecologically sustainable farming practices.</p>	<p>100 % of farmers implement ecologically sustainable farming practices.</p>	<p>The construction of 7 chicken coops and 1 shed was completed.</p> <p>100% of farmers are adopting new or improved ecologically sustainable measures related to the sustainable rearing of chickens, pigs and livestock. As well as what is related to ecologically sustainable good practices for their crops.</p>	<p>IS</p>	<p>7 of the 8 chicken coops were built, and in exchange for that 8th a shed was built that will also serve for the application of good ecologically sustainable practices. Due to the COVID-19 pandemic, the construction works had to stop, however the work was resumed as the restrictions established by the government were lifted. With remnants of the travel item, 2 additional pigs will be built for the adequate breeding of pigs. Counterpart funds have also worked with farmers to implement sustainable silage practices.</p>
<p>Output Indicator 2.1.2: Declaration approved by the Floreana Parish Council.</p>	<p>One declaration developed and adopted by the Floreana Parish Council.</p>	<p>The Floreana Parish Board, and the Autonomous Decentralized Municipal Government of San Cristobal issued the declaration of support for the Floreana Island ecological restoration project.</p>	<p>CA</p>	<p>Currently there are the signed documents of the Declaration, both from the Floreana Parish Board and the Autonomous Decentralized Municipal Government of San Cristobal.</p>
<p>Output Indicator 2.1.3: Approved Operational Plan</p>	<p>One operational plan approved by PSC.</p>	<p>The Operations Plan reviewed by the project partners and approved.</p>	<p>CA</p>	<p>In the Steering Committee of April /2021, the Project Operations Plan was approved, it was sent for translation and will be available for review and application in both languages.</p>

<p>Output Indicator 2.1.4.a: Approved risk management plans.</p>	<p>6 risk management plans approved by PSC.</p>	<p>The set of risk management plans for pets, freshwater, children, agriculture, livestock, nearshore fisheries, rodents, and visitors was sent to partner institutions for final review and feedback.</p>	<p>CA</p>	<p>The Risk Management Plans for livestock, pets, fresh water, children, fisheries near the coast, commensal rodents and tourism, which were prepared with CI specialists, GNPD technicians, socialized with the Floreana community, and the review of specific plans and approved by the Ministry of Agriculture and Livestock, the District Directorate of Education and the Autonomous Decentralized Municipal Government of San Cristobal, finally these plans were approved by the Steering Committee in February/2021.</p>
<p>Output Indicator 2.1.4.b: Percentage of the Floreana island male and female residents who participate in the consultations regarding the risk management plans developed for the Project.</p>	<p>100% of the male and female residents participate in the consultations.</p>	<p>100% of all households have been visited at least once (sometimes) by IC staff to present and discuss risk management plans.</p>	<p>CA</p>	<p>All meetings pertinent to the socialization, discussion and consultations on the risk management plans were held in their entirety with the community, however these socializations will continue to take place before, during and after eradication.</p>

<p>Output Indicator 2.1.5: Environmental and Social Impact Assessment completed and approved.</p>	<p>One ESIA completed and approved by PSC.</p>	<p>A consultant team was hired to prepare the ESIA.</p>	<p>IS</p>	<p>The EIA has been developed as required by IC. Rounds of socialization were carried out with the Floreana community to proceed with the gathering of information that allows the economic and social analysis required for this study to be carried out.</p> <p>The final study approved by the GNPD and IC will be shared with the community of Floreana and Santa Cruz. The full ESIA is expected by August 2021.</p>
<p>Outcome 3.1: Ecosystem processes, particularly seed dispersal, re-initiated across Santa Fe island (2,413 ha) as the result of the translocation of giant tortoises</p>				
<p>Output Indicator 3.1.1: # of giant tortoises (<i>Chelonoidis hoodensis</i>) translocated to Santa Fe Island.</p>	<p>On average, at least 40 juvenile giant tortoises (<i>Chelonoidis hoodensis</i>) are translocated annually.</p> <p>At least 30 sub-adult giant tortoises (<i>Chelonoidis hoodensis</i>) are translocated.</p>	<p>Throughout the project 381 young giant tortoises (<i>Chelonoidis hoodensis</i>) have been relocated.</p> <p>31 subadult giant tortoises (<i>Chelonoidis hoodensis</i>) have been translocated.</p>	<p>CA</p> <p>CA</p>	<p>The objective set in the project was met, transferring more than the amount set.</p> <p>This translocation will help the giant tortoises fulfill their role as ecosystem engineers, with the dispersal of seeds.</p>
<p>Output Indicator 3.1.2: Tested and optimized monitoring and evaluation protocols accepted by the Project Steering Committee.</p>	<p>One monitoring and evaluation protocol.</p>	<p>The Ecological Monitoring Protocol on Santa Fe Island, approved by the Steering Committee.</p>	<p>IS</p>	<p>Ecological Monitoring Protocol for Santa Fe Island, was approved by the Steering Committee in April/2021.</p>
<p>Outcome 3.2: Production in captivity of giant tortoises for future reintroductions throughout the archipelago is significantly increased</p>				

<p>Output Indicator 3.2.1: Number of centers modernized and expanded.</p>	<p>Two centers modernized.</p>	<p>A professional was hired who began the work of readjustment and expansion of the Breeding Centers for the reproduction of giant tortoises on the islands of Santa Cruz and Isabela.</p>	<p>IS</p>	<p>The work is close to completion (expected in July 2021) and everything required by the GNPD has been met to continue with the captive breeding activities on the two islands.</p>
<p>Output Indicator 3.2.2: # of breeders selected, located, and transferred to breeding center.</p>	<p>At least five giant tortoises located and transferred (20% increase in the captive population of the Floreana breeders).</p>	<p>32 tortoises were extracted from the Wolf volcano with genes from Floreana and were transferred to the Giant Tortoise Breeding Center in Santa Cruz.</p>	<p>CA</p>	<p>With the discovery of the tortoises in the Wolf volcano located in Isabela, it will be possible to increase the reproduction in captivity of the supposed extinct species of Floreana.</p>
<p>Output Indicator 3.2.3: # of scientific, technical and popular articles and reports.</p>	<p>1 peer-reviewed article and 2 popular articles produced</p>	<p>Galapagos Conservancy produced scientific articles that were published in newsletters, as well as chapters in a book on Tortoises.</p>	<p>CA</p>	<p>The peer-review publication was delivered and is submitted to the magazine Restoration Ecology for publication. Publication is expected in the following quarter. A chapter was published in the book Galapagos Giant Tortoise Due to the COVID-19 pandemic, the symposium organized every year by the GNPD could not be held. However, GC participated at LACA 2020 International Congress, in which the progress of the repopulation of Santa Fe Island with tortoises translocated to this island was presented.</p>