



**GREEN
CLIMATE
FUND**

Meeting of the Board
16 – 19 May 2022
Antigua and Barbuda
Provisional agenda item 5

GCF/B.32/02/Add.02

25 April 2022

Consideration of funding proposals - Addendum II

Funding proposal package for FP185

Summary

This addendum contains the following seven parts:

- a) A funding proposal titled "Climate Change: The New Evolutionary Challenge for the Galapagos";
- b) No-objection letter issued by the national designated authority(ies) or focal point(s);
- c) Environmental and social report(s) disclosure;
- d) Secretariat's assessment;
- e) Independent Technical Advisory Panel's assessment;
- f) Response from the accredited entity to the independent Technical Advisory Panel's assessment; and
- g) Gender documentation.

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Funding Proposal

Project/Programme title:	Climate Change: The New Evolutionary Challenge for the Galapagos
Country(ies):	Ecuador
Accredited Entity:	Corporación Andina de Fomento (CAF)
Date of first submission:	<i>[2021/03/24]</i>
Date of current submission	<i>[2022/01/18]</i>
Version number	<i>[V.10]</i>



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Note to Accredited Entities on the use of the funding proposal template

- Accredited Entities should provide summary information in the proposal with cross-reference to annexes such as feasibility studies, gender action plan, term sheet, etc.
- Accredited Entities should ensure that annexes provided are consistent with the details provided in the funding proposal. Updates to the funding proposal and/or annexes must be reflected in all relevant documents.
- The total number of pages for the funding proposal (excluding annexes) **should not exceed 60**. Proposals exceeding the prescribed length will not be assessed within the usual service standard time.
- The recommended font is Arial, size 11.
- Under the [GCF Information Disclosure Policy](#), project and programme funding proposals will be disclosed on the GCF website, simultaneous with the submission to the Board, subject to the redaction of any information that may not be disclosed pursuant to the IDP. Accredited Entities are asked to fill out information on disclosure in section G.4.

Please submit the completed proposal to:

fundingproposal@gcfund.org

Please use the following name convention for the file name:

“FP-[Accredited Entity Short Name]-[Country/Region]-[YYYY/MM/DD]”

A. PROJECT/PROGRAMME SUMMARY				
A.1. Project or programme	Programme	A.2. Public or private sector	Public	
A.3. Request for Proposals (RFP)	<p>If the funding proposal is being submitted in response to a specific GCF Request for Proposals, indicate which RFP it is targeted for. Please note that there is a separate template for the Simplified Approval Process and REDD+.</p> <p>Not applicable</p>			
A.4. Result area(s)	<p>Check the applicable GCF result area(s) that the <u>overall</u> proposed project/programme targets below. For each checked result area(s), indicate the estimated percentage of GCF and Co-financers' contribution devoted to it. The total of the percentages when summed should be 100% for GCF and Co-financers' contribution respectively.</p>			
		GCF contribution	Co-financers' contribution¹	
	Mitigation total	42 %	92 %	
	<input checked="" type="checkbox"/> Energy generation and access	38 %	89 %	
	<input type="checkbox"/> Low-emission transport	<u>Enter number %</u>	<u>Enter number %</u>	
	<input checked="" type="checkbox"/> Buildings, cities, industries and appliances	4 %	3 %	
	<input type="checkbox"/> Forestry and land use	<u>Enter number %</u>	<u>Enter number %</u>	
	Adaptation total	58 %	8 %	
	<input checked="" type="checkbox"/> Most vulnerable people and communities	8 %	0 %	
	<input checked="" type="checkbox"/> Health and well-being, and food and water security	29 %	7 %	
<input type="checkbox"/> Infrastructure and built environment	<u>Enter number %</u>	<u>Enter number %</u>		
<input checked="" type="checkbox"/> Ecosystems and ecosystem services	21 %	1 %		
A.5. Expected mitigation outcome <i>(Core indicator 1: GHG emissions reduced, avoided or removed / sequestered)</i>	584,168.98 tCO ₂ e over lifespan (25 years for energy) <i>Indicate greenhouse gas (GHG) emission reductions or removals in tCO₂eq over total lifespan of the project/programme²</i>	A.6. Expected adaptation outcome <i>(Core indicator 2: direct and indirect beneficiaries reached)</i>	567,936	
			<table border="1"> <tr> <td>Direct: 21,525 beneficiaries of investments and technical assistance</td> <td>Indirect: 546,411 (From the 33,000 Galapagos population, 11,475 are indirect beneficiary and 443,685 Ecuadorian tourists and 91,251 Developing Countries tourist in 5 years)</td> </tr> <tr> <td>0,12% <i>Indicate % of direct beneficiaries vis-à-vis total population</i></td> <td>3% <i>Indicate % of indirect beneficiaries vis-à-vis total population</i></td> </tr> </table>	Direct: 21,525 beneficiaries of investments and technical assistance
Direct: 21,525 beneficiaries of investments and technical assistance	Indirect: 546,411 (From the 33,000 Galapagos population, 11,475 are indirect beneficiary and 443,685 Ecuadorian tourists and 91,251 Developing Countries tourist in 5 years)			
0,12% <i>Indicate % of direct beneficiaries vis-à-vis total population</i>	3% <i>Indicate % of indirect beneficiaries vis-à-vis total population</i>			
A.7. Total financing (GCF + co-finance³)	<u>117,595,558.20</u> USD	A.9. Project size	Medium (Upto USD 250 million)	
A.8. Total GCF funding requested	<u>65,271,298.94</u> USD <i>For multi-country proposals, please fill out annex 17.</i>			

¹ Co-financer's contribution means the financial resources required, whether Public Finance or Private Finance, in addition to the GCF contribution (i.e. GCF financial resources requested by the Accredited Entity) to implement the project or programme described in the funding proposal.

² The total lifespan of the project/programme is defined as the maximum number of years over which the outcomes of the investment are expected to be effective. This is different from the project/programme implementation period.

³ Refer to the Policy of Co-financing of the GCF.

<p>A.10. Financial instrument(s) requested for the GCF funding</p>	<p>Mark all that apply and provide total amounts. The sum of all total amounts should be consistent with A.8.</p> <p> <input checked="" type="checkbox"/> Grant <u>34,730,152.76</u> <input type="checkbox"/> Equity <u>Enter number</u> <input checked="" type="checkbox"/> Loan <u>30,541,146.19</u> <input type="checkbox"/> Results-based payment <u>Enter number</u> <input type="checkbox"/> Guarantee <u>Enter number</u> </p>		
<p>A.11. Implementation period</p>	<p>5 years Indicate the number of years and months the project/programme is expected to be implemented.</p>	<p>A.12. Total lifespan</p>	<p>25 years Indicate the maximum number of years over which the outcomes of the investment are expected to be effective, i.e. to lead to adaptation and/or mitigation results.</p>
<p>A.13. Expected date of AE internal approval</p>	<p>This is the date that the Accredited Entity obtained/will obtain its own approval to implement the project/programme, if available. 6/1/2022</p>	<p>A.14. ESS category</p>	<p>Refer to the AE's safeguard policy and GCF ESS Standards to assess your FP category. A</p>
<p>A.15. Has this FP been submitted as a CN before?</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<p>A.16. Has Readiness or PPF support been used to prepare this FP?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>
<p>A.17. Is this FP included in the entity work programme?</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<p>A.18. Is this FP included in the country programme?</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
<p>A.19. Complementarity and coherence</p>	<p>Does the project/programme complement other climate finance funding (e.g. GEF, AF, CIF, etc.)? If yes, please elaborate in section B.1. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>		

A.20. Executing Entity information

- **CAF:** Development Bank of Latin America: is a multilateral development bank that promotes a sustainable development model through credit operations, non-reimbursable resources, and support in the technical and financial structuring of projects in the public and private sectors of Latin America. CAF is a Regional Direct Access accredited entity to the GCF. It will hold the role of Accredited Entity and Executing Entity.
- **Corporación Financiera Nacional B.P. - CFN (National Financial Corporation)** is a public financial institution, whose mission is to promote the development of the productive and strategic sectors of Ecuador, through multiple financial and non-financial services aligned with public policies. The institutional action is framed within the guidelines of the National Government's programs aimed at stabilizing and dynamizing the economy, becoming a decisive agent for achieving the reforms undertaken
- **Corporación Nacional de Finanzas Populares y Solidarias - CONAIFPS** (National Corporation of Popular and Solidarity Finance) Pursuant to Article 159 of the Organic Law of the Popular and Solidarity Economy: The Corporation will have as its fundamental mission to provide financial services subject to the policy dictated by the Inter-Institutional Committee to the organizations covered by the Organic Law of the Popular and Solidarity Economy, under second-tier financial and credit service mechanisms; for which purpose it will exercise the functions that will be set forth in its Articles of Incorporation. By the year 2021, CONAIFPS will be the leading public second-tier development financial institution in the provision of products, financial and non-financial services with quality and innovation for Popular and Solidarity Economy Organizations, contributing to their inclusion and consolidation in the country for the economic and social development of its members and clients.
- **FAO Ecuador:** The Food and Agriculture Organization (FAO) is a specialized agency of the United Nations that leads international efforts to defeat hunger. Its goal is to achieve food security for all and make sure that people have regular access to enough high-quality food to lead active healthy lives. With over 194 member states, FAO works in over 130 countries worldwide.
- **WWF Ecuador:** World Wildlife Fund (WWF) is one of the largest international nature conservation organizations, working in nearly 100 countries. In Ecuador, WWF is registered as a non-profit organization with a signed basic operating agreement with the Government since 2004 and last renovated in 2019. WWF-Ecuador has 7 prioritized intervention landscapes, which include the Galápagos region. In them, WWF works through 5 complementary strategies: 1) protecting species and ecosystems, 2) promoting sustainable markets and livelihoods, 3) educating and mobilizing society for sustainability, 4) strengthening natural resources governance, and 5) promoting climate change adaptation and mitigation.
- A **Conolophus SPV** will be established for the purposes of implementing the Conolophus Project sponsored by Gran Solar and TotalEren, the concessionaire that won the public tender for the Conolophus Project.
Gransolar is a Leading Ecuadorian company founded in 2012 by a visionary group of investors who believe in the need to generate renewable energy in the country. Since 2014 the company owns the largest solar plant in Ecuador. Total Eren was created in 2012 as an Independent Power Producer (IPP), Total Eren develops, finances, builds and operates over the long-term renewable energy power plants globally. Total Eren today owns more than 3,500 MW* of renewable energy assets in operation or under construction and has over 4,000 MW* of projects under development spread over the five continents. In April 2019, Total Eren acquired NovEnergia Holding Company ("NHC" or "NovEnergia"), thereby diversifying its project portfolio and strengthening its presence in southern Europe in particular.

A.21. Executive summary (max. 750 words, approximately 1.5 pages)

The Galapagos Islands are part of the Republic of Ecuador. They lie about 1,000 kilometers from the Ecuadorian coast in the Pacific Ocean. The diversity and uniqueness of its species, its volcanic origin, and its geological dynamics make these islands be considered a living laboratory of evolutionary processes, added to the fact that it enabled conditions for the development of a large number of species both animals and plants that do not exist anywhere else in the world. This makes Galapagos a unique and globally important site for the common heritage of humanity (declared a Natural Heritage Site by UNESCO in 1978). However, these unique conditions are at risk by climate change.

The Islands are home to about 33,000 people and receive about 106,987 tourists annually between national Ecuadorian tourists (88,737) and Developing Country Tourists (18,250). Primary livelihoods are agriculture, small-scale fisheries, and nature-based tourism, which are highly vulnerable to global environmental changes and have limited capacity to adapt. The nature tourism industry has become the most important driver of the economy, where the sustainable tourism experience is based on visits to the Galapagos Natural Park (GNP) and the Marine Reserve (GMR).

Like other islands in the world, they are not self-sufficient in the products necessary for their subsistence or their livelihoods. This means that there is a high dependence on transport from the mainland to the island, which increases the environmental impact and especially GHG emissions. Galápagos islands' energy is based on diesel imported from the mainland, and 75% of the food is imported today, with forecasts to increase to 95% by 2036.

Climate change in Galapagos is already evident today. The agricultural sector has been heavily impacted by droughts and 28% of its area is already covered by invasive species, which are spreading further with climate change. Key marine and terrestrial ecosystems are also at risk because of invasive species which are much more resilient to climate variability and humidity changes than endemic species. Fisheries have also been impacted, as evidenced during the 2015/16 event when significant changes were observed in catch composition. The intrinsic sensitivity of the Galapagos has increased in recent decades due to the effects of the described climate-based drivers, but also an inefficient use of energy by the tourism sector, unsustainable land management practices, the spread of climate-resilient invasive species and overfishing and illegal, undeclared and unregulated (IUU) fishing. At the same time, the agricultural and fisheries sectors have opportunities to contribute to the GHG emissions reductions in terms of land and energy use.

Climate change scenarios show that marine and terrestrial ecosystems will be further altered in the future. In Galapagos, climate risks include higher sea surface temperatures, ocean acidification, and sea-level rise. On the terrestrial areas, changes include the increase of average annual temperatures and increased rainfall seasonality. More intense El Niño–Southern Oscillation (ENSO) events are also expected. These changes directly impact local human communities as their livelihoods are dependent primarily on nature-based tourism, fisheries, and agriculture, all of which are dependent on these threatened natural resources.

It proves necessary to change the Galapagos' development pathways, by increasing resilient food production, reverse ecosystem degradation, adopt low-carbon and resilient land and sea management practices and implement efficient and renewable energy systems.

This Programme has the goal of **contributing to a transformational change towards a self-sufficient island system in which local livelihoods are developed under a low-carbon model and enhanced capacity to adapt to climate change.**

This is a comprehensive programme for the transformation of Galapagos. As such, it seeks to have an impact on various sectors and with various strategies in this small group of islands where everything is interconnected: energy, economic activities, ecosystems. Therefore, the Government of Ecuador is proposing a programme with activities that transform all sectors and strengthen ecosystems, while mobilizing the population to achieve a real transformation. This programme is cross-cutting because it actively seeks to reduce GHG emissions (energy and land use sectors) and increase the resilience of communities and ecosystems. It proposes the mainstreaming of the behavioral change and ecosystem-based adaptation approaches.

The Programme will help overcome barriers related to access to finance, lack of capacity of Galapagos institutions to drive transformational change, lack of technical knowledge on adaptation and mitigation technologies and actions, market barriers from livelihoods, and lack of public awareness and commitment to climate change. Using a combination of funding sources, including concessional public and private loans, grants, and equity, the Programme will conduct activities across three main components:

(1) *Energy matrix change in the Galápagos archipelago*: this component will increase low-emission energy access and reduce the energy consumption of the Galapagos livelihoods by facilitating access to finance and technical assistance for renewable energy generation (Photovoltaic (PV) plant and micro-distributed PV generation) and energy efficiency investments (air conditioners and refrigerators replacement). The tourism sector is particularly targeted since it is identified as a driving force for climate actions, based on its significance in the local economy.

(2) *Building climate resilience of the Galapagos' livelihoods*: this component will strengthen Galapagos farmers and small-scale fisheries' adaptive capacity to increase local food production through the provision of reimbursable and non-reimbursable funds to foster the adoption of sustainable land and fisheries practices, promoting more efficient

value chains and a blue circular economy, fostering the protection and restoration of key marine and terrestrial ecosystems that sustain Galapagos livelihoods including tourism, and strengthening the decision-making frameworks related to ecosystem management.

(3) *Sustainability mechanisms for climate resilience and low emissions livelihoods*: this component will strengthen the response of local livelihoods and population through educational and communicational programs; and increasing capacity of key institutions by empowering their decision making by mainstreaming climate change into policy and planning instruments. It will support the development of sustainability mechanisms such as an ecotourism certification scheme, the participatory design of the Galapagos Climate Action Plan and the establishment of a financial mechanism that will guarantee the sustainability of the programme actions in the long term.

Actions will be implemented in the four populated islands (Santa Cruz, San Cristóbal, Isabela, Floreana), in High Ecological Value Areas (HEVAS), including the Galapagos Marine Reserve (GMR).

The Programme complements governmental efforts led by the National Government and by the Governing Council of the Galapagos related to climate change, agriculture, water, and energy in the country, notably the NDC and the National Strategy of Climate Change and in particular the recently approved Galapagos 2030 Plan, which was developed in close coordination to this funding proposal. It can be affirmed that the proposed programme will constitute one of the main instruments to help accelerate the achievement of the Plan's objectives.

The main direct stakeholders are the local governments (Government Council of the Special Regime of Galapagos (CGREG) and the Galapagos National Park Directorate (GNPD), the tourism sector (hotels, restaurants, operators), the agricultural sector (farmers), small-scale fisheries and the education sector (schools and universities). More than 470 beneficiaries from the tourism sector will have access to finance for investing in energy-efficient technologies and distributed renewable energy generation, a total of 624 farmers or agricultural production units (1,872 persons), and 1,000 fishing households (3,000 persons) will benefit from the adaptation measures implementation- Technical assistance and capacity building activities will benefit tourism operators, farmers, fishers, staff from local financial institutions, technology providers, specialists from key local agencies, ship owners, students; local people will be trained to install and maintain the technologies promoted by the project, and the citizenship will benefit from awareness-raising activities for climate action, The Programme will enhance climate resilience in 19,000 hectares of agricultural areas, 1,500 hectares of Scalesia forests and 138,000 km² of marine ecosystems. The Programme will benefit the total population of the islands (33,000 people) and the more than 106,987 annual tourists per year, considered as resource users (energy, water, food, ecosystems), as distributed power generation will make the electricity from each island's grid cleaner and inclusive. In this way, all the inhabitants of Galapagos and its visitors will be able to reduce the carbon intensity of their activities, become more resilient by reducing their overall energy dependence on diesel imported from the mainland, and enjoy better air quality by reducing the generation of electricity in thermoelectric plants.

The Programme will lead to an estimated emissions reduction from energy investments of 23,366.76 tCO₂e per year, about 111,104.19 tCO₂e during the 5 years of implementation of the Programme, and 584,168.98 million tCO₂e during its lifespan -25 years -.

The Programme will have a total volume of USD 117.59 million. This includes USD 30,54 million from GCF reimbursable funding, USD 30,23 million in senior loans from CAF, USD 18,00 million from equity from the Conolophus PV plant bid winner Gransolar-Total Eren, USD 3.88 million from equity from the final beneficiaries of the Galapagos' Climate Credit Line (GCCL); USD 33.07 million in grants from the GCF, USD 1.66 million in grants for Programme Management and a USD 0.21 million grant from CAF.

A portion of the reimbursable funding from the GCF and CAF will fund the centralized energy project through a Loan Agreement and another portion will be channeled through intermediated credit managed through the public development bank Corporación Financiera Nacional (CFN), Corporación Nacional de Finanzas Populares y Solidarias – (CONAIFPS) and local banks present in Galapagos. This scheme will serve to overcome current barriers to accessing credit for mitigation and adaptation investments in energy, tourism, agriculture, fisheries, and ecosystems, with the goal of reaching a wide range of beneficiaries. In addition, the grant portion will be used primarily for supporting the placement of the loans, for investments in enhancing ecosystem resilience, and for technical assistance, knowledge management, and awareness-raising activities.

1. The Programme will be Implemented by CAF as the Accredited Entity, that will also hold the role of Executing Entity in particular activities, and will co-work with the Executing Entities WWF, FAO, CONAFIPS and CFN. The Government Council of the Special Regime of Galapagos (CGREG); Galapagos National Park Directorate (GNPD), Ministry of Agriculture and Livestock (MAG), Ministry of Energy, and Non-Renewable Natural Resources (MEyRNRNR), and Ministry of Tourism (MinTur) are the Governmental Partners to be engaged by the EEs to implement the activities. The engaged Governmental Partners will not be Executing Entities for the purposes of this Programme. The Ministry of Environment, Water and Ecological Transition (MAATE) as the NDA will be overseeing the performance of the whole Programme, holding a leading role in the Steering Committee.

B. PROJECT/PROGRAMME INFORMATION

B.1. Climate context (max. 1000 words, approximately 2 pages)

1. This section summarizes the climate context of the Programme: trends and future scenarios, impacts on marine and terrestrial resources and on local livelihoods and mitigation opportunities. Please refer to Annex 2 for comprehensive information on all aspects.
2. The Galapagos climate is a product of the interaction of oceanic currents surrounding the islands and the winds from the southeast. The influence of currents and winds is governed by interactions of the Inter-Tropical Convergence Zone (ITCZ) and the El Niño Southern Oscillation (ENSO).
3. **The unique marine and terrestrial ecosystems of the Galapagos Islands are highly vulnerable to climate change because of climate change-induced increased temperatures, increased rainfall seasonality, extreme hydrometeorological events, expected to cause a rise in evapotranspiration, increased sea surface temperature and sea level rise. Consequently, inhabitants and their livelihoods such as agriculture, fisheries and nature-based tourism have been negatively impacted.** Current and future impacts are likely to concentrate on the inhabited islands' highlands, whereas marine impacts concentrate along most of the Galapagos Islands' shorelines. These impacts can be exacerbated by other environmental and human drivers. In addition, these drivers can interact with climate-based drivers such as ENSO at multiple temporal and spatial scales, exacerbating their negative impacts on already fragile ecosystems and the socioeconomic system of the Archipelago.
4. The main non-climate drivers of environmental change related to tourism are oil spills inside the marine reserve, water contamination and wastewater mismanagement, touristic sites and trails overuse and plant and animals' disturbances. The main non-climate drivers related to the agriculture and fisheries sectors are unsustainable land management practices, and illegal, unreported, and unregulated fishing. In all sectors, the introduction of invasive species is of great severity.

[Current and observed temperature](#) (methodology and results in Annex 2 Section 4 and Appendix 5.1)

5. **Temperature: Islands have warmed by about 0.6°C since the early 1980s** (mean land surface temperature).
6. **Precipitation:** in contrast to this increasing trend temperature, **precipitation records from 1981 to 2017 suggest a decreasing trend across the archipelago, particularly in arid coastal areas.** Critically, the first two decades of this century are on average ~ 40% drier than those during the decade of 1981–1990. Despite this overall decreasing trend in precipitation in the archipelago, records from 2002 to 2017 suggest the precipitation pattern has not changed significantly in the coastal region of Santa Cruz and San Cristobal islands. ENSO events, particularly those from 1982 to 1983 and 1997 to 1998, have influenced the time series and prevented a clear interpretation of climatic trends.
7. **Sea Surface Temperature (SST): has increased at a rate of 0,06°C per year over recent decades. Regional SST has increased by 1.2°C over the last two decades (2002-2018).** This finding agrees with the IPCC (2007) report suggesting that the equatorial Pacific has warmed 0.4–0.8° over the last 40 years and that greater increases in SST are expected in this region due to greenhouse warming.
8. **El Niño and La Niña.** ENSO is the dominant mode of global climate variability on an inter-annual time scale that strongly impacts the Galápagos. **Evidence suggests that El Niño events have increased in intensity and frequency over the last two decades due to warmer SSTs⁴**

[Climate change projections](#) (methodology and results in Annex 2 Section 4 and Appendix 5.1)

9. Global circulation models (GCMs) generally **project warmer and wetter future conditions. Temperature is expected to increase between 1.4 (6.2%) and 1.9 °C (14.5%) in the RCP 4.5 and 8.5, respectively by the 2050-time horizon.** This increase will be heterogeneous across the islands, with humid zones in the western islands showing the greatest increase. The upwelling region to the west of the Isabela Island shows relatively slower warming trends compared to the eastern Galapagos region. **Precipitation projections also suggest a relative increase on all the islands (5% up to 25%).** This pattern seems to result from an intensification of the wet seasons, since relative increases increase in accordance with the annual estimate (in contrast to the dry season, where some scenarios even project a reduction in precipitation. For the decades between 2040 and 2060,

⁴ (Conroy et al., 2008, 2010; Rustic et al. 2015; Thompson et al. 2017)

precipitation may increase even more: climate projections suggest that rainfall in the Galapagos may increase between 20 and 70%. **These increments in temperature and precipitation will be accompanied by augmenting hot and wet extremes, which would ultimately translate into more severe heatwaves and floods in the region⁵.**

10. **The Eastern Tropical Pacific (ETP) is expected to have increased SSTs due to greenhouse warming, suggesting an increase in ENSO frequency and intensity⁶.** The dynamic downscaling of the impact of climate change on the ocean circulation dynamics in the Galapagos Islands projects an increase of a near 2 °C rising trend in SST anomaly in the El Niño for the period 2001–2050. **Upward trends in sea levels are projected to continue throughout the twenty first century.** Continued increases in sea surface and air temperature coupled with more intense and erratic ENSO events may lead to a climate system in the Galapagos Islands with **increased seasonality and stronger spatial heterogeneity.**
11. The studies emphasize the need to incorporate uncertainty and robust/not regret approaches as the bases for planning strategies in the water, food, conservation, and other climate-connected sectors in the Galapagos Islands. These strategies must be both robust in the face of a wide range of potentially uncertain climate conditions.

Impacts of Climate Change

Impacts on marine resources (details in Annex 2. Section 7.1 and 8.3)

12. Upwelling areas could be reduced because of climate induced ocean warming. Past reductions in the upwelling associated with El Niño led to **dramatic declines in productivity that extended from the bottom of the food chain through fish populations and up to marine birds, mammals and reptiles. The warmer water is less nutrient enriched than the cool waters that normally surround the Galápagos and the marine ecosystem consequently becomes disrupted (fish abundance and distribution).** The bottom of the food chain is also impacted as phytoplankton concentrations can decrease substantially (33–46%) because of high temperatures in the archipelago, leading to community-level reductions in biomass⁷. A critical and growing threat to the sustainability and functional resilience of marine ecosystems, that can be exacerbated by the impacts of climate change, **are invasive species. Non-indigenous species (NIS) can provide reduction of the functional diversity of the resident species assemblages by removing key organisms, which may have overall implications for ecosystem function, production, and response to other environmental stressors.** Invasions of NIS impact biodiversity and society, including ecosystem services such as fisheries and nature-based tourism. For example, in the GMR there are reports of the invasive seaweed, *Caulerpa racemosa*, expanding in a popular tourism site in Santa Cruz. This species of green algae competes with native species for space and forms extensive mats changing species assemblages and functional diversity. This consequently affects negatively on tourism industry. Higher SST will also have variable effects on fish species: for example, positive changes in temperature are expected to yield more variable tuna and yellowfin biomass. Such changes affect artisanal fisheries that harvest at least 68 fish species and several marine invertebrates for domestic consumption and overseas exports.

Impacts on terrestrial resources (details in Annex 2. Section 7.1 and 8.1)

13. Ecosystem responses would be very different if there was a change to the baseline climatic **conditions or to the frequency or intensity of very wet or very dry years, all of which are possible under global climate change.** Anomalous warming of sea surface temperature, air temperature, and extreme precipitation (As El Niño events) have resulted in substantial impacts in the terrestrial ecosystems. **Increased rainfall and productivity can create optimal condition for reproduction for invasive plants (growth of herbs and vines and change the community structure of arid ecosystems, making them more susceptible to colonization by invasive species).** **Invasive plants have continued to spread further throughout the archipelago, especially on the inhabited islands⁸ and consequently the decline of tropical island biota. One highland species that may be particularly affected by climate conditions is the endemic tree species *Scalesia pedunculata*.** Studies suggests that the short life expectancy of this and other *Scalesia* species makes them vulnerable to persistent, long-term disturbances. The increase in the prevalence of pathogens and parasites during rainy conditions can

⁵ It is important to note that in the Galapagos region, major discrepancies have been reported between GCMs and observed tropical Pacific SSTs trends. These discrepancies result from the deficiencies of CMIP5 experiments in adequately capturing the Equatorial Pacific cold tongue. As a result, GCM outputs for the Galapagos region are thought to overestimate the warming and wet trend. The projected warmer and wetter future contradicts the recent drying trends (described previously). If the unusual wet decades in the late 20th century and the overestimation of future precipitation in the Galapagos Islands are not carefully addressed, this will lead to misinterpretations regarding the Islands' water availability and hydrological.

⁶ Cai W, Santoso A, Wang G, Yeh S, An SI et al (2015) ENSO and greenhouse warming. Nat Clim Chang 5:849–859. <https://doi.org/10.1038/NCLIMATE2743>

⁷ (Wolff et al. 2012).

⁸ Watson J, Trueman M, Tufet M, Henderson S, Atkinson R. 2009. Mapping terrestrial anthropogenic degradation on the inhabited islands of the Galápagos archipelago. Oryx 44:79-82.

also lead to bird populations (e.g., finches and mockingbirds) being overwhelmed, resulting in lower breeding and fledging success.

Impacts on livelihoods: agriculture, fishing, and tourism.

Impacts on Agriculture (details in Annex 2. Section 8.2)

14. The agricultural area in Galápagos extends over 2.4% of the island's territory (19,010 ha.), distributed in 755 farming units, of which 63% are family farms (less than 5 ha.) and 30% are managed by women. All four inhabited islands of the Galapagos, Santa Cruz, San Cristobal, Isabela, and Floreana, have a zone in the humid highlands that has been designated for agricultural use. Inhabitants of the highlands of the Galapagos use their land for three general activities: cattle ranching (bovine, poultry, pork), crop production (permanent and annual crops), and tourism activities. Temperature and precipitation are recognized as the primary driver of terrestrial biological productivity in Galapagos and its modifications could induce **changes in water availability** (decreasing superficial water flow in the agricultural areas), **native species distributions and agricultural productivity**⁹. The occurrence of heavy rains and increased precipitation influences the occupation and possible expansion of invasive plants that threaten local agricultural productivity and are responsible for the degradation of critical habitats and ecosystems in the protected areas located in the upper and humid parts of the island. [Models used in this proposal](#) show how **agricultural products or crops will be drastically affected. Grains and vegetables across all seasons will be strongly affected with temperature change, but more importantly affected by rainfall decrease, especially during the dry season. This is probably the most important implication of climate change in agricultural products. Pastures will be seriously affected by the decreased precipitation, especially during the dry season.**

Impacts on Fishing- Small-Scale Fisheries (SSF) (details in Annex 2 Section 8.4)

15. SSF are a strategic sector for the economy, food security, and sustainable development of the Galapagos human population. Between 1950 and 2010, 26,500 t of finfish were caught within the economic exclusive zone of the Galápagos Islands. Of these catches, approximately 25.3%, equivalent to 6,700 t, was consumed by the Galapagos human population, including tourists, while the remainder 74.7%, equivalent to 19,800 t, was exported to mainland Ecuador. **SSF in Galapagos are especially vulnerable to the social-ecological perturbations caused by drastic long-term and large-scale effects of climate variability associated with climate change, including SST anomalies, acidification, and sea-level rise. These climatic drivers affect the distribution and production of fish stocks, the risk and viability of fishing operations and livelihoods, and the economic contribution of fisheries to poverty reduction.** Species targeted by SSF show signs of over exploitation (e.g., bass and groupers), while others have already collapsed due to overfishing (i.e., sea cucumber in 2006). Intensive fishing coupled with the reduced distribution of several Galapagos marine species (e.g., Galapagos grouper) makes them very susceptible to extinction. Recent data indicate that under the scenario RCP 8.5, SST in Galapagos would increase 3.9 °C by the end of this century. This means that by the year 2100, the SST in Galapagos would be, on average, 30.9 °C in the worst-case scenario. The preferred sea temperature of the sailfin grouper ranges between 14.5 °C and 23.7 °C; thus, this species would be outside of its thermal range under an RCP 8.5 scenario. Thus, the sailfin grouper's ecosystem biomass will be reduced by 8.3% and 10.8% by 2030 under RCP 2.6 and 8.5 scenarios, respectively. Such a reduction in biomass will be higher by 2100 (8.0% and 15.6% for RCP 2.6 and 8.5, respectively).

Impacts on Tourism Nature-based tourism (details in Annex 2 Section 8).

16. Galapagos plays a key role in Ecuador's tourism industry, as this is the main tourist destination in Ecuador and the most visited national park, bringing a significant flow of money to the country. The Gross Domestic Product of Galapagos was US\$256.1 million in 2019, where tourism contributed 65.5% of this figure in the archipelago. Therefore, nature-based tourism in Galapagos contributes substantially to livelihoods both locally and in the country. **This tourism relies heavily on maintaining the natural features of the sites, which are the attraction for visiting the archipelago. By altering ecosystem processes, iconic species, and critical habitats such as coral reefs, climate change could have a profound impact on the tourism industry.** Before the COVID-19 pandemic, nature-based tourism was the main economic driver in the Galapagos, generating almost 80% of the local economy. Marine tourism-related jobs alone, accounted for 37% of the workforce.

⁹ Threats of Climate Change in Small Oceanic Islands: The Case of Climate and Agriculture in the Galapagos Islands, Ecuador

The links between Programme's activities (detailed in section B.3) and the key climate change impacts & challenges outlined above are summarized in Table 1. For details see Annex 2 Sections 7, 8 and 10. A more detailed version of this table is included in section 10.5.

Table 1. Key climate change threats associated impacts and adaptation measures needed.

Key climate change and non-climatic threats	Major impacts	Adaptation measures
Increases in Sea Surface Temperature (SST)	<p><u>Nature-based tourism:</u></p> <ul style="list-style-type: none"> • Coral habitats degradation due to bioerosion and bleaching events • Reduction in coral's recruitment rates due to changes in the circulation systems of the currents, together with a loss of connectivity between the populations of the different islands. 	<ul style="list-style-type: none"> • Restore high ecological value coral reef areas through coral planting and exclusion area. • Reduce the impact of diving, anchoring and pollution related to tourism operations in selected marine HEVAs, to enhance ecosystems resilience and adaptive capacity to the effects of climate change. <p><u>HEVA for intervention:</u> Darwin and Wolf islands, Marchena coral remnants, The Bolivar Channel and Elizabeth South Conservation Area Santiago-Santa Cruz</p>
Increases in Sea Surface Temperature (SST) coupled with increase in marine traffic due to an upsurge in annual visitors	<p><u>Ecosystems and Nature-Based tourism:</u></p> <ul style="list-style-type: none"> • increase the number of new marine bio invasions due to non-indigenous species (NIS) leading to a reduction of the functional diversity of the resident species assemblages by removing key organisms, which may have overall implications for ecosystem function, including productivity. • Substantial losses to nature-based tourism by expanding uncontrollably, forming dense beds that cover recreational sites becoming a problem for boating, swimming, and diving. 	<ul style="list-style-type: none"> • Strengthen marine biosecurity programs in the GMR, to prevent and control climate driven introductions and invasions by Non-Indigenous Species (NIS) <p><u>Intervention area:</u> The GMR as a whole</p>
Increase in air/land temperature together with sea level rise coupled with an increase in marine traffic	<p><u>Nature-based tourism:</u></p> <ul style="list-style-type: none"> • Loss of green turtles nesting and feeding habitats due to sea-level rise and erosion. • Feminization of sea turtle populations 	<p>Improve surveillance and control measures for adequate sea turtle nesting and foraging in the GMR, to counteract potential effects of climate change in their reproductive success.</p> <p><u>HEVA for intervention:</u> The Bolivar Channel and Elizabeth South Corridor Sierra Negra Volcano Isabela South, Conservation area Santiago-Santa Cruz</p>
Increased SST will promote spatial and bathymetric changes of spiny lobsters and yellowfin tuna stocks.	<p><u>Small-scale fisheries:</u></p> <ul style="list-style-type: none"> • Climate change will exacerbate the impact of IUU fishing and marine pollution. • Reduction of the accessibility of spiny lobsters and yellowfin tuna in the long-term will increase fishing variable costs, reducing fishers' livelihoods, and put in risk the economy and food security of local coastal communities. 	<ul style="list-style-type: none"> • Reduce fishing effort over spiny lobsters through the sustainable development of the tuna small-scale fishery. • Improve the design and effectiveness of Galapagos marine zoning to ensure the sustainable development of the spiny lobster fishery. • Strengthen management conditions of small-scale tuna fishery to reduce its ecological impact over secondary and endangered, threatened and protected (ETP) species. • Improve surveillance and control measures to reduce IUU fishing. • Promoting a blue circular economy through new sustainable and socially responsible seafood enterprises. <p><u>HEVA for intervention</u> The Bolivar Channel and Elizabeth South, Corridor Sierra Negra Volcano Isabela South</p>
Increased SST will increase the natural mortality rates of Galapagos sailfin groupers stocks.	<p><u>Small-scale fisheries:</u></p> <ul style="list-style-type: none"> • Climate change will exacerbate the negative impact caused by overfishing of Galapagos sailfin groupers. • Reduction of the availability of Galapagos sailfin groupers will reduce fishers' livelihoods and food security of coastal communities. 	<ul style="list-style-type: none"> • Reduce fishing effort over Galapagos sailfin grouper through the sustainable development of the tuna small-scale fishery. • Strengthen management of sailfin groupers fishery to mitigate climate change impacts while restoring the species ecological role by improving the design and effectiveness of Galapagos marine zoning and adopting a climate-smart small-scale fisheries approach. • Diversify fishers' livelihoods by enhancing climate change resilient local value chains to improve Galapagos seafood system access to markets. • Improve surveillance and control measures to reduce IUU fishing. <p><u>HEVA for intervention</u> The Bolivar Channel and Elizabeth South, Corridor Sierra Negra Volcano Isabela South Conservation area Santiago-Santa Cruz</p>
Acidification of the ocean increased due to lack of the regulation of seawater carbonate chemical equilibrium by sea cucumbers	<p><u>Small-scale fisheries:</u></p> <ul style="list-style-type: none"> • More acidic waters will impact many calcifying species, e.g., shell-forming marine organisms, but also probably the physiology and respiration of fishes, especially the more vulnerable early life stages. 	<ul style="list-style-type: none"> • Implement small-scale aquaculture and experimental allocation of Territorial Use Rights for Fishing (TURFs), to rebuild the ecological role of sea cucumber stocks and diversify fishers' livelihoods. • Strengthen management of sea cucumber fishery to mitigate climate change impacts while restoring the species ecological role by improving the design and effectiveness of Galapagos marine zoning and adopting a climate-smart small-scale fisheries and aquaculture approach. • Improve surveillance and control measures to reduce IUU fishing. <p><u>HEVA for intervention:</u> Conservation area Santiago-Santa Cruz</p>

		The Bolivar Channel and Elizabeth South Corridor Sierra Negra Volcano Isabela South
Increases in air/land temperature and precipitation. ↑invasive species expansion (e.g., guava, blackberry), resulting in Scalesia forest degradation	<p>Nature-based tourism: Loss of highland ecosystems key for conspicuous endemic species that constitute important tourism attraction.</p> <p>Farming systems: Loss of crop yield due to competition with invasive species encroachment and enhanced evapotranspiration. Loss of Scalesia forest capacity to intercept to capture additional water from the characteristic mist (<i>garúa</i>) of the highlands in the cool season, leading to possible water shortages.</p> <p>Ecosystems: Changes in ecosystem productivity that can possibly affect carbon sequestration</p>	<ul style="list-style-type: none"> Strengthen control programs for invasive plant species, in protected and agricultural areas. Restore key remnant forest fragments in protected and agricultural areas to enhance ecosystems adaptive capacity and provision of environmental services. HEVA for intervention: Conservation area Santiago-Santa Cruz, Corridor Sierra Negra Volcano Isabela South, Corridor Wolf Volcano, Punta Albermarle and Cape Marshall, The Bolivar Channel and Elizabeth South
Increased average annual temperatures. Increased seasonality rainfall ENSO will be more frequent and more intense	<ul style="list-style-type: none"> Loss of soil's capacity to retain nutrient and water. Effects on the aquifer recharge process Higher precipitation could threaten the humid zone by changing vegetation growth rates and forest structure. <p>At farm level:</p> <ul style="list-style-type: none"> Increasing water needs at farm level on dry season. Loss of crops yields and income reduction. Pastures will be seriously affected by the decreased precipitation, especially during the dry season. Grains and vegetables across all seasons will be strongly affected with temperature change, but more importantly affected by rainfall decrease, especially during the dry season. Increase of plagues and diseases on crops. Changes in water humidity of soil. <p>Agriculture livelihood (indirect impacts):</p> <ul style="list-style-type: none"> Farms' abandonment Increase food insecurity and malnutrition. Farmers' capacity to produce food is reduced. 	<ul style="list-style-type: none"> Enhanced institutional capacity for climate-resilient planning and development for land management (include capacity building about climate change and climate resilient agricultural practices, install a hydro/agro-meteorological monitoring system to inform and tailor the information to the needs of vulnerable smallholder farmers). Local farmers use climate information for planning crops and land use at farms enhancing ecosystem services provision. Improved farmers livelihoods and rehabilitated ecosystem services through climate-resilient water and agricultural food productions system (Implement an integrated climate-resilient crop management system at farm level, implement silvopastoral practices at the farm level, develop and implement water collection and water management systems for climate-resilient food production). Increase food production and availability for improving food security of local communities and consumers. Improving carbon organic soil content with best managing practices. Improve crops and grassland management with efficient water use. Strengthen management of invasive plant species, especially blackberry, in agricultural areas, based on projected dynamics of their expansion under climate change scenarios. Upgraded and more efficient value chains for climate-smart seafood and agriculture products, potentiated with links to new markets (Implement strategies to improve the Galapagos coffee, vegetables, and livestock value chain). Diversification of farmers' livelihoods. Intervention area: Agricultural zones of the islands Santa Cruz, San Cristobal, Isabela and Floreana

Mitigation opportunities

17. The major opportunities to reduce GHG emissions in Galapagos are related to the adoption of renewable energy generation and energy efficiency technologies.

Energy (details in Annex 2. Section 9.2).

18. Electricity generation in Galápagos is highly dependent on imported fossil fuels, grids are inefficient, distributed renewable energy generation is not the mainstream, and there is important room to promote the adoption of energy efficient appliances.

Electricity generation is highly dependent on imported fossil fuels.

19. The electric power generation system has four isolated grids, thermoelectric plants are the main source of power generation. The energy sector consumed a total of 3,5 million gallons of diesel (ELECGALAPAGOS, 2019), in addition to consumption associated with ship transport to the islands, represented emissions worth 35,415-ton CO₂eq/year. The fuel used for electricity generation is shipped from mainland Ecuador 1,000 km away; this constitutes additional GHG emissions associated with transport and adds to the environmental and social risks associated with diesel transport to the islands upon ecosystems and species.

20. In 2007 under the "Zero Fossil Fuels in Galapagos Islands," introduced the first renewable energy power plants. Additionally, the renovation of the thermoelectric plants conducted in previous years, allowed a reduction of diesel consumption by 1.1 million gallons in 2016. Since 2007, solar and wind projects have been developed proving their effectiveness in Galapagos. Other renewable generation technologies have been analysed, finding limitations to their development in the short and medium term, such as the case of geothermal energy available only where there

is no electrical demand (MEER, 2010), or tidal energy limited by the environmental impact to the marine protected areas.

21. The 2017-2026 Ecuador Electricity Masterplan (PMEE) included the Plan for Generation Expansion in the Galapagos Isolated System (PEGSAG 2018), which seeks to shift the current energy generation composition of the islands (85% diesel, 11% wind, 4% solar) towards 60% renewables penetration. As a non-interconnected system, it faces challenges in terms of control, reliability, and stability. It is critical to improve efficiency considering the 11% of energy losses in the distribution system and electricity consumption of auxiliary equipment.
22. Specific to the Island of Santa Cruz, the 2018 PEGSAG proposed a set of wind farm, PV plant and ESS projects for the short-term and a similar set for the medium-term. However, with the government's endorsement of the private initiative PV project for this island, called PV Conolophus project and currently finalizing the award process, the objective of the current Electricity Master Plan to cover 60% of electricity with renewable energies would be met. In this way, this project will cover the short- and medium-term generation needs, and the other planned projects will be postponed to a future stage.
23. *The great weight of tourism in the islands' emissions profile:* Tourism contributes to anthropogenic global climate change through the emission of greenhouse gases (GHG) related to accommodation, activities, and transport. Tourism has grown at almost the same rate as electric power demand in Galapagos, with an annual average growth rate of 7.7%, representing more than half of the total electric consumption, thus suggesting a direct driver for associated GHG emissions. Please refer to Annex 2 - appendix 1 for further information about the electricity demand and the number of tourism businesses in Galapagos.

The proposal is aligned with the main policies and political instruments of climate change, agriculture, water, and energy in the Country, including the NDC and the National Strategy of Climate Change. Details of this can be seen in section D of this proposal and Annex 2. Section 3.8

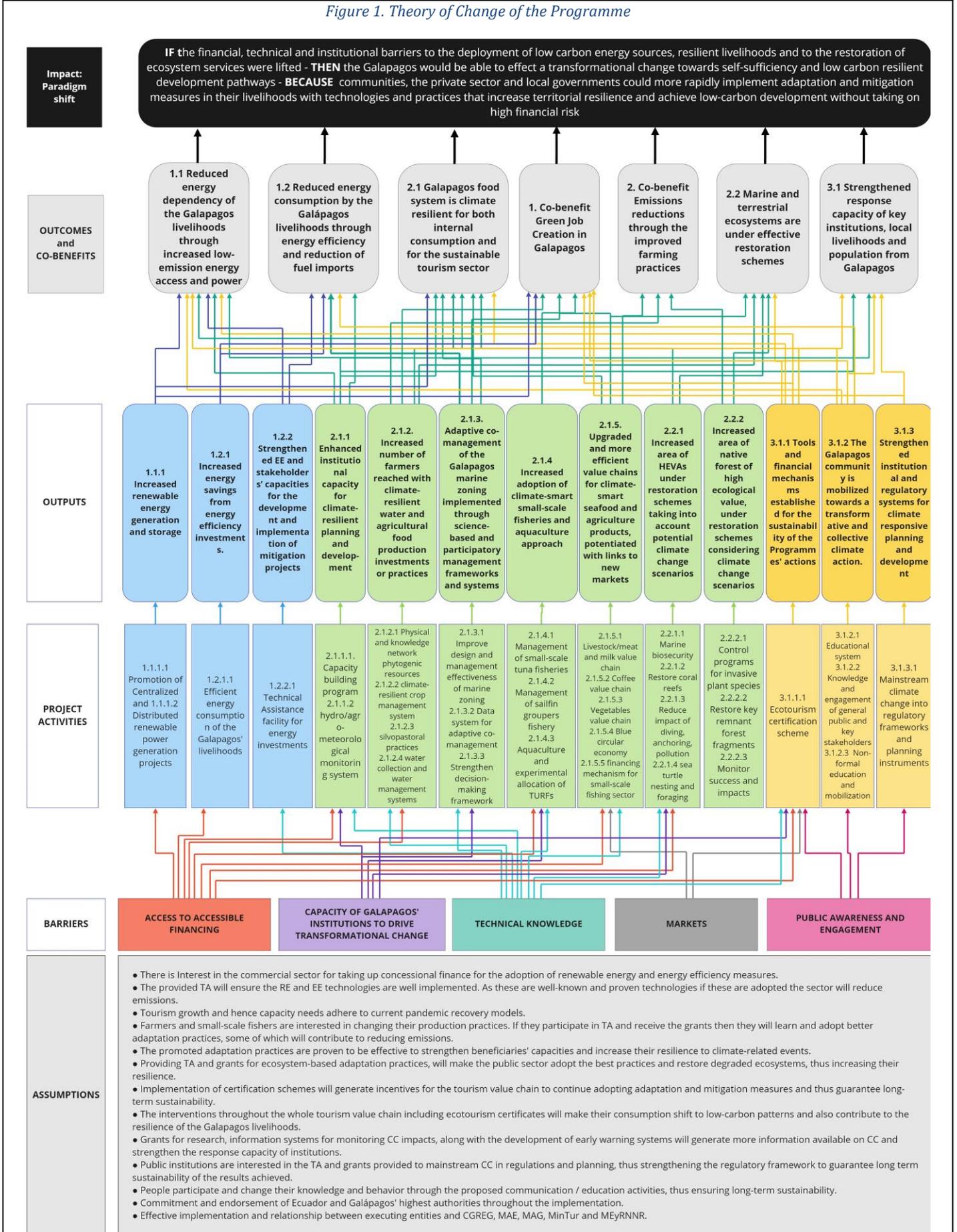
B.2 (a). Theory of change narrative and diagram (max. 1500 words, approximately 3 pages plus diagram)

The core problem

24. Today, Galapagos' main livelihoods (agriculture, small-scale fishing, and tourism), are highly vulnerable to climate change and present significant opportunities to reduce GHG emissions. Being heavily dependent on ecosystem services, they need to increase their resilience to climate change; and at the same time, they are the main sectors through which the Galapagos islands can find a low-carbon development pathway.
25. The context of these three main livelihoods is complex, given their dependence on:
 - The marine and terrestrial ecosystems services, in terms of food, water, and nature-based touristic attractions. Before COVID, nature-based tourism was the most important driver of the local economy, around 80%. With the pandemic lockdown, 50% of the employees lost their jobs or were kept in a standby situation.
 - Food and fossil fuel imports from mainland Ecuador. 75% of the food is imported nowadays, with predictions raising to 95% by 2036, and 85% of the energy is based on diesel imported from the mainland.
26. As described in Section B.1, climate risks severely exacerbate the threats posed by the drivers of environmental change that are intrinsic to the development of the Galapagos economy. These magnified impacts will directly affect the Galapagos' livelihoods: agriculture production, water deficit, pests, loss of environmental services of native ecosystems and agroecosystems, changes in fish species distribution and availability, and general impact on the ecosystems that are the main attraction for the nature-based tourism sector.
27. Galapagos' livelihoods also contribute to global GHG emissions. The small-scale fisheries sector does not represent a heavy load in the balance since its contribution is mainly related to the use of fossil fuel-based energy (boats, refrigeration). Nevertheless, agriculture and tourism can significantly contribute to emissions reductions. Agriculture can have a significant impact by changing land-use practices, livestock and manure management, and the use of fossil fuel-based energy (machinery, refrigeration). Also, the tourism sector (hotels, restaurants, other tourism operators such as tourism agencies and transportation) is key for reducing emissions related to energy consumption: not only through more efficient use of energy and the deployment of renewable energy but also because an important part of the fuel that is nowadays being imported will no longer have to be transported from the mainland, with its consequent associated emissions.

The figure below shows the Theory of Change diagram of the Programme.

Figure 1. Theory of Change of the Programme



[Link of specific activities proposed by the Programme and barriers to overcome](#)

28. The barriers that are common to the whole Programme are related to access to accessible finance, to the low capacity of the Galapagos institutions to drive transformational change, insufficient technical knowledge for implementing adaptation and mitigation solutions, market issues regarding competition with imported products, and lack of public awareness and engagement.
29. The barrier of access to **accessible finance** is common to all sectors in Galapagos, as described in the financial and economic context and analysis (please refer to section D.6 of this FP, Annex 3, and appendix 4.1 of Annex 2).
30. For instance, the centralized PV generation project is feasible, only with the concessionality of the GCF, since under current economic and financial market conditions in Ecuador, a credit market that can satisfy the demand for such a project is not found. Economic crisis due to COVID-19, no state investments in energy, low foreign investment, high sovereign risk, no supply in the private credit market, among others, sum to the difficulties of promoting an investment such as the Conolophus project.
31. In the same vein, the tourism, commercial, farmers and small-scale fisheries (SSF), all face a lack of accessible financing for investing in distributed renewable energy, energy efficiency, climate resilient and low-carbon technologies; in particular, the tourism sector faces financial difficulties to access and maintain certification schemes. Also, the local authorities in charge of the management of ecosystems, do not count with funding to invest in the ecosystem resilience in the face of climate change.
32. Barriers related to **knowledge and technical capacity** are present in all sectors as well: banks, private investors, the tourism, agriculture and SSF sectors do not know how to design and implement the climate investments necessary to cope with adaptation and foster emissions reductions; the tourism sector has difficulties to comply with the technical requirements of the ecotourism certification; farmers face knowledge barriers related to invasive species management; SSF face knowledge barriers related to the increasing degradation of key marine ecosystems; they all face barriers related to the lack of information on climate change impacts on their activities.
33. Local authorities do not have the capacity to promote regulations and traceability systems for key fisheries species, innovative approaches to control and eradicate invasive species, active conservation approaches and best practices to reduce business as usual tourism operations. Also, they lack of sufficient technical capacities to mainstream climate change in their planning, and to design financial sustainability strategies and a locally managed ecotourism certification scheme that is more effective and less costly than the existing ones.
34. To reach resilient terrestrial and marine ecosystems, other barriers related to low quality information and lack of monitoring systems to assess impacts of adaptation actions are highly relevant.
35. The main **market** barriers are found to be faced by farmers, related to food imports, lack of connection of the local production to the tourism value chain, among others, which leads them to farming lands abandonment.
36. Finally, the local educational community faces barriers related to the lack of articulation to incorporate the climate change perspective (**awareness and engagement**). Please refer to Annex 2, Sections 3 to 8 to understand the context of the different sectors, and Section 11 for further detail on the barriers identified and how they will be addressed by the Programme.

[The goal](#)

37. This Programme has the goal of promoting a transformational change towards a self-sufficient island system in which livelihoods are developed under a low-carbon model and greater capacity to adapt to climate change.
38. **Programme goal statement:** “**IF** the financial, technical and institutional barriers to the deployment of low carbon energy sources, resilient livelihoods and to the restoration of ecosystem services were lifted - **THEN** the Galapagos would be able to effect a transformational change towards self-sufficiency and low carbon resilient development pathways - **BECAUSE** communities, the private sector and local governments could more rapidly implement adaptation and mitigation measures in their livelihoods with technologies and practices that increase territorial resilience and achieve low-carbon development without taking on high financial risk”. Therefore, the **objective** of this programme is to provide financial and non-financial resources to help reduce barriers to investment in mitigation and adaptation actions and to foster behavioral change by the agriculture, fisheries, and tourism sectors
39. According to the logic of the proposed intervention, changes in the **energy** system would be achieved through the provision of concessional financing for investments in centralized and distributed renewable energy generation systems and energy efficiency technologies, as well as technical assistance for the preparation of energy projects, primarily in the tourism sector, but also in the small-scale agricultural and fishing sectors and for the evaluation and monitoring of such projects by local banks. In this way, these interventions would help reduce the vulnerable livelihoods’ dependence and that of the entire Galapagos system on external sources and reduce greenhouse gas

livelihoods through increased low-emission energy access and power generation								
Outcome 1.2: Reduced energy consumption by the Galápagos livelihoods through energy efficiency and reduction of fuel imports	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Outcome 2.1: Galapagos food system is climate resilient for both internal consumption and for the sustainable tourism sector.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Outcome 2.2 Marine and terrestrial ecosystems are under effective restoration schemes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Outcome 3.1 Strengthened response capacity of key institutions, local livelihoods, and population from Galapagos.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If any co-benefits have been identified in section B.2(a), fill in the Co-benefit table below to map each co-benefit to the corresponding category as defined in the FP guidance note.

Co-benefit number	Co-benefit					
	Environmental	Social	Economic	Gender	Adaptation	Mitigation
Green Job creation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Emissions reductions through the improved farming practices	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

B.3. Project/programme description (max. 2500 words, approximately 5 pages)

Programme objective

- The Programme has the **goal** to achieve a transformational change towards a self-sustaining island system in which livelihoods are developed under a low carbon and climate-resilient model. The main livelihoods of the Galapagos need to increase their resilience to climate change; and at the same time, they are the main channels through which the Galapagos Islands can find a way to significantly reduce their GHG emissions.

- The Programme has the **objective** of providing financial and non-financial resources to help reduce barriers to investment in mitigation and adaptation actions and to foster behavioral change by the agriculture, fisheries and tourism sectors that currently have insufficient access to finance and a significant lack of knowledge about climate change impacts and possible solutions to increase the resilience of productive systems and reduce GHG emissions. The Programme aims to mobilize the Galapagos community towards a transformative climate action and to establish mechanisms such as certification schemes and financing strategies, for the sustainability of the Programme actions in the long term.
- To achieve the expected outcome, the Programme will use a combination of funding sources, including loans, grants, and equity, through three mutually reinforcing and interlinked **components: (1)** Energy matrix change in the Galapagos Archipelago, **(2)** Building climate resilience of the Galapagos' livelihoods, and **(3)** Sustainability mechanisms for climate resilience and low emissions livelihoods.
- **Territorial and programmatic approach of a cross-cutting proposal:** This proposal is a comprehensive programme for the transformation of Galapagos. As such, it seeks to have an impact on various sectors and with various strategies, under the same umbrella of a climate approach. It is critical to understand the proposed territorial approach in such a particular area as a small archipelago far from the mainland: there, in this small group of islands, everything is interconnected: the way energy is generated and used influences urban and rural areas almost equally; everything that changes in one sector, in one terrestrial or marine area, changes in the others, since everything inhabits the same territory, and all economic activities are interdependent. Therefore, the Government of Ecuador is proposing a programme with activities that transform all sectors and strengthen ecosystems, while mobilising the population to achieve a real transformation. This programme is cross-cutting because it actively seeks to reduce GHG emissions and increase the resilience of communities and ecosystems. It is also transversal in the use of loan and grant resources, as described throughout sections B.3 and B.4 and as shown in Figure 3.
- Given the need to create an enabling environment that catalyzes resilient and low-carbon investments in tourism, agriculture, and fisheries, the Programme proposes to structure the **Galapagos' Climate Facility** to channel credit to these sectors through the national development bank (CFN), Corporación Nacional de Finanzas Populares y Solidarias (CONAIFPS) and local banks through the **Galapagos' Climate Credit Line (GCCL)**; establish the **Conolophus Centralized Power Generation Loan Agreement** between CAF, the Ministry of Energy and the private sector to boost investment in centralized renewable energy; and provide **Non-Reimbursable Resources** channeled by WWF, FAO and CAF for investments in ecosystem rehabilitation and technical assistance and awareness for all actors involved in implementation, including final beneficiaries. Please refer to Annex 2 section 13, for further details on the GCCL and the SPV to be established.
- The Programme activities have been prioritized through a **multi-criteria** analysis methodology that considers potential impact, feasibility level, and potential paradigm shift. Please refer to Annex 2, Section 10 "Analysis of alternatives".
- The Programme has also been designed based on a **market study**. Please refer to Annex 2 Appendix 4.1 for details on the green financing baseline and the financial demand in Galapagos. Also, Annex 2 section 12 includes the market studies along with the description of the activities.

Programme beneficiaries

- The indirect beneficiaries of the Programme are the 21,525 inhabitants of the islands who will become more resilient and will be part of a low-carbon development, based on the actions of the Programme, and the more than 106,987 tourists visiting the island every year, which are considered as resource users (energy, water, food, ecosystems). More than 470 beneficiaries from the tourism sector will have access to finance for investing in energy-efficient technologies and distributed renewable energy generation, a total of 624 farmers or UPAS (1,872 persons), and 1,000 fishing households (3,000 persons) will benefit from the adaptation measures implementation; Technical assistance and capacity building activities will benefit tourism operators, farmers, fishers, staff from local financial institutions, technology providers, specialists from key local agencies, ship owners, students; local people will be trained to install and maintain the technologies promoted by the project, and the citizenship will benefit from awareness-raising activities for climate action, the Programme will enhance climate resilience in 19,000 hectares of agricultural areas, 1,500 hectares of Scalesia forests and 138,000 km² of marine ecosystems.
- The types of direct beneficiaries of the Programme resources are summarized in the table below. Please refer to Annex 2 section 3 for the characterization of the sectors and section 8 for the description of the climate impacts they face. Their eligibility is defined in the description of each activity (Annex 2 section 12).

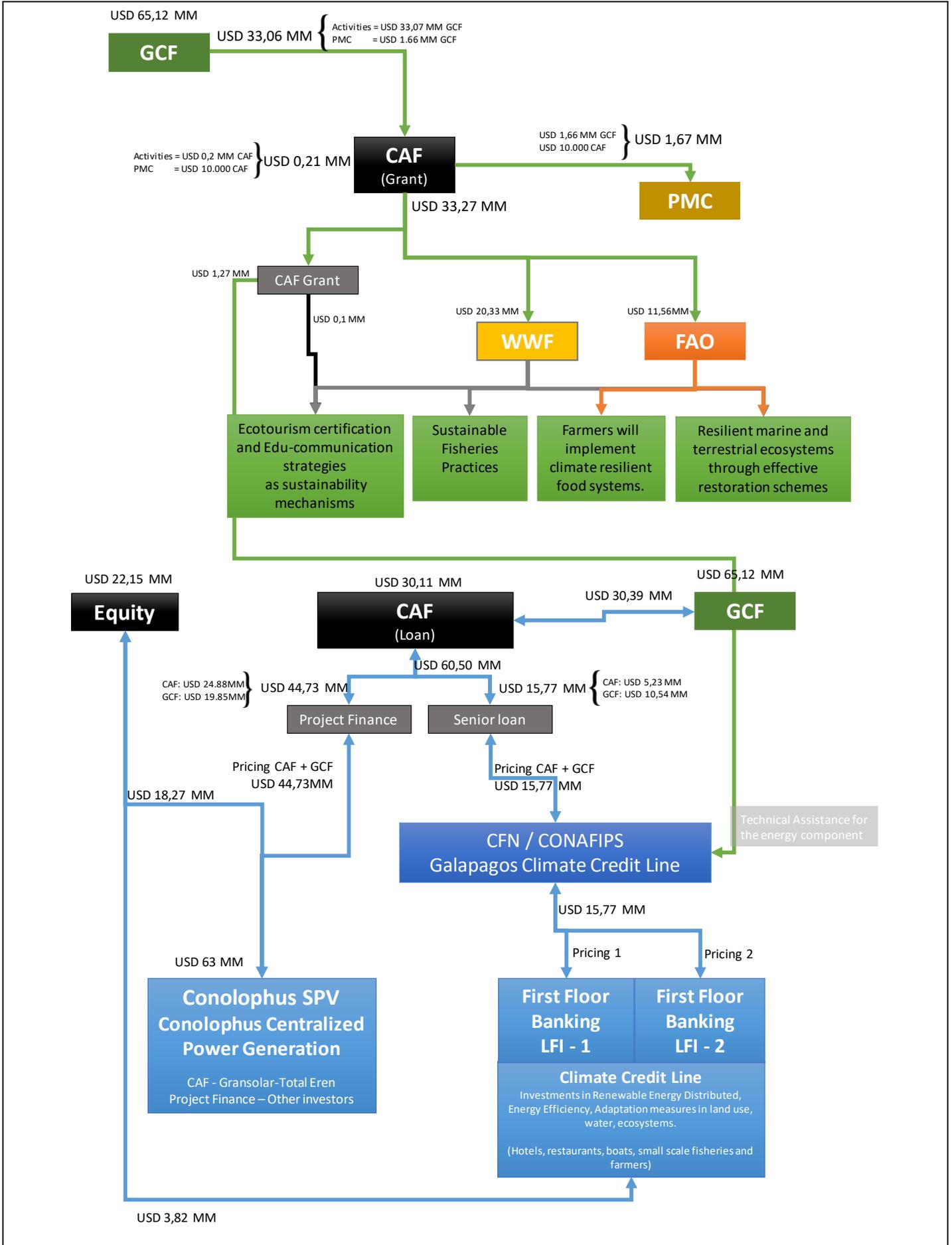
Table 2. Programme beneficiaries

Component 1	Component 2	Component 3
<ol style="list-style-type: none"> 1. Galapagos population 2. Galapagos Livelihoods <ul style="list-style-type: none"> ● Tourism value chain (hotels, restaurants, boats, logistics operators, commercial, services). ● Agriculture ● Small-scale fisheries Other: <ul style="list-style-type: none"> Educational and sport centers Office, residential and private buildings 3. Local Financial Institutions 4. Conolophus tender winner; Gransolar/Total Eren consortium (beneficiary of the Loan Agreement) 	<ol style="list-style-type: none"> 1. Galapagos Livelihoods <ul style="list-style-type: none"> ● Agriculture ● Small-scale fisheries ● Tourism (hotels, restaurants, boats, logistics operator). 	<ol style="list-style-type: none"> 1. Main governmental institutions. 2. Galapagos Livelihoods <ul style="list-style-type: none"> ● Agriculture ● Small-scale fisheries ● Tourism (hotels, restaurants, boats, logistics operator). 3. Education sector (youth, schools, universities).

Programme Financial structure

- The financial structure has been designed as an implementation mechanism which will benefit directly to the largest number of people in Galapagos, different livelihoods: farmers, fishermen, and the tourist operators as well as the financial sector and the private sector.
- The figure below shows the Funds flow chart of the Programme.

Figure 2. Funds flow chart of the Programme



Programme Grant

- The grant will support capacity building, technical assistance, education, and awareness-raising activities, as well as direct interventions in the rehabilitation of key ecosystems and resilient projects within the agriculture, fisheries, and tourism sectors. The grant will support projects targeting the livelihoods of the Galapagos people. It will contribute to building a resilient and sustainable tourism economy, and to increasing the understanding of how the Programme's holistic approach can drive the circular economy and lasting behavioral change.
- One of the main objectives of the grant is to accompany the implementation of bankable projects so that the Galapagos' Climate Credit Line can be used. Among others, the grant will support the capacity building of financial institutions in the Galapagos, such as the CFN, CONAFIPS and local banks, to ensure the monitoring and sustainability of the Programme.

Conolophus Centralized Power Generation Project

- Through the Ministerial Agreement of June 16, 2020, the start of the Public Selection Process was authorized, to exceptionally delegate to private equity companies, national or foreign, the development of the Conolophus Project, for a period of twenty-five (25) years from the signing of the concession contract.
- The Agency for the Regulation and Control of Energy and Non-Renewable Natural Resources presented a reserve price of 565.41 dollars per MWh, while the offer of the Gransolar/Total Eren was 458.88 dollars per MWh. Of the five companies authorized in August 2020, only the group submitted a technical offer, so in April, the Technical Commission signed the Evaluation and Qualification Act of the Technical Offer (envelope No. 1), in which it resolved enable the association Gransolar/Total Eren for the next phase of the PPS corresponding to the opening of the economic offer.
- The 25th of August 2021 the Ministry of Energy and Non-Renewable Natural Resources declared the tender winner of the Conolophus Project. The 8th of September the Ministry notified Gransolar/TotalEren the organization was awarded of the tender.
- A Trust Agreement will be signed between the Government of Ecuador and the association Gransolar/Total Eren, for the Conolophus PV Project construction and operation to assure transparency and compliance in the financial management. In the technical aspect, it will increase the coverage, quality, and sustainability of energy generation in the Baltra-Santa Cruz in Galapagos through concessional finance and technical assistance.
- The Trust aims to improve aid efficiency by consolidation under a single agreement using a standardized set of financial and project management tools and procedures. The Trust provides a fiduciary instrument to streamline financing by financial and technical partners of the project defined within the context of the Conolophus project.

The parties involved in the trust are the following:

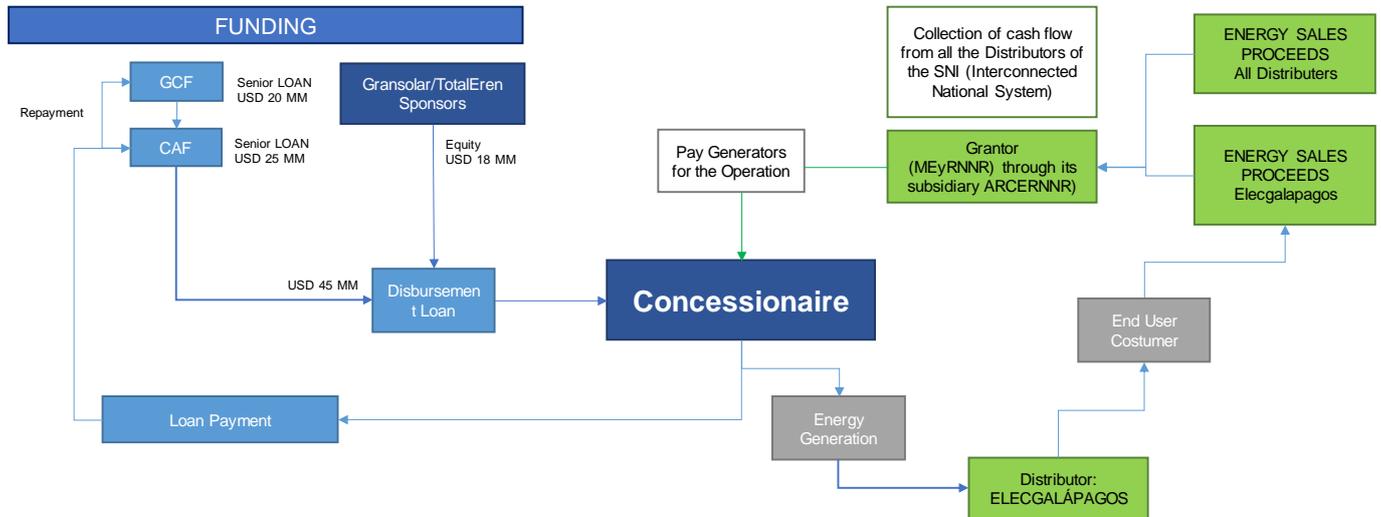
- Private Sector: It is the settlor of the trust fund. It transfers the ownership of assets (solar panels, Eolic engines and towers, etc.) to the trust fund. The tender winner Gransolar/Total Eren.
- Public Sector: By law, this party cannot transfer ownership of its assets. However, it can provide the Trust the permits to operate in public land and to use the Galapagos power grid. In addition, this party would be the Trust customer (this aspect will be explained in detail in subsequent sections).
- RE plants: Energy producers owned by the Trust.
- Implementing and executing agency: Supervises, controls and executes that the RE plants perform optimally and efficiently (this party will be explained in detail in subsequent sections). The Trust contracts this agency.
- The Trust will solely use the loan proceeds to construct the Conolophus PV Project. It is an independent legal entity because it has legal personality, but it is NOT the SPV. The SPV sends collection/payment orders to the trust as required by the project and as permitted under the trust's operating rules.

Financing the Conolophus Project.

- CAF: will be the financier.
- CAF will sign a Loan Agreement with the Conolophus PV Project tender winner company the "Conolophus SPV" to finance the construction of the solar power energy plant. Please refer to Annex 2 section 3.6 for further details on the bidding process.

- The diagram below helps to visualize how the flows will function.

Figure 3. Conolophus SPV Resources Flow



Galapagos' Climate Credit Line (GCCL)

- Several of the Programme's investments will be implemented through a credit line channeled through CFN and / or CONAFIPS and the local banks in Galapagos. The banks Pichincha and Pacífico were pre-selected by CAF as they are the only two banks present in the Islands. Please refer to Annex 2 section 13 for details. The activities that include investments through the credit line are shown in Table 4. The eligibility conditions of each of the activities are described in Annex 2 Section 12. Access to these credits will be enhanced by ensuring that the GCF concessionality is passed on to local financial institutions and beneficiaries, and with the support provided by Technical Assistance activities. Access to the credit line will be assessed based on the proposed projects' technical quality, methodological rigor, and the mitigation and/or adaptation potential impacts. The Programme is aligned with the Gender Action Plan (GAP – Annex 8) to reach the target percentages of women accessing credit (see section E.4) through affirmative actions to be developed by the financial institutions with the Programme support. This process will be led by the Programme's safeguards and gender specialist (see section B.4). A web-platform will be developed to allow the management of the projects including eligibility and prioritization criteria, monitoring, and reporting.

Table 3. Activities promoting investments through the Galapagos' Climate Credit Line

Activity	Eligible investments
Activity 1.1.1.2 Distributed renewable power generation projects.	Small scale solar PV systems
Activity 1.2.1.1 Promotion of efficient energy consumption by the Galapagos' livelihoods	High-efficiency air conditioners and refrigerators
Activities under Output 2.1.2. Climate-resilient water and agricultural food productions systems implemented.	Silvopastoral systems Water storage, distribution, use
Activities under Output 2.1.5. Upgraded and more efficient value chains for climate-smart seafood and agriculture products, potentiated with links to new markets.	Machinery, equipment, working capital (seed fund, seed capital to start the process)
Activity 2.1.5.5 Put in place a long-term financing mechanism to improve the sustainability and competitiveness of the Galapagos small-scale fishing sector.	Business plans and with the greatest probability of generating a positive social and environmental impact
Activity 2.2.1.3 Reduce the impact of diving, anchoring, and pollution related to tourism operations in selected marine HEVAs, to enhance eco systems resilience and adaptive capacity to the effects of climate change.	Digital Positioning Systems (DPS)

The conditions of the credit line are listed in the following table.

Table 4. Climate Credit Line Characteristics

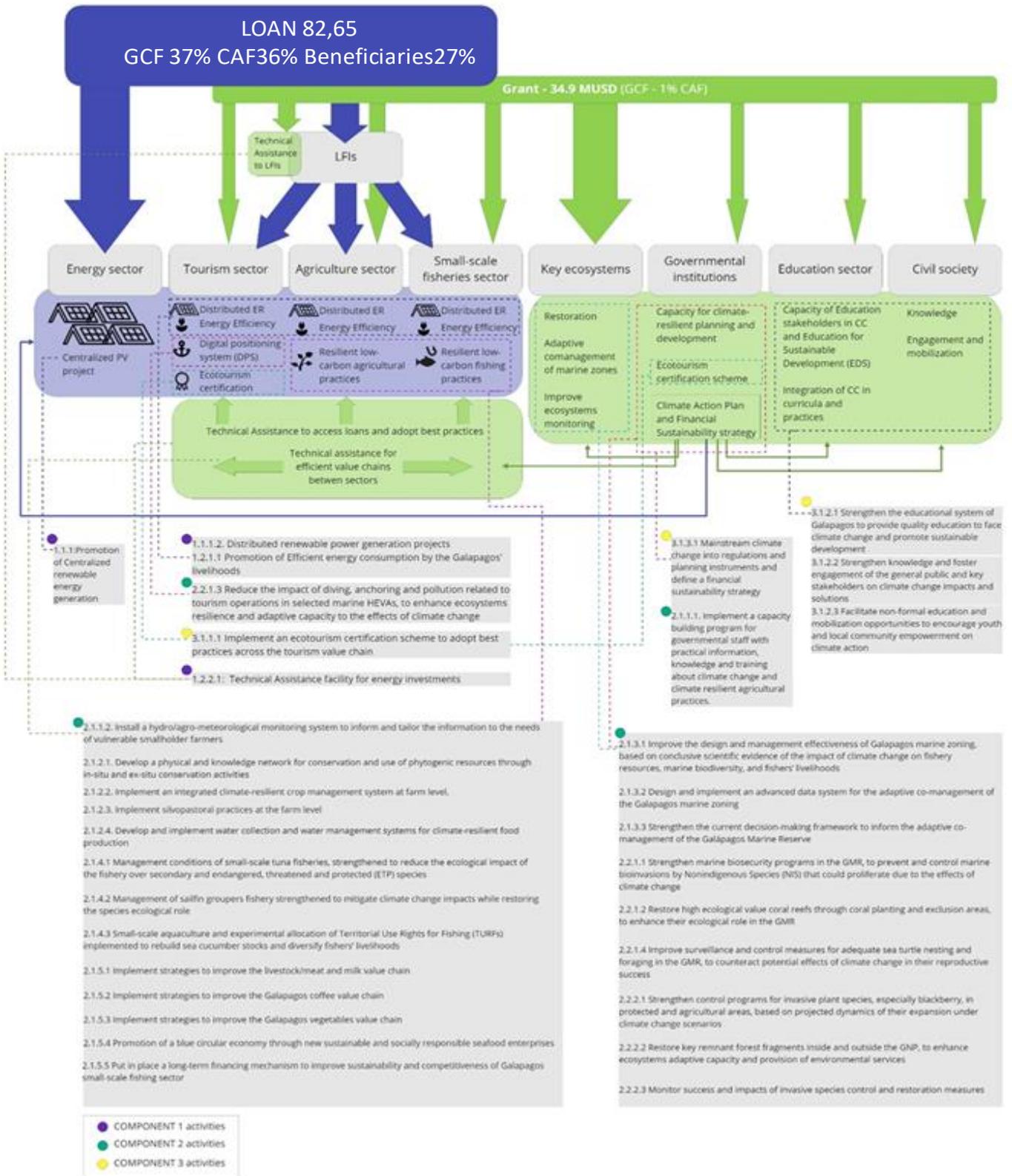
Characteristics	Description
Objective Climate Credit Line (LFIs)	To provide a Climate Credit Line with adequate financial terms and conditions available to beneficiaries and local businesses from Galapagos in order to finance local distributed renewable energy, energy efficiency, Dynamic Positioning Systems (DPS), fisheries activities and land use climate change adaptation and mitigation activities. Loans will be made available to beneficiaries and local businesses to improve or grow their businesses
Resources	The refundable resources available for the Climate Credit Line totalize USD 15,773,065.98, which include a financial contribution of 67% from GCF and 33% from CAF.
Implementation Period	The implementation period of the Programme is 20 years from the effective date of the FAA. For the case of this, it will be developed in the following manner: <ul style="list-style-type: none"> • Period for allocating resources: 4 years (starting on the 2nd year of implementation). • Period for recovering resources: 15 years. • To be determined with the LFI: <ul style="list-style-type: none"> - Repayment periods: <ul style="list-style-type: none"> - 2 years for investments in Renewable Energy and Energy Efficiency - 5 years for investments in Agriculture - 6 years for Fisheries - 5 years for the Digital Positioning Systems
Beneficiaries	End beneficiaries of the Programme include beneficiaries and local businesses from specific economic sectors. In order to access the Programme, beneficiaries and local businesses will demonstrate their registration and documentation to prove the fulfillment with eligibility criteria, including the economic sector. beneficiaries and local businesses must be of the following sectors: <ul style="list-style-type: none"> • Agroindustry • Fisheries • Hotels • Restaurants • Tour Operator offices • Food processing and beverage industry • Educational and sport centers • General commerce facilities • Office, residential and private buildings <p>For further details about the sectors please refer to the Feasibility Study. This credit line will provide specific support to the beneficiaries and local businesses that are headed by women, in alignment to the Gender Action Plan.</p>
Prioritization Criteria	<ul style="list-style-type: none"> • Women entrepreneurs and small businesswomen • GCF investment criteria • The Final Operations Manual will include further precisions about priority measures and the tools for ensuring that these priorities are addressed by the Programme.
Participating Institutions	Local Financial Institutions (LFIs) that have a credit line with CFN or CONAFIPS (CAF's borrower), and that comply with the eligibility requirements stipulated by the Programme.
Disbursement Modality	Disbursements will be granted under the credit lines to finance sub-loans granted to Final Beneficiaries. Only sub-loans that have been granted after the FAA enters into force could be recognized. Through this modality, CFN and / or CONAFIPS cannot request funds from CAF to recover funds already used in their portfolio. The sub-loans to final beneficiaries will be in US Dollars. Ecuador is a dollarized economy.
Disbursement Operation	CAF will provide funds to CFN and / or CONAFIPS, assuring that there is a balanced distribution of the use of the Programme's resources. Then each LFI disbursement request will be funded 33% with CAF's own resources and 67% with GCF resources, with their respective interest rates.
Currency of Disbursements	Disbursements will only be granted in US dollars.

Payments and Amortizations	In general, the method of payment of CFN and / or CONAFIPS to CAF, shall be preferably in equal capital quotas, plus interests, with a semiannual periodicity. The method of payment of the final beneficiary to the intermediary will be established in accordance with CFN and / or CONAFIPS and the LFI's policies.
Guarantee	CAF requires a Sovereign Guarantee of Ecuador's Government. The guarantee granted by the National Government covers all payment obligations of the Borrower (CFN and / or CONAFIPS) under the relevant Loan Agreement, in the same terms and conditions set forth therein.
Terms of sub loans and grace period for the LFIs	The terms of the sub loans and grace period granted by CFN and / or CONAFIPS to the LFIs must be similar to the terms of the loans and grace period granted by CAF to CFN and / or CONAFIPS of GCF's and CAF's Proceeds. The terms of the subloans and the grace period granted to the LFIs cannot be contrary to CFN and / or CONAFIPS policies. However, CFN and / or CONAFIPS as well as the LFIs neither of them can increase the spread that they normally use.
Interest Rate for CFN and CONAFIPS	The minimum interest rate applicable to the CFN and / or CONAFIPS is determined by CAF's Finance Vice-Presidency and approved by CFN's and / or CONAFIPS's President in view of Ecuador ratings and the contracted aspects agreed with GCF and pursuant to CAF's current regulations. CAF's rate depends directly on the Libor+6months plus the rate CAF has established for Ecuador. Therefore, the rate is floating and has to be reviewed every 6 months.
Interest Rate for the LFI	The minimum interest rate applicable to the LFI is determined by CFN's and / or CONAFIPS's Finance Vice-Presidency and approved by CFN's and / or CONAFIPS's President in view of Ecuador ratings, market conditions. Rate is revisable when the rate of the loan from CAF to CFN and / or CONAFIPS are reviewed (see previous point).
Prepayment	LFIs can voluntarily prepay the pending capital amount, either in full or partially, at any moment before the end of the term. This prepayment will be subject to CAF's Policy and in agreement to provisions established in the signed FAA.

Description of Programme Components

- Components and outcomes are structured in three components described in the following sections. For a detailed description, please refer to Annex 2 section 12 and its appendices.
- The figure below aims to introduce to the logic of the intervention, as a continuation of the Theory of Change diagram and the funds flow chart presented above (Figures 1 and 2). The proportion of the loan and the grant proceeds from the GCF, the AE and the beneficiaries, is shown from the perspective of the beneficiaries. This helps to understand how and how much of the proceeds will be invested in the different activities; and how the financial sustainability strategy will seek to guarantee that the activities will continue to be funded.
- It can be observed that the loan portion will be directed to loans to the different sectors (energy, tourism, agriculture, fishing) that will invest in different climate solutions that are organized in different components (e.g., a restaurant will be able to receive loans for energy appliances (Component 1) but also for investing in the ecotourism certificate (Component 3); a farmer will be able to ask for a loan that includes resilient farming practices (Component 2) but also solar panels (Component 1). In the case of the grant, it can be seen that it will mainly support activities related to ecosystems, capacity building, knowledge and awareness-raising, but also with a strong support to the catalysation of the loans. Moreover, not only the beneficiaries of the loans will be supported, but also the local banks (LFIs) that will provide them.
- The list of fully named activities that are connected to the diagram is presented as a way to guide the reader through the components.

Figure 4. General view of the use of loan and grant proceeds, beneficiary sectors, and activities



Component 1: Energy matrix change in the Galápagos archipelago.

- Component 1 will reduce the energy dependency of the Galapagos livelihoods through increased low-emission energy access and power generation and will reduce the energy consumption by the Galápagos livelihoods through energy efficiency. Currently, according to the Generation Expansion Plan of the Galapagos Isolated System (PEGSAG), 84% of the archipelago's energy matrix is based on fossil fuels with diesel, 16% on renewable energy,

of which 12% is wind energy and 4% photovoltaic energy. The implementation of this component is expected to change the energy matrix reaching 35% based on fossil fuels with diesel, 65% on renewable energy, of which 23% is from wind energy and 42% on photovoltaic energy.

Outcome 1.1: Reduced energy dependency of the Galapagos livelihoods through increased low-emission energy access and power generation.

- The Programme seeks to boost the implementation of the PEGSAG with the criteria of energy sovereignty and use of available renewable resources, in order to reduce the use of fossil fuels for electricity generation, as well as the Government's initiative "Zero Fossil Fuels in Galapagos", which sets out the objective of reducing the use of petroleum derivatives in that area of high environmental and social sensitivity as an important part of the national conservation strategy of the Archipelago.

Output 1.1.1: Increased renewable energy generation and storage.

Activity 1.1.1.1. Promotion of Centralized renewable energy generation

- The Programme will finance the development of the Conolophus solar photovoltaic power generation project through the Conolophus Centralized Power Generation Loan Agreement, to which CAF as EE for this activity will on lend. Due to its level of progress and its high impact, the Conolophus project has been prioritized over the other projects to be promoted in Galapagos, as established in the PEGSAG. It includes a 14.8 MWp PV plant, a 40.9 MWh battery energy storage system, a switching station at 34.5kV, 49 km of sub-transmission line, and a centralized automatic control system for all the power plants in the island. The dispatchable PV+BESS power plant and substation will be located in a WWII decommissioned runway in Baltra island, following the recommendation of the territory development plan issued by Galapagos Government Council (CGREG). Considering that by 2019 the renewable energy penetration accounted for 14.4%, the PV Conolophus Project should provide the remaining amount to the recommended 70% participation of renewables in the Santa Cruz Island, after a full year of operation. Please refer to Annex 2 Section 12.4 for further details on the technical feasibility that includes description of the equipment, expected share of energy mix, and characteristics of the centralized automatic control system.
- This activity is expected to reduce an average of 18,893 tCO_{2e}/year due to avoided diesel-based generation and an average of 26.8 tCO_{2e}/year due to avoided transportation of diesel from the mainland (see Annex 22)
- The project model refers to a public-private partnership where the private organization builds, owns, operates, and transfers the facilities after a 25-year concession period. Further details on contractual and legal aspects are described in Section B.4 Implementation arrangements.

Activity 1.1.1.2. Distributed renewable power generation projects.

- An intermediation scheme will allow providing loans to invest in Micro distributed PV generation through the Galapagos' Climate Credit Line (GCCL) to which CAF as EE will on lend and that will be managed by the CFN, CONAFIPS through local banks present in Galápagos. The tourism sector will be particularly targeted due to the impact potential of this sector, and the technology will be promoted in the agriculture and small-scale fisheries sectors. Nevertheless, beneficiaries of the commercial, educational and sport centers, office, residential and private buildings would also be eligible. The tourism sector is expected to be reached in three of the inhabited islands and will focus on the hotels with the largest energy consumption; Floreana island was not considered because it does not have a commercial sector that impacts on the electricity demand. The eligibility conditions for accessing credit for distributed RE generation are listed in the table below.

Table 5. Eligibility conditions for accessing loans for distributed RE generation.

Condition	Description
Beneficiaries	a) Ecotourism value chain such as hotels, restaurants, and boat operators. b) Farmers (individuals, cooperatives, associations, MSMEs). c) Small-scale fisheries.
Eligible investments	<ul style="list-style-type: none"> • Small scale solar PV systems
Minimum objectives	80% GHG emissions reductions 80% reduced Energy consumption
Financing thresholds	From USD 5,000 to 40,000
Minimum co-financing by the beneficiary	20%
E&S category	B or C (category A is not eligible)
Other conditions	Must be proven RE technologies. Micro distributed PV generation must comply with the current regulation on equipment specifications and protection requirements.

- The credit window expects to reach at least 230 beneficiaries (50% in Santa Cruz, 25% in Isabela and 25% in San Cristobal) and is expected to reduce an average of 3,150.9 tCO₂e/year due to avoided diesel-based generation, and an average of 4.60 tCO₂e/year due to avoided transportation of diesel from mainland (see Annex 22).
- Beneficiaries will self-generate clean energy, reducing their dependence on the power grid and creating systemic benefits such as the decrease in diesel consumption from power plants, CO₂ emissions cuts, fewer large investments in centralized power plants, defer investments in electrical distribution system upgrades extending lifetime of lines and transformers, among others. At the same time, the beneficiaries become sustainable tourism champions at energy use.
- The electrical system of the islands will also profit on the distributed generation projects by decreasing the demand curve at noon and early afternoon, also likely reducing some technical losses at the distribution level, and by delaying expansion of the power plants and the sub-transmission system (in the case of Santa Cruz – Baltra). Please refer to Annex 2 section 12.4 for further considerations about the stability of the grid and the requirements of the regulations.

Outcome 1.2: Reduced energy consumption by the Galápagos livelihoods through energy efficiency and reduction of fuel imports

- The programme will promote the reduction of energy consumption by providing loans to invest in efficient technology. The Programme will implement the Second Phase of the Government’s Program for the Renewal of Inefficient Energy Consumption Equipment. A Technical Assistance Facility will provide the means to build capacities of all actors involved in the implementation of energy investments.

Output 1.2.1: Increased energy savings from energy efficiency investments.

Activity 1.2.1.1 Promotion of efficient energy consumption by the Galapagos' livelihoods

- Access to loans will be facilitated to beneficiaries through the Galapagos’ Climate Credit Line (GCCL) to which CAF as EE will on lend. The objective is to optimize the electrical energy consumption in the acclimatization and refrigeration areas, with the replacement of 4,524 units (2,430 Refrigerators and 2,094 A/C) mainly in the tourism sector, although beneficiaries of the commercial, agriculture and small-scale fisheries sectors, educational and sport centers, office, residential and private buildings would also be eligible. The eligibility conditions for accessing credit for distributed RE generation are listed in the table below.

Table 6. Eligibility conditions for accessing loans for energy efficiency investments.

Condition	Description
Beneficiaries	Ecotourism value chain such as hotels, restaurants, and boat operators. b) Farmers (individuals, cooperatives, associations, MSMEs). c) Small-scale fisheries.
Eligible investments	<ul style="list-style-type: none"> • Air conditioners. • Refrigerators. • Laundry Machines • other as specified technologies
Minimum objectives	Air conditioners: 20% GHG emissions reductions; 20% reduced energy consumption Refrigerators:15% GHG emissions reductions; 15% reduced energy consumption
Financing thresholds	From USD 300 to USD 10,000
Minimum co-financing by the beneficiary	20%
E&S category	B or C (category A is not eligible)
Other conditions	Equipment rated A in energy consumption. Split air conditioners. Inverter technology. Energy efficiency must guarantee the highest range of the applied standard RTE 035. The refrigerant gas must not contain any agent that affects the Ozone layer and the global warming potentials must be minimal, such as R290, R22 Split A/C and R600a refrigeration.

- This replacement would obtain savings of 1,688 MWh/year. This activity is expected to reduce an average of 1,322.9 tCO₂e/year due to avoided diesel-based generation; and an average of 1.94 tCO₂e/year due to avoided transportation of diesel from the mainland (see Annex 22).

Output 1.2.2 Strengthened Executing Entities and stakeholders' capacities for the development and implementation of mitigation projects.

Activity 1.2.2.1: Technical Assistance facility for energy investments

- The objective of this facility that will be managed by CAF (CAF holding the role of EE), is to facilitate the implementation of the Programme by increasing knowledge on low carbon energy investment projects, supporting CFN, CONAIPS and local financial institutions providing credit through the GCCL, actors of the touristic, agricultural and fisheries sectors, and technical service providers to strengthen their capacities to prepare, implement and monitor energy projects. These stakeholders will also be targeted by Component 3 activities related to raising awareness on climate change and mitigation. Also, Component 3 envisages offering training to local people for new employment opportunities in the installation and maintenance of RE and EE technologies. The technical assistance will include:

Matchmaking events to facilitate development of mitigation projects.

- The objective is to contribute to building a relationship of trust between energy technology service providers, local banks and stakeholders in the tourism, agricultural and artisanal fishing sectors. Matchmaking events will be held between local banks and technical assistance providers to facilitate project development.

Technical Assistance for Public Local Banks

- Aimed at public local banks that grant loans under the Programme to strengthen the capacity of officers, executives and staff involved in the Programme to identify potential clients, evaluate potential beneficiaries and projects based on eligibility criteria, and determine potential bankable projects. Training will be offered about RE and EE project evaluation, contractual agreements between clients and suppliers, environmental and social risk management of projects, gender perspective, and definition of GHG baseline and MRV.
- Moreover, this activity will help defining a line of credit focused on women entrepreneurs and small businesswomen. The GAP includes activities such as awareness-raising, capacity building and assistance to financial institutions. The generation of financial capabilities for women is also foreseen (see below and refer to Annex 8).

Technical Assistance for Final Beneficiaries

- Technical support will be provided to beneficiaries in the tourism, agricultural and artisanal fisheries sectors and technical service providers for effective project development and implementation of mitigation projects.
- Eligibility will depend on the specific training:
- *Training in mitigation project preparation and management including how to structure bankable projects, environmental and social safeguards, understanding contractual agreements between clients and suppliers:* potential and confirmed participating SMEs.
- *Training for women at the head of companies in the sector to bridge identified gaps:* women-led SMEs of all the eligible sectors.
- *Pre-investment activities that will include feasibility studies for the identification of RE, EE development opportunities, environmental and financial assessments, support for business plan development, and other advisory activities necessary for the effective implementation of climate investments:* confirmed participating SMEs.
- *Technical support for the definition of baseline and MRV:* confirmed participating SMEs.
- *Environmental management of the technologies such as coolant management:* SMEs accessing loans.

Component 2: Building climate resilience of the Galapagos' livelihoods.

- Component 2 will enhance the climate resilience of the Galapagos' livelihoods, by strengthening the food system and rehabilitating and protecting the key ecosystems that sustain them. Activities will be executed mainly by FAO and WWF, and CFN and / or CONAFIPS will be the EE for providing loans for activities under Outputs 2.1.2 and 2.1.5. For a detailed description, please refer to Annex 2 section 12.5 and its appendices.

Outcome 2.1: Galapagos food system is climate resilient for both internal consumption and for the sustainable tourism sector.

- The main objective is to strengthen the islands' food system in the face of climate change, resulting in enhancing resilience of the Galapagos' agriculture and small-scale fisheries livelihoods through increased availability of local food to supply resident and visitor populations. The activities under this outcome have also mitigation co-benefits.
- Outputs 2.1.2 and 2.1.5 will be implemented in all the farms of the agricultural area in Galápagos. Direct beneficiaries of these outputs are families managing 755 farms. These farms cover an area of 19,000 hectares, containing 228 large-scale farms (> 20 hectares), 202 medium-scale farms (5-20 hectares), and 325 small-scale farms (< 5 hectares).
- Small scale fishers will also benefit from this outcome. There are 1,084 license holders and 416 vessels registered in Galapagos, although only 37% of them remain active (see Section 3.4.1 in Annex 2). Each fishing license provides to its owner the right to fish any type of shellfish and finfish species commercially permitted.
- Please refer to Annex 2 sections 4 and 8-10 for further details about the characterization of beneficiaries in each of the islands; and for the description of the climate change impacts and expected scenarios for these sectors.
- Activities under Output 2.1.2. Output 2.1.5 will be financed through the credit line. The eligibility conditions for accessing loans for these investments are described in the table below.

Table 7. Eligibility for accessing loans for investment in sustainable land use.

Condition	Description
Beneficiaries	Farmers (individuals, cooperatives, associations, MSMEs).
Eligible investments	<ul style="list-style-type: none"> • Silvopastoral systems • Storage, distribution, use • Value chains - machinery, equipment, working capital (seed fund, seed capital to start the process)
Eligibility of beneficiaries	<ul style="list-style-type: none"> • Placed in most vulnerable zones subject to changes in water availability, and temperature increase. • Lower income and small farm size will be prioritized. • Participation on farming field schools.
Minimum objectives	30% of the farming area
Financing thresholds	From USD 5,000 to USD 100,000
Minimum co-financing by the beneficiary	20%
E&S category	B or C (category A is not eligible)
Other conditions	Those who have previously participated in technical assistance activities and capacity building processes will be favored. No purchase of additional livestock, no expansion of the agricultural frontier.

Output 2.1.1. Enhanced institutional capacity for climate-resilient planning and development.

- The activities proposed in this output will improve the knowledge of Galápagos' government staff and vulnerable farmers on climate change issues and climate-resilient agricultural best practices. In addition, the generation and access to hydro-meteorological information for decision-making in a changing climate will be strengthened, and consequently decision-makers and farmers will act against climate change. These activities will enhance the adaptive capacity of farmers and allow climate change adaptation planning to be sustained beyond the activities proposed in this component and Programme. These activities will be implemented by FAO with non-reimbursable GCF funds.

Activity 2.1.1.1. Implement a capacity building program for governmental staff with practical information, knowledge and training about climate change and climate resilient agricultural practices.

- This activity will develop a capacity building program throughout the 5 years of Programme implementation to strengthen key local governmental agencies (Ministry of Agriculture (MAG), Ecuadorian Institute of Agricultural Research (INIAP), and the Galapagos Government Council (CGREG)) with technical knowledge, so they are capable to develop an extension program for farmers and their families about climate change agricultural adaptation and mitigation practices based on local knowledge and conditions to guaranty sustainability of the activities of this program. The beneficiaries will be 15 technical staff members of the MAG, INIAP, CGREG, and three Municipalities.

Activity 2.1.1.2. Install a hydro/agro-meteorological monitoring system to inform and tailor the information to the needs of vulnerable smallholder farmers.

- Access, generation, and delivery information is critical in the process of enhancing the adaptive capacities of the rural areas to climate change. This action will collect data, produce information, analyze, and interpret, and disseminate information for decision making at different levels, and for the farmers. This activity looks to address the weakness of hydrometeorological monitoring data in the Islands and strengthen the capacities of local government agencies and scientific organizations to provision “in-time” information and services, which will allow the construction of an early warning system, and climatic information for land management decisions. This monitoring system will be procured by FAO will be implemented by the Galapagos Science Center (GSC) in coordination with the National Institute of Meteorology and Hydrology (INAMHI). After the project concludes, all the equipment and hydrometeorological stations will form part of the INAMHI and this organization together with the GCS will continue to operate and maintain the equipment.
- The monitoring system includes a) Climatological monitoring, b) Surface hydrology monitoring, c) Groundwater monitoring. These three aspects will be integrated within a Climate Information System for Galapagos, which would aggregate and distribute this information. Technical staff will be trained in the use of equipment, process of data, troubleshooting, and data distribution.
- This activity will be implemented throughout Years 1 to 5 and will provide infrastructure to collect groundwater, manage the surplus and collect surface water data to cover 37 km² in Santa Cruz, 32 km² in San Cristobal and 17 km² in Isabela. Direct beneficiaries: 21,525 local users of the information from the 33,000 inhabitants; 3 Municipalities; Government agencies: MAATE, INIAP, CGREG; INAMHI, Universities and NGOs. Indirect beneficiaries: 755 farm households and 19,009. 6 hectares (100% of the farms).

Output 2.1.2. *Increased number of farmers reached with climate-resilient water and agricultural food production investments or practices.*

- The activities of this output seek to transform degraded agricultural areas into healthy agroecosystems to enhance climate change adaptation capabilities, optimizing quality in all aspects of agriculture and the environment, by respecting the natural capacity of plants, animals, and the productive landscape, which are key to the Galapagos Islands. These activities will also lead to improved water recharge and productivity and contribute to the population's and ecosystem's increased resilience to climate change. As one of the impacts of climate change is the scarce availability of water for agriculture, especially in dry seasons, one of the activities will help better access, storage and distribution of water considering the climate variables. Technical Assistance will be funded by the GCF grant and loans will be facilitated to farmers through the Galapagos' Climate Credit Line (GCCL) according to the eligibility criteria listed in Table 7. These resources will be invested in providing Galapagos farmers with the skills, knowledge, and technologies they need to manage soils, water, and biomass to enhance soil moisture/fertility sufficiently for production of a diversity of climate-resilient crops through agroforestry systems or other climate-resilient practices. These practices are based on agroecology principles and are also considered "non-regret" practices, considering climate variability and the impacts of climate change in Galapagos.
- **Eligibility:** the beneficiaries will be chosen by combining data from the rural cadastre and participatory rural appraisals, which will make it possible to define the activities that are appropriate for each farm. The budget has been estimated in such a way that 100% of the farms suitable for an activity will be able to carry it out. In all cases, a prioritization of farms managed by women will be ensured and with the minimum established in the Gender Action Plan (30%).

Activity 2.1.2.1. Develop a physical and knowledge network for conservation and use of phytogenic resources through in-situ and ex-situ conservation activities.

- This activity will allow access to quality seeds in sufficient quantity, as a decisive means of production to increase productivity at the farm level, and therefore the availability of nutritious food. This will enable the farmers to improve their bargaining power in the local agro-food chain through improved access to adapted seeds to environmental changes caused by climate change.
- Exchanges will be promoted with the International Maize and Wheat Improvement Center (CIMMYT) of seeds that are adapted to climate change conditions, particularly on drought resilient genetic materials that have been already selected by the INIAP. Also, by proposing community-based actions to explore, restore, preserve, and distribute adapted seeds, this program recovers and promotes the use of existing cultivars resistant to different biotic changes generated by climate change, will decrease the risk of food insecurity due strong climatic related events including pests, droughts, and floods. Through providing shaded areas and shelter, the overall climate variability is reduced, and therefore it can increase soil moisture retention, reduce water loss from soil evapotranspiration and crop transpiration, and increase soil fertility. With the support of extension services from the INIAP, farmers will explore, find, select the best seeds of different crops in the field. Part of those seeds will go back to the farm/community seed banks. The following sub-activities will allow to improve the adaptive capacity of the agroecosystems in

Galapagos: a) implement in-farms conservation activities: collect, conserve, use and distribute the agrobiodiversity existing in Galapagos (community-based seed bank), with special focus on the variety of crops resistant to biotic changes caused by climate change, and b) Improvement of existing infrastructure at INIAP, which will work as an agrobiodiversity repository, knowledge center and distribution facility, for long-term conservation.

- Targets: The direct beneficiaries are INIAP seed bank, and 25 “seed” farmers distributed in the four islands: 8 in Santa Cruz, 7 in San Cristobal, 8 in Isabela and 2 in Floreana, where plots for efficient production and reproduction of quality seeds will be implemented.
- Seed distribution will be implemented in Years 2 to 4 in 624 farms that include those with crop, livestock, and mixed production. Indirect beneficiaries: 755 farm households and 19,009 Hectares. 6 Hectares (100% of farms).

Activity 2.1.2.2. Implement an integrated climate-resilient crop management system at farm level.

- This activity will minimize pest pressure, and maintain soil fertility, creating greater tolerance to droughts, floods and the attacks of pests driven by climate change. As part of the agroecological approach, the Integrated Crop Management (ICM) is a basic strategy that will allow the development of a healthy agricultural system resilient to climate change. ICM will be incorporated into daily management of the production systems, through technical assistance, monitoring, and adaptation cycle. The application of agroecological practices, ICM included, will generate greater climate change adaptive capacity to the production system, by: (a) improved soil moisture and nutritional growing conditions, (b) increased agrobiodiversity into the agri-food productive systems, (c) increased the biodiversity and the organic material in soil, reducing pest and disease problems as a consequence of more resilient systems; (d) reduced impact of rainfall variability and droughts on yields and improved rainfall infiltration, minimum runoff, and soil erosion; (e) increased soil carbon sequestration through higher levels of humid and non-humid SOM (soil organic matter) and soil biota, and improved aquifer recharge and stream flow. The changes in cropping and land use pattern, soil management, over-exploitation of water storage and changes in irrigation pattern have a mitigating effect by reducing greenhouse gas emissions and increasing carbon sequestration.
- Targets: this activity will be implemented in years 1 to 4 in at least 55% of the total Galapagos farms (404 farms), distributed in the following way: a. At least four ICM practices will be implemented in medium and small-scale farms, covering 334 farms (1002 beneficiaries, 30% women). b. At least four ICM practices will be implemented in large-scale farms, covering 70 farms (210 beneficiaries, 30% women), excluding livestock production.

Activity 2.1.2.3. Implement silvopastoral practices at the farm level.

- This activity will implement a silvopastoral system (SPS) in Galapagos for cattle ranching to improve production efficiency and to integrate the management of the invasive species *Psidium guajava* (guava) and endemic/native species as associated arboreal species. Other native trees species will be integrated in the landscape as generators of shade and ecological services and reduce guava density on farms. This SPS model comprises: i) Farmers training to implement silvopastoral systems (guava-grass-breeding association), ii) fodder banks with shrubs, iii) rotational grazing with occupation periods, and iv) restoration of native forage species under a perspective of Forest Management with Integrated Livestock, as a possibility of restoring productive livestock landscapes and generating shadow corridors to cushion increases in temperature. These practices seek to reduce the vulnerability of livestock production to climate change as they stabilize forage availability throughout the year by favoring water infiltration and soil conservation.
- GHG mitigation co benefit will be derived not only from the carbon sequestration of the introduction of trees and bushes, but also for reducing the need for synthetically produced farm inputs and from reducing the need to expand the agricultural frontier.
- Agroecological SPS will be implemented in 244 farms in medium and large-scale farms mostly devoted for cattle ranching activities (Livestock (dairy-meat) and mixed farms). Specific sub activities, such as fodder banks and paddock division, will be implemented on farms with over 20 cows (68 farms). Additionally, in 66 livestock production farms will be implemented by biodigesters: 42 in cattle production farms and 24 in swine production farms.

Activity 2.1.2.4. Develop and implement water collection and water management systems for climate-resilient food production.

- Water scarcity is the major problem in the Galapagos agroecosystems, which is mainly caused by changing rainfall patterns and higher temperatures. The lack of rains and scarce water available in the Islands have even prompted authorities to decree a state of emergency in 2016. This activity will improve the water collection and distribution system for the agricultural sector in the Galapagos Islands by including 300 new hectares with climate resilient farms and new water collection, storage, and distribution systems. Additionally, the proposed interventions in the more efficient water irrigation system aim to increase its diversity and redundancy, both in sources and in operating

infrastructure. This activity relates to the implementation of a water system that supports the agricultural needs of the Islands, mainly in the dry season but also takes advantage of rainfall and its possible increase in the future. This activity will implement a system with the following sub-activities: 1. Water Sources & Intakes: rainfall collection, new groundwater wells and boreholes, fog catchers, 2. Water Storage: natural or green infrastructure (use existing aquifers for water storage through natural recharge) and grey infrastructure (reservoirs and tanks), 3. Water Distribution: channels, pipelines (pipe flow encouraged to avoid evaporation losses) and irrigation: drip irrigation, sprinkler irrigation.

- Targets: These practices will be implemented in farms of San Cristobal, Santa Cruz, and Isabela islands. By the end of the project at least 300 new ha. of agricultural land with improved water management practices. Some of the beneficiaries of this activity will be the same of other activities under Output 2.1.2, due to the nature of the investments.
- As per local regulations, the volume of water to be used by farmers or other users' needs to be authorized by the Ministry of Environment and Water, considering water availability. The project will generate information about surface and groundwater to support the Ministry to avoid conflicts based on new local information that the project will help to provide to the government and farmers.

Output 2.1.3. Adaptive co-management of the Galapagos marine zoning implemented through science-based and participatory management frameworks and systems.

- To prevent and mitigate the impact of the ENSO and climate change on marine ecosystems such as sea acidification and increased sea surface temperature, it is fundamental to increase the effectiveness and adaptive co-management of the new Galapagos marine zoning, as fishery management and marine biodiversity conservation tool. To accomplish this the program will implement the following activities, that will be executed by WWF with GCF non-reimbursable resources.

Activity 2.1.3.1 Improve the design and management effectiveness of Galapagos marine zoning, based on conclusive scientific evidence of the impact of climate change on fishery resources, marine biodiversity, and fishers' livelihoods.

- One of the main barriers for an effective implementation of the current marine zoning, has been the lack of scientific evidence to support the establishment of take and no-take zones. The program will therefore start by generating scientific knowledge about the impact of the former Galapagos marine zoning, and about the effects of human and climate drivers on fishery stocks and marine biodiversity (see Annex 2 section 12.5.1.4 for a detailed description of needed studies). Based on this knowledge, the GNP and Galapagos Governing Council will receive a set of recommendations to improve the design and management effectiveness of the new Galapagos marine zoning, to reconcile conservation and fishery management objectives. These recommendations will be the basis for a participatory process that will need to take place for the endorsement of the new marine zoning by the small-scale fishing sector and other relevant stakeholders.
- One of the most important challenges for the effective implementation of the new marine zoning is to re-establish the credibility and legitimacy of the small-scale fishing sector on the re-zoning process, through extensive and participatory consultation. To this end, the program will give technical and financial support to CGREG and the GNP, for the effective implementation of the Consultative Board of Participatory Management (CBPM). Stakeholders in the re-zoning process will be engaged, through extensive and participatory consultation in the CBPM. Such co-management approach will improve the credibility and legitimacy of the new Galapagos marine zoning since it will provide a voice to several members of local coastal communities who have influence or are influenced by the decisions taken concerning the management of the GMR. Finally, an advanced information system and a structured decision-making framework will be implemented to promote the adaptive co-management of the GMR.

Activity 2.1.3.2 Design and implement an advanced data system for the adaptive co-management of the Galapagos marine zoning.

- The adaptive co-management of the Galapagos marine zoning requires better data collection, dimensioned to inform appropriate indicators in a faster and more accessible format for reporting, processing and analysis, that will translate into more effective mechanisms to disseminate results and enable near real-time adaptive responses.
- The utilization of high-tech advanced data systems has been precluded by limitations of funding and institutional shortcomings. This activity will finance a new system that will reduce costs, facilitate adaptive and responsive decision-making procedures, to improve marine zoning management efficiency. An app, a data repository, and a dashboard will be created to collect, store, and analyze annually updated subtidal ecological data. This advanced data system, called the "Subtidal Ecological Monitoring" module, will be created following the transdisciplinary methodology recommended by Bradley et al. (2019). Such a module will be developed in collaboration with the

GNP and NGOs and be integrated into the “Consolidated Environmental Information System (*Sistema Único de Información Ambiental - SUIA*)”, which is the national data repository system for environmental data in Ecuador.

- Complementally, local management authorities, scientists, NGO, and relevant stakeholders will be trained to facilitate the integration of the information generated by the Subtidal Ecological Monitoring module into GMR management decisions.

Activity 2.1.3.3 Strengthen the current decision-making framework to inform the adaptive co-management of the Galápagos Marine Reserve.

- The effective adaptive co-management of the GMR requires a structured decision-making framework linked to the subtidal ecological and fisheries monitoring program and other monitoring and evaluation systems conducted by the GNPD and Charles Darwin Foundation, which are fundamental to improve the management effectiveness of marine zoning. Since 2019, GNPD with the support of the Arizona State University are developing a framework for structured decision-making that involves: (1) refining management objectives and modelling ecosystem behavior; (2) monitoring ecosystem change and response to management actions; and (3) evaluating spatial management options.
- To ensure the effective implementation of this structured decision-making framework the program will invest in the development of a training program for local management authorities, scientists, NGO, and relevant stakeholders. The objective is to facilitate the integration of the structured decision-making framework into GNPD decision-making process and existing monitoring programs.
- Moreover, a cooperation agreement will be sought to align the priorities of the Galapagos Marine Reserve Fund (*Fondo para la Reserva Marina de Galápagos, FRMG*, which is being created at the time of the preparation of this proposal) with the activities proposed in this Programme, and therefore foster the channeling of FRMG funds to complement and maintain adaptation measures over time.

Output 2.1.4. Increased adoption of climate-smart small-scale fisheries and aquaculture approach.

- Alternative fisheries management measures are required to reduce the impact of tuna fisheries and ensure the restoration of the ecological role of sailfin groupers and sea cucumber, as well as to diversify fishers’ livelihoods, contributing to mitigate the impact of the ENSO and climate change. Activities under this Output will be executed by WWF with GCF non-reimbursable resources.

Activity 2.1.4.1 Management conditions of small-scale tuna fisheries, strengthened to reduce the ecological impact of the fishery over secondary and endangered, threatened and protected (ETP) species.

- The Program will build from the alliance created by 12 governmental and non-governmental organizations in 2019, to maximize the economic value of the Galapagos tuna fishery and minimize its ecological impact by improving its management and marketing system, through a Community-Based Fishery Improvement Project, or C-FIP¹⁰. The objective is to implement state-of-the-art technology to improve the monitoring, traceability, and trading of Galapagos small-scale fisheries, in particular the tuna fishery. Such action will contribute to reduce IUU fishing and promote fair trade through e-commerce. See Section 12.5.1.5 in Annex 2.
- Specifically, this activity will: implement an electronic monitoring system that allows the cost-efficient collection of catch data in situ, both target and bycatch species, in combination with a blockchain traceability system; and improve post-harvest handling and cold-chain infrastructure, design and implement a code of good fishing practices and a manual of best practice handling techniques for target and bycatch species. Additionally, the following research priorities identified by the GNPD and stakeholders to improve the management and sustainability of the Galapagos tuna fishery will be carried on: (1) determine the impact generated by illegal and incidental fishing of sharks, and other ETP species, generated by the industrial and artisanal fishing fleet, both domestic and foreign, that takes place inside and outside the boundaries of the GMR, taking into consideration the impact of the climatic variability on catch composition; 2) determine the level of impact of ghost fishing and illegal fishing aggregating devices (FADs) on the GMR; and (3) determine the migratory patterns and the genetic and population structure of yellowfin tuna from the GMR.

¹⁰ A C-FIP is defined as an alliance of diverse actors and institutions, including fishers, managers, traders, scientists, private sector, and NGOs, who join efforts to define and agree on an action plan, which specifies the activities that are required to create ecologically sustainable, economically profitable, and socially fair fisheries. This people-centered approach for the improvement of community-based coastal fisheries combines globally recognized ecosystem-based and human rights-based approaches, including the UN FAO’s Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries, and the Marine Stewardship Council Standard (MSC), in combination with blue finance principles, to promote sustainability of coastal community-based fisheries and benefits they provide to humankind.

Activity 2.1.4.2 Management of sailfin groupers fishery strengthened to mitigate climate change impacts while restoring the species ecological role.

- This activity will rebuild sailfin groupers stocks and restore their ecological role into Galapagos marine ecosystem through the design and implementation of a C-FIP for the sailfin grouper.
- So far, the C-FIP model has contributed to mobilize financial resources from the public and philanthropic sector to improve the management and marketing system of the spiny lobster and tuna fisheries, and the same is expected to occur for the Galapagos sailfin fishery. These public and philanthropic investments have the potential to leverage a cascade of private financial resources to fund innovative projects that increase the efficiency of the fishery sector on all the links of the value chain and reduce the impact of the fishing activity on marine ecosystems, increasing their resilience and adaptive capacity to the ENSO and climate change.
- The program will work with the GNPD, Galapagos Governing Council, small-scale fishing sector, private sector, and other relevant actors to define a C-FIP action plan and a bankable business plan that helps to attract the investment required for the holistic and community-based improvement of the Galapagos sailfin grouper. As a fundamental part of this framework, with this outcome the program will elaborate and promote the adoption of a participatory management plan for the sailfin grouper, considering the effects of climate change; this plan will include landing regulations, improve fishing practices and monitoring activities.

Activity 2.1.4.3 Small-scale aquaculture and experimental allocation of Territorial Use Rights for Fishing (TURFs) implemented to rebuild sea cucumber stocks and diversify fishers' livelihoods.

- This activity will support the development of small-scale aquaculture in Galapagos, in combination with the experimental allocation of Territorial Use Rights for Fishing (TURFs), to rebuild sea cucumber stocks, and to provide an alternative source of income to the small-scale fishing sector, in academic partnership with Universidad de las Americas and Universidad Técnica de Manabí.
- As the population abundance of sea cucumbers is substantially below carrying capacity as a result of overfishing, restocking may be the only active management intervention that can boost population recovery. Restocking or stock rebuilding involve temporary releases of hatchery fish aimed at rebuilding depleted populations more quickly than would be achieved by natural recovery (Lorenzen et al. 2012). To this end, a substantial number of sea cucumbers relative to the abundance of the remaining wild stock will be released to significantly accelerate rebuilding. As restocking calls for close ecological and genetic integration of wild and cultured stocks, combined with very restricted harvesting, fishing intensity will be regulated through the experimental allocation of TURFs. This management approach will maximize the contribution of wild and released cultured sea cucumber to population growth. Furthermore, genetic management will be used to maintain the characteristics of the wild population, and developmental manipulations likewise may be carried out to produce "wildlike" sea cucumbers.
- The specific actions that will be carried out are: 1) Update stock assessment of *I. fuscus*, including projections under climate change conditions and fishing regulations; 2) Reproduce in captivity and release a substantial number of sea cucumbers into the remaining wild stock, to significantly accelerate rebuilding and 3) Experimental allocation and evaluation of TURF to regulate harvesting and fishing intensity of *I. fuscus*. The GNPD as administrator of the GMR will be in charge of enforcing the TURFs, through the vessel monitoring system (VMS) and Automatic Identification System (AIS) already in place, in collaboration with the group of fishers who are granted the TURFs.

Output 2.1.5. Upgraded and more efficient value chains for climate-smart seafood and agriculture products, potentiated with links to new markets.

- The lack of integration of vulnerable farmers and fishers to the existing value chains decrease their resilience to onset and drastic events caused by climate change. On the other hand, as a step towards food security of the island's growing population, there is an increased demand for access to quality products, with higher nutritional value, and of affordable and timely access. In addition, there is a growing demand from consumers for more information about the content, origin, and processing of their food products, including any social and environmental impacts they have. The proposed activities will promote a stronger and more dynamic value chain that will allow actors to address the difficulties of producing and processing, and marketing organic food products more effectively inside the Islands. Food security and the economy of the archipelago could improve remarkably if residents decided to increase their consumption of local products, which would be beneficial for the local small-scale sector and the entire economy of Galapagos. In addition, food imports from mainland Ecuador would be reduced, which in turn would reduce the risk of transporting new invasive species to Galapagos. Technical Assistance will be funded by the GCF grant, and loans will be facilitated to farmers and fishers through the Galapagos' Climate Credit Line (GCCL). Activities 2.1.5.1 to 2.1.5.3 will be executed by FAO and activities 2.1.5.4 and 2.1.5.5 by WWF.

- **Eligibility:** as in the case of the activities under Output 2.1.2, the beneficiaries will be chosen by combining data from the rural cadastre and participatory rural appraisals, which will make it possible to define the activities that are appropriate for each farm. The budget has been estimated in such a way that 100% of the farms suitable for an activity will be able to carry it out. In all cases, a prioritisation of farms managed by women will be ensured and with the minimum established in the Gender Action Plan (30%).

Activity 2.1.5.1 Implement strategies to improve the livestock/meat and milk value chain.

- This activity will strengthen the traceability of dairy and meat products in Galapagos food systems to improve their positioning in the local market and increase their profitability at all stages of the value chain. This activity will: i) *At the production stage:* strengthen farm production processes that have a clear focus on sustainability and climate resilience; ii) *At the processing stage:* strengthen processes of manufacturing and adding value to products and foster the use of more efficient technologies that pollute less while increasing their competitiveness in the market; iii) *At the Market stage:* improve reliability in food product availability and quality and establish local systems for the fair trade between producers and consumers.
- The beneficiaries will be the same as those where silvopastoral practices will be implemented: 244 farms in medium and large-scale farms mostly devoted for cattle ranching activities across all islands.
- Mitigation co-benefits will come from: 1) the conservation and efficient use of natural resources; 2) a shift away from extensive livestock production strategies with high GHG emissions, in favor of intensive and semi-intensive production systems with lower demands of external farm inputs; 3) an improvement of the manufacturing and processing methods for meat and dairy products with resource-efficient technologies.

Activity 2.1.5.2 Implement strategies to improve the Galapagos coffee value chain.

- The 2014 Census of Agricultural Production Units suggests that coffee growing is the agricultural activity with highest income generation for farmers. Coffee production generates a cumulative gross annual income of USD 923,841, which is equivalent to USD 1,277 per hectare. There are 20 farms that produce exclusively coffee (640 Hectares) and 67 farms (3,856 Hectares) of coffee plantations mixed with other crops, distributed across three inhabited islands: Isabela, San Cristobal, and Santa Cruz. This activity will promote the local coffee market by covering the surface of Galapagos agroforestry systems with quality coffee plants. Maintaining and increasing the use of coffee has multiple effects to help adapt agroforestry systems to climate change and environmental deterioration. Coffee plants improve soil structure through roots growth and by adding to the leaf litter. Coffee also establishes a synergy with endemic and native hanging plant species, generating microclimates, and capturing water from atmospheric humidity with their branches. Furthermore, active coffee plantations prevent the expansion of invasive plant species.
- Sub-activities include enhancing coffee harvesting, mobilizing production to the local coffee agro-processing center, construction of a wet processing center, construction of a dry processing center. This action will include the 20 farms that exclusively produce coffee and 30 farms with mixed crops.

Activity 2.1.5.3 Implement strategies to improve the Galapagos vegetables value chain.

- This activity will develop micro-enterprises that add value to potential agricultural products (bananas, plantains, cassava, citrus, medicinal herbs, vegetables) from integrated production systems, which in the medium term contribute to strengthening agroecology as an official form of cultivation in the islands. Based on the premise that agroecology rightly represents the most effective and efficient way to achieve climate resilience of agriculture worldwide and especially in island ecosystems highly vulnerable to climate change, such as Galapagos.
- The actions proposed include strengthening the knowledge and norms for processing these products, constructing two agro-processing plants, and building public policies to position these products.
- The sub activities are: agro processing of Banana, Plantain and Cassava flours and chips, agro-processing of preserves and pulps of citrus fruits, pineapple and tomato and agro-processing of aromatic and medicinal herbs.
- By supplying the agro-processing plants, 408 farms (344 agricultural and 64 integral) will be direct beneficiaries. It should be noted, the prices established by the processing plant will be within the framework of the Social and Solidarity Economy and Fair Trade.

Activity 2.1.5.4 Promotion of a blue circular economy through new sustainable and socially responsible seafood enterprises.

- Previous projects have failed in their effort to improve the management and marketing system of Galapagos small-scale fisheries because technical assistance and capacity building processes have been short-term, uncoordinated, and without adequate and sustained institutional and financial support to ensure the creation of

necessary enabling conditions, to take advantage of the business opportunities offered by the Galapagos small-scale fisheries.

- Through this activity the program will create the “Galapagos Virtual Innovation Lab” (G-Lab), an inter-institutional and interdisciplinary platform that integrates and coordinates the governmental and non-governmental programs and projects for the promotion and development of sustainable fisheries. The main objective of the G-Lab is to provide long-term capacity building, knowledge sharing, and technical advice to fishers, cooperatives, associations, seafood companies, and civil society entrepreneurs, in aspects related to social innovation for climate resilience, sustainable development and circular economy. The G-Lab will be initially funded by GCF funds and long-term funding is expected to be obtained, as described in section B.6. NGOs and universities would provide technical assistance.
- Based on the results of the implementation of the G-Lab, technical assistance to local fishers and entrepreneurs will be delivered to comply with all technical, legal, organizational, and administrative requirements for the creation or consolidation of new seafood enterprises, based on principles of sustainability and social responsibility. Potential business model prototypes are described in Annex 2 appendix 2.2.

Activity 2.1.5.5 Put in place a long-term financing mechanism to improve sustainability and competitiveness of Galapagos small-scale fishing sector.

- Through this activity the Programme will establish a soft credit line for entrepreneurs within the Galapagos’ Climate Credit Line (GCCL), to foster the financial inclusion of fishers and entrepreneurs from civil society interested in adopting climate resilient and sustainable fishing practices in exchange for receiving financing for the development of ventures with principles sustainability and social responsibility that help improve the productivity, competitiveness, and social inclusion of fishers in the financial system. This line will be part of the credit line that will be managed by the Public Bank CFN and / or CONAFIPS through local banks present in Galápagos.
- One of the main challenges to improve the productivity, sustainability and competitiveness of Galapagos small-scale fishing sector is obtaining long-term financing. Through the proposed activity, the program will establish a soft credit line, to those companies or individuals that show an attractive investment plan, which would be developed with technical assistance provided by the G-Lab described in the previous activity.
- The eligibility conditions for accessing loans for sustainable fishing practices are described in the table below.

Table 8. Eligibility conditions for accessing credit for investment in sustainable fisheries practices.

Condition	Description
Beneficiaries	Fishers and entrepreneurs from civil society willing to adopt sustainable fishing practices, in exchange for receiving financial support for the development of seafood ventures based on sustainability and social responsibility principles that help improve the productivity, competitiveness, and social inclusion of fishers in the financial system.
Eligible investments	To the extent feasible, business plans for pilot seafood ventures should incorporate and demonstrate their alignment with three principles. <ul style="list-style-type: none"> • Economic efficiency: ensure productivity and profitability of fisheries, particularly a strong value proposition for investment under prospective pilot operations. • Social equity: promote positive social welfare outcomes for beneficiaries and effective distribution of wealth from enhanced fisheries, including income and livelihood opportunities, development of value-added products, and market access and diversification, recognizing the key role of women in fisheries value chains. • Biodiversity conservation and ecosystem health: reduce the ecological impact of fishing on marine biodiversity and ecosystems by minimizing fishing pressure over commercial and protected species.
Financing thresholds	From USD 10,000 to 60,000
Minimum co-financing by the beneficiary	10%
E&S category	B or C (category A is not eligible)

Outcome 2.2 Marine and terrestrial ecosystems are under effective restoration schemes.

Output 2.2.1 *Increased area of Marine High Ecological Value Areas (HEVAs), under restoration schemes taking into account potential climate change scenarios.*

Activities under this output will be executed by WWF with GCF non-reimbursable resources. In the case of Activity 2.2.1.3, loans will be provided through the Galapagos' Climate Credit Line (GCCL) through CFN and / or CONAFIPS and local banks.

Activity 2.2.1.1 Strengthen marine biosecurity programs in the GMR, to prevent and control marine bioinvasions by Nonindigenous Species (NIS) that could proliferate due to the effects of climate change.

- Invasion science and management solutions will be mobilized to protect, empower, and strengthen the Galapagos biosecurity program, and the public and research institutions involved, to prevent and reduce the expected impacts of marine invasive species related to climate change scenarios.
- Invasive species globally produce damages estimated at more than 5% of global GDP. Invasive species have devastated food production systems around the world, collapsing fisheries. Invasive species also have significant impacts on biodiversity. Preventing the introduction of new alien species through biosecurity is the most cost-effective strategy, rather than managing them once they become established.
- Although current biosecurity actions, led by the Agency for Regulation and Control of Biosecurity and Quarantine for Galapagos (ABG) and GNPD, are superior to many other countries, in the ETP region and the world they only focus on marine NIS being introduced by marine traffic and not by natural marine dispersal. Thus, it is necessary to improve biosecurity protocols and pathway management procedures considering future climatic scenarios, along with training and equipment. These are urgently required to minimize the risk of introductions of marine NIS that have the potential to significantly impact biodiversity and livelihoods in the archipelago.
- This activity will address a major driver in biodiversity loss by (a) creating risk analysis and ranking systems for biosecurity, (b) create effective Early Detection and Rapid Response (EDRR) protocols to diminish new NIS invasions in the marine environment and (c) create an alert system to announce new incursions of marine invasive species in the GMR. This will allow for rapid detection of threats, improve coordination between local stakeholders and authorities, and will develop both an informal and formal detection network and engage the public through citizen science. Complementally, the program will implement a regional outreach campaign to showcase and promote the replica of the GMR NIS Alert System and EDRP, in other ETP region marine protected areas (MPAs). WWF will engage GNPD as a procured party/service provider to implement the monitoring protocols with support of the FCD and integrated to the GNPD management procedures.

Activity 2.2.1.2 Restore high ecological value coral reefs through coral planting and exclusion areas, to enhance their ecological role in the GMR.

- This activity will restore coral reef ecosystems and strengthen the controls of bioerosion and coral bleaching in critical High-Ecological Value areas (HEVAS) of the GMR.
- Corals in Galapagos have suffered (98% of damage) due to bleaching events as a result from the increased sea surface temperature (SST) (Glynn, 1994; Lessios et al., 1983; Robinson, 1985) during past strong El Niño events (1982–1983, 1997– 1998). Most coral species present within the GMR, such as *Porites lobata* and *Pavona gigantea*, show the same responses to temperature change as most corals worldwide, with an upper temperature limit of 30°C before bleaching begins. Over the past two decades, SST within the GMR had a mean absolute increase of 1.2 °C from 2002 to 2018. This estimate is higher than the mean warming estimates for the Equatorial Pacific over the last 40 years (0.4°–0.8°), and, critically, greater increases are expected in this region due to global warming (Paltan et al. 2021). Future climatic scenarios (RCP 4.5 and 8.5 for the year 2040) predict a mean sea temperature at a depth of 5 m of 27.5 °C and 28.62 °C for the Northern and Far Northern bioregions, respectively. Further, sea temperature within the GMR reached 30°C in April 2033 under RCP 8.5, and the projections for RCP 8.5 the average temperature in March and April will surpass that threshold (See Appendix 2.3, section 4.1). In addition, changing current systems can also have large impacts upon the ecology of a marine system such as changes in larvae dispersal (Cetina-Heredia et al., 2015). The particle tracking model developed for the year 2040 allows for further visualization of the connectivity between islands due to larval dispersal. At a depth of 5 m for both RCPs there is a clear drop-off by 2040 in the connectivity between populations of coral species among the main islands. This is likely due to increased current magnitude which drags the larvae out of the reserve into the open ocean, preventing them from settling. Furthermore, there are fears that climate-linked expansions might encourage the development of devastating biological trajectories, like the appearance of invasive species [19] and the emergence of epidemic diseases. The slow recovery of these coral reefs is particularly alarming since climate change impacts are expected to exacerbate coral habitat loss in the GMR due to thermal stress (Banks et al., 2016).

- At the same time, it has been discovered that among coral communities, there are some species that show a much higher tolerance than others to climate change and bleaching (Hughes et al., 2010; Oliver and Palumbi, 2011). This resilience enables communities to withstand disturbances and regain their functions and dominance in the environment (Hughes et al., 2007, Glynn et al., 2018). Therefore, it is critical to begin with experiments aimed at determining the feasibility of planting coral and conduct experiments to increase survival and reduce mortality rates. Different experimental conditions will be used to measure the optimal temperature, light, and substrate for corals to grow on. Temperature and light can determine the makeup of the initial colonizers while sediment that accumulates on artificial substrate and affect settlement of coral (Spieler et al., 2001). The restoration of coral reefs using this approach have been tested in almost two decades in a number of coral reefs worldwide, with more than 86 coral species that were successfully transplanted (Rinkevich 2014). Further, coral transplant investigations in Hawaii indicate that when corals are transplanted to areas protected from the waves, which present conditions like those of their place of origin, they can have a high survival rate (Rodgers et al., 2017). The transplantation of corals in degraded reefs has yielded successful results in the Philippines, where fragments of corals attached to the substrate have doubled in size and the diversity of reef fish has increased at the transplant sites in a year and a half (Gómez et al., 2014)
- The Ecuadorian government through the GNPD and the Charles Darwin Foundation started in 2000 to perform comprehensive baseline surveys of the occurrence and condition of coral communities and monitor the health of coral ecosystems across the GMR (Danulat and Edgar, 2002; Banks et al., 2016; Riegl et al., 2019a). Although the current GMR zoning aims to protect some of the Galapagos coral reefs from fishing and tourism activities, no active management measures of their ecosystems were implemented until 2021.
- Acknowledging the potential climate change impacts in these ecosystems, in September 2021, the DPNG started a 2-year small pilot project for restoring corals in a very specific site: Punta Estrada. The program will build from the results of this pilot project, to develop an extensive coral restoration program for the GMR, operated by the GNPD with support of the Charles Darwin Foundation.
- A coral restoration plan will be implemented in close collaboration with technicians from the GNPD and coral experts from the Nova Southeastern University (NSU) in the USA. To avoid degradation and protect the coral reefs this module will go hand by hand with Activity 2.2.1.3 to adopt better diving practices.
- Specific actions are: 1) Produce one update assessment of the abundance and distribution of coral reefs and their associated biodiversity in the GMR considering current and future climate scenarios; 2) Transplant corals from the nursery developed in collaboration with the GNPD, to at least 1 degraded site in each island (Darwin, Wolf and Floreana); 3) Design and implement a removal program for sea urchins to assess vulnerability by conducting experiments; 4) Mainstream the participation of the tourism sector in conservation and restoration programs carried out by the GNPD in key touristic coral reef sites.

Activity 2.2.1.3 Reduce the impact of diving, anchoring and pollution related to tourism operations in selected marine HEVAs, to enhance ecosystems resilience and adaptive capacity to the effects of climate change.

- The slow recovery of coral reefs is particularly alarming since climate change impacts are expected to exacerbate coral habitat loss in the GMR, due to thermal stress. Hence, non-harmful tourism practices on marine ecosystems, and particularly on corals, need to be implemented in order to increase the resilience of coral reefs to natural and anthropogenic impacts. This activity aims to reduce the environmental impacts associated with marine tourism (diving, anchoring) and pollution associated with tourism activities. Technical Assistance will be funded by the GCF grant executed by WWF, and loans will be facilitated to boat operators through the GCCL.
- The specific actions under this activity are: a) Design and implement a conservation categorization system and management protocols for diving visitor sites; b) Development and adoption of Diving Tourism Best Practices Toolkit co-created with dive tourism stakeholders; c) Reinforce the control and monitoring of pollution levels from boats; d) Develop a Decision Support System (DSS) portal for policymakers, with information regarding marine tourism, including impacts from the tourism activities and the health of sites; e) Implement agreements with tourism stakeholders for replacing anchoring procedures and technologies with fixed-mooring buoys signaling and the Digital Positioning Systems (DPS).
- For the promotion of the DPS, workshops will be held targeted to diving liveaboard cruises and will derive in an installation plan agreed with GNPD and one third (3-4) of diving cruises operating in the Galapagos selected based on their willingness to engage, DPS specifications and DPS expert advice. Program will assist cruise companies in the access to low interest loans to acquire the technology and will provide technical assistance for the adequate installation of the DPS.

- The adoption of these good practices by tourism operators will be linked to the certification program proposed by the program under component 3.
- Sub-activities a) to d) will be financed by a GCF grant. Subactivity e) will be part of the credit line that will be managed by the public national development bank CFN and / or CONAFIPS through local banks present in Galapagos. The 10 vessels that have expressed interest in an anchoring system have the financial capacity to pay a loan for this system. The eligibility conditions for accessing loans for investment in Digital Positioning Systems (DPS) are described in the table below.

Table 9. Eligibility conditions for accessing credit for investment in Digital Positioning Systems.

Condition	Description
Beneficiaries	Diving cruises operating in the Galapagos selected based on their willingness to engage
Eligible investments	Digital Positioning Systems (DPS).
Financing thresholds	From USD 10,000 to 45,000
Minimum co-financing by the beneficiary	20%
E&S category	B or C (category A is not eligible)
Other criteria	Boats meet minimum required engine and electric technological standards. Operators' capacity to finance further maintenance of equipment, and signature of a commitment letter with the GNPD and Navy Operator availability of human and time resources to be trained in related aspects. O&M Plan developed.

Activity 2.2.1.4 Improve surveillance and control measures for adequate sea turtle nesting and foraging in the GMR, to counteract potential effects of climate change in their reproductive success.

- Climate change poses a serious threat to sea turtles (Cheloniidae) as their terrestrial reproductive phase is only successful within a limited range of environmental and physical conditions. Expected increases in temperature may result in highly female-biased populations and lower hatchling survival rates (Hawkes et al. 2007; Fuentes et al. 2009, 2010). These conditions are likely to become less optimal as climate change progresses. Besides, nesting habitats (i.e., sandy beaches), are increasingly under threat as a result of rising sea levels. Projected sea level rise may cause egg mortality and loss and/or alteration of nesting beaches (Fish et al. 2005, 2008). As nesting area diminishes turtle densities may increase, resulting in increases in nest destruction, predation and infection rates (Girondot et al. 2002; Tiwari et al. 2006). Thus, sea turtle adaptation depends at least in part on the effectiveness and adaptiveness of management and conservation strategies at mitigating climate change impacts and reducing anthropogenic stress (Hamann et al. 2010). Following the recommendations proposed by Fuentes et al. (2011), specific EBAs actions have been proposed to increase Galapagos' marine turtles adaptive capacity that varied from habitat protection to more active and direct manipulation of nests and the nesting habitats together with fill critical knowledge gaps to aid the trial and implementation of the proposed EBAs.
- This activity, funded by the GCF grant executed by WWF, proposes to tackle effects of climate change by (1) directly manipulate turtle's nests to protect them from the direct impacts of erosion and flooding at most important nesting sites of the archipelago, (2) reduce sea turtle mortality due to anthropogenic causes, more specifically boat strikes, and (3) monitor and assess key habitats within the GMR to assess the success of the measurements applied.
- This activity will ensure that sea turtles remain in their role of maintaining the habitat for fisheries species that are important for the local economy of the archipelago. Additionally, since sea turtles are the second most sighted species during recreational diving activities within the GMR, and therefore its maintenance is essential for Galapagos nature-based tourism.

Output 2.2.2 *Increased area of native forest of high ecological value, under restoration schemes, to secure environmental services in the face of climate change.*

- This activity, funded by the GCF grant executed by WWF, seeks to increase the resilience of key terrestrial ecosystems through rehabilitation and restoration approaches, while strengthening the ongoing invasive species control program led by the GNPD. This proposal focuses on the landscapes of the humid highlands of Santa Cruz, San Cristóbal, and Isabela. Specifically, it addresses areas of high hydrological and ecological importance that house the last remnants of *Scalesia* forests. Overall, the implementation area covers ~45,000 ha in total, with an elevation range from 200 to 700 m.a.s.l.
- Please refer to Annex 2 – Section 12.5.2.3 for further details on the areas included, the ecosystem services they provide, and details of the actions to be implemented, as well as O&M plans.

Activity 2.2.2.1 Strengthen control programs for invasive plant species, especially blackberry, in protected and agricultural areas, based on projected dynamics of their expansion under climate change scenarios.

- This activity aims to limit the impact of invasive species, the expansion of which will be enhanced by climate change.
- Invasive plant species will be contained through the following approaches: (1) Limiting the distribution and therefore impacts of invasive species on native and endemic species and (2) Preserving remnant forest habitats from further degradation through invasive species control. Priority areas, defined as areas with high hydrological and ecological importance, have been identified where invasive plant species control is proposed see Annex 2 appendix 2) The area controlled will be a) left to regenerate on its own, allowing ecological succession to take place (passive restoration) or b) restored with native species (Activity 2.2.2.2).
- On the one hand, the control programs for invasive plant species will be strengthened in areas within the Galapagos National Park, with emphasis on guava and blackberry. Activities proposed include 1) verifying and adjusting guava and blackberry climate change distribution models, 2) have 750 ha within the GNP under innovative control schemes where dispersal of guava and blackberry can be contained, and 3) strengthen the Terrestrial Invasive Species Program of the GNPD for long term control under climate change scenarios.
- On the other hand, invasive species management and control measures will be implemented in farms. Specific actions include; 1) assessing the conservation status of 750 ha of *Scalesia* forest fragments in the agricultural area, 2) freeing areas from invasive species to make them available for agricultural production, strengthening active agricultural practices (such as improvement of cattle grazing and agroforestry systems management) in 750 ha to control invasive species in collaboration with MAG, GNPD and ongoing civil society/private restoration; and 3) promoting new land-use strategies that help preserve and promote native biodiversity, while at the same time keeping invasive species at bay.

Activity 2.2.2.2 Restore key remnant forest fragments inside and outside the GNP, to enhance ecosystems adaptive capacity and provision of environmental services.

- This activity will restore and conserve key remnant forest fragments on farms and in GNP areas and raise awareness of the importance of ecosystem services. This activity will be developed along three main lines.
- On the one hand, the restoration of key remnant forest fragments within the Galapagos National Park will be carried out. The conservation status of 750 ha of *Scalesia* forest fragments will be assessed, GNPD nurseries will be strengthened on the three islands to provide seedlings of native species, and 300,000 native plants in key restoration areas, and 750 ha of key *Scalesia* forest fragments will be established under restoration plans.
- On the other hand, the conservation and restoration of key remnant forest fragments on farms will be promoted. This includes offering incentives to farmers to carry out restoration actions, increasing connectivity between key forest fragments, and restoring 750 ha of farmland with *Scalesia* spp. and other native tree species with a total of 300,000 individuals planted.
- Finally, outreach activities and workshops will be conducted with the local community on the importance of ecosystem services and how they benefit livelihoods. Workshops and meetings will be held with farmers and local authorities to build capacity and disseminate project results. Publications and other communication materials will also be prepared to show the progress of restoration activities.

Activity 2.2.2.3 Monitor success and impacts of invasive species control and restoration measures.

- Predicting future ecosystem dynamics depends critically on an improved understanding of how disturbances and climate change have driven long-term ecological changes in the past. Permanent plots allow for the characterization and modelling of active ecological processes. Since these processes can be spatially autocorrelated (e.g., pathogens, insects, windthrow, etc.), the plots provide the context to analyze how these climate and human-driven processes are changing vegetation communities and ecosystem dynamics. Long term data from permanent plots

can be used to determine how annual climate variation affects each agent of vegetation change, as well as to assess and understand the effect restoration actions have on the system.

- Through this activity, restoration success will be evaluated with the help of permanent plots previously established and a vegetation mapping with drones and high-resolution satellite imagery, in close cooperation with the GNPD and other relevant stakeholders. Applied control techniques will be constantly monitored and evaluated to ensure high efficacy, while at the same time minimizing negative impacts on non-target species. The information produced through the monitoring program will inform the GNPD via co-implementing monitoring and restoration actions, training, and outreach. In addition, the project will consolidate a data management and information system where all the information will be uploaded. It is envisaged the information system will inform restoration actions based on an adaptive management scheme.
- Complementally, to document restoration success and changes in the plant and animal communities of the forest fragments, a baseline will be established for different species on Santa Cruz, San Cristóbal and Isabela prior to the onset of restoration actions.

Component 3 - Sustainability mechanisms for climate resilience and low emissions livelihoods

Outcome 3.1 Strengthened response capacity of key institutions, local livelihoods, and population from Galapagos.

Output 3.1.1 Tools and financial mechanisms established for the sustainability of the programme's actions.

Activities under this Output will be executed by WWF with GCF non-reimbursable resources.

Activity 3.1.1.1 Implement an ecotourism certification scheme to adopt best practices across the tourism value chain.

- An ecotourism certification structure will be designed and implemented in compliance with standards for climate-resilient development for the Galapagos tourism sector, based on climate change mitigation and adaptation measures and good tourism management practices, which will contribute to strengthening the competitiveness of the islands' tourism destination. This activity aims to overcome the obstacles faced by the tourism sector related to comply with requirements and to face the cost of the certification (see Annex 2 appendix 3.1). Most of the actors in the tourism sector are small and local family businesses that are suffering from a major economic crisis as a result of the pandemic; in the specific case of the boat operators, most of them have good environmental practices as required by the GNP. However, these practices do not include measures with a climate perspective, e.g., low-emissions solutions.
- Two key aspects of the certification proposed are: 1) it will be sought to be managed by the local authorities and thus it is expected to offer much lower costs to the tourism actors; 2) the technical assistance will include supporting the tourism actors to access loans from the GCCL to fund the costs related to the certification.
- The activity will begin by identifying and training local auditors on the concepts, standards, and procedures for ecotourism certification. A socialization will be carried out and finally a certification pilot will be implemented with prioritized companies. This pilot will offer: i) audits; ii) an assistance plan to incorporate improvements and corrective measures with the support of experts and focused on the needs and priorities identified for each enterprise; iii) evaluation of results to determine whether the objectives established in the proposed pilot were achieved.
- Finally, a final design of the certification program will be achieved, which will establish the standards that will help distinguish and differentiate the ecotourism enterprises established and operating in the Galapagos Islands.
- It is expected that this certification will become an original tool endorsed by the agencies that support sustainable development and climate change policies.

Output 3.1.2 The Galapagos community is mobilized towards a transformative climate action.

Activity 3.1.2.1 Strengthen the educational system of Galapagos to provide quality education to face climate change and promote sustainable development.

- A comprehensive educational approach to climate change will be integrated within the educational system of Galapagos (basic education, high-school and third level education), that includes innovative and pertinent education models, approaches, methodologies, and tools.
- Through Education for Sustainable Development (EDS), experiential and place-based education approaches, this activity aims to promote and sustain the development of significant teaching-learning experiences to strengthen

knowledge, attitudes and skills of children and youth to be better prepared to face climate change and contribute to a resilient and self-sufficient Galapagos system.

- The sub-activities are described in Annex 2 section 12.6.1, and include: a) Establish a Board of Education for Climate Change; b) Integrate quality climate change education into the existing professional development program of the Ministry of Education in Galapagos for education leaders and teachers, through intensive training and the development of pedagogical resources to implement the contextualized curriculum; c) Implement climate-friendly practices in schools to promote pro-climate attitudes and climate literacy; d) Implement community engagement and experiential learning programs for students of basic education and high school, connecting to mitigation and adaptation initiatives promoted by the Program; e) Design and implement technical education programs for youth, to address the labor markets local demand in areas related to Galapagos sustainable food value chain (agriculture and fisheries), and energy efficiency and renewable energy (centralized and distributed), within a climate change and post-COVID-19 context.

Activity 3.1.2.2 Strengthen knowledge and foster engagement of the general public and key stakeholders on climate change impacts and solutions.

- This activity aims to facilitate information, practical knowledge, tools, and outreach opportunities, to encourage the local and international communities' interest, support and active involvement in addressing climate change.
- Climate change communication will be integral and fundamental to the successful implementation of the Programme in the short and medium term and will play an important basis for promoting deep engagement with climate change adaptation and mitigation actions in the long term. Through a social and behavioral change approach (see Appendix 3.4 on Behavioral Change), this activity aims to develop a comprehensive knowledge management, communication and outreach program for Galapagos focused on climate change.
- The sub-activities are described in Annex 2 section 12.6.1, and include: a) Develop a knowledge management and outreach digital platform that makes updated and relevant information, knowledge, lessons, and resources regarding climate change in the Galapagos, understandable and accessible to the public and key stakeholders (targeting local, national and international audiences); b) Develop and implement a communication strategy based on innovative approaches and methods, to strengthen knowledge and foster commitment for the adoption of climate change mitigation and adaptation measures; c) Develop a behavioral change campaign aimed at consumers of the food system in Galapagos, focusing on those behaviors that can be effectively addressed by communications interventions. With the aim of fostering global connections and contribute to the search of scalability and replicability of the Programme's actions, the activities include dissemination events with strategic partners (e.g., the nature-based tourist industry, other islands systems, other territories dependent on nature-based activities), in the form of workshops, seminars, and peer-to-peer learning exchanges.

Activity 3.1.2.3 Facilitate non-formal education and mobilization opportunities to encourage youth and local community empowerment on climate action.

- Action-based, non-formal educational and outreach experiences will be implemented to foster youth and community empowerment, engagement, and leadership on climate action, by providing them with practical knowledge, tools and skills, and most importantly, the opportunity and agency to translate those into climate action.
- Through lifelong learning, action-oriented and experiential education approaches, this activity aims to prepare youth and adults for individual and collective action towards climate change by developing the necessary competencies for deep engagement and active citizenship.
- The sub-activities are described in Annex 2 section 12.6.1, and include: a) Develop a capacity building program for non-formal facilitators (government officials, NGOs, community leaders) to increase their understanding and practical application of climate change approach into communication, community outreach and non-formal education interventions; b) Develop immersive field-based and non-formal educational experiences for different audiences, to connect the local community with the natural environment and climate change mitigation and adaptation initiatives; c) Create a permanent working platform that brings together existing organized groups and citizens towards collective climate action, through capacity building and the implementation of pilot youth and community-based projects.

Output 3.1.3 Strengthened institutional and regulatory systems for climate responsive planning and development.

Activity 3.1.3.1 Mainstream climate change into regulations and planning instruments and define a financial sustainability strategy.

- This activity will be executed by CAF with its own grant resources. It will be developed in three steps:

1) It will begin by *strengthening legal instruments* in Galapagos for mainstreaming climate change in policies and regulations related to tourism, agriculture, fisheries, and ecosystems. This task will involve conducting a diagnosis of legal tools, developing specific proposals for Galapagos stakeholders, and providing accompaniment and technical assistance to the legal teams of the relevant Galapagos institutions.

2) The *Climate Action Plan* for Galapagos will be designed in alignment with the actions and lessons learned developed during the implementation of the present Programme. The stages of the design of this plan will include diagnosis, formulation, socialization, and gender-sensitive citizen participation. Having this plan will guarantee the anchoring of resources and state budget.

3) In this sense, the *Financial Sustainability Strategy* for the Plan will be developed, which will include the design of financing mechanisms to make it operational and sustain its actions in the long term. A technical accompaniment is foreseen to put it into operation so that in year 3 it starts to be implemented and to collect funds and in year 5, when the Programme comes to an end, the Plan and its mechanisms will be fully operational. Through this activity, discussions and working sessions with the Government will be encouraged to mobilize existing or new resources for climate action. It is important to bear in mind that pre-allocation of resources is not permitted in Ecuador under current legislation, and that current policy does not support the creation of a multiplicity of funds throughout the country, but rather promotes the centralization of the management of public funding. However, this Programme will seek the commitment at the central level (e.g., Ministry of Finance) to improve the conditions of financial sustainability of the resilient and low-carbon actions promoted in Galapagos. The technical assistance resources will be used to assess the potential use of the savings obtained with the project (i.e., fuel that will not be imported thanks to the renewable energy investments), to evaluate the channeling of incentives, tariffs, fees (i.e., potential raising of mandatory tourist entrance fees or optional contributions), concessions, opportunities for the carbon economy and the blue economy to design options, and to constantly feed the political-institutional hub that manages the financing mechanisms to influence the allocation of resources. The choice of financing mechanisms will seek to ensure that both private tourism entrepreneurs and tourists contribute financially/compensate or at least cover the subsidy they currently receive from the state. Please refer to section B.6 for further details.

B.4. Implementation arrangements (max. 1500 words, approximately 3 pages plus diagrams)

44. CAF will be the Accredited Entity of the Programme, and CFN, CONAFIPS, FAO . Conolophus SPV and WWF will be the Executing Entities. CAF will also hold the role of EE for three activities, 1.1.1.1, 1.2.2.1 and 3.1.3.1, and in the direct supervision of the loan eligibility of the GCCL. Below, a summary of the experience of the AE and the EEs is presented. Please refer to Annex 2 section 14 for further details on the track record and the capacity of the AE and the EEs to deliver. Please refer to Annex 2 section 12.7 for a summary of the correspondence between activities, financial mechanisms, Executing Entities, and the main local stakeholders that will partner for the execution.

CAF, Development Bank of Latin America

45. CAF is a multilateral development bank that promotes a sustainable development model through credit operations, non-reimbursable resources, and support in the technical and financial structuring of projects in the public and private sectors of Latin America. CAF is a Regional Direct Access accredited entity to the GCF.

46. Over 28% of CAF's portfolio includes green finance. Such projects have focused on energy efficiency, renewable energy solutions, sustainable transport and climate change adaptation through disaster risk reduction and ecosystem services.

47. CAF's large track record of energy and sustainable land use projects and programmes, including the detail of its GCF and Adaptation Fund's project and programme portfolios and the projects financed in Galapagos in particular, is described in Annex 2 section 14. CAF's capacities for implementing environmental and social safeguards are described in Annex 6.

CFN - National Financial Corporation B.P., Ecuadorian Development Bank

48. CFN is a public financial institution, whose mission is to promote the development of the productive and strategic sectors of Ecuador, through multiple financial and non-financial services aligned with public policies. The institutional action is framed within the guidelines of the National Government's programs aimed at stabilizing and dynamizing the economy, becoming a decisive agent for achieving the reforms undertaken.

49. The CFN B.P., during its institutional trajectory, has consolidated its credit activity, reiterating the commitment to continue serving the productive sector with special attention to the micro and small businesses, supporting them additionally in training programs, technical assistance, and the signing of inter-institutional agreements for the promotion of production, seeking to improve and highlight business management as a source of competitiveness in the medium and long term.

CONAFIPS - National Corporation of Popular and Solidarity Finance

50. The Corporation's basic mission will be to provide financial services, subject to the policy established by the Interinstitutional Committee, to the organizations covered by the Organic Law of the Popular and Solidarity Economy, under second-tier financial and credit services mechanisms; to this end, it will perform the functions set forth in its bylaws.

51. CONAFIPS grants loans to organizations in the popular and solidarity-based financial sector, i.e., savings and credit cooperatives, mutuels, savings banks and community banks. The objective of CONAFIPS, by providing financing to these organizations, is to strengthen them so that they, in turn, will be able to provide credit to entrepreneurs in the popular and solidarity economy.

52. CONAFIPS has the following financial products: MicroEfectivo CONAFIPS, My House Credit CONAFIPS – AFD, Migrant Support Credit, Reactivate Ecuador and Extended MicroAcumulation

53. CONAFIPS has approved the programme with CAF signed in 2021 *“Financial inclusion program through savings and credit cooperatives, with a gender and green business approach, within the framework of the crisis generated by COVID-19 and the subsequent economic reactivation.”*

FAO

54. The Food and Agriculture Organization (FAO) is a specialized agency of the United Nations that leads international efforts to defeat hunger. With over 194 member states, FAO works in over 130 countries worldwide.

55. The GCF Board's key investment priorities target many challenges directly relevant to FAO's mandate and work such as reducing emissions from deforestation and land use and enhancing the resilience of people's livelihoods and food security. FAO is accredited with the GCF.

56. FAO's portfolio related to climate change has expanded to more than 300 programmes and projects that address the sector's responses to climate variability and extreme events in the agricultural sector. As per December 2020, FAO has 13 projects approved by the GCF on adaptation, mitigation, and cross-cutting initiatives.

57. FAO has provided technical assistance to Ecuador since 1957. During these years, FAO has implemented hundreds of projects at the national and local level. Please see in Annex 2 section 20 for further details.

WWF

58. WWF is among the world's leading conservation organizations, with more than a half century of experience and a presence in over 100 countries. WWF was created on April 29, 1961, and since then, has invested \$10 billion in more than 13,000 projects around the world. WWF's experience with the GCF is based in its role as an Accredited Entity.

59. WWF started working in Ecuador in 1962 when it supported the establishment of the Charles Darwin Research Station in Puerto Ayora, Galapagos. Since then, WWF has supported a wide variety of projects in Ecuador and in the Galapagos in particular, having supported the creation of the Galapagos Marine Reserve (RMG), several marine and terrestrial areas management and the implementation of communications and education campaigns on best practices on ecotourism, efficient energy consumption, waste management, food waste, among others. Please refer to Annex 2 section 20 for further details on past and present projects.

60. Governmental Partners will be the Government Council of the Special Regime of Galapagos / CGREG, the Galapagos National Park Directorate / GNPD, the Ministry of Agriculture and Livestock / MAG, the Ministry of Energy and Non-Renewable Natural Resources / MEyRNRNR, Ministry of Tourism and MinTur. Please refer to Annex 2 section 5.9 for further details on the Institutional framework. These governmental entities have been involved in the structuring and formulation of the Funding Proposal and have presented letters of interest to the proposal and they will be engaged by the EEs (CAF, CFN, CONAFIPS, FAO, WWF) as procured parties/service providers to implement some of the Activities. The engaged Governmental Partners will not be Executing Entities for the purposes of this Programme. They will be participating and safeguarding the interests and application of the local government legal framework taking into account that this is a public sector Programme. They are part of the Sectoral Technical Committees. Please refer to Annex 2 section 14.2 Implementation Arrangements for further precisions on their participation.

61. Technical Advisors: The Programme will work with local organizations which have technical knowledge and can technically support the development of the Programme by virtue of their role in the management and development of knowledge for Galapagos, as well as their technical capacity in hydrological modeling and information generation.

Conolophus SPV

62. A Conolophus SPV will be established for the purposes of implementing the Conolophus Project sponsored by Gran Solar and TotalEren, the concessionaire that won the public tender for the Conolophus Project.
63. Gransolar is a Leading Ecuadorian company founded in 2012 by a visionary group of investors who believe in the need to generate renewable energy in the country. Since 2014 the company owns the largest solar plant in Ecuador. Gransolar's goal is to transforming Galapagos into a microgrid that will make the islands the most positively impacted by-renewable-energy territory in the world. Gransolar SA is promoting a project for a Microred Renewable Energy Central & Photovoltaic 14.5 mw of photovoltaic + 39.9 mw / h batteries and their associated systems. In the province of Galapagos, its purpose is framed within the Objectives of the National Development Plan that motivates that in 2021 the electricity generation from renewable energy sources should be increased to 90%.
64. Total Eren was created in 2012 by Pâris Mouratoglou and David Corchia, both of them having a significant track record in the renewable energy sector. As an Independent Power Producer (IPP), Total Eren develops, finances, builds and operates over the long-term renewable energy power plants globally. Total Eren's teams are multidisciplinary and display a perfect grasp of all stages of development of a renewable energy project, be it solar, wind, or hydro. Thanks to its unique track-record in developing new projects and new geographies, Total Eren today owns more than 3,500 MW* of renewable energy assets in operation or under construction and has over 4,000 MW* of projects under development spread over the five continents. In April 2019, Total Eren acquired NovEnergia Holding Company ("NHC" or "NovEnergia"), thereby diversifying its project portfolio and strengthening its presence in southern Europe in particular.

Governance of the Programme

65. The Programme will have two levels of coordination:
66. A level of strategic coordination that will include a Steering Committee and three Technical Committee, and
67. An operational structure of the program that will be organized according to each of the 3 components, which in turn will meet under a transversal coordination of the program.

Strategic coordination level

Programme Steering Committee

68. Maximum decision-making authority, consisting of high representatives of CAF, the Ecuadorian Ministry of Environment, Water and Ecological Transition (MAATE) and the Governing Council of the Special Regime for Galapagos (CGREG). This Steering Committee will hold meetings every 6 months. It will be in charge of:
69. Verifying compliance of Programme implementation.
70. Reviewing and approving the consolidated Annual Operating Plan.
71. Reviewing and approving the consolidated Annual Procurement Plan.
72. Reviewing and approving the Annual Performance Report (APR) according to the GCF's format.
73. Review and approve the Semi-Annual Performance Report (S-APR)
74. Review and approve Major Changes according to the GCF's Policy on Restructuring and Cancellation
75. Review and approve the mid-term and final evaluations of the Programme, provide comments and recommendations.
76. Be informed on the progress of the APR to be submitted to the Green Climate Fund.
77. Review and approve the TORs of the Programme Management Unit (PMU).
78. Invite WWF, CFN, CONAFIPS, FAO as observers in the selection process of the Programme Management Unit. Hold face-to-face or virtual meetings at least twice a year on a semi-annual basis. The Steering Committee may be extraordinarily convened by the chair or at the request of any of the members.
79. The Chair of the Steering Committee will alternate annually between the MAATE and CAF through their designated representatives.

80. Decisions of the Steering Committee shall be made in accordance with the rules that ensure management for development results. The decision shall be made by consensus.
81. Arbitrate conflicts that may arise during implementation.
82. Provide strategic guidance aligned with the national climate change policy and local actions.

Sectoral Technical Committee

83. Committee responsible for presenting execution results to the Steering Committee. The Sectoral Technical Committee is made up of the Climate Change Secretariat at the MAATE, the Management and Promotion Division of Energy Efficiency Projects and the Expansion of the Generation and Transmission of Electrical Energy Division, and ElecGalapagos from the MEyRNNR, the Insular Zonal Division of the Ministry of Tourism, the Planning and management of the territory Division of the CGREG, the Galapagos National Park, the Provincial Agricultural Division of Galápagos of the MAG, the Climate Change Unit of CAF as Accredited Entity of the Programme, the Programme coordinators, CFN, CONAFIPS, FAO and WWF as Executing Entities.

The Sectoral Technical Committee is in charge of:

84. Delivering the information to consolidate the Annual Operational Plan.
85. Delivering the information to consolidate the Annual Procurement Plan.
86. Delivering the information to consolidate the Semi-Annual Performance Report (S-APR) and provide recommendations.
87. Delivering the information to consolidate the Annual Performance Report (APR) and provide recommendations.
88. Delivering the information in case of requiring Major Changes according to the GCF's Policy on Restructuring and Cancellation.
89. Delivering the information of the Programme's performance.
90. Delivering the information required for mid-term and final output assessment.
91. Delivering the information on a semi-annual basis.

Operational structure of the Programme

92. The operational structure of the Programme will be based on the coordination of the Accredited Entity and the Executing Entities.

CAF's functions as Accredited Entity

93. CAF will hold the role of the Accredited Entity of the Programme, based on its experience of successfully carrying out similar Programme activities in the Latin American region. The existence of a central unit, within CAF's sphere, will allow to guarantee compliance with technical standards and a close monitoring and follow-up by CAF to ensure consistent levels of progress as well as a regular flow of information where progress of activities can be contrasted against the plan. This allows taking corrective actions if necessary, during the Programme's execution, ensuring it is cost-effective.
94. The external auditing and the incorporation of observations and lessons learned are guaranteed. All execution will be conducted based on an Operations Manual arising from any such agreement as CAF may enter with the GCF, which will respect all understandings reached.
95. CAF will maintain day-to-day oversight responsibility for Programme supervision and have direct responsibility for fulfilling the duties and obligations of a GCF Accredited Entity. It will be responsible for financial management and accountable for the use of GCF resources under the Programme. It will provide technical and administrative backstopping to the Programme Management Unit (PMU) (see below) to ensure results-oriented management and proper administration of funds. It will maintain Programme accounts, monitor resource mobilization of baseline and co-finance. Financial transactions will be subject to annual audits undertaken by internationally certified auditors. The AE functions involve the provision of monitoring and evaluation services as well. CAF will have permanent coordination with Programme staff and dialogue with Programme stakeholders.
96. CAF as the accredited entity will review and approve Annual Work Plans (AWPs) based on consultations with EEs and other necessary parties in the programme.

The Executing Entities functions

97. CFN, CONAFIPS, FAO, WWF, Conolophus SPV and CAF will be the Executing Entities of the Programme. Please refer to Annex 2 section 12.7 for the detailed correspondence of the Programme activities and the EE that will execute them.
98. CAF and CFN or CONAFIPS will carry out the execution of the activities financed by the public loan trench and the Conolophus SPV will carry out the execution of the activities financed by the private loan trench. FAO and WWF will ensure the coordinated execution of activities under the Grant trench.
99. Based on their respective experience, FAO will execute the activities related to agriculture and livestock and WWF will develop the activities related to support fisheries, the restoration and conservation activities in marine and terrestrial HEVAs (in Component 2), and the sustainability activities of the Programme (Component 3).
100. CAF will be the Executing Entity of the “Activity 3.1.3.1 Mainstream climate change into regulatory frameworks and planning instruments” taking into account the mainstream of this activity in the Programme. Also, CAF will execute the “Activity 1.1.1.1 Centralized renewable energy generation and storage project”, and Activity 1.2.2.1 “Technical Assistance facility for energy investments”.
101. FAO and WWF will ensure the coordinated execution of activities under Component 2, and WWF will lead the execution of Component 3, working closely with CAF, CFN, CONAFIPS and FAO especially in this Component with cross-cutting characteristics.
102. FAO and WWF shall bring technical support at the Mitigation and Adaptation Technical Committees.
103. CAF, CFN, CONAFIPS, FAO and WWF shall ensure quality in their operations and are accountable for executing the projects according to the principles and modalities applied to the operations of the GCF.
104. CAF, CFN, CONAFIPS, FAO and WWF shall ensure appropriate monitoring, independent evaluation, and financial audits of all activities funded by the GCF.

The Programme Management Unit (PMU)

105. The Programme Management Unit (PMU) will be established in Galapagos and will have a dedicated team to guarantee all components and activities are carried out according to the Programme design. It will articulate with the monitoring and evaluation activities (covered by CAF as Accredited Entity) to ensure that all expected results will be achieved on time and within budget.
106. This PMU will have a Programme Coordinator, a Monitoring and Evaluation Specialist, a Sectoral Adaptation Specialist, a Sectoral Mitigation Specialist, a Capacity Building Specialist, an Environmental and Social Safeguards Specialist and an Accounting Assistant. The latter will be in charge of overseeing the implementation of the ESMF and the Gender Action Plan in liaison with CAF’s Coordination of Environmental and Social Assessment and Monitoring (CESAS) and CAF’s Gender Coordination. They will report to the Programme Coordinator. The coordinator and the mentioned specialists to be financed by the Programme budget.
107. The PMU will work closely with the Sectorial Business (private and public) and Administrative (Legal, Procurement, Human Resources, etc.) areas within CAF.
108. Principal Executives of the Private Sector and Public Sector that are already part of CAF for the management of intermediated programmes, will be assigned for this Programme.
109. The PMU will ensure that Programme implementation proceeds smoothly through well-written work plans, Terms of Reference and carefully designed administrative arrangements that meet CAF and GCF requirements. PMU’s responsibilities will include the following:
 110. Follow-up of the achievements of the Programme outcomes, outputs, and objectives.
 111. To manage day-to-day implementation of the Programme, coordinating activities by the rules and procedures of CAF/GCF.
 112. To provide overall administration, while acting as an independent and unbiased guarantor of cooperation and information exchange.
 113. To provide technical input as appropriate to the outcomes.
 114. To facilitate staff recruitment and procurement processes.
 115. To ensure, together with CAF, to coordinate with the stakeholders and other relevant regional programmes.
 116. To oversee the approval of individual projects to be financed by LFI through CFN and / or CONAFIPS.
 117. To ensure, together with CAF, to convene quarterly Programme Implementation Meetings (PIMs) to review progress in implementing work plans.
 118. To ensure, together with CAF, that specified tasks are outsourced to suitable sub-contracted providers or national and international consultants through competitive bidding processes. PMU’s responsibilities in this regard include development of bidding documents and terms of reference and monitoring the overall progress of these processes.

119. To organize Programme-level meetings and workshops, e.g., inception workshop, etc.
120. To monitor financial progress reports and the financial balance provided by CAF's operational systems.
121. Prepare and present the consolidated Annual Operational Plan.
122. Prepare and present the consolidated Annual Procurement Plan.
123. Prepare and present the consolidated Semi-Annual Performance Report (S-APR) including the Technical Committee recommendations.
124. Prepare and present the consolidated Annual Performance Report (APR) including the Technical Committee recommendations.
125. In case of requiring Major Changes according to the GCF's Policy on Restructuring and Cancellation, prepare and present the consolidated request. Prepare and present the consolidated Major Changes requirements.
126. Prepare and present the consolidated Programme's performance.
127. Prepare and present the consolidated required information for mid-term and final output assessment.
128. Planning and monitoring the technical aspects of the Programme, including regular field visits and periodic reporting.
129. Ensuring advanced funds are used following agreed work plans and Programme budget.
130. Preparing and adjusting commitments and expenditures to be authorized by CAF. Guaranteeing timely disbursements, financial recording and reporting against budgets and work plans.
131. Managing and maintaining budgets, including tracking commitments, expenditures and planned expenditures against budget and work plan.
132. Maintaining productive, regular, and professional communication with other Programme stakeholders to ensure the smooth progress of Programme implementation.
133. 50% or more of the PMU will be women.

Anticipated legal arrangements.

134. The anticipated legal arrangements between the GCF, CAF, Executing Entities (CFN, CONAFIPS, FAO, WWF, Conolophus SPV), Local banks, and beneficiaries include:
135. CAF and GCF will enter into a Funded Activity Agreement (FAA) for the Programme in the framework of the Accreditation Master Agreement (AMA). The FAA will outline the sectorial, technological, and geographical scope (the "Mandate") of the proposed CAF/GCF Programme.
136. During Programme implementation, CAF will be responsible for providing governance, oversight, and quality assurance in accordance with its policies, procedures, and with the FAA and AMA.
137. The Executing Entities and the LFI's selected for the Programme have gone through a pre-assessment screening, based on the criteria included in Annex 9– "Know your client", and in most cases have pre-established financial relations with CAF. An updated and robust due diligence will be in place before CAF approves each IFI under this Programme, where each due diligence will be presented to the CAF investment committee for review.
138. The typical contractual arrangements to be put in place in relation to the co-financing would be a Common Terms Agreement and Loan Agreements between the borrower and the lenders. Other contractual arrangements may be required based on the final structure of the transaction, such as a sponsor support/equity contribution agreement, onshore/offshore security agreements and other ancillary agreements.

Figure 5. Implementation Arrangements

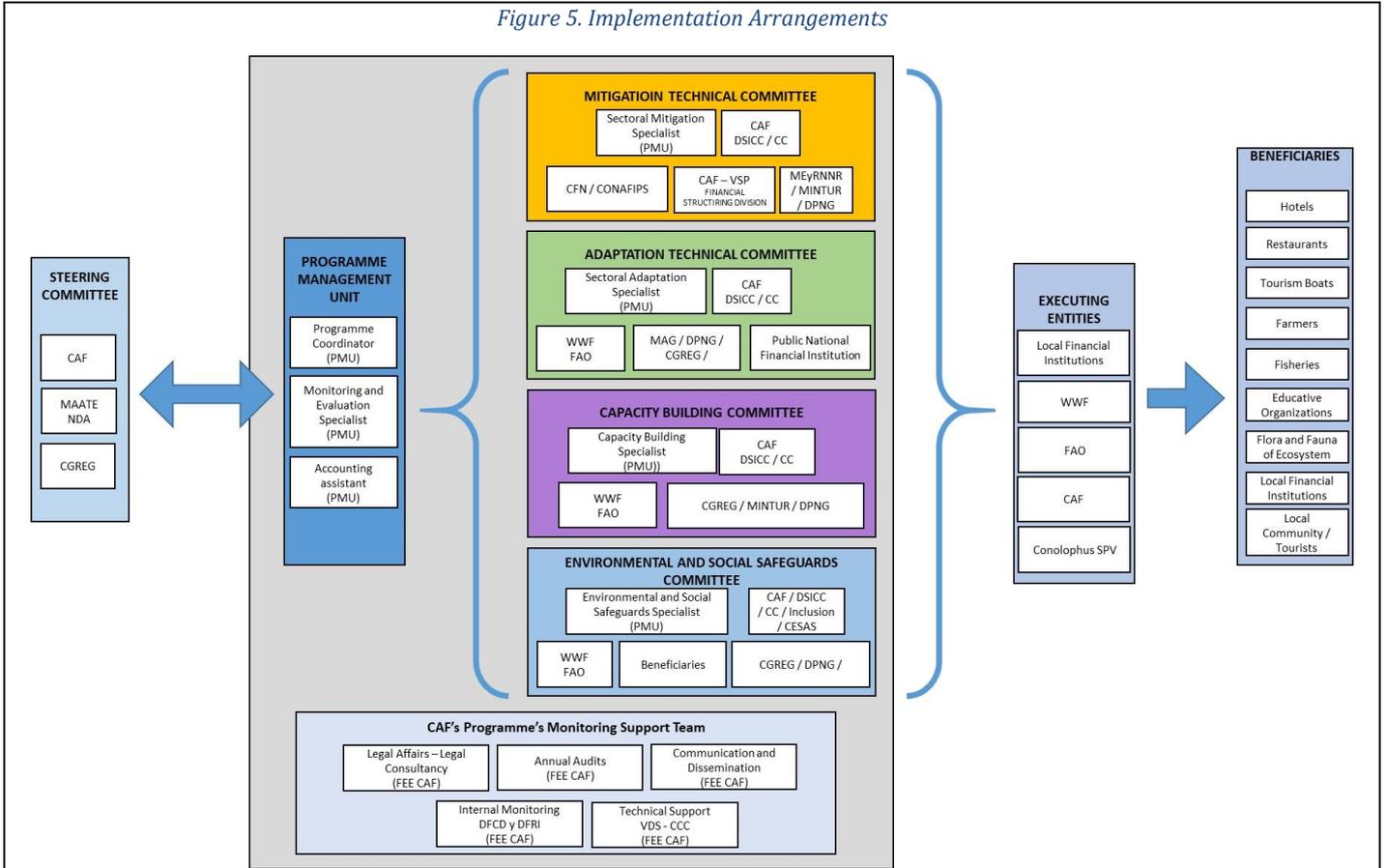
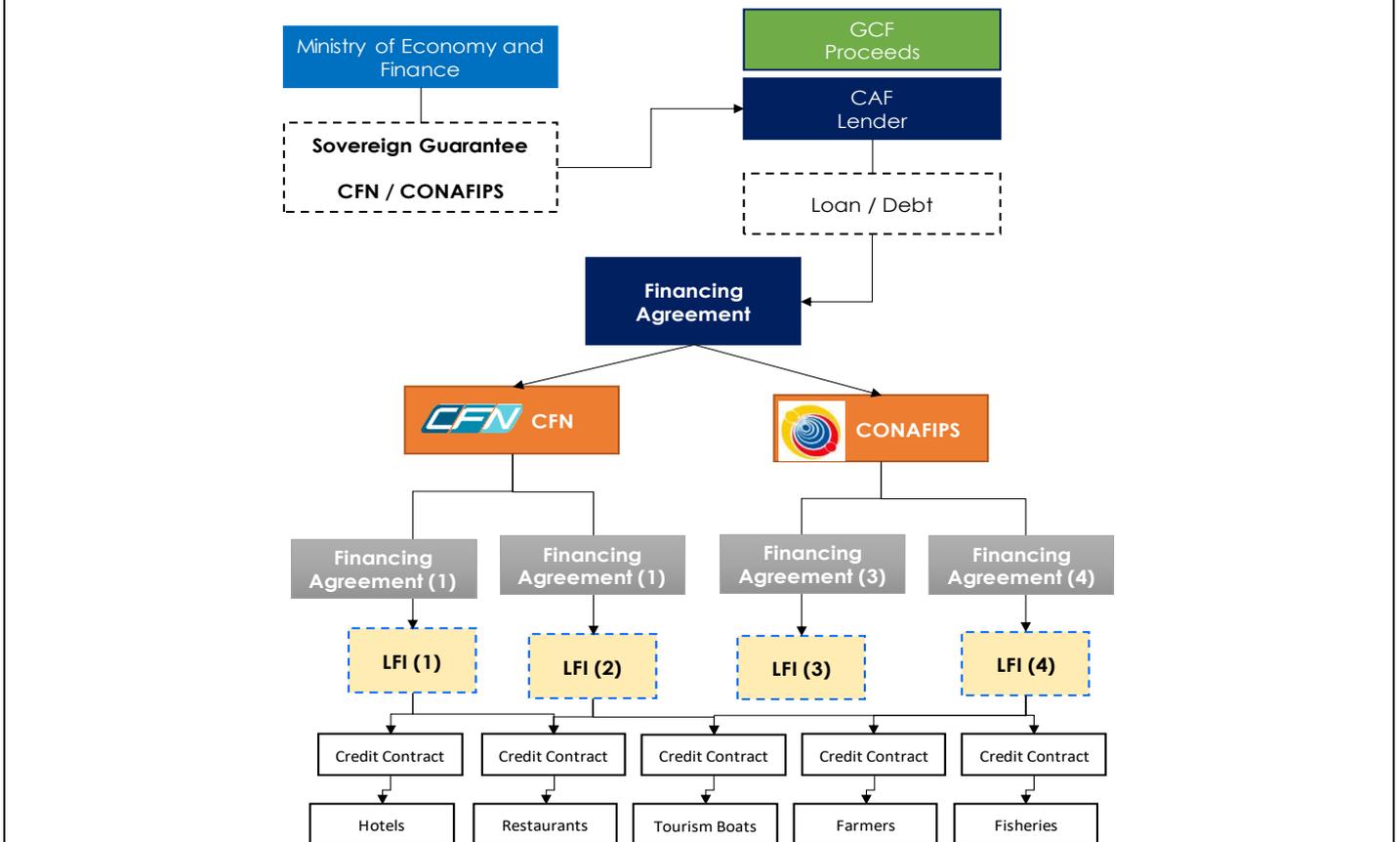


Figure 6. Anticipated Legal Arrangements GCCL



Galapagos' Climate Facility

139. The Galapagos' Climate Facility is not a separate legal entity, but rather the name of the initiative under which the Programme's will be implemented.

Galapagos' Climate Credit Line (GCCL) - through CFN or CONAFIPS and LFIs

140. CAF will enter into loan agreements or amend existing loan agreements with CFN and / or CONAFIPS, for the Galapagos' Credit Line.
141. CAF will establish a methodology to follow appropriate commercial practices and procedures in all operations financed with GCF resources. In the provision of financing, CAF will perform a due diligence of the Executing Entities and the LFIs and carefully assess their ability to meet their obligations under the loan agreement.
142. CAF and GCF proceeds will be lend to CFN or CONAFIPS, which will in turn on-lend these proceeds to LFIs.
143. The LFIs will use the loan proceeds to fund the loans made under the GCCL.
144. CAF will contractually ensure that the conditions required by GCF are transferred to the GCCL Agreements (thought amendment to those already executed).
145. The loan agreements will make available CAF and GCF financing for investments consistent with the Mandate of the Programme. CAF as per the loan agreement will have the ability to reject a sub-loan. The LFIs screen potential loan recipients (i.e., the final beneficiaries) in accordance with the eligibility criteria and then present a list to CAF for final approval.
146. It will be a requirement in the eligibility criteria and credit rules that refinancing is not allowed.
147. Local banks and CFN and / or CONAFIPS will disburse GCF and CAF loans to beneficiaries consistent with the mandate of the Programme. As part of the Programme, CAF teams and technical assistance CFN or CONAFIPS hired by the Programme will provide technical assistance and capacity building to help Local banks and CFN or CONAFIPS conduct internal procedures to evaluate eligible technologies and/or projects, check compliance with the mandate and put in place monitoring systems. CAF will report to the GCF based on the conditions established in the FAA and AMA. No project may be financed with GCF's resources if it does not meet the conditions required by the GCF according to the FAA. The Programme Management Unit will review and assess subprojects eligibility. In addition, contractual obligations will be established for both: the IFI and the agreements with Beneficiaries.
148. LFIs agreements will contain AML/ CFT clauses that will be transferred to the Local banks' Beneficiaries (through the loan agreements between the Local bank and the Beneficiary).
149. Loans will be repaid by the beneficiaries to the Local banks, back to CAF and the GCF. The schedule of repayments is outlined in Annex 3.

The Conolophus Centralized Power Generation Loan Agreement

150. A Conolophus SPV will be established for the purposes of implementing the Conolophus Project sponsored by Gran Solar and TotalEren, the concessionaire that won the public tender for the Conolophus Project.
151. CAF will sign a Loan Agreement with the Conolophus Project tender winner company the " Conolophus SPV " to finance the construction of the solar power energy plant. Please refer to Annex 2 section 3.6 for further details on the bidding process.
152. The Ministry of Energy and the Concessionaire will sign a Trust Agreement for the construction and operation of the solar power energy plant. Please refer to Annex 2 section 3.6 for further details on the bidding process.
153. The Trust will solely use the loan proceeds to construct the Conolophus PV Project. It is an independent legal entity because it has legal personality, but it is NOT the SPV. The SPV sends collection/payment orders to the trust as required by the project and as permitted under the trust's operating rules.
154. The tender winner company will constitute a specific purpose company, the "Conolophus SPV", which will: 1) sign the Concession Contract with the (MEyRNNR) Grantor, 2) sign the PPAs with the Distributors, 3) sign the Trust Agreement and 4) execute the project.

Grants and Technical Assistance

155. The instrument between CAF and FAO/WWF is a grant. CAF will enter into grant execution agreements with FAO Ecuador and WWF Ecuador.
156. The PMU will enter into contracts with Technical Assistance providers for Component 1 following CAF's contracting procedures, as needed.
157. No project may be financed with GCF's resources if it does not meet the conditions required by the GCF according to the FAA.
158. No further grants will be given to the beneficiaries (i.e., the beneficiaries will not receive cash payments): the grant monies will be used to pay for services and inputs to implement the activities.

159. CAF will not sign any contracts with final beneficiaries.

160. Since FAO and WWF will provide agricultural, educational, environmental inputs and tools, they sign delivery/reception acts, where beneficiaries commit themselves to the proper use of the inputs and maintenance, if required. Acts include name of beneficiary, objective, scope, value, commitments, place of destination, follow up mechanisms, among others

Evaluation and due diligence of Executing Entities.

CAF is responsible for the evaluation of the Executing Entities.

161. FAO, WWF and Conolophus SPV as direct executing entities of the program based on its standards which cover:

162. Basic data of the client or counterparty

163. Changes in functional structure

164. Documents of incorporation, board of directors, shareholding composition, powers, appointments of their representatives

165. Financial Transparency, Audits, Contracts, services and purchases manuals, transparency manual, ethics, others.

166. Regulations on Money Laundering, questionnaire on Prevention and Detection of Money Laundering, Declaration of Activities and Legal Assets, Knowledge of Third Parties Authorized to Receive Disbursements.

CAF is responsible for the evaluation of CFN and CONAFIPS. CAF will:

167. Identify the main risk factors of the operation and the client and determine their possible mitigators.

168. Analyze the technical, institutional, market, financial, economic, environmental, and social aspects, anti-money laundering, among others, of the operation and the client, in an exhaustive way to determine its viability.

169. CAF will complete annually the credit evaluation document. CAF's credit evaluation document is included in Annex 9.

Evaluation and due diligence of participating LFI:

170. The CFN and / or CONAFIPS Responsible Executive will collect information about the operation and the client, ensuring that it allows to know the real situation of the client and their perspectives. To the extent possible, the Responsible Executive will contrast or complement the information it receives from the client with external sources.

171. CFN and / or CONAFIPS is responsible for the evaluation of LFIs. CFN and /or CONAFIPS will:

172. Identify the main risk factors of the operation and the client and determine their possible mitigators.

173. Analyze the technical, institutional, market, financial, economic, environmental, and social aspects, anti-money laundering, among others, of the operation and the client, in an exhaustive way to determine its viability.

174. In the case of non-sovereign risk operations, in addition to evaluating the client's ability to fulfill his contractual obligations, paying special attention to the economic-financial situation of the client, his payment experience and the macro-sector environment, as well as to other specific factors of the operation.

Evaluation and due diligence of winner of the tender Project Conolophus:

CAF is responsible for the evaluation of the Conolophus SPV. CAF will:

175. Identify the main risk factors of the operation and the client and determine their possible mitigators.

176. Analyze the technical, institutional, market, financial, economic, environmental, and social aspects, anti-money laundering, among others, of the operation and the client, in an exhaustive way to determine its viability.

177. Evaluate the client's ability to fulfill his contractual obligations, paying special attention to the economic-financial situation of the client, his payment experience, and the macro-sector environment, as well as to other specific factors of the operation.

178. CAF will complete the credit evaluation document annually. CAF's credit evaluation document is included in Annex 9 appendix 2

B.5. Justification for GCF funding request (max. 1000 words, approximately 2 pages)

179. The Programme embraces the most fundamental transformation for the Galapagos islands system in decades. There is currently no other initiative with the vision, power, and determination to transform the Galapagos system and accelerate its transition towards a low emission and resilient economy within the frame of a post-pandemic green recovery. This is precisely the timing to embrace such a challenge, as the current global context is having a considerable impact on the local economy, putting its major economic engine on hold while strengthening the case for an island system empowered to produce its own energy, food, and water.
180. The long-term conservation of the Galapagos archipelago is a high priority for Ecuador', as it is the country's natural region with the highest international profile and contributes about 20% of the country's tourist GDP (MAE, 2014). The Galapagos features exceptional conditions, setting it up to become a center of climate knowledge and innovation in oceanic ecosystems of high global conservation priority. The Program proposes a paradigm shift in all related institutions, and significant technological leaps that currently cannot be financed by the Ecuadorian state or domestic resources. Under the current circumstances, without the GCF financing it would be impossible to catalyze any change, coordinated among the different entities involved, to the extent necessary to adequately address these transformational challenges.
181. In 2007, the government administration that took office began an aggressive construction process of building hydroelectric plants and petrochemical plants. As a result, Ecuador's continental energy demand is completely satisfied. Two problems arise from this government plan: Galápagos was not properly taken into account and the government's budget for energy plants construction has reached its budget limits. From the 2008 Galapagos Zero Emissions initiative to the present-day Generation Expansion Plan of the Galapagos Isolated System (PEGSAG), initiatives have not been entirely effective due to the current lack of economic resources. The same has happened with initiatives related to agriculture and conservation. For example, the MAG's National Climate-Resilient Livestock Program was expanded to the islands, as a strategy to transform extensive livestock farming into intensive livestock systems resilient to climate change, seeking to increase their profitability without increasing the range of grasslands. Unfortunately, the program has been halted by lack of budget and technical considerations.
182. With a dollarized economy, a fiscal deficit of 3,58% of the GDP, a sovereign risk of 1.209 basis points and a banking index of 65,4%, it becomes progressively harder and more expensive for Ecuador to access adequate and competitive financing options. According to the IMF, Ecuador's economy was among the most affected in Latin American by the COVID virus, registering a GDP decrease of -6,27% in year 2020. Situation is even more critical in Galápagos, considering that nearly 80% of its economy depends directly or indirectly on tourism, which according to the Ministry of Environment reports a 73% drop-in activity in 2020, despite an early reopening of tourism after the most critical moments of the pandemic.
183. In the absence of fiscal savings, Ecuador has attempted to adapt its economy to a challenging global context with support from international organizations, including the World Bank Group and the IMF. In this context, the country is promoting a reform program to ensure fiscal sustainability, strengthen the foundations of dollarization. These plans implied austerity measures throughout the public sector, prioritizing spending in sectors such as education, health, and housing. Likewise, the economic reform that has been implemented since 2019, has substantially curtailed the budgets dedicated to the environmental sector, falling from roughly 2% of the GDP in 2011 to the current 0,03% registered in 2020. Under current fiscal adjustment conditions, without GCF's funding, the Program's goals would be unfeasible.
184. With regards to the Ecuadorian banking and financial system, evidence suggests it does not have the capacity to supply the capital needed by the private sector to implement the Program, considering the volume of resources needed and the relative market for credit in the country. New projects, such as the RE plants in Galápagos are categorized as "Commercial Productive" credit, which represents 10% of the Banks' total credit allocation. It can be stated that the Ecuadorian financial system provides loans mainly to the consumer credit segment.
185. According to the Superintendency of Banks, currently, the bank with the greatest credit portfolio is "Produbanco", which is \$385.7 million. Hence, if "Produbanco" accepts to allocate its entire "Commercial Productive" loan in RE projects in Galápagos, the most it could provide is \$38 million, which would be sufficient to develop Component 1. Moreover, the Ecuadorian financial system is composed entirely of national banks, which means no foreign banking capital could supply funding to the RE plants. In conclusion, it can be affirmed that there is a serious scarcity of green financing.
186. On the other hand, credit in Ecuador is expensive to the extent that it becomes a great barrier for green or climate investments. In comparison with other dollarized economies of the region, interest rates in Ecuador almost double the ones in Panama and are 45% higher than El Salvador. Therefore, without an improvement in the credit conditions that the GCF loan could offer, it is unlikely that the transformational change intended by the program will be generated.

187. In conclusion, the current Ecuadorian government fiscal budget is undermined, and the private Ecuadorian banks do not provide the necessary loans for these kinds of ventures. Moreover, in Galapagos the average loan per capita provided by the private banking system is \$243, while the national average is \$1.354. In contrast, the GDP per capita in Galapagos is \$7.856, while national GDP per capita is \$6.231. Hence, the islands report a considerable credit deficit. Since the lack of financing supply is substantial, the GCF loan will not disturb the market money costs. In fact, it is the opposite, it will supply the financing necessities of an industry with an unsatisfied demand, therefore, it can be concluded that requesting funds to the GCF in the form of concessional loans and grants is justified.
188. Galapagos has been one of the provinces most affected in its economy by the COVID-19 pandemic. One of the data that illustrates this is the impact on sales: Galapagos was the province that was most affected, with a reduction of 77% (Ministry of Production, Foreign Trade, Investments and Fishing, 2020). According to the survey conducted for the preparation of the Galapagos Reactivation Plan, in July 2020, 50% of the population was unemployed or on temporary suspension and 82% of businesses reported no income. Forty-two percent of the businesses stated that access to credit with better conditions would be necessary to improve, maintain, or reactivate businesses during and after the crisis. Other proposals made by the participants in the consultations were to protect local employment, promote local food supply and the articulation of productive sectors, among others. The challenge is to mainstream climate actions in this recovery.
189. Resources from the Green Climate Fund will be needed to support the Galapagos' green recovery process, in this sense, the concessional nature of these resources is necessary as part of the incentives that will be provided to the final beneficiaries through the various implementation mechanisms

B.6. Exit strategy (max. 500 words, approximately 1 page)

190. The Programme's exit strategy is based on 6 main axes: 1) advocacy in the political-administrative spheres, institutional articulation, and management plans; 2) the great long-term impact of a substantial injection of funds for climate change-oriented investments; 3) the search for behavioral change and the commitment of beneficiaries; 4) the intrinsic sustainability of climate actions; 5) the active search for a financial sustainability strategy, and 6) the high potential of Galapagos as a demonstration case of transition towards a resilient and low-carbon development model.
- 1) Advocacy, preinstitutional articulation, and management plans**
191. The Programme will work with the main governmental actors and will influence the activities currently carried out by the existing structures on the islands. The implementation of the project will modify the Annual Operational Plans of the local administrations and will demand the attention and involvement of the administrators of key institutions such as CGREG, MAG, PNG, among others. Five years of intensive work with a climate change focus, for the modification of regulations and prioritization, for technical training, and the implementation of climate actions, will leave installed capacities in officials and regulations oriented towards the pursuit of adaptation and mitigation objectives in the islands. It is assumed that part of the activities that have been developed during the implementation of the programme will be transferred and taken over by local institutions at the end of the programme. In addition, it is expected that politicians and technicians who have worked with the project, who have been trained in adaptation and mitigation issues and have seen first-hand the benefits and good results, will choose to promote this approach in all future initiatives in the archipelago.
192. Throughout the programme, priority will be given to hiring local consultants. This strengthening will serve to facilitate that, in the future, they can be incorporated into local institutions and other projects and programmes that are developed in the islands. Also, once the project ends, the acquired goods (equipment, machinery, computers, etc.) are transferred to the beneficiaries, as applicable: Ministry of Agriculture, INIAP, INAMHI, GNP, CGREG. None of what is acquired is retained by the EEs.
193. While there is great awareness of biodiversity conservation in the Galapagos, there has been no substantive work on climate change issues to date. An example of this is that for decades all kinds of environmental variables have been monitored in the islands, but never with a focus on climate change. Thus, it can be affirmed that this issue has been made invisible by the enormous importance given to purely environmental issues, which is why this project will be transformative by inviting all actors to join a process with this perspective as its main focus.
194. The Programme will promote the incorporation of climate change at various levels of administration: parish and municipal governments, MAG, INIAP, MAATE, universities, etc. It is precisely the Programme, implementing the actions, and generating new information (e.g., hydroclimatic monitoring) that can lay the foundations for long-term results.
195. In the same sense, the Programme will leave several planning instruments in place, which will constitute tools for long-term decisions. To mention a few, a new marine zoning framework with the establishment of no-take zones (Activity 2.1.3.1) or a Climate Action Plan for the islands (Activity 3.1.3.1) will be left as long-term agreements.

2) The large impact of a substantial injection of funds for climate change-oriented investments.

196. As mentioned above, funds come to Galapagos from different sources, but not climate change oriented. In addition, the credit market is highly underserved: Galapagos has 4 times less access to credit than mainland Ecuador. At least 470 beneficiaries from the tourism sector will have access to finance for investing in energy-efficient technologies and distributed renewable energy generation. Around 624 farmers or agricultural production units, and 1,000 fishing households will also benefit from the adaptation measures implementation, including access to credit for resilient low-carbon investments.
197. Making credit available for climate investments will have a major impact on the business ecosystem by boosting the certification system, promoting the low-carbon tourism destination, creating productive linkages with tourism and fisheries, agriculture, and energy. Injecting this amount of credit resources through banking has a very positive impact in terms of boosting a market with a high demand that is channeled into climate finance.
198. At the level of financial actors, it is expected that the two local banks that will have channeled green credits for the tourism, agriculture, and fisheries sectors, and that will have been strengthened by the Programme's Technical Assistance, will maintain these lines operational beyond the Programme's implementation. More than 40 staff of these local banks will have been trained in adaptation and mitigation project assessment, E&S management, Baseline and MRV. Thus, capacities will have been built for continuing with the credit lines with no technical barriers.
199. The grant resources will have a major impact insofar as the investments they will facilitate are currently very costly for local institutions. The project will provide the possibility of making the initial investment in equipment, materials, training, etc., which will then be maintained by the island institutions, within their budgetary capacities (maintenance is less costly than the initial investment). For example, investments for climate change monitoring, new equipment, technologies, and tools for observation, monitoring, modeling, and prediction will be integrated into the GNPS, CGREG, MAG, the Ministry of Energy, and Non-Renewable Natural Resources, and the Ministry of Tourism. Staff will have the necessary baseline capacity and will be further strengthened as the institutions commit to providing adequate operation and maintenance. Another particularly costly investment is the establishment of the coral nurseries, which involves high initial investment, but for the maintenance of which it is possible to commit the NGP. All investments made will be anchored in the planning instruments.

3) Seeking behavioral change and beneficiaries' engagement

200. The work methodology of the Executing Agencies includes the search for the commitment of the beneficiaries of the Programme's actions. This is planned to be achieved through several stages: an initial process of validation of the beneficiaries, their farms, their fishing or tourism activity; continuing with training processes in which they are taught to use the equipment and materials (e.g. field schools in the case of agriculture); continuing with an accompaniment of the beneficiaries over one or two years (one, two harvests, fishing seasons, use of energy-efficient equipment), to measure and observe the results together with them; accompanying them in the access to credit; taking the successful cases to convince other potential beneficiaries. It is estimated that the incorporation of actions related to behavioral science transversally to the Programme (Activity 3.1.2.2), will increase the long-term commitment of the beneficiaries. Formally, and as usual, commitment to the maintenance of materials and practices will also be sought through the signing of letters of agreement with them.

4) Intrinsic sustainability of climate actions

201. There are actions that by their nature become immediately sustainable in the long term. This is the case of linking projects in the agricultural and fisheries sectors with the tourism sector (Output 2.1.5), projects with traceability seals, and a climate change focus within an effective marketing scheme. If, for example, the farmer manages to obtain a stable income for his products in this chain, this economic resilience, together with resilience to climate impacts, will generate long-term sustainability. This is also the case for investment in renewable energies, which will be an important signal to the market for the next calls for projects: it is necessary to invest first in a large project so that a management model is created, and investor confidence is consolidated. Finally, all activities under Component 3 on education, the creation of technical high schools to train local people in trades related to climate change, mobilization, etc. ensure that future generations will have this knowledge and skills adapted to the new development pathway. It is expected that at least 10,000 persons will be made aware of climate threats and related appropriate responses, and thus it could be expected that they will demand the continuation of the actions that the Programme has promoted.

5) The active pursuit of a strategy for financial sustainability

202. The project will dedicate resources to the active search for a long-term financial sustainability strategy. This task is covered in Activity 3.1.3.1. The team in charge of this activity will consist of consultants specialized in climate

and environmental finance issues who are familiar with the reality of the Galapagos. As mentioned above, Galapagos has significant funds earmarked for conservation activities and with quite sophisticated mechanisms, but none of them have a climate change perspective. The Programme will encourage discussions with the Government to mobilize existing or new resources for climate action. Meetings, workshops, and working sessions will be held to provide solutions for shaping schemes towards this objective. Incentives, tariffs, and fees, concessions, opportunities for the carbon economy, the blue economy will be analyzed, options will be designed and the political-institutional hub that manages the financing mechanisms will be constantly fed to influence the allocation of resources.

203. Some issues that could be worked on would be, for example, the analysis of the potential use of the funds saved by reducing diesel transport to the islands thanks to the change of the energy matrix towards renewable energies (driven by the investments of Component 1); on the other, the analysis of existing or emerging funds, such as the Galapagos Invasive Species Fund (FEIG), the CAF green bonds or the Galapagos Marine Reserve Fund (FRMG). The objective of the FRMG is to provide financial sustainability to the monitoring, control, and surveillance system of the GMR and its surrounding waters. These funds are not specifically targeted at climate change, but nevertheless support actions in line with some of the activities in this proposal, such as the fight against invasive plants, with biodiversity conservation objectives, but whose impact is directly related to climate change by exacerbating their dispersal.

204. As mentioned in the previous point, some of the Programme's activities are sustainable on their own, as is the case of the value chain activities, but others are more challenging to sustain, such as climate change monitoring or the maintenance of coral nurseries. It is for these activities that the main focus should be on the search for pull funding, through the aforementioned review of tariffs, fees, etc., state budgets, and new or existing funds.

205. This pull funding would ideally be managed according to the priorities set out in the Climate Action Plan for Galapagos (Activity 3.1.3.1), which will act as an umbrella for regional planning.

6) The high potential of Galapagos as a demonstration case for the transition to a resilient, low-carbon development model

206. Galapagos is a global flagship. Driving this transformational change in a place with such high visibility will have a remarkably high impact to be taken as an example to be followed for other oceanic island systems in the world with limited access to resources. This would be the first public-private capital model, with international funding, concentrated in such a geographic space

FINANCING INFORMATION						
C.1. Total financing						
(a) Requested GCF funding (i + ii + iii + iv + v + vi + vii)	Total amount			Currency		
	65.27			<u>Options</u>		
GCF financial instrument	Amount	Tenor	Grace period	Pricing		
(i) Senior loans Conolophus SPV	<u>20</u>	15 years	5 years	2,7 % ¹¹		
(i) Senior loans CFN / CONAFIPS	<u>10.54</u>	15 years	2 years	0.75 %		
(ii) Subordinated loans	<u>Enter amount</u>	<u>Enter years</u>	<u>Enter years</u>	<u>Enter %</u>		
(iii) Equity	<u>Enter amount</u>			<u>Enter % equity return</u>		
(iv) Guarantees	<u>Enter amount</u>	<u>Enter years</u>				
(v) Reimbursable grants	<u>Enter amount</u>					
(vi) Grants	34.73					
(vii) Results-based payments	<u>Enter amount</u>					
(b) Co-financing information	Total amount			Currency		
	<u>Enter amount</u>			<u>Options</u>		
Name of institution	Financial instrument	Amount	Currency	Tenor & grace	Pricing	Seniority
CAF	<u>Senior Loans</u>	<u>25.00 – 30.00</u> ¹²	<u>million USD (\$)</u>	<u>15 years 2 years</u>	<u>Libor 6 m + 5,8%%</u>	<u>Options</u>
CAF	<u>Senior Loans</u>	<u>5.23</u>	<u>million USD (\$)</u>	<u>15 years 2 years</u>	<u>Libor 6 m + 1,8%%</u>	<u>Options</u>
CAF	<u>Grant</u>	<u>0.21</u>	<u>million USD (\$)</u>	<u>Enter years Enter years</u>	<u>Enter%</u>	<u>Options</u>
Conolophus SPV	<u>Equity</u>	<u>18</u>	<u>million USD (\$)</u>	<u>Enter years Enter years</u>	<u>Enter%</u>	<u>Options</u>
Beneficiaries GCCL	<u>Equity</u>	<u>3.88</u>	<u>million USD (\$)</u>	<u>Enter years Enter years</u>	<u>Enter%</u>	<u>Options</u>
(c) Total financing (c) = (a)+(b)	Amount			Currency		
	<u>117.59</u>			<u>million USD (\$)</u>		
(d) Other financing arrangements and contributions (max. 250 words, approximately 0.5 page)	<p>Please explain if any of the financing parties including the AE would benefit from any type of guarantee (e.g. sovereign guarantee, MIGA guarantee).</p> <p>Please also explain other contributions such as in-kind contributions including tax exemptions and contributions of assets.</p> <p>Please also include parallel financing associated with this project or programme (refer to the co-financing policy).</p>					

¹¹ GCF's all-in fixed rate at 2.7% (fixed rate + service fee) represents a "floor" and is subject to change depending on the outcomes of the due diligence stage.

¹² This is based in a 75% leverage as per the Financial Model "FM Conolophus V.03.12.2021 interest rate CAF5.8 GCF2.2" of USD 27,30 MM; however, CAF lend above this figure to meet the 80% leverage if deemed necessary of USD 30 MM.

C.2. Financing by component

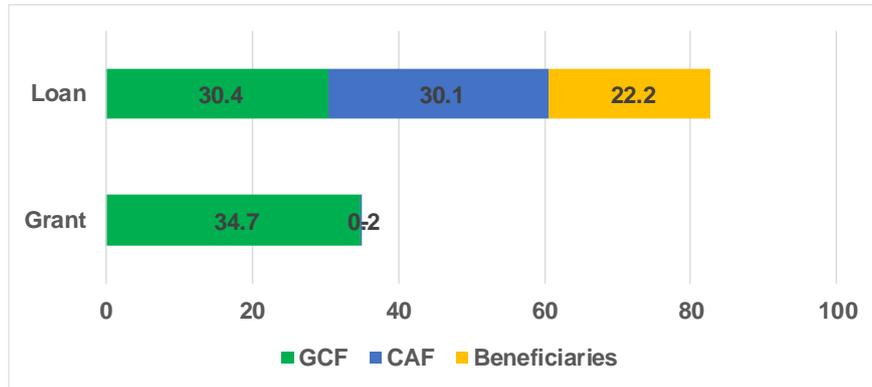
Please provide an estimate of the total cost per component and output as outlined in section B.3. above and disaggregate by source of financing. More than one co-financing institution can fund a single component or output. Provide the summarised cost estimates in the table below and the detailed budget plan as annex 4.

Component	Output	Indicative cost million USD (\$)	GCF financing		Co-financing		
			Amount	Financial Instrument	Amount	Financial Instrument	Name of Institutions
Component 1	Output 1.1.1	71.78	20.00	Senior loans	25.00	Senior loans	CAF
			4.56	Senior loans – CFN / CONAFIPS	0.10	Grant	CAF
			0.54	Grants	18.00	Equity	Beneficiaries
	Output 1.2.1	3.86	2.25	Senior loans – CFN / CONAFIPS	0.97	Senior loans – CFN / CONAFIPS	CAF
			0.00	Grants	0.64	Equity	Beneficiaries
Output 1.2.2	0.63	0.63	Grants				
Component 2	Output 2.1.1.	2.34	2.05	Grants	0.29	Equity	Beneficiaries
	Output 2.1.2.	10.07	0.00	Senior loans – CFN / CONAFIPS	1.30	Senior loans – CFN / CONAFIPS	CAF
			7.72	Grants	1.06	Equity	Beneficiaries
	Output 2.1.3.	1.15	1.15	Grants			
	Output 2.1.4	1.56	1.56	Grants			
	Output 2.1.5	7.38	3.50	Senior loans – CFN / CONAFIPS	0.92	Senior loans – CFN / CONAFIPS	CAF
			2.78	Grants	0.18	Equity	Beneficiaries
	Output 2.2.1	6.97	0.22	Senior loans – CFN / CONAFIPS	0.10	Senior loans - CFN / CONAFIPS	CAF
			6.57	Grants	0.08	Equity	Beneficiaries
Output 2.2.2	6.63	6.63	Grants				
Component 3	Output 3.1.1	0.49	0,49	Grants			
	Output 3.1.2	2.94	2.94	Grants			
	Output 3.1.3	0.10	0.00		0.10	Grants	CAF
Programme management component	PMC	1.67	1.66	Grants	0.01	Grants	CAF
Indicative total cost (USD)		117.59	65.11		52.48		

* Note: We would like to stress that these are conservative terms reflecting a preliminary risk assessment of the Conolophus project at this point in time. These terms are likely to improve as business premises and assumptions are further reviewed in subsequent stages of the project assessment, particularly during due diligence of the project and Conolophus SPV in in order to achieve a target blended margin CAF-GCF of 4.50% to 5.00%. It is expected to have the financial closure in June 2022.

The following diagram helps to visualize the amount of loan and grant required for the programme, and the distribution between financiers (GCF, CAF, and beneficiaries).

Figure 7. Loan and grant amount (MUSD) per source of funding



C.3 Capacity building and technology development/transfer (max. 250 words, approximately 0.5 page)

C.3.1 Does GCF funding finance capacity building activities?

Yes No

C.3.2. Does GCF funding finance technology development/transfer?

Yes No

207. The Program has included capacity building activities in all three components: in Component 1, they are concentrated in a Technical Assistance facility under Output 1.2.2; in Component 2, these activities are present throughout all Outputs; in Component 3 there is also capacity building in all outputs, highlighting, in addition, the specific focus on strengthening the education system under Output 3.1.2. Please refer to Section B.3 and Annex 2 section 12 for the description of these activities.

208. Many investments promoted by the project are highly innovative. Please refer to Section B.3, section D.2 where the innovative aspects of the programme are outlined, and Annex 2 and its annexes for detailed descriptions

EXPECTED PERFORMANCE AGAINST INVESTMENT CRITERIA

This section refers to the performance of the project/programme against the investment criteria as set out in the GCF's [Initial Investment Framework](#).

D.1. Impact potential (max. 500 words, approximately 1 page)

209. The Programme contributes to the achievement of the two GCF's objectives: contribution to the shift to low-emission sustainable development pathways and contribution to increased climate-resilient sustainable development.

[Contribution to the shift to low-emission sustainable development pathways](#)

Emissions reductions

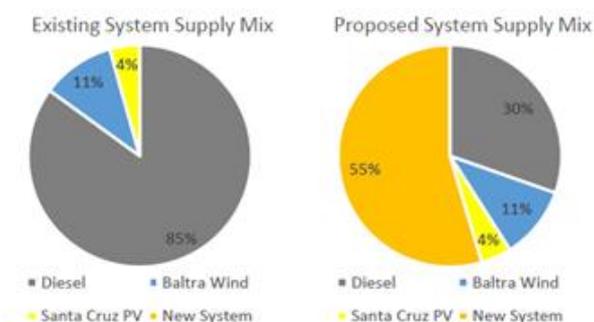
210. The energy investments of the Programme will lead to an estimated reduction of 23,400.08 tCO₂e per annum. The emissions reductions during the 5 years of implementation of the Programme will be about 111,104.19 tCO₂e (considering that the credit line will start providing loans in year 2). Over the 25-year lifespan of the technology, emissions reductions will reach 584,168.98 tCO₂e¹³.

Table 11. Estimated annual GHG emissions reductions from energy investments.

	Annual power generation / energy saved (GWh)	Annual diesel displaced ('000 liters)	Annual GHG reductions from RE generation / avoided from EE investments (tCO ₂ e)	Annual GHG avoided from diesel transportation (tCO ₂ e)	Annual GHG reductions from Component 1 activities (tCO ₂ e)
Centralized ER	22.85	6,312.28	18,892.93	26.79	19,919.72
Distributed ER	4.50	1,083.61	3,150.93	4.60	3,155.53
Energy Efficiency	1.65	456.71	1,322.90	1.94	1,324.83
Total	29.00	7,852.60	23,366.76	33.33	23,400.08

211. The expected increase in the renewable generation share of the Santa Cruz island due to the centralized PV project will have a great impact. The figure below shows the forecasted monthly share.

Figure 8. Santa Cruz energy mix with PV Conolophus project



Source: MERNNR, 2020

[Contribution to increased climate-resilient sustainable development](#)

Hectares more resilient

212. The Programme will enhance climate resilience in:

¹³ In the case of the energy investments, the emission factors of each isolated system have been calculated (Baltra-Santa Cruz, San Cristobal, Isabela and Floreana), applying the CDM methodology TOOL07 (IRENA, 2021). The emissions from fuel transport have been calculated in accordance with the Guidelines for Measuring and Managing CO₂ Emission from Freight Transport Operations (ECTA CEFIC, 2011). PUNA ship transports fuel to the islands, which transports 2,400 tons of diesel.

- 19,000 hectares of agricultural areas.
- 1.500 hectares of Scalesia forests under restoration schemes.
- 138.000 km² of marine ecosystems.

Beneficiaries

213. The indirect beneficiaries estimated are **11,475 inhabitants of the islands** (which are the non-direct beneficiaries of the 33,000 inhabitants) who will become more resilient and will be part of a low-carbon development, based on the actions of the Programme, and the 443,685 Ecuadorian tourists and 91,251 Developing Countries tourist that would visit the islands in 5 years of Programme implementation - considered as resource users (energy, water, food, ecosystems). –

214. The direct beneficiaries are estimated as follows (please see Section E for the detail of the beneficiaries of each activity):

- **Concessional loan:** The local economy will benefit from affordable sustainable energy by enabling Conolophus tender winner, a special purpose company, to invest in renewable energy generation using concessional loans required to make the project financially sustainable and facilitating financial close.
- **Concessional credit lines:** The tourism, agriculture and fishery sectors will have access to concessional loans allowing them to develop economically in a resilient and low carbon pathway. The tourism and fishery livelihoods will have access to the loans permitting them to develop new business models assuring the conservancy of the marine reserve and contributing to its resilience. The loans that will be provided under the Programme are presented in the table below.

Type of investments	Number of loans	Minimum % of loans for women-led businesses	Minimum number of loans for women-led businesses
Distributed renewable energy	320	20%	64
Energy efficiency	1,600	20%	320
Farmers - 2.1.2 Climate-resilient water and agricultural food production investments or practices.	404	30%	121
Farmers - 2.1.5 Upgraded and more efficient value chains for climate-smart seafood and agriculture products, potentiated with links to new markets.	244	30%	73
Fishers - 2.1.5 Upgraded and more efficient value chains for climate-smart seafood and agriculture products, potentiated with links to new markets.	50	10%	5
Total loans	2,618		583,4

- **The energy matrix** change based on centralized and distributed power generation will make the electricity from each island's grid cleaner. In this way, all the inhabitants of the Santa Cruz Island (15,000 inhabitants) will be able to reduce the carbon intensity of their activities, become more resilient by reducing their overall energy dependence on diesel imported from the mainland, and enjoy better air quality by reducing the generation of electricity in thermoelectric plants.
- **Agriculture:** It is estimated that around 624 farmers will benefit directly from the project (about 119 female and 505 male farmers). The average family size is 3 per household, thus, the number of total beneficiaries is estimated to be around 1,872 persons.
- **Fisheries:** 1,000 fishing households (3,000 persons).
- Investments in ecosystems restoration, institutional strengthening, education, and dissemination activities will directly benefit the whole Galapagos' population.
- Technical assistance and capacity building activities will benefit almost 1,000 people, between **tourism operators, farmers, fishers, staff from local financial institutions, technology providers, specialists** from key local agencies, ship owners, students; at least 230 local people will be trained to install and maintain the technologies promoted by the project, and the citizenship will benefit from awareness-raising activities for climate action,

Other relevant impacts

Please refer to sections E.2 to E.5 for more details of the Programme targets. Some relevant expected results and outcomes are the creation of at least 250 green jobs from low-carbon investments, at least 110 decision makers use climate information (Fund-level outcome A6.0), and at least 10,000 persons strengthen their awareness of climate threats and risk-reduction processes (Fund-level outcome A8.0). A large quantity of project-level outputs is listed in table E.5.

D.2. Paradigm shift potential (max. 500 words, approximately 1 page)

Potential for scaling up and replication.

- The proposed Programme is highly scalable and replicable especially at the scale of islands and oceanic archipelagos which are highly dependent on external resources (fossil fuels, food) and whose economies are dependent on the nature-based tourism sector.
- The overwhelming contribution of tourism to the local economy in the Galapagos and makes it difficult to find, in the short term, other economic activity that takes over the role of tourism as driver of the economy. As the tourism sector has strong backward linkages with other sectors of the Galapagos economy, when tourism grows, it buys inputs from other economic sectors, such as the artisanal fisheries and agricultural sectors, propelling the growth of these. Thus, a well promoted, well managed, nature-based and conservation focused tourism sector will have many social benefits to the local economies and a considerable contribution to nation-wide and other similar economies in the world.
- The technical concept of the centralized PV project tackles specific aspects such as the intermittent nature of the renewable energy sources, the stability and reliability of electric grid operation, and the optimization and renewable sources priority in the generation dispatch. All of them have been main constraints for the expansion of power plants based on renewable energy technologies in the small and isolated Santa Cruz – Baltra island electric grid. This project becomes the cornerstone for achieving high penetration of renewable energy in Santa Cruz – Baltra and provides the technical means for future generation projects' integration.
- The technical concept of the distributed energy, the spread of the solar panels in visible places such as hotels, restaurants, and the demonstration of their benefits in terms of self-generation and lower costs, accompanied by the capacity building and awareness-raising activities and the presence of local banks strengthened for channeling loans for these investments, will have a cascade effect on the population, and eventually a powerful demonstrative effect for continental Ecuador and other similar places in the region.
- Galapagos holds a leading position in terms of innovation as regards its regulatory and institutional framework, visitors' management, participatory management of resources, control and surveillance systems, and invasive species eradication and control. Galapagos plays a key role in the capacity building and institutional strengthening of Ecuador's National System of Protected Areas, actively engaged in the exchange of knowledge, which sustains south-south cooperation relations with a series of countries and international initiatives. These conditions suggest that a successful program in Galapagos is likely to inspire a long-term paradigm shift not only in continental Ecuador but also across protected areas of the region.

Potential for knowledge sharing and learning.

- A substantial portion of Lessons Learned will be based on the Programme's monitoring and evaluation activities, as well as knowledge management which will systematize the institutional reporting.
- The Programme will have activities dedicated to communication, education, and participation (Output 3.1.2), centered around developing the necessary knowledge, values, attitudes, and capacities to make informed decisions and responsible actions to maintain environmental integrity, to ensure economic viability, and to support a just society for the current and future generations. Climate change communication and social and behavioral change approaches will be cross-cutting throughout the Programme activities, ensuring that more effective communication strategies and tactics are defined to influence people's awareness, understanding, concern and action on climate change (see Annex 2 section 12.6).
- Through Activity 3.1.2.3, the Programme will implement a communication and dissemination strategy to ensure a wide dissemination of the Programme in Galapagos and among the key stakeholders as and the Programme beneficiaries; and to ensure learning, including sharing of lessons learned and best practices among them. The specific activities include the development and distribution of promotional material of the Programme, such as webinars, videos, and publications; development of a website to share information about the Programme and its results, and the systematization and dissemination of experiences and lessons learned from the Programme

such as case studies, to promote the replica in other similar contexts. At least 3 case studies will be developed in each of the livelihoods: tourism, agriculture, and fisheries. Also, at least 2 case studies will be developed on climate finance inclusion of women. Learning workshops will be conducted during the lifetime of the Project. This Programme will generate important lessons from the application of the Ecosystem-based Adaptation principles.

Contribution to the creation of an enabling environment

- The **market** for climate change solutions remains underdeveloped in Galapagos. This Programme will foster the development of a new market for low carbon energy generation and sustainable land use projects. To overcome barriers and create a long-term enabling environment for this kind of investments, the Programme will put in place a structure for green lending through the public and local banks in Galapagos. The green credit line and the technical assistance that will be provided to banks and to beneficiaries, will involve the development of processes and procedures to assess green projects and reduce the risk perception in relation to these projects, which will have a long-term and sustainable impact. Capacity building activities will guarantee that the market impacts are sustainable.
- Tourism operators, and the agricultural and fisheries sectors will benefit from **capacity building, awareness raising** activities and **accessible and affordable finance**, to implement projects that will reduce their operating costs, increase their productivity and, at the same time, enhance the resilience of the ecosystems from which they depend.
- The sustained participation of the private and public sector will be actively promoted by a **Stakeholder engagement** during the implementation stage. During the implementation of the Programme, a multi-stakeholder approach will be pursued to create conditions for Programme ownership. Engagement methodologies such as the co-creation of best practices and the promotion of discussion spaces in which the private sector would be included, will bring social benefits related to the shared responsibility, active involvement, and appropriation of the stakeholders in the future of nature-based tourism in the Galapagos.
- The Programme will promote **innovative** technologies and innovative organizational structures in all the sectors in which it will implement its actions. Some examples of innovative solutions that can be mentioned are the use of fog catchers in the rural areas, the construction of processing centers to be managed by organizations operating under a Social and Solidarity Economy (SSEn) framework, the pilot project of the use of Dynamic Positioning Systems (DPS) for a selected number of live aboard cruises to test its viability as an alternative to anchoring in the Galapagos, the use of deep learning to aid in the annotation and processing of large amounts of photographic and video graphic output from citizen science-aided monitoring, among others.

Contribution to regulatory framework and policies

- Please refer to D.5. Country ownership for the description of the alignment of the Programme with the Climate Change policies of the country.
- The Programme will directly contribute with the priorities set by the Plan for Generation Expansion in the Galapagos Isolated System (PEGSAG), within which the Conolophus project is the largest project of its kind planned for the Islands. Regarding distributed energy, the Programme will follow current regulation (ARCONEL 003/18). The objective of the 'Program of Refrigerators Renewal -RENOVA- Second Phase' will be channeled through the Programme, giving impulse to its objective of optimizing the electrical energy consumption in the acclimatization and refrigeration areas in the tourist commercial sectors of the Province of Galapagos.
- Component 2 is aligned with the "Eco-sustainable Farming Plan for Galapagos," promoting resilient, profitable agriculture that fits the natural characteristics of the islands; also aligned with the second outcome are the "Galapagos Special Regime Land Use Plan" as well as the "2019-2029 Invasive Species Management Plan for Galapagos" and the Fisheries Calendar defined by the Galapagos National Park Directorate (GNPD). The municipal land use plans (Isabela, San Cristobal, and Santa Cruz) regulate land use outside the protected areas (including agricultural lands, as well as some of the high-ecological value areas). Also relevant to this component, the Galapagos Protected Areas Management Plan (including the zoning system of Galapagos protected areas), focuses on the conservation of the islands' ecosystems.
- The Programme complements other related governmental efforts, led by the Governing Council of the Galapagos, including the recently approved Galapagos 2030 Plan, which was developed in close coordination to this funding proposal, leading into an adequate integration of the funding proposal within the regional long-term policy. The programme was designed in parallel with the development of the Galapagos 2030 Plan that provides response to a major gap Galapagos had in terms of emission reduction targets, concrete adaptation objectives and improvement of the situation of dependency from resources from the mainland. It can be affirmed that the integration of this programme with this Plan has already taken place and that the proposed

programme will constitute one of its main financial mechanisms that will help to accelerate the achievement of its objectives.

Overall contribution to climate-resilient development pathways consistent with relevant national climate change adaptation strategies and plans

- The Programme will contribute to a transformational change towards a low carbon self-sufficient island system with greater capacity to adapt to climate change and variability. The intervention seeks a transition towards a more sustainable and circular economy to reduce dependency on imports of food and fossil fuels from continental Ecuador, adapting local consumption and production patterns to the expected climate change impacts. The different Programme outputs are aimed to increase resilience, considering Galapagos archipelago is a highly sensitive system, whose vulnerability has increased in recent decades and is currently proving the case.
- All the proposed activities will contribute to the mitigation and adaptation objectives consistently with relevant national climate change adaptation strategies and plans, as described in Section D.5.
- The Programme develops a crosscutting vision from a climate change perspective, through tangible adaptation and mitigation measures in an isolated territory such as the Galapagos islands. The Program proposes the adoption of low emissions technologies for power generation, food production and biodiversity conservation in the islands, preparing the tourism destination for the expected climate change impacts. The need has never been greater for integrating sustainable tourism practices with other best practice guidelines developed for thematic areas such as biodiversity, climate resilience, coastal zone management, sustainable land management, and rural development. Integrated approaches will increase efficiency, reduce overlap and result in a more cohesive sector response to prevailing impact issues in Galapagos islands. Research on value- and supply chain management approaches at destinations will also strengthen inter-linkages between tourism and other sectors (e.g., agriculture, fisheries) providing opportunities for multiplier effects and minimizing leakage. It promotes deep changes of the production and consumption patterns, which in the short term will noticeably improve the carbon intensity of Galapagos by making it less dependent upon the mainland. Likewise, the Program will build local capacity, facilitating favorable conditions and enabling institutional elements for climate change adaptation and mitigation. It will do so through innovative financing models involving the creation of the SPV and the Galapagos' Credit Line to multiply change agents and accelerate the adoption of sustainable and low carbon development.
- The Programme will catalyze the paradigm shift from business-as-usual tourism development towards climate resilient and low emissions ecotourism in Galapagos. Ecotourism has been widely recognized as the only sustainable model for tourism development in the islands (CDF, GNP, and Governing Council of Galapagos, 2010). This Programme is an opportunity to contribute towards a *Green Recovery* tourism in Galapagos after the COVID-19 pandemic, considering that building resilient and low emissions ecotourism development marks an alternative pathway for the future, showing leadership in positioning Galapagos brand as a climate resilient ecotourism destination, that in turn supports the diversification of the local economy, whereby the Programme strongly supports the three main livelihoods of the islands (tourism, agriculture and fishing).

D.3. Sustainable development (max. 500 words, approximately 1 page)

Environmental co-benefits

- **Protection of agricultural diversity, soils, and water resources:** measures proposed for the agricultural sector have several co-benefits related to local knowledge co-generation and sharing; greater sustainability and protection of the crops; protection of water sources; control of the expansion of invasive species; increase of natural pollinators; increase resilience of ecosystem and agroecosystem services to climate change at the agricultural landscape scale; pest reduction; conservation of unique species for the world. Improvement and diversification of agricultural production at farm level (biodiverse farms). For example, according to the feasibility study, if restoration and rehabilitation activities were implemented in both protected and agricultural areas, the increase of invasive species like *Psidium guajava* increase (23.16% by 2030 under a BAU scenario) could be reduced between 16% and 18% under program implementation scenario Also, the reduction or non-increase in food imports from mainland Ecuador, would reduce the risk of transporting new invasive species toward Galapagos.
- **Reduction of the use of agrochemicals:** The Integrated Crop Management practices promoted, will reduce the need for herbicide and chemical pesticide application by introducing crop rotation and bio-fertilization strategies.
- **Protection of water sources:** The inclusion of 300 has of new resilient climate systems and 6,000 has of silvopastoral systems aims to improve the integrated management of water resources in Galapagos.

- **Pollution prevention in the agriculture sector:** By constructing sustainable agroprocessing centers, wastewater and emissions that would normally be released at these stages will be treated or captured on-site. Simultaneously, these treated waters will serve as biofertilizers for plantations. By increasing the demand for organic products, as raw material for the supply of small agroprocessing companies, an adequate pre- and post-harvest management of crops will be stimulated, generating less contamination due to poor waste management, less contamination of water and soil.
- **Restoration and protection of marine and terrestrial ecosystems:** This Programme will work on the restoration and conservation of ecosystems of the Galapagos' unique biodiversity hotspot, considered among the most exceptional biodiversity regions in the world. It will restore coral reefs, measures for adequate sea turtle nesting and foraging, strengthen control programs for invasive species, among others.
- **Monitoring of the impacts of human activities on the ecosystems:** Information of environmental impacts such as pollution levels at the environmental scale of visitor sites and control sites regarding heavy metals, organic compounds including hydrocarbons and those found in sunscreens with proven negative effects on marine biota and corals and microplastics, or the impact of diving practices, will be enhanced through the monitoring activities on environmental change.
- **Water management:** These practices will be implemented in farms of San Cristobal, Santa Cruz and Isabela islands and it is expected that by the end of the fifth year, at least 300 new ha. of agricultural land with improved water management practices, this with the establishment of rainwater collection, water harvesting, treatment, storage and efficient irrigation systems at a farm scale.

Economic co-benefits

- **New business models:** The adoption of renewable energy technologies will provide opportunities for local value creation, for responding to growing energy demands by opening new business models linked to the emergence of citizens as renewable energy producers and energy providers. Also, these new schemes can contribute to creating the environment for better distributing economic returns across society.
- **Additional income from energy savings:** Energy efficiency and renewable energy projects will reduce the beneficiaries' expenditure on energy bills and improve productivity in Galapagos which has the highest energy prices of the country.
- **Additional income from productive diversification:** The Programme will foster the diversification of the economic income of farmers. E.g., by obtaining sub-products by managing the decomposition process of manure and harvest waste such as biogas and bio-fertilizer; silvopastoral systems that bring synergies between cattle and trees mean that a combined system can provide more income than either system on its own, increasing animal welfare and productivity.
- **Additional income from stronger value chains:** The proposed activities will promote stronger and more dynamic value chains (sustainable production of meat, milk, coffee, vegetables, seafood, fish) that will allow actors to address the difficulties of producing, processing, and marketing organic food products more effectively. There will be an improvement in terms of productivity. Crop productivity will increase within the first year of the project and until the end of the project in a range of 2.6% to 69.6%, including pasture, cassava, peanuts, and others. In terms of seed production, with the implementation of the Program, an increase of 469.85 hectares is expected in 5 years. In addition, an index of 1.5 was established as the index of increase in milk production in cattle raising under the Silvopastoral System. Using this index in the Silvopastoral System implemented in Galapagos, an average daily production of 6.99 liters per Adult Bovine Unit (ABU).
- **Decreasing the uncertainty related to climatic conditions:** farmers, authorities and functionaries will be informed on time of potential conditions that could harm their crops, animals, investments, and they will be able to make better decisions on their investments.
- **Protecting the nature-based tourism resource:** by maintaining biodiversity, these areas may become an attractor for tourists which would increase the economic benefits of local inhabitants.
- **Protecting incomes of fishers by protecting marine ecosystems:** Scientific evidence suggests that the creation of the GMR has contributed to increase the productivity of yellowfin tuna and skipjack tuna around Galapagos through a spillover effect.
- **Reduce losses due to climate impacts:** Silvopastoral design provides multiple services to help farmers adapt to more variable and extreme weather due to climate change. During severe droughts, cattle experience elevated mortality rates due to unbearable temperature and dehydration levels. High temperatures and low precipitation rates may also cause pastures to die, leaving cattle with no food.

- **Local banks with capacities to channel green investments:** in the identification, administration, monitoring and reporting of climate change loans (energy, land use, and new technologies for boats).
- **Financing mobilized:** The Programme will leverage USD 26.85 million from private investments/private loans related to the centralized PV plant; and at least 10% of the co-financing that the beneficiaries of the credit line will invest.

Social co-benefits including health impacts.

- **Number of Beneficiaries:** 33,000 corresponding to Galapagos population and 443,685 Ecuadorian tourists and 91,251 Developing Countries tourist in 5 years will be benefited by the Programme activities.
- **Job creation:** on the side of the energy sector, jobs will be created based on technology development, production, installation, and maintenance. Apart from the investments promoted through the loans, the Programme will provide specific Capacity building for the creation of these new jobs. On another side, land use investments tend to generate additional jobs, because system complexity increases with higher area efficiency. Also, agroprocessing stages will be enhanced and that will generate jobs. E.g., the different coffee agroprocessing stages (wet processing, tasting, roasting) will generate direct employment opportunities for the local population.
- **Social Economy:** The Programme will foster the implementation of companies within the framework of the Social and Solidarity Economy (SSE). Initiatives such as the promotion of agroprocessing coffee with a Social and Solidarity Economy framework will distribute the economic gains among coffee growers, according to the efforts they have invested to obtain high quality gourmet products.
- **Healthy food environment:** The Programme will promote food systems that foster a diversified, balanced, and healthy diet for both tourist and local population, mainly for children.
- **Water security:** By conserving and protecting the natural areas, the overall water security of the Islands is enhanced. This includes not just the agricultural sector but also water supply for human consumption.
- **Increasing resilience of people by protecting ecosystems:** Healthy, well-functioning ecosystems enhance natural resilience to the adverse impacts of climate change and reduce the vulnerability of people. This Programme will work on the restoration and conservation of ecosystems and reducing the impacts of human activity.

Gender co-benefits.

- **Women access to climate finance:** The Programme will require local banks to have gender strategies, policies or procedures, or women-targeted financial products. Gender will be a prioritization criterion in the credit line, and specific training will be provided to women to foster their participation.
- **Women farmers:** The Programme will strengthen the participation of women in agricultural production, both in their capacities to access and control their agricultural resources.
- **Women participants in training and workshops:** The number of women and men attending Programme supported workshops, training and conferences will be monitored. Gender-disaggregated lists of participants will be collected. To ensure women participation in the workshops; specific budget will be allocated from the workshops budget, as for childcare, payments of the boats for mother and child, others. To ensure women participation in the workshops; a survey will be addressed to know the best time and day when the workshops should be done.
- The Programme's **Gender Action Plan** ensures cross-cutting gender-related measures have been integrated into all activities and the Programme's monitoring framework. In addition, the Environmental and Social Specialist of the Programme will be required to have relevant training and expertise on gender issues. This Specialist will monitor the implementation of the GAP, provide support with gender-related training and activities, and accompany the Executing Entities to implement gender-related measures within the Programme (for further information refer to the Gender Assessment and Action Plan in Annex 6).

D.4. Needs of recipient (max. 500 words, approximately 1 page)

- As described in Section B.1, the oceanic Galapagos archipelago is **one of the most vulnerable** places to climate change (Di Carlo et al, 2010). Changes are anticipated for almost all of life's aspects of its 33,000 residents, in addition to the 106,987 tourists entering the islands every year.
- Climate risks compound the threats posed by environmental change factors intrinsic to the development of the Galapagos economy. Thus, increasing average annual temperatures, rising sea surface temperatures, increased seasonality of rainfall, more intense ENSO events, sea level rise and acidification are manifested and will become increasingly potent in a context of unsustainable land management practices, increasing unsustainable production and consumption patterns, overfishing and the spread of invasive species.

- The **agriculture, small-scale fisheries, and tourism sectors** constitute the main livelihoods of the Galapagos' local population. These three livelihoods are highly dependent on terrestrial and marine ecosystems that are and will be further impacted by climate change.
- Major elements of vulnerability to climate change of the **food system** are the high dependency on food and fuel imports from mainland, the impact on agricultural productivity by changes in temperature and precipitation, dispersion of invasive species, effects on water resources, disruption in the availability and accessibility of marine fish and invertebrates, among others. The disruption of ecosystem processes and emblematic species can have a profound impact on **nature-based tourism**. Both terrestrial and marine ecosystems will be impacted by climate change, by making them more vulnerable to invasive species (terrestrial) and increasing pressure on keystone species such as coral reefs and green sea turtles.
- On the side of mitigation, the major opportunities to reduce GHG emissions in Galapagos are related to **sustainable land use** and to the adoption of **renewable energy generation and energy efficiency** technologies. Galapagos' sustainable energy matrix has been expected for the last 10 years, as it provides the basis for low emissions tourism development.
- From the 2008 Galapagos Zero Emissions initiative to present-day PEGSAG, initiatives have not been entirely effective due to the current lack of economic resources. In the **absence of financial resources**, the national government has prioritized the participation of private stakeholders to implement specific projects of public investment. Within the domestic market, the conditions to finance those types of projects are not attractive enough to promote participation of private stakeholders. This is where the Program resources come into play and permit a technological leap through concessional funding. Ecuador has made huge efforts to improve both the living conditions and the protection of the environment in the Galapagos Islands, which has demanded significant investment for the country. However, a technological leap of this scale requires financial sources, with advantageous conditions and non-refundable resources in order to gain the desired impacts in the tourism, agriculture, fisheries, conservation and energy sectors. Please refer to Section B.5 Justification of GCF funding request for further explanation.

D.5. Country ownership (max. 500 words, approximately 1 page)

215. The Programme is aligned and consistent with the Republic's **Constitution**, guaranteeing nature's rights and recognizing special regimes for planning and development. It explicitly states that the government will promote the use of clean and alternative energy sources, in addition to energy efficiency, while providing access to public services, preserving the environment, and maintaining food and water security.
216. The country's **National Climate Change Strategy (2012-2025)** establishes the strategic and institutional basis for the generation of national climate change plans in prioritized sectors for mitigation and adaptation. The present proposal is coherent with the spirit of the strategy and particularly the action lines related to: Conserve and sustainably manage the natural heritage and its terrestrial and marine ecosystems to contribute to their capacity to respond to the impacts of climate change; Identify and incorporate appropriate practices to mitigate climate change in the agricultural sector, which can also strengthen and improve its productive efficiency and competitiveness; Strengthen the implementation of measures to promote energy efficiency and sovereignty, as well as the gradual change of the energy matrix, increasing the proportion of renewable energy generation, thus contributing to climate change mitigation.
217. Ecuador is in the final stages of developing its **National Adaptation Plan (NAP)**, which is expected to be completed between late 2021 and early 2022. This proposal is aligned with the main areas of activity of the NAP, related to strengthening the technical and institutional capacity of planners and decision makers, improving information on climate vulnerability at the territorial and sectoral levels, and contributing to monitoring, reporting and verification of adaptation.
218. The **National Climate Change Mitigation Plan (PLANMICC)** is currently in its initiation phase. This Plan is one of the climate change management instruments in accordance with the Organic Code of the Environment and its Regulations and aims to reduce greenhouse gas emissions and conserve and increase carbon sinks, in accordance with national capacities and circumstances, without harming the competitiveness and development of the different sectors. The Plan will establish the measures and actions to mitigate climate change, as well as the mechanisms and instruments for their implementation and coordination.
219. Climate change adaptation and mitigation have also been addressed through national policies since 2009 via Executive Decree 1815, and through the Inter-institutional Committee on Climate Change established in 2010, via

Executive Decree 495. Furthermore, Ecuador has adopted the 2030 Agenda for Sustainable Development as a national policy through Executive Decree 371 from April 2018.

220. The Programme falls within the **NDC** presented by Ecuador in March 2019, in which the energy sector is vital in emissions reduction and development of adaptation measures in strategic environmental areas in Ecuador. The present proposal contributes to the following NDC's lines of action and initiatives: boost the use of renewable energy, strengthen energy efficiency by supporting equipment replacement; promote sustainable livestock development; develop and implement sustainable agro-productive systems, and strengthen sustainable forest management. In adaptation, it will contribute to the following measures and goals:

- Natural Heritage: improvement of the public policy instrument for natural heritage including ACC, implementation of sustainable practices for the use of natural resources in areas of influence.
- Water Heritage: incorporation of climate change criteria and national and sectoral strategies and plans of the water sector, inclusion of climate change variables in technical feasibility and in the regulation and control of water resources and control of water resources. and implementation of its management plans to ensure, in the future, water in quantity and quality; and design and implementation of actions that contribute to increasing the adaptive capacity of hydraulic infrastructure (existing and new) for multiple use.
- Creation and strengthening of capacities on climate change, management of natural heritage and water resources.
- Implementation of communication, dissemination and capacity-building programs that allow the awareness of actors in the agriculture and water sector about the effects of climate change.

221. The Programme is in line with the “**Galapagos Zero Emissions**”, which intends to gradually reduce the use of fossil fuels in vehicles, vessels, and thermoelectric energy generation, as well as to progressively replace conventional vehicles with electric vehicles in the Galapagos archipelago, initiative for the decarbonization of the tourism sector.

222. On the education and participation activities side, the Programme is aligned with the Paris Climate Change Agreement and the 2030 Agenda for Sustainable Development that “unanimously recognize the importance of education and public awareness in the drive towards sustainable development”, and in particular with the Action for Climate Empowerment (ACE) contained in article 6 of the United Nations Framework Convention on Climate Change and in article 12 of the Paris Agreement. ACE has six interdependent and interrelated elements: education, training, public awareness, public participation, public access to information, and international cooperation. They all play a fundamental role in accelerating adaptation and mitigation actions regarding climate change. At the National level, these activities are aligned with several local initiatives, the National Adaptation Plan Project (PLANACC), and the National Strategy of Environmental Education for Sustainable Development 2017 2030 (ENEA) and the “Tierra de Todos” programme, promoted by the MAAE in collaboration with the Ministry of Education (MINEDUC), to contribute to climate and environmental literacy in Ecuador.

223. Additionally, the Programme is aligned with the Environmental Organic Code, sanctioned in 2018, and includes climate change measures in local planning strategies.

224. The proposed Programme was developed in close consultation with national and local authorities representing all stakeholders involved in the different activities, allowing appropriation and alignment to contribute to relevant state policies by strengthening capacities and competencies of key national and local institutions. The Stakeholder Engagement Plan sets the guidelines for an effective engagement of the different actors related to the Programme's initiatives.

225. The Programme relies on the high capacities of the Accredited Entity CAF and the Executing Entities – CFN, CONAFIPS, FAO, WWF, to deliver. These capacities have been described in section B.4. Moreover, the Programme will count with the leadership of Ecuador's government and the support of the 181. Governmental Partners: The Government Council of the Special Regime of Galapagos (CGREG); Galapagos National Park Directorate (GNPD), Ministry of Agriculture and Livestock (MAG), Ministry of Energy and Non-Renewable Natural Resources (MEyRNRNR) and Ministry of Tourism (MinTur)

D.6. Efficiency and effectiveness (max` . 500 words, approximately 1 page)

226. Investments in centralized and distributed energy generation and energy efficiency, and in agricultural and fishing practices, are mostly revenue-generating with the engagement of the private sector. For these activities, there is significant leverage of private investment and a significant co-financing from CAF. Those activities are requested to be partially funded by a concessional loan from the GCF.

227. As described in Section B.5 on the justification of GCF funding request, the GCF loan will supply the financing necessities of sectors that have an unsatisfied demand. Moreover, the cost of credit in Ecuador is expensive and the government does not have the resources to implement the Programme's objectives.
228. The activities related to the strengthening of marine and terrestrial ecosystems are, in turn, not driven by a commercial logic and thus a grant is requested in their case.
229. The technical assistance and institutional capacity that is proposed throughout the Programme activities, and the Awareness raising, education, and participation component, would not be considered pertinent to go through financial and economic analysis.
230. Resources from the Green Climate Fund will be needed to support the country's green recovery process, which will require concessional resources to guarantee institutional strengthening activities in terms of both technical expertise and governance mechanisms, as well as activities to increase the technical capacities of beneficiaries and the awareness of the Galapagos population.
231. The estimated cost in tCO₂e amounts to USD 201.30 for 25 years of lifetime of technology if referred to the total Programme financing. If referred to the amount requested to the GCF, this figure is 111.47 USD/tCO₂e.
232. One of the factors that crosses the reality of the Programme is the fact that costs in Galapagos are 1.8 times higher than in the mainland, and salaries are 80% higher than in the mainland, by law¹⁴. To illustrate this: the daily cost of a nutritious diet in an average home of 5 people in the Galapagos corresponds to USD 15.70, while the average for the continent is USD 8.00; other comparisons are described in this article¹⁵. It is critical to consider that Ecuador has a dollarized economy; and that there is a lack of professionals in the fields required by the Programme in the Galapagos Islands, and they usually need to be brought from the mainland, and sometimes from other countries in the region. This is the reason why salaries and expenses of the Programme budget can appear comparatively higher than in other locations.
233. A Programme Management Unit (PMU) will be established in order to guarantee all components and activities are carried out according to the Programme design. This PMU will articulate monitoring and evaluation activities led by CAF, as Accredited Entity, to ensure that all expected results are achieved on time and within budget.
234. Experienced partners such as FAO and WWF, with capacities and systems in place to ensure quality and punctual delivery, will implement activities of Components 2 and 3. Due to the nature of climate change phenomenon, with progressive, long-term and differentiated impacts on ecosystems and productive activities, Component 3 will contribute towards ensuring cost-effective mitigation and adaptation initiatives, backed by Galapagos planning and regulatory instruments, based on local scientific information.

Component 1: Energy matrix change at the Galapagos archipelago.

235. This component seeks to finance the execution of renewable energy generation projects and energy efficiency initiatives and strengthen the capacities of the different stakeholders for the development and implementation of the corresponding activities. The Programme will create the enabling conditions to accelerate the adoption of a distributed generation scheme among the touristic and commercial sectors.
236. The results of the financial and economic analysis. They are presented below.

Economic Analysis of Component 1

Output	Economic Costs in \$	Economic Benefits in \$	Economic IRR	Economic NPV in \$	Benefit/Cost Ratio	CO ₂ emissions reduction in tons
Renewable energy	50.3MM ¹⁶	94.06MM	45.5%	43.97MM	1.87	380.045
Distributed solar	8.14MM	11.27MM	17.86%	3.76MM	1.38	53.800
Energy efficiency	3.86MM	5.40MM	17.49%	1.54MM	1.39	20.962

237. The project is profitable with a social discount rate for Ecuador of 12%.
238. The economic benefits of Component 1 are the savings in the consumption of diesel replaced by the generation of clean energy from new technologies. Consequently, positive externalities are created since it allows saving costs

¹⁴ Galápagos ya cuenta con Índice de Precios al Consumidor: <https://www.gobiernogalapagos.gob.ec/galapagos-ya-cuenta-con-indice-de-precios-al-consumidor/>

¹⁵ BBC NEWS Mundo, 2015 ¿Cuánto cuesta vivir en las Islas Galápagos?:

https://www.bbc.com/mundo/noticias/2015/06/150612_ecuador_galapagos_costo_vida_protestas_correa_aw

¹⁶ This capital expenditure refers to the pre-feasibility study (carried out 2 years ago) that has subsequently changed.

in fuels that should not be subsidized (electricity consumption is heavily subsidized in Ecuador), as well as reducing carbon emissions, which is an advance in the fulfillment of commitments international acquired. Reductions in CO2 emissions are projected to 20 years (see Annex 2, Appendix 1.2). Also, the fuel used for electricity generation is shipped from mainland Ecuador 1,000 km away; environmental and social risks associated with diesel transport to the islands, includes serious hazards upon ecosystems and species.

239. Electricity demand has demonstrated a constant growth, mostly fueled by the tourism sector as Galapagos' major economic engine, which justifies the need to incorporate new renewable power and optimize its use.

Financial Analysis of Components 1 and 2

	Beneficiary	NPV		IRR		Payback period	
		Without GCF	With GCF	Without GCF	With GCF	Without GCF	With GCF
Renewable Energy	Energy company	-2.33MM	11.94MM	7.23%	17.83%	18,03	6,2
Distributed	Lodging	342	4213	7,73%	9,86%	10,16	9.93
Energy Efficiency	Tourism agency	23	251	7,76%	9,85%	10	8
Land Use	Farmer	-0.436MM	1.15MM	3.98%	8,64%	X	6
line of credit small fishing	Fisheries	-2480	6778	3	10	7,62	5,85

Centralized renewable energy

240. **Operating Expenses (OPEX):** a benchmarking analysis with relevant reference projects has been carried out to further review operating costs (OPEX). This has been validated by CAF's internal technical team. However, please note that, as the EPC and O&M contracts have not been signed, there could be important deviations from the figures presented in the financial model "Annex 3. Financial Model Conolophus". The cost concepts included in the analysis are typical for these types of transactions including: O&M contract for the panels, inverters, batteries and transmission line, insurance, agent admin and fiduciary costs (trusts), administrative and overheads, security and surveillance, contingencies and others.

241. **CAF financing:** CAF's main terms are: (i) variable interest rate of Libor 6m (or equivalent SOFR term) + 5,8% margin, (ii) leverage at project level of up to 80% (USD 30.5 MM CAF own exposure), (iii) tenor of construction period (up to 24 months) + 15 years amortization with a 2-year grace period, (iv) representing a door-to-door tenor of 17 years.

242. **GCF financing:** the model is presented with a GCF fixed rate pricing of 2.70%¹⁷ with similar tenors to those of CAF Financing.

243. **Leverage:** The model shows a leverage of 75% for the "Base Case" equivalent to USD 27,3 MM, however, CAF has approval "in principle" increase such amount to reach an 80% leverage, depending on negotiations with Gransolar / TotalEren and debt sizing criteria. Please note that we are assuming that GCF is prepared to disburse up to USD 20 MM, therefore any amount over and above required to reach the 80% leverage would be covered by CAF.

244. **Scenario 1 is the Base Case or Base Case – CAF @ 5.8%** as per the Financial Model¹⁸, is the Base Case as described above. Scenario 2 is a sensitivity to the Base Case assuming an increase in CAPEX of 10%, likewise Scenario 3 stresses the Base Case assuming an increase in OPEX of 10% and finally Scenario 4 shows a decrease in power generation of 17% and consequent decrease in revenues.

¹⁷ GCF's all-in fixed rate at 2.7% (fixed rate + service fee) is considered to be a "floor" and is subject to change depending on the outcomes of the due diligence stage.

¹⁸ Please refer to version: "FM Conolophus V.03.12.2021 interest rate CAF5.8 GCF2.2" of the Financial Model

CASE	1	2	3	4
	Base Case - CAF @ 5.8%	Base Case - CAF @ 5.8% - 10% CAPEX	Base Case - CAF @ 5.8% - 10% OPEX	Base Case - CAF @ 5.8% - 17% loss gen
Key finding				
Blended Financing Rate (CAF + GCF)	4.63%	4.95%	4.81%	4.74%
Project IRR	9.10%	8.18%	8.63%	6.20%
Equity IRR	17.07%	13.51%	15.11%	7.21%
WACC	6.52%	5.79%	6.12%	4.11%
Project NPV USD'000	93,582	101,496	100,987	111,905
DSCR Historic Average	1.51	1.39	1.43	1.21
DSCR Min	1.30	1.16	1.21	0.96
Max leverage (SPV)	75.00%	75.00%	75.00%	75.00%
Base rate (LIBOR 6m)	0.24%	0.24%	0.24%	0.24%
Tenor	15.00	15.00	15.00	15.00
Grace Period	2.00	2.00	2.00	2.00
Max debt amount (CAF) & " USD'000"	27,250	27,250	27,250	27,250
Margin over BR	5.80%	6.12%	6.12%	6.00%
Max debt amount (GCF)	20,000	20,000	20,000	20,000
GCF Service Fee	0.50%	0.50%	0.50%	0.50%
Margin over BR	2.20%	2.20%	2.20%	2.20%

245. **The capital investment is USD 63MM.** Excluding financing costs, the sponsors have calculated a total capital cost of USD 63 MM. The concessionaire is looking for a minimum of 70 % floor - 80 % maximum leverage. The funding plan considered an equity of up to USD 18 MM provided by the sponsor and CAF-GCF blending financing for USD 47.3 MM. These amounts are based on a 75% leverage. Any additional indebtedness over and above this leverage will be assumed by CAF. The projects capacity to attract debt will be determined by a number of financial and economic variables that will be analyzed in detailed under due diligence stage.

246. The different NPV, IRR, Payback years and DSCR results can be seen in the Annex 3 within the Financial Model..

247. The financial and economic evaluation concludes that the Centralized renewable energy project is feasible. Despite these results, even under favorable conditions, funding from the GCF is necessary. The following points present the financial market conditions of Ecuador, especially the Galapagos Islands, and the current economic context of the country, which serve as an argument to demonstrate the need for GCF financing.

- The Ecuadorian economy is slowly recovering from the socioeconomic crisis caused by the COVID 19 pandemic. In 2020 it presented a year-on-year growth rate of -7.8% and a fiscal deficit of -6.1%
- There are no state investments in Energy since after 10 years of government investment, the current national budget for power plants is minimal. At the same time, foreign direct investment is among the lowest in the region in recent years.
- Sovereign risk is at a high level. As of 6/10/2021 it is 833 bps and to the sovereign risk we must add the Ecuadorian passive reference rate.
- At the same time, it faces a limited amount of loans to finance development bank projects, CAF's loan limit to private entities is \$ 25MM and with authorization of presidency \$ 30MM.
- There is no supply in the private credit market since Ecuadorian private banks do not have the capacity to finance this type of project. It is extremely rare to see \$ 10MM loans.

248. If the GCF and CAF loans are not granted, the centralized energy product is not viable because the Ecuadorian credit supply does not satisfy this particular demand for such a large private investment destined to environmental management and the State does not have the resources to face it either. Therefore, in a business scenario as always, it results from a scenario without the existence of this project and without any change in terms of renewable energy projects.

Distributed renewable energy

249. There is market acceptance for these photovoltaic kits: 60.1% of the interviewees are interested in installing equipment that produces energy from renewable sources as long as there is financing and for 56.8%, they are interested provided that the investment made reduces the fixed costs.

250. Renewable photovoltaic energy reduces energy bills paid by beneficiary end-users. To quantify the value of these savings, we measure the total MWh/year per island saved with PV energy considering the potential market of PV energy kits buyers.
251. For this Programme, the total loan amount of this product is 6.514 MUSD plus private equity (1.6 MUSD) equals 8.14 MUSD, which is divided equally among the beneficiaries. The income considered is that produced by the monthly savings in the traditional electricity bills of the commercial companies, which in Galapagos is USD 0.27 per MWh, due to the efficient use, the output generates 4.5GW in clean energy, and the result is an average saving of 1,114,711 USD / year. The investment is the solar panel kit, its financial cost is the interest rate for the end user. Although the EA has not yet negotiated the performance with local banks, for this exercise we assume the current rate for consumer loans (11.2%).
252. The result obtained for an average final beneficiary is an IRR of 9.86% and a NPV at a discount rate equal to 7.57% (Ecuadorian sovereign risk) of USD 4,213.66. The WACC in this operation is equal to 11.98%.3,724.59. This result reflects that the investment is profitable. In a scenario without GCF, it is assumed that the beneficiary takes a loan from the private bank for an interest rate of 17% and the investment is hardly profitable.

Energy efficiency

253. Based on the results obtained for the first phase of the Refrigerator Renewal Program - RENOVA -, it is expected that this Program will continue to save energy by replacing old equipment with others with more efficient technology. With replacement of 3,200 units (1,900 Refrigerators and 1,300 A / c) in the tourist commercial sectors of the Province of Galapagos. The purpose is to reduce the amounts invested by the Government in generating electricity in this intervention area and to reduce CO2 emissions.
254. There is market acceptance for these energy efficient appliances. Most beneficiary end-users are eligible for the loan and therefore funds can be allocated.
255. Production saves 1.69 GW of energy from fossil fuels.
256. It is expected to obtain an average annual saving in energy consumption of 2,179 MWh, which will allow an economic saving of USD10,142,267 considering the price in traditional commercial electricity bills, which in Galapagos is USD 0.27.
257. The total loan amount for this production is around \$ 3.1 million plus private capital (\$ 0.6 million), which is equivalent to \$ 3.86 million, which is divided into air conditioning and refrigeration equipment. It is assumed that the credit is taken at a rate equal to 15.2%. Likewise, it is taken into account that this equipment is fully depreciated in 10 years.
258. The result obtained for an average final beneficiary is an IRR of 9.85% and a NPV at a discount rate equal to 7.57% (Ecuadorian sovereign risk) of USD 251.22, the WACC in this operation is equal to 11.62%. This result reflects that the investment is profitable.
259. Without the support of GCF and CAF, it is unlikely that decentralization and energy efficiency programs will be implemented since there will be no offer from the private credit market that provides adequate incentives for the beneficiaries to promote investment in the adoption of more energy efficient technologies.

Economic and Financial Analysis of Component 2

Fisheries

260. The project focuses on the creation of a Credit Line Incentive Program, whose main objective is to promote a blue circular economy through the financial inclusion of fishermen and civil society entrepreneurs interested in adopting sustainable fishing practices, in exchange for receiving financing for the development of companies with principles of sustainability and social responsibility.
261. One of the main challenges for the Galápagos artisanal fishing sector is obtaining long-term financing. This could include investments to: (1) improve monitoring programs for target and incidental species, (2) prevent or mitigate ecological impacts produced by fishing activities, (3) implement marketing and marketing strategies to improve quality and add value to fishery resources. Unfortunately, the government budget to invest in all these activities is quite limited.
262. The program for granting soft loans has the technical assistance provided by the GCF, through a "Virtual Galapagos Innovation Laboratory", which is what the fishing market needs to solve the problem it has encountered in the past where technical assistance and capacity building processes have been short-term and uncoordinated. Therefore, through the GCF project, the intention is to create, sustain and enrich the G-Lab and extend its benefits

to farmers and other sectors of Galapagos, such as tourism, so without the support of the GCF the project will not be viable.

263. The G-Lab represents the methodological, operational and institutional framework required for the creation of an inter-institutional and interdisciplinary platform that integrates and coordinates governmental and non-governmental programs and projects for the promotion and development of sustainable fishing. The main objective of the G-Lab is to provide long-term training, knowledge exchange and technical advice to fishermen, cooperatives, associations, fishing companies and civil society entrepreneurs, in aspects related to social innovation for sustainable development and the circular economy.

264. From the financial analysis it is obtained:

- The Incentive Program for the line of credit indicates that granting soft loans of US \$ 30,000 to small fishing companies will result in a profitable investment that will produce approximately for a typical fishing company, a 10% IRR, a positive investment NPV of US \$ 6,779 and a payback in less than six years. According to the sensitivity analysis and different scenarios, the Incentive Program of the credit line is only possible if the cost of the repayable fund is less than 6% and if the interest rate of the loans charged to the soft credit remains around 5%. Both conditions are non-market conditions, since the interest rate on corporate loans at which the financial institution will be able to access the funds is around 9% per year; and, in the case of small businesses, the lending rate is around 25%.
- The G-Lab and the credit line incentive program have identified at least three business models with the potential to promote climate-smart and sustainable small-scale fisheries and systemic changes in the Galapagos shellfish system:
 - a) Seafood export company: The Shipowners Association proposes the creation of the "Galapagos Seafood Company" (GSC), a marketing company that will be able to commercialize the landings of a fleet of 14 vessels owned by the members of the Association. The GSC aims to create an independent commercial company to increase the benefits obtained by fishermen in the value chain, solving the oligopsony structure of the supply chain and the weak management capacity of current fishing cooperatives. The GSC offers market incentives based on the quality of the supplied product and alternative mechanisms to redistribute the surplus. The GSC plays an intermediary role in the commercialization of tuna caught by the Shipowners Association. Therefore, its income comes from its sales made in international markets, and its costs include the price paid to fishermen for its product plus the logistical expenses to place the product in international markets. The GSC will be a profitable investment since the IRR is 79%, the NPV is positive and reaches US \$ 912,320; recovery is 21 months. Sensitivity analysis shows that the GSC's return on investment could be vulnerable to a tuna price drop below \$ 4 per pound (assumed price for analysis is \$ 5.32 per pound), but it also shows that there are very profitable alternative markets such as local tourism and the continental market.
 - b) Value-added fishing company: An example prototype from the past is "Blue Fish". This seafood company was founded in 2001 by a small group of entrepreneurial women from Puerto Villamil, Isabela. Pescado Azul produced marketable smoked food products using yellowfin tuna, which was sourced from local fishermen who followed fishing rules and regulations. All suppliers had to meet measurement and control standards related to catch size and gear to sell their catch to Blue Fish. Once processed, the value-added products were sold to the tourism sector (cruise ships and restaurants) and local communities. This small company contributed to reducing the fishing pressure on overexploited coastal fisheries and advanced an alternative prototype of sustainable development. Administrative and personal problems led to the failure of this prototype around 2008. New local entrepreneurs are trying to start this prototype again in Isabela and Puerto Ayora. "Blue Fish": it will be a profitable investment since the IRR is equivalent to 28% in a period of 10 years, the NPV is positive reaching US \$ 100,850. The investment could be recovered in 52.1 months. According to the sensitivity analysis, the profitability of Blue Fish is quite sensitive to direct production costs. Therefore, training and capacity building grants should focus on helping Pescado Azul gain efficiency in its production process.
 - c) Fisheries by-products company: This is the least explored prototype, but the most promising to promote a circular economy and contribute to the mitigation of climate change by reducing greenhouse gases. For example, fish waste (bones, heads and guts) could be used to reduce agrochemical fertilizers in Galapagos. It is estimated that 2.2 t of fish waste is generated each week in Puerto Ayora, Galapagos, consisting mainly of fish skin and bones. Once the fish is processed, the fish waste is completely treated as garbage and transported to the landfill for disposal.

265. Galapagos marine ecosystems provide important services to humans at the regional and global levels. The creation of the GMR has contributed to increasing the productivity of yellowfin tuna and skipjack tuna around the Galapagos through a spillover effect. It also contributes to the economy of Ecuador and the PTO countries through the protection of various endangered species that, in turn, attract tourists.

266. Supporting sustainable and more profitable tuna fisheries in Galapagos will relieve pressure on locally threatened species, while expanding market opportunities for local fishermen. This will contribute to better food security on the islands by strengthening the local supply chain for high-quality protein. Furthermore, reducing imports of seafood will reduce the likelihood of the introduction of new invasive species from mainland Ecuador.
267. The blue economy promotes the sustainable use of ocean resources for economic growth, improved livelihoods and employment, and the health of the ocean ecosystem. Similarly, a circular economy promotes change from a linear take-away model to one that keeps products and materials in circulation for as long as possible, minimizing resource use and waste generation, and reusing products. When they reach the end of their useful life to generate more value.
268. The GMR also contributes through global carbon storage services. Approximately 778,000 tons of carbon are stored in the Galapagos mangroves.

Dynamic positioning

269. vessel through the use of thrusters that are constantly active and balance environmental forces (wind, waves, current, etc.). Environmental forces tend to move the boat out of the desired position, while the controlled thrust automatically balances those forces and holds the boat in position. This system is relatively expensive and offers no incoming cash flow, so calculating an internal rate of return is not financially meaningful. The benefits of PD are adaptation measures based exclusively on ecosystems. However, the PD's production resources come from a loan.
270. The intervention will be economically beneficial in more ecologically friendly marine tourism practices, reducing its impact on key ecosystems such as coral reefs, significantly reducing their vulnerability to climate change and at the same time preserving their natural resilience. The impacts of anchors and pollution from ships on marine habitats and, in particular, on coral reefs, will be significantly reduced. Protecting marine habitats will increase the resilience of coral reefs to the expected impacts of climate change.
271. In a scenario without intervention, the expected impacts of climate change accelerate (coral bleaching, low recruitment, bioerosion) and the natural resilience of the impacted species to climate change (such as coral reefs) decreases. The funding will continue as usual, perpetrating the harmful practices that have been occurring since the eighties. Discussion spaces and opportunities will not be created for stakeholders to discuss and imagine solutions to the anchoring problem. New technologies to avoid anchoring (such as DPS) will not be evaluated or implemented on dive cruises

Agriculture

272. The Program offers different activities that include the implementation of agricultural practices that allow the cultivation of species throughout the year that will adapt to climate change. Likewise, it seeks to develop forestry to produce sustainable animal protein at the same time as the slaughter and processing service centers are strengthened so that the population has access to healthy processed products.
273. In the different intervention practices proposed, the financial analysis included the establishment of their implementation cost, classifying the investments in buildings, machinery and equipment, workshops, monitoring and practices or production involved.
274. Regarding the monetary income from the sale of the products, the following was adopted: to establish the projected utility of the community seed bank, the seed production potential per year and the average sale price were used. For the Silvopastoral practice, the increase in milk and meat production and the average benefit that would be obtained in each case were considered. For biodigesters, the increase in biofuel production was considered and revenues were calculated using the current price of domestic gas in the country. For the biofertilizer, the price of the inorganic fertilizer that it would replace in the implementation of the practice was used as the estimated price. For the price of coffee, flours, fruit pulps and aromatics, the sale price in Galapagos was considered, as well as for slaughter and milk processing activities such as cheese and yogurt. In the different cases, to estimate the sale, production minus self-consumption, if applicable, was calculated.
275. Regarding the use of labor, if the task to be performed has a certain specialty, the hiring of full-time technical personnel is considered, if the task to be performed is periodic, the staff is hired through salary.
276. As this Program contains many subprograms that are interrelated under different workshops and practices that intervene in several farms and at the same time it has the creation of plants for the use of many beneficiaries at the same time, the financial analysis was calculated as a whole for the Program in set divided by activities. The program execution period was set at 5 years. The NPV of the project's general agricultural practices would reach USD5,513,093 while the feasible IRR would be 20.4%.

277. The financial analysis at the final beneficiary level was taken as an example of the activity "Implement strategies to improve the livestock / meat and dairy value chain" on San Cristobal Island and results in an IRR equal to 8.64% and a NPV at a discount rate of 10% of u\$s1,151,660.05 and the payment is recovered after 6 years. In a scenario without GCF, if you find credit supply in the private market due to the high rate, the investment is not profitable.
278. As a co-benefit of agricultural interventions, approximately 251,860 tons of CO₂eq from agricultural areas will be avoided.
279. All this will result in a nutritional benefit for the population of Galapagos. Incorporating these practices will support both the reduction of invasive species on farms and the archipelago's food security.
280. Likewise, practices to ensure the availability of water throughout the year support the supply of crops in times affected by climate change and food security and the supply of fresh water for both crops and the population.
281. GCF support in the form of grants and loans are key elements in reducing market barriers, improving livelihoods and developing resilient agricultural systems that currently affect vulnerable Galapagos farmers.
282. For the program to have a positive effect, it is necessary to guarantee that all the conditions will be established for the project to have continuity beyond the five years of intervention.
283. Without the project, neither the benefits nor the costs would occur. And without the support of the GCF, the project that has workshops and monitoring is not viable and these are necessary for the success of the program

LOGICAL FRAMEWORK

This section refers to the project/programme's logical framework in accordance with the *GCF's Integrated Results Management Framework* to which the project/programme contributes as a whole, including in respect of any co-financing.

E.1. Project/Programme Focus

Please indicate whether this proposal is for a mitigation or adaptation project/programme. For cross-cutting proposals, select both.

- Reduced emissions (mitigation)
 Increased resilience (adaptation)

E.2. GCF Impact level: Paradigm shift potential (max 600 words, approximately 1-2 pages)

This section of the logical framework is meant to help a project/programme monitor and assess how it contributes to the paradigm shift described in section D.2 above by applying three assessment dimensions - scale, replicability, and sustainability.

Accordingly, for each assessment dimension (see the definition per assessment in the accompanying guidance note), describe the current state (baseline) and the potential scenario (target) and rate the current state (baseline) by using the three-point-scale rating (low, medium, and high) provided in the guidance note. Also describe how the project/programme will contribute to that shift/ transformation under respective assessment dimensions (scale, replicability and sustainability). In doing so, please refer to section B.2(a) (theory of change).

Assessment Dimension	Current state (baseline)		Potential target scenario (Description)	How the project/programme will contribute (Description)
	Description	Rating		
Scale	<p>Although at a general level adaptation measures are reflected in the national climate change instruments, it is important that consider explicitly the context differences of Galapagos.</p> <p>The Eastern Tropical Pacific Marine Corridor (CMAR for its acronym in Spanish) (http://cmarpacifico.org/) is a regional initiative (Ecuador, Costa Rica, Colombia y Panamá) for conservation and sustainable use, considering as core areas the marine protected areas of Malpelo, Gorgona, Coiba, Galápagos and Cocos formed in a Network of Marine Protected Areas.</p>	Medium	<p>National and local governments know and consider to incorporate in their planning instruments the good practices, tools, adaptation and mitigation measures and strategies validated by the project.</p> <p>Galapagos plays a key role in the capacity building and institutional strengthening of Ecuador's National System of Protected Areas, actively engaged in the exchange of knowledge, which sustains south-south cooperation relations with a series of countries and international initiatives with similar characteristics.</p> <p>A substantial portion of Lessons Learned will be based on the Programme's monitoring and evaluation activities, as well as knowledge management which will systematize the institutional reporting.</p>	<p><i>The Programme will have activities dedicated to communication, education, and participation (Output 3.1.2), centered around developing the necessary knowledge, values, attitudes, and capacities to make informed decisions and responsible actions to maintain environmental integrity, to ensure economic viability, and to support a just society for the current and future generations. Climate change communication and social and behavioral change approaches will be cross-cutting throughout the Programme activities, ensuring that more effective communication strategies and tactics are defined to influence people's awareness, understanding, concern and action on climate change (see Annex 2 section 12.6).</i></p> <p>Output 3.1.2 <i>The Galapagos community is mobilized towards a transformative climate action. Knowledge management and outreach digital platform targeting local, national and international audiences; Communication strategy to strengthen knowledge and foster commitment for the adoption of climate change mitigation and adaptation</i></p>

	<p>The CMAR works through the establishment of joint governmental regional strategies supported by civil society, international cooperation organizations and non-governmental organizations.</p> <p>Currently, de CMAR does not consider climate change related issues.</p>		<p>The evidence and lessons learnt from Galapagos are available and discussed in the CMAR.</p> <p>Potential regional strategies for climate change adaptation and mitigation are identified in the CMAR.</p>	<p>measures; Dissemination events with strategic partners (e.g., the nature-based tourist industry, other islands systems, other territories dependent on nature-based activities), in the form of workshops, seminars, and peer-to-peer learning exchanges.</p>
<p>Replicability</p>	<p>Today, Galapagos' main livelihoods (agriculture, small-scale fishing, and tourism), are highly vulnerable to climate change. There is weak institutional and technical capacities to address climate change in the Galapagos food system.</p> <p>There are barriers related to access to finance, lack of capacity of Galapagos institutions to drive transformational change, lack of technical knowledge on adaptation and mitigation technologies and actions, market barriers from livelihoods, and lack of public awareness and commitment to climate change.</p> <p>Climate change is a new and unknown challenge for the Galapagos community. There is a lack of accessible, timely, understandable and relevant information about climate change, leading to poor climate change literacy among youth and community members and limited evidence-based decision making. Demonstrative actions have proven to be important agents of action, when combined with awareness and access to financial incentives.</p>	<p><u>Medium</u></p>	<p>Adaptive capacity of farmers through achieving participatory and integral farm planning with producers, the application of climate change adaptation measures can be replicated in other islands.</p> <p>Fishers, farmers and tourism operators not reached directly by the program are mobilized towards action through demonstrative actions and evidence of its benefits, combined with climate change awareness and long term incentives.</p> <p>A model for climate change adaptation and mitigation in oceanic island systems is created and disseminated, including strong evidence of the impact of practices on reducing climate vulnerability and carbon emissions.</p> <p>Capacity building to change current practices and to implement integrated climate-resilient crop management systems, silvopastoral practices, and agroecosystem restoration can be replicated</p>	<p><i>Describe key applicable outputs and resulting outcomes that will be replicated to other sectors, markets, geographical regions, or countries.</i></p> <p>The Programme will have activities (Outcome 2.1) dedicated to strengthen the islands' food system in the face of climate change, resulting in enhancing resilience of the Galapagos' agriculture and small-scale fisheries livelihoods through increased availability of local food to supply resident and visitor populations. This activities are replicable in other islands.</p> <p>Output 2.1.1. Enhanced institutional capacity for climate-resilient planning and development.</p> <p>Output 2.1.2. Increased number of farmers reached with climate-resilient water and agricultural food production investments or practices.</p> <p>Output 2.1.3. Adaptive co-management of the Galapagos marine zoning implemented through science-based and participatory management frameworks and systems. Key recommendation for replica will derive from the use of participation methodologies and process for marine spatial planning and zoning,</p> <p>Output 2.1.4. Increased adoption of climate-smart small-scale fisheries and aquaculture approach. Strong evidence of the impacts and benefits of good fisheries management practices collected.</p>

	<p>Galapagos is a global flagship, Its unique and fragile natural characteristics, combined with its recent colonization and its consumer-oriented economic model, have generated considerable scientific interest to better understand the dynamics of sustainability in this context.</p> <p>A place with such high visibility opens an important window for generating and transmitting evidence of good practices and lessons learned, in a world with limited access to information and resources.</p>		<p>The green credit line and the technical assistance that will be provided to banks and to beneficiaries, will involve the development procedures to assess green projects and reduce the risk perception in relation to these projects, which will have a long-term and sustainable impact that can be replicated.</p>	<p>Output 2.1.5. Upgraded and more efficient value chains for climate-smart seafood and agriculture products, potentiated with links to new markets. Loans and G-Lab installed in Galapagos and incentivizing the creation, innovation and growth of seafood product businesses.</p> <p>The Programme will have activities (Outcome 2.2) dedicated in the GMR, to strengthening marine biosecurity programs and improve surveillance and control measures, restore high ecological value coral reefs, reduce the impact related to tourism operations in selected marine HEVAs and strengthen control programs for invasive species are activities that can be replicable in other insular territories.</p> <p>Output 2.2.1 Increased area of Marine High Ecological Value Areas (HEVAs), under restoration schemes taking into account potential climate change scenarios. Strong evidence of the impacts and benefits of proposed adaptation measures collected.</p> <p>Output 2.2.2 Increased area of native forest of high ecological value, under restoration schemes, to secure environmental services in the face of climate change. Strong evidence of the impacts and benefits of invasive species control techniques and restoration practices collected.</p> <p>Output 3.1.2 The Galapagos community is mobilized towards a transformative climate action. Knowledge management and outreach digital platform targeting local, national and international audiences; Communication strategy to strengthen knowledge and foster commitment for the adoption of climate change mitigation and adaptation measures; Dissemination events with strategic partners (e.g., the nature-based tourist industry, other islands systems, other territories dependent on nature-based activities), in the form of workshops, seminars, and peer-to-peer learning exchanges.</p>
<p>Sustainability</p>	<p>Galapagos community and visitors have been subject of information campaigns on environmental issues that have proven to be a weak strategy upon influencing behavior change. Climate literacy and commitment to climate</p>	<p><u>High</u></p>	<p>Future generations of the Galapagos have the knowledge and skills adapted to the new development pathway.</p> <p>At least 10,000 persons are aware of climate threats and related appropriate</p>	<p>Describe key applicable outputs and resulting outcomes that will be sustained beyond the project/programme period.</p> <p>The programme has in its different components mechanisms to ensure the sustainability of the activities that are going to be developed during its implementation. Financial, educational, legal frameworks and mechanisms</p>

	<p>action in the Galapagos population in low.</p> <p>Lack of institutional conditions that enable the long term adoption of climate change. Climate change is not considered in planning instruments and regulatory frameworks,</p> <p>Fisheries, farmers and tourism sectors don't have the financial capacities and incentives to adopt and maintain climate change practices. Good environmental practices from this sectors are not registered, traced and certified, and therefore nor recognized in monetary value by the market.</p>		<p>responses, and thus demand the maintenance of adaptation and mitigation measures.</p> <p>Key planning and regulatory instruments incorporate climate change evidence and scenarios.</p> <p>Consumption choices from the Galapagos population and visitors are towards local, sustainable, and climate-friendly products.</p> <p>Tourism industry supporting and engaged in marine conservation and resoration actions, to maintain key nature-based attractions.</p>	<p>have been developed under the program that will assure the sustainability of the Programme.</p> <p>The following outputs will ensure the sustainability of the Programme.</p> <p>Output 2.1.3. Adaptive co-management of the Galapagos marine zoning implemented through science-based and participatory management frameworks and systems. Climate change evidence and scenarios will be integrated in marine zoning.</p> <p>Output 2.1.5. Upgraded and more efficient value chains for climate-smart seafood and agriculture products, potentiated with links to new markets. Value added products with traceability systems recognized by local and international markets.</p> <p>Output 2.2.1 Increased area of Marine High Ecological Value Areas (HEVAs), under restoration schemes taking into account potential climate change scenarios. Tourism industry engaged in conservation and restoration actions.</p> <p>Output 3.1.1 Tools and financial mechanisms established for the sustainability of the programme's actions. Tourism good practices certified and valued by national and international markets.</p> <p>Output 3.1.2 The Galapagos community is mobilized towards a transformative climate action. Behavioral change campaigns towards consumers. Children and Youth permanent education programs.</p> <p>Output 3.1.3 Strengthened institutional and regulatory systems for climate responsive planning and development.</p>
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E.3. GCF Outcome level: Reduced emissions and increased resilience (IRMF core indicators 1-4, quantitative indicators)

Select appropriate IRMF core and supplementary indicators to monitor project/programme progress. More than one IRMF (core and or supplementary) indicators may be selected as applicable for each GCF results area and project/programme outcome (as defined in the table in section B.2(b)). If IRMF indicators are unable to measure any given project/programme outcomes, project/programme-specific indicators should be developed under section E.5 (project/programme specific indicators).

GCF Result Area	IRMF		Baseline	Target	Assumptions / Note
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	Indicator	Means of Verification (MoV)		Mid-term	Final ¹⁹	
<u>MRA1 Energy generation and access</u>	<u>Core 1: GHG emissions reduced, avoided or removed/sequestered</u>	Annual energy audits (inspection survey and an analysis of energy flows for energy generation) Elecggalapagos Monthly / Annual Energy report	0	36,664 tCO ₂ e midterm	111,104.19 tCO ₂ e during the 5 years 584,168.98 tCO ₂ e during the 25 years lifespan	The Programme will lead to an estimated emissions reduction from energy investments of 584,168.98 tCO ₂ e over lifespan of the project corresponding to 25 years. Average annual GHG emission reduction is estimated to be 23,366.76 tCO ₂ e per year.
<u>ARA1 Most vulnerable people and communities</u>	<u>Core 2: Direct and indirect beneficiaries reached</u>	Web platform for monitoring the programme CFN / CONAFIPS loans documents Records of GNP tourist (Ecuadorian and developing countries) Web platform for monitoring the programme	Direct 0 Indirect: 0	Direct 7,102 Male: 4,972 Female: 2,130 Indirect: 180,314 Male:126,220 Female: 54,094	Direct 5 year 21,525 Male: 15,067 Female: 6,458 Indirect 5 year 546,410 Male: 382,487 Female: 163,923 Indirect 25 year 2,732,050 Male: 1,912,435 Female: 8,196,153	Total direct beneficiaries are: 21,525 and a total indirect beneficiaries 546,410 during the 5 years of the Programme. The indirect beneficiaries as are an arrival per year, the accumulative total indirect beneficiaries is of 2,732,050.

¹⁹ The final target means the target at the end of project/programme implementation period. However, for core indicator 1 (GHG emission reduction), please also provide the target value at the end of the total lifespan period which is defined as the maximum number of years over which the impacts of the investment are expected to be effective.

<p><u>ARA4 Ecosystems and ecosystem services</u></p>	<p><u>Core 4: Hectares of natural resources brought under improved low-emission and/or climate-resilient management practice</u></p>	<p>Web platform for monitoring the programme / M&E program reports Agricultural areas reports Spatially explicit assessment of the new marine zoning.</p> <p>Report of Scalesia forest restoration practices, that includes a high-resolution map plus a carbon and a biodiversity assessment.</p>	<p>0</p>	<p>6,000 hectares of agricultural areas</p> <p>500 hectares of Scalesia forests</p> <p>4,600,000 hectares (46,000 km²) of marine ecosystems</p>	<p>19,000 hectares of agricultural areas</p> <p>1,500 hectares of Scalesia forests</p> <p>13,800,000 hectares (138,000 km²) of marine ecosystems</p>	<p>The Programme will enhance climate resilience in 19,000 hectares of agricultural areas, 1,500 hectares of Scalesia forests and 13,800,000 hectares (138,000 km²) of marine ecosystems</p>
<p><u>MRA1 Energy generation and access</u></p>	<p><u>Supplementary 1.4: Renewable energy generated</u></p>	<p>Centralized ER: energy meters and records of the energy injected to grid by winning company with CFN and Elecgaapagos oversight.</p> <p>ER: records of energy provided by PV panels measured by local meters at each location – to be gathered by local banks and complemented with audits, with CAF oversight.</p>	<p>0</p>	<p>942,365 MWh/ mid term</p> <p>161,770 MWh/ mid term</p>	<p>2,855,645 MWh/5 years</p> <p>490,215 MWh/5 years</p>	<p>Centralized ER: The Programme will lead to an accumulative energy generation from centralized energy investments of 14,278,225.00 MWh/ 25 yr over lifespan of the project corresponding to 25 years.</p> <p>Average annual energy generation: 571,129 MWh/ yr)</p> <p>Distributed ER: The Programme will lead to an accumulative energy generation from distributed energy investments of 2,451,07500 MWh/ 25 yr over lifespan of the project corresponding to 25 years.</p> <p>Annual energy generation (98,043 MWh/ yr).</p> <p>See Annex 2 appendix 1.2 (emissions reductions calculations). Project lifetime: 25 years .</p>

						based on useful life of technology and contracts duration.
<u>MRA3 Buildings, cities, industries and appliances</u>	<u>Supplementary 1.1: Annual energy savings</u>	Local banks with CFN / CONAFIPS / CAF oversight. Number of deficient equipment replaced, ELECGALAPAGOS records the power and efficiency of each replacement, as well as the historical electricity consumption of the beneficiaries	0	1,653 MWh	41,322 (MWh)	See Annex 2 appendix 1.2 (emissions reductions calculations). Project lifetime: 25 years. Justification of project lifetime: useful life of technology and contracts duration. Annual energy generation (41,322 MWh/ yr).
<u>ARA2 Health, well-being, food and water security</u>	<u>Supplementary 2.1: Beneficiaries (female/male) adopting improved and/or new climate-resilient livelihood options</u>	Livelihood's assessment reports M&E program reports	0	500 farmers or agricultural production units (1,500 persons), and 1,000 fishing households (3,000 persons)	624 agricultural production units (1,872 persons), and 1,000 fishing households (3,000 persons)	Diversification of livelihoods is achieved during project lifetime. Farmers and fishers accept and support changes in their BAU activities.
<u>ARA4 Ecosystems and ecosystem services</u>	<u>Supplementary 4.1: Hectares of terrestrial forest, terrestrial non-forest, freshwater and coastal marine areas brought</u>	Report of Scalesia forest restoration practices, that includes a high-resolution map plus a carbon and a biodiversity assessment.	0	750 ha of Scalesia forests under restoration	1,500 ha of Scalesia forests under restoration	Long term agreements with farmers are enforced by the GNPD and MAG All the Galapagos Marine Reserve is considered in this

	<u>under resoration and/or improved ecosystems</u>	<p>Spatially explicit assessment of the new marine zoning.</p> <p>Reports of coral restored areas, diving sites and turtle nesting and feeding sites.</p>		4,600,000 hectares (46,000 km ²) of marine ecosystems under improved management	13,800,000 hectares (138,000 km ²) of marine ecosystems under improved management	<p>target since the Program will work in mainstreaming climate change in the GMR zoning (output 2.1.3) and strengthening biosecurity program for the entire GMR (Output 2.2.1). Other restoration actions will be implemented for specific HEVAS inside the GMR.</p> <p>The target assumes that the new GMR zoning is endorsed and supported by local stakeholders.</p>
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E.4. GCF Outcome level: Enabling environment (IRMF core indicators 5-8 as applicable)

Select at least two relevant IRMF core (enabling environment) indicators to monitor and elaborate the baseline context and project/programme's targeted outcome against the respective indicators. Rate the current state (baseline) vis-à-vis the target scenario and select the geographical scope of the outcome to be assessed. Describe how the project/programme will contribute towards the target scenario. Refer to a case example in the accompanying guidance to complete this section.

Core Indicator	Baseline context (description)	Rating for current state (baseline)	Target scenario (description)	How the project will contribute	Coverage
<u>Core Indicator 5: Degree to which GCF investments contribute to strengthening</u>	Country ownership for the description of the alignment of the Programme with the	<u>low</u>	The Programme will contribute to a transformational change	235. The Programme complements other related governmental efforts, led by	<u>Single sub-national area within a country</u>

<p><u>institutional and regulatory frameworks for low emission climate-resilient development pathways in a country-driven manner</u></p>	<p>Climate Change policies of the country. However, there are no climate change policies in Galapagos.</p>		<p>towards a low carbon self-sufficient island system with greater capacity to adapt to climate change and variability developing climate change policies in the energy, tourism, landuse and marine sectors.</p>	<p>the Governing Council of the Galapagos, including the recently approved Galapagos 2030 Plan, which was developed in close coordination to this funding proposal, leading into an adequate integration of the funding proposal within the regional long-term policy.</p> <p>Outcome 2.1: Galapagos food system is climate resilient for both internal consumption and for the sustainable tourism sector.</p> <p>Output 2.1.1. Enhanced institutional capacity for climate-resilient planning and development.</p> <p>Outcome 3.1 Strengthened response capacity of key institutions, local livelihoods, and population from Galapagos.</p> <p>Output 3.1.3 Strengthened institutional and regulatory systems for climate responsive planning and development.</p>	
<p><u>Core indicator 7: Degree to which GCF Investments contribute to market development/transformation at the sectoral, local, or national level</u></p>	<p>The market for climate change solutions remains underdeveloped in Galapagos. This Programme will foster the development of a new market for low carbon energy generation and sustainable land use projects. To overcome barriers and create a long-</p>	<p><u>low</u></p>	<p>The intervention seeks a transition towards a more sustainable and circular economy to reduce dependency on imports of food and fossil fuels from continental Ecuador, adapting local consumption and production patterns to the expected climate change impacts.</p>	<p>The Programme will foster the diversification of the economic income of farmers. E.g., by obtaining sub-products by managing the decomposition process of manure and harvest waste such as biogas and bio-fertilizer; silvopastoral systems that bring synergies between cattle and trees</p>	<p><u>Single sub-national area within a country</u></p>

	<p>term enabling environment for this kind of investments, the Programme will put in place a structure for green lending through the public and local banks in Galapagos. The green credit line and the technical assistance that will be provided to banks and to beneficiaries, will involve the development of processes and procedures to assess green projects and reduce the risk perception in relation to these projects, which will have a long-term and sustainable impact. Capacity building activities will guarantee that the market impacts are sustainable.</p>		<p>The Programme will catalyze the paradigm shift from business-as-usual tourism development towards climate resilient and low emissions ecotourism in Galapagos. Ecotourism has been widely recognized as the only sustainable model for tourism development in the islands.</p> <p>Apart from the investments promoted through the loans, the Programme will provide specific Capacity building for the creation of these new jobs. On another side, land use investments tend to generate additional jobs, because system complexity increases with higher area efficiency. Also, agroprocessing stages will be enhanced and that will generate jobs. E.g., the different coffee agroprocessing stages (wet processing, tasting, roasting) will generate direct employment opportunities for the local population.</p>	<p>mean that a combined system can provide more income than either system on its own, increasing animal welfare and productivity.</p> <p>The proposed activities will promote stronger and more dynamic value chains (sustainable production of meat, milk, coffee, vegetables, seafood, fish) that will allow actors to address the difficulties of producing, processing, and marketing organic food products more effectively. There will be an improvement in terms of productivity</p> <p>Outcome 2.1: Galapagos food system is climate resilient for both internal consumption and for the sustainable tourism sector.</p> <p>Output 2.1.5. Upgraded and more efficient value chains for climate-smart seafood and agriculture products, potentiated with links to new markets.</p>	
<p><u>Core indicator 8: Degree to which GCF investments contribute to effective knowledge generation and learning processes, and use of good practices.</u></p>	<p>Zero (0) knowledge management and outreach digital platform.</p> <p>Zero (0) communication strategy</p>	<p><u>high</u></p>	<p>The Program will build local capacity, facilitating favorable conditions and enabling institutional elements for climate change adaptation and mitigation.</p>	<p>Component 3: Sustainability mechanisms for climate resilience and low emissions livelihoods</p> <p>The Program is based on the logic to perpetuate the</p>	<p><u>Single sub-national area within a country</u></p>

<p><u>methodologies and standards</u></p>	<p>Zero (0) behavioral change campaign aimed at consumers of the food system in Galapagos,</p>		<p>The sustained participation of the private and public sector will be actively promoted by a Stakeholder engagement during the implementation stage. During the implementation of the Programme, a multi-stakeholder approach will be pursued to create conditions for Programme ownership.</p>	<p>investments promoted in the 5 years of implementation, if it acts in the areas of formal and non-formal education and communication to mobilize the population towards collective climate action, and if it strengthens the regulatory and institutional frameworks for climate-responsive planning and development, the sustainability of the program will be guaranteed (Outcome 3.1).</p> <p>Engagement methodologies such as the co-creation of best practices and the promotion of discussion spaces in which the private sector would be included, will bring social benefits related to the shared responsibility, active involvement, and appropriation of the stakeholders in the future of nature-based tourism in the Galapagos.</p> <p>One (1) knowledge management and outreach digital platform that makes updated and relevant information, knowledge, lessons, and resources regarding climate change in the Galapagos, understandable and accessible to the public and</p>	
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				<p>key stakeholders (targeting local, national and international audiences);</p> <p>One (1) communication strategy based on innovative approaches and methods, to strengthen knowledge and foster commitment for the adoption of climate change mitigation and adaptation measures;</p> <p>One (1) behavioral change campaign aimed at consumers of the food system in Galapagos, focusing on those behaviors that can be effectively addressed by communications interventions.</p>	
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E.5. Project/programme specific indicators (project outcomes and outputs)

This section should list out project/programme-specific performance indicators (outcomes and outputs) that are not covered in sections above (E.1-E.4). List down tailored indicators to monitor /track progress against relevant project/programme results (outcomes/outputs). AEs have the freedom to decide against which outcomes they would like to set project/programme specific indicators. If any co-benefits are identified in sections B.2(a)(b), and D.3, AEs are encouraged to add and monitor co-benefit indicators under the "Project/programme co-benefit indicators" section in table below. Add rows as needed.

Please number each outcome and output as shown below to indicate association of outputs to the contributing outcome. The numbering for outputs under this section should correspond to the output numbering in annex 4 (detailed budget plan).

Project/programme results (outcomes/ outputs)	Project/programme specific Indicator	Means of Verification (MoV)	Baseline	Target		Assumptions / Note
				Mid-term	Final	
Outcome 1.1	N/A	N/A	N/A	N/A	N/A	N/A
Output 1.1.1: Increased renewable energy generation and storage.	a. Number of MW installed in centralized energy.	Energy meters and records of the energy injected to grid by winning company with	0	a. 40.9 MWh b. 23343,61 kWh energy injected to grid	a. 40.9 MWh b. 22819,04 kWh energy injected to grid	Government maintains policy of promoting RE.

	b. Number of kWh injected to the grid.	CFN / CONAFIPS / CAF oversight.				Assuming that Conolophus PV project starts its operation in 2023 The demand behaves with the evaluated growth trend.
	c. Financing volume of loans provided for the installation of distributed energy. d. Number of loans provided for the installation of distributed energy (gender-disaggregated data). e. Number of MW of distributed energy installed. f. Number of MWh generated with distributed energy.	LFIs M&V with CAF oversight Energy records provided by PV panels measured by local meters at each location – to be gathered by local banks through self-reporting of companies and complemented with audits Power purchase agreements and project records by Elecgalapagos and LFIs with CFN / CONAFIPS /CAF oversight	0	c. 2.44 million USD d. 120 loans provided (20% women) e. 15.65 MW distributed energy installed. f. 40,051 MWh generated.	c. 6.51 million USD d. 320 loans provided (20% women) e. 17.35 MW installed. f. 13,030 MWh generated.	Assuming interest of beneficiaries for taking loans for accessing these technologies Assuming interest of the local banks to finance mitigation projects The payment of the loan is guaranteed with the savings generated by distributed energy and which strengthens the local electricity system throughout the supply chain.
Outcome 1.2	N/A	N/A	N/A	N/A	N/A	N/A
Output 1.2.1: Increased energy savings from energy efficiency investments.	a. Financing volume of loans provided for energy efficiency investments. b. Number of beneficiaries of loans for energy efficiency investments (gender-disaggregated data) c. Number of MWh saved through energy efficiency investments.	LFIs with CFN / CONAFIPS / CAF oversight The electricity company ELECGALAPAGOS must register the monthly consumption of the beneficiaries, which will show the consumption behavior before and after the replacement of inefficient equipment. The replaced A/C and refrigeration equipment represents more than 60% of the users' consumption, in some cases up to 70%. With this, the	0	a. 1.2 million USD. b. 800 loans provided for energy efficiency investments (20% women) c. 1.14 GWh saved.	a. 3.22 million USD. b. 1,600 loans provided (20% women) c. 2.28 GWh saved.	Assuming interest of beneficiaries for taking loans for accessing these technologies Assuming interest of the local banks to finance mitigation projects Assuming that each beneficiary will replace 2 pieces of equipment (so the number of beneficiaries is half the number of total pieces of equipment)

		traceability and recording of savings will be seen from this baseline for all beneficiaries.				
Output 1.2.2 Strengthened Executing Entities and stakeholders' capacities for the development and implementation of mitigation projects.	1.2.2.1a. Number of participants at matchmaking events (gender disaggregated)	CFN / CONAFIPS / CAF reporting List of participants disaggregated by gender	0	a. 100 participants (40% women)	a. 200 participants (40% women)	Assuming interest of banks and stakeholders from the tourist, commercial, agriculture and fisheries sectors. Providers would be included.
	1.2.2.1b. Number of LFIs personnel trained for the development of and implementation of mitigation projects.	CFN / CONAFIPS / CAF reporting Training records with list of participants disaggregated by gender	0	b. 30 individuals at LFIs trained (40% women)	b. 40 individuals at LFIs trained (40% women)	Assuming participation of local banks personnel in the proposed activities.
	1.2.2.1c. Number of beneficiaries with capacities built in mitigation projects development. 1.2.2.1d. Number of women-led businesses trained in green businesses. 1.2.2.1e. Number of beneficiaries supported with pre-investment activities.	CFN / CONAFIPS / CAF reporting Training records with list of participants disaggregated by gender	0	c. 1,000 beneficiaries trained in mitigation projects development (20% women) d. 15 women-led businesses e. 1,000 beneficiaries supported with pre-investment activity (20% women)	c. 1,800 beneficiaries trained in mitigation projects development (20% women) d. 30 women-led businesses e. 1,800 beneficiaries supported with pre-investment activity (20% women)	Assuming participation and interest of beneficiaries in the proposed activities
Outcome 2.1	N/A	N/A	N/A	N/A	N/A	N/A

Output 2.1.1. Enhanced institutional capacity for climate-resilient planning and development.	2.1.1.1a Number of specialists from key local agencies and organizations trained (disaggregated by gender)	Training records with list of participants disaggregated by gender Framework document approved and validated	0	a. 15 specialists from key local agencies and organizations trained (30% women) b. 5 frameworks developed	a. 30 specialists from key local agencies and organizations trained (30% women) b. 10 frameworks developed	Target for women participation in agricultural sector based on Gender Action Plan
	2.1.1.1b Framework to include climate change capacity building for extension and rural advisory services for farmers					
Output 2.1.1. Enhanced institutional capacity for climate-resilient planning and development.	2.1.1.1c. Number of hydro/agro-meteorological monitoring information systems in place and area covered by the system	Hydro-agro meteorological system managed by FAO/GSC/INHAMI Training records with list of participants disaggregated by gender.	0	c. 1 system in place covering 10 000 Ha of agriculture zones c. 4 agro-meteorological warning reports every year since year 2 d. 15 staff trained (30% women)	c. 1 system in place covering 20 000 Ha of agriculture zones. c. 4 agro-meteorological warning reports every year since year 2 d. 20 staff trained (30% women)	Target for women participation in agricultural sector based on Gender Action Plan Agrometeorological equipment is installed, and local institutions use the climate information
	2.1.1.1d. Number of technical staff trained for implementation of sensors and management of the information system (disaggregated by gender)					
Output 2.1.2. Increased number of farmers reached with climate-resilient water and agricultural food production investments or practices.	a. Financing volume of loans provided under Output 2.1.2	LFI and CFN and / or CONAFIPS records with CAF oversight	0	a. 0.48 million USD b. 160 farmers (30% women) c. Farmer improve their food production by 20%	a. 1.296 million USD b. 404 farmers (30% women) c. Farmers improve their food production by 30%	Assuming interest of LFIs in financing climate-resilient agriculture projects
	b. Number of farmers accessing loans (disaggregated by gender)					
	2.1.2.1a. Number of farms produce, store, and manage seeds for	Delivery/reception acts	0	a. 15 farms produce, store, and manage	a. 25 farms produce, store, and manage	Target for women participation in agricultural

	<p>providing to fellow farmers..</p> <p>2.1.2.1b. INIAP existing infrastructure improved (%)</p>			<p>seeds for providing to fellow farmers.</p> <p>b. 80% of INIAP infrastructure improved (germplasm bank, storage facilities)</p> <p>c. 100 farmers receive seeds produced locally</p>	<p>seeds for providing to fellow farmers.</p> <p>b. 100% of INIAP infrastructure improved (germplasm bank, storage facilities, fridges, seed production)</p> <p>c. 200 farmers receive seeds produced locally</p>	<p>sector based on Gender Action Plan</p> <p>Assuming participation and interest of beneficiaries in the proposed activities ability to pay for seeds</p>
	<p>2.1.2.2a. Number of hectares covered by ICM practices (Small, medium, and large farms, disaggregated by gender)</p>	<p>Rural participatory assessment results</p> <p>Field schools reports</p>	0	<p>a. 2400 hectares implement ICM practices</p> <p>b. 267 medium and small scale farms, disaggregated by gender.</p> <p>c. 56 large-scale</p>	<p>a. 3000 hectares implement ICM practices</p> <p>b. 334 medium and small-scale farms, disaggregated by gender.</p> <p>c. 70 large-scale</p>	<p>Target for women participation in agricultural sector based on Gender Action Plan</p>
	<p>2.1.2.3a. Number of farmers trained to implement silvopastoral systems on farms (disaggregated by gender)</p> <p>2.1.2.3b. Number of farms with an Agroecological Silvopastoral System implemented.</p> <p>2.1.2.3c. Number of beneficiaries (disaggregated by gender).</p>	<p>Training records with list of participants disaggregated by gender</p> <p>Carbon Organic Soil monitoring results at farm level</p>	0	<p>d. 195 farmers trained (30% women)</p> <p>b. 195 farms with ASS implemented.</p> <p>c. 585 beneficiaries (30% women)</p> <p>d. 52 livestock farms with biodigesters.</p>	<p>a. 244 farmers trained (30% women)</p> <p>b. 244 farms with ASS implemented.</p> <p>c. 732 beneficiaries (30% women)</p> <p>d. 66 livestock farms with biodigesters.</p>	<p>Target for women participation in agricultural sector based on Gender Action Plan</p> <p>Assuming participation and interest of beneficiaries in the proposed activities</p>

	2.1.2.3d. Number of livestock production farms with biodigesters.					
	2.1.2.4a. Volume of water storage needs covered by green and grey water storage infrastructure. 2.1.2.4b. Number of hectares with enhanced water supply 2.1.2.4c Number of beneficiaries of the water systems (disaggregated by sex).	Water system infrastructure installed (reservoirs, pipelines, irrigation systems)	0	a. 13,200 m3 covered. b. 400 hectares with enhanced water supply. c. 1,363 beneficiaries of the water systems (30% women)	a. 16,500 m3 covered. b. 499 hectares with enhanced water supply. c. 1,704 beneficiaries of the water systems (30% women)	Target for women participation in agricultural sector based on Gender Action Plan Assuming participation and interest of beneficiaries in the proposed activities Water availability (especially groundwater) is enough to cover planned requirements
Output 2.1.3. Adaptive co-management of the Galapagos marine zoning implemented through science-based and participatory management frameworks and systems	2.1.3.1a. Number of high ecological value areas (HEVA) effectively protected of all marine macro-habitats (e.g., corals) at each of the five marine bioregions of the GMR. 2.1.3.1b. Number of No take zones (NTZ) strategically distributed to protect at least 30% of the breeding stock and critical recruitment and nursery habitats for sea cucumbers, spiny lobsters and sailfin groupers.	Spatially explicit assessment of the new marine zoning	0	a. 40% of HEVA effectively protected. b. 15% of NTZ strategically distributed within the GMR.	a. 80% of HEVA effectively protected. b. 30% of NTZ strategically distributed within the GMR.	Based on the HEVA identification (See Annex 2. Section 7) Assuming stakeholders endorsement of the new marine zoning

	<p>2.1.3.2b. “Subtidal Ecological Monitoring” module in place and integrated into the “Sistema Único de Información Ambiental (SUIA)”.</p> <p>2.1.3.2c. At least 60% of GNPD and CGREG management authorities and other relevant stakeholders trained for the integration of the framework in decision-making process and ongoing monitoring programs.</p>	<p>2.1.3.2b Reports delivered by Subtidal Ecological Monitoring” module</p> <p>2.1.3.2c. Skills and competences assessment reports</p>	<p>0</p>	<p>b. 50% of the subtidal ecological monitoring program integrated into the SUIA.</p> <p>c. 40% of GNPD and CGREG management authorities and other relevant stakeholders trained</p>	<p>b. 100% of the subtidal ecological monitoring program integrated into the SUIA.</p> <p>c. 60% of GNPD and CGREG management authorities and other relevant stakeholders trained</p>	<p>Assuming SUIA is maintained as the national system for environmental indicators.</p>
<p>Output 2.1.4. Increased adoption of climate-smart small-scale fisheries and aquaculture approach.</p>	<p>2.1.4.1a. Level of sustainability of Galapagos tuna fisheries derived from the MSC’s - BMT tool.</p> <p>2.1.4.1b. Percentage increase of tuna landings.</p> <p>2.1.4.1c. Number of ship-owners have implemented in their fishing vessels an electronic monitoring system and they are part of a blockchain traceability system.</p> <p>2.1.4.1d. Number of fishing organizations has designed and implemented a code of</p>	<p>Reports derived from the MSC’s Benchmarking and Tracking Tool (BMT)</p> <p>MoU between GNPD and vessel owners. Monitoring and Traceability system reports</p> <p>Code of conduct endorsement letter</p>	<p>0</p>	<p>a. 10% increase in sustainability level.</p> <p>b. 40% of tuna landings, have improved thanks to enhanced post-harvest handling and cold-chain infrastructure.</p> <p>c. At least 40 ship-owners have implemented in their fishing vessels an electronic monitoring system and they are part of a</p>	<p>a. 40% increase in sustainability level.</p> <p>b. 80% of tuna landings, have improved thanks to enhanced post-harvest handling and cold-chain infrastructure.</p> <p>c. At least 100 ship-owners have implemented in their fishing vessels an electronic monitoring system and they are part of a</p>	<p>a. Target based on similar experiences with MSCs</p> <p>b. Target based on cold-chain infrastructure capacity.</p> <p>c. Assuming interest in participating in the activity, manifested during feasibility study, is maintained.</p> <p>d. Assuming interest in participating in the activity, manifested during feasibility study, is maintained.</p>

	good fishing practices and a manual of best practice handling techniques for target and bycatch species.			blockchain traceability system. d. One fishing organization has designed and implemented a code of good fishing practices and a manual of best practice handling techniques for target and bycatch species.	blockchain traceability system. d. Two fishing organizations have designed and implemented a code of good fishing practices and a manual of best practice handling techniques for target and bycatch species.	
	2.1.4.2b. Level of sustainability of sailfin grouper fisheries derived from the MSC-BMT tool.	Endorsement letters from authorities and fishers organizations. Reports derived from the MSC's Benchmarking and Tracking Tool (BMT)	0	b. 1 report of the sailfin grouper fisheries sustainability derived from the BMT.	b. 3 reports of the sailfin grouper fisheries sustainability derived from the BMT.	
	2.1.4.3a. Sea cucumber stock size. 2.1.4.3b. Number of larvae have been reared locally, and number of sea cucumbers have been released in specific TURF to accelerate stock rebuilding across the GMR. 2.1.4.3c. Number of households receiving economic benefits from	Sea cucumber stocks assessment Rearing data report Official TURF allocation agreement.	0	a. At least 10% of cucumber stocks increased. b. At least 300.000 larvae have been reared locally, and at least 15.000 sea cucumbers have been released in specific TURF to accelerate stock rebuilding across the GMR.	a. At least 10% of cucumber stocks increased. b. At least 1 million larvae have been reared locally, and at least 100,000 sea cucumbers have been released in specific TURF to accelerate stock	a and b. Minimum value to obtain successful results; there is a good probability of getting higher values. Assuming CGREG and GNPD procedures to

	the successful allocation of TURF.	Income assessment of households with allocation of TURF		c. At least 110 fisher's households are benefited from the successful allocation of TURF.	rebuilding across the GMR. c. At least 320 of fisher's households are benefited from the successful allocation of TURF.	allocate TURF are maintained.
Output 2.1.5. Upgraded and more efficient value chains for climate-smart seafood and agriculture products, potentiated with links to new markets.	<p>2.1.5a. Financing volume of loans provided under Output 2.1.5</p> <p>2.1.5b. Number of beneficiaries of the agriculture sector provided with loans (disaggregated by gender)</p> <p>2.1.5c. Number of beneficiaries of the fisheries sector provided with loans (disaggregated by gender)</p>	LFIs M&V with CAF oversight	0	<p>a. 1.6 million USD</p> <p>b. 90 farmers (30% women)</p> <p>c. 20 fishers (10% women)</p>	<p>a. 4.42 million USD</p> <p>b. 244 farmers (30% women)</p> <p>c. 50 fishers (10% women)</p>	Assuming interest of LFIs in financing climate-resilient agriculture projects
	<p>2.1.5.1a. Number of livestock production systems strengthened.</p> <p>2.1.5.1b. Number of slaughterhouses with management plan, traceability standards and reliable cold transport chain</p> <p>2.1.5.1c. Total of loans provided to farmers to</p>	<p>FAO monitoring report</p> <p>Credit access by producers</p>	0	<p>a. 195 livestock production systems strengthened.</p> <p>b. 2 slaughterhouses enhanced.</p>	<p>a. 244 livestock production systems strengthened.</p> <p>b. 3 slaughterhouses enhanced.</p>	Farmers and producers are involved in capacity building processes.

	<p>improve their dairy processing plants.</p> <p>2.1.5.1d. Number of documents describing the results of the positioning of the local market.</p> <p>2.1.5.1e. Number of farmers with strengthened capacities related to management, use and conservation of pastures and forages, meat processing practices and the production of pasteurized milk, cheese, yogurt, and caramel (disaggregated by gender)</p>			<p>c. \$544,000 provided as loans to farmers.</p> <p>d. 14 documents</p> <p>e. 586 farmers (30% women)</p>	<p>c. \$680,000 provided as loans to farmers.</p> <p>d. 16 documents</p> <p>e. 732 farmers (30% women)</p>	
	<p>2.1.5.2a. Number of farmers' capacity strengthened on post-harvest strategies (disaggregated by gender)</p> <p>2.1.5.2b. Number of farmers strengthened on mobilization of productions with biosecurity measures (disaggregated by gender)</p> <p>2.1.5.2c. Number of wet processing centers constructed.</p> <p>2.1.5.2d. Number of dry processing centers.</p>	<p>Delivery/reception acts of wet and dry processing centers</p> <p>Loan approval document</p> <p>Document on analysis on market positioning.</p>	<p>0</p>	<p>a. 25 farmers (30% women)</p> <p>b. 25 farmers (30% women)</p> <p>c. 1 coffee wet processing center.</p> <p>d. 1 coffee dry processing center.</p> <p>e. 888 hectares.</p>	<p>a. 67 farmers (30% women)</p> <p>b. 67 farmers (30% women)</p> <p>c. 2 wet processing center.</p> <p>d. 2 dry processing center.</p> <p>e. 1,111 hectares.</p>	<p>Target for women participation in agricultural sector based on Gender Action Plan</p>

	<p>2.1.5.2e. Number of hectares benefitting from strategies to improve the coffee value chain (harvest, post-harvest, transportation, wet and dry processing, tasting and roasting).</p>					
	<p>2.1.5.3a. Number of farmers strengthened on agroprocessing of banana, plantain, and cassava (disaggregated by gender)</p> <p>2.1.5.3b. Number of agro-processing plants constructed.</p> <p>2.1.5.3c. Number of public policies to position brand of cassava, banana and plantain chips and flours.</p> <p>2.1.5.3d. Number of farmers strengthened on agroprocessing of preserves and pulps of citrus fruits, pineapple and tomato (disaggregated by gender)</p> <p>2.1.5.3e. Number of agro-processing plants constructed.</p>	<p>List of farmers participating in the project.</p> <p>Delivery/reception acts</p> <p>Credit accessed by producers.</p> <p>Income analysis reports</p>	<p>FAO monitoring report</p>	<p>a. 218 farmers strengthened (30 % women)</p> <p>b. 1 agro-processing plant constructed.</p> <p>c. 1 public policies.</p> <p>d. 120 farmers strengthened (30% women)</p> <p>e. 1 agro-processing plant constructed.</p> <p>f. 1 public policies.</p> <p>g. 60 farmers strengthened on agroprocessing of aromatic and medicinal herbs (30% women)</p>	<p>272 farmers strengthened (30% women)</p> <p>b. 1 agro-processing plant constructed.</p> <p>c. 1 public policy.</p> <p>d. 150 farmers strengthened (30% women)</p> <p>e. 1 agro-processing plant constructed.</p> <p>f. 1 public policy.</p> <p>g. 75 farmers strengthened on agroprocessing of aromatic and medicinal herbs (30% women)</p>	<p>Target for women participation in agricultural sector based on Gender Action Plan</p>

	<p>2.1.5.3f. Number of public policies to position brand of preserves and pulps of, at a minimum, pineapple, citrus and tomatoes.</p> <p>2.1.5.3g. Number of farmers strengthened on agroprocessing of aromatic and medicinal herbs (disaggregated by gender)</p> <p>2.1.5.3h. Number of agro-processing plants constructed.</p> <p>2.1.5.3i. Number of public policies to position brands of preserved aromatics.</p>			<p>h. 1 agro-processing plant constructed.</p> <p>i. 1 public policies.</p>	<p>h. 1 agro-processing plant constructed.</p> <p>i. 1 public policy.</p>	
	<p>2.1.5.4a. Number of local seafood enterprises successfully implemented with technical assistance from the Galapagos Virtual Innovation Lab (G-Lab). From which: - % of women-led enterprises.</p> <p>2.1.5.4b. Number of entrepreneurs that have received sustained institutional and financial support by the G-Lab.</p>	<p>G-Lab reports</p> <p>Enterprises legal constitution</p> <p>Enterprises assessments</p>	<p>0</p>	<p>a. 4 local seafood enterprises are operating from which 10% women led.</p> <p>b. 20 entrepreneurs have received sustained institutional and financial support by the G-Lab.</p> <p>c. Two value-added products are offered by the new socially</p>	<p>a. 10 local seafood enterprises are operating from which 10% are women led.</p> <p>b. 50 entrepreneurs have received sustained institutional and financial support by the G-Lab.</p> <p>c. Five value-added products are offered by the new socially</p>	<p>a&b. Assuming legal and financial requirements for the constitution of enterprises is the same.</p> <p>c. Assuming national and international markets for seafood added value products are maintained and recovered from COVID19 crisis.</p>

	2.1.5.4c. Number of value-added products are offered by the new socially responsible seafood enterprises.			responsible seafood enterprises.	responsible seafood enterprises.	
	2.1.5.5a. Number of soft loan credit programs established. 2.1.5.5b. Number of entrepreneurs that have received loans from the Galapagos' Climate Credit Line for fisheries (disaggregated by gender).	Credit offer procedures and requirements established and accessible. Bank credit adjudication document signed	0	a. A soft loan credit program called the Blue Incentives Program is designed. b. 20 entrepreneurs have received financial support by the Blue Incentives program (10% women)	a. A soft loan credit program called the Blue Incentives Program is established. b. 50 seafood entrepreneurs have received financial support by the Blue Incentives program (10% women).	Assuming beneficiaries are willing to get into debt, knowing that their enterprises will become productive and competitive with the support of the program.
Outcome 2.2	N/A	N/A	N/A	N/A	N/A	N/A
Output 2.2.1 Increased area of Marine High Ecological Value Areas (HEVAs), under restoration schemes taking into account potential climate change scenarios.	2.2.1.1a. Number of Early Detection and Rapid Response (EDRR) protocol for marine invasive species is created and under implementation in the GMR. 2.2.1.1b. Number of decision-makers from the GNPD and ABG consuming and incorporating information from the Decision Support System platform	Report from Early Detection and Rapid Response (EDRR) protocol Decision-making platform reports Training workshops reports. Skills and competences assessment Outreach materials Report on audiences exposed to the material.	0	a. One EDRR protocol for marine invasive species is designed for the GMR. b. At least 10 decision-makers. c. None.	a. One EDRR protocol for marine invasive species is implemented for the GMR. b. At least 20 decision-makers. c. 4 countries.	Assuming countries' joint working platform- CMAR is in place and active.

	<p>2.2.1.1c. Number of Countries of the ETP are aware and interested in the Galapagos Early Detection and Rapid Response (EDRR) system.</p>					
	<p>2.2.1.2a. Number of coral nurseries implemented in a site (in-situ) approved by the GNPD to grow new corals that will be transplanted to selected degraded areas.</p> <p>2.2.1.2b. Number of sites in selected islands (Darwin, Wolf and Floreana) under restoration schemes through transplanted corals from the nursery developed in collaboration with the GNPD.</p> <p>2.2.1.2c. Number of small-scale sea urchin removal plan experiments implemented to minimize reef damage and assist recovery of coral reefs.</p> <p>2.2.1.2d. Number of tourism operators participating in coral restoration processes.</p> <p>2.2.1.2e. Percentage of coral areas in the GMR</p>	<p>NSU exchange and training workshops reports.</p> <p>Experiments reports</p> <p>Nurseries implementation report.</p> <p>GNPD approval letter</p> <p>Restoration monitoring reports</p> <p>Experiment reports</p> <p>Tourism sector engagement reports.</p> <p>Meeting reports and list of participants.</p> <p>Assessment report</p>	<p>0</p>	<p>a. Two coral nurseries implemented in a site (in-situ).</p> <p>b. Two degraded site in each island under restoration schemes through transplanted corals</p> <p>c. At least one small-scale sea urchin removal plan experiment designed.</p> <p>d. None</p> <p>e. 0%</p>	<p>a. Three coral nurseries implemented in a site (in-situ).</p> <p>b. Three degraded site in each island under restoration schemes through transplanted corals</p> <p>c. At least one small-scale sea urchin removal plan experiment implemented.</p> <p>d. At least 2 tourism operators.</p> <p>e. 10%</p>	<p>a. Assuming nursery form the GNPD is maintained</p> <p>d. Target assuming interest from tourists to engage in restoration activities</p> <p>e. Target based on similar initiatives implemented and documented.</p> <p>f. Assuming FRMG is successfully created and implemented.</p>

	<p>with improved health status.</p> <p>2.2.1.2f. Number of long-term monitoring systems in place, for the adaptive management of active and passive coral restoration actions under current and future climate scenarios.</p>	<p>Monitoring plan document.</p> <p>Commitment letter from GNPD and FRMG for long term support of the monitoring program.</p>		<p>f. One long-term monitoring plan with the GNPD designed.</p>	<p>f. One long-term monitoring plan with the GNPD implemented</p>	
	<p>2.2.1.3a. Number of Diving Tourism Best Practices adopted.</p> <p>2.2.1.3b. Number of capacity building activities for dive guides and GNP technicians implemented.</p> <p>2.2.1.3c. Number of monitoring systems and DDS portals implemented for underwater diver behavior and pollution levels control.</p> <p>2.2.1.3d. Number of boat tourism operators and their personnel with capacities for the installation and maintenance of Positioning Systems (DPS) (disaggregated by gender).</p>	<p>Diving monitoring reports</p> <p>Training workshops reports</p> <p>skills and competences assessment</p> <p>Decision Support System (DSS) portal reports</p> <p>Official Bank document with credit adjudication.</p> <p>LFIs and CFN and / or CONAFIPS with CAF oversight</p>	<p>0</p>	<p>a. 2 Diving Tourism Best Practices adopted</p> <p>b. 3 capacity building activities for dive guides and GNP technicians implemented.</p> <p>c. One monitoring system and DDS portal designed for underwater diver behavior.</p> <p>d. 2 tourism operators and 10 persons with capacities to install and maintain Digital Positioning Systems (DPS)</p>	<p>a. 5 Diving Tourism Best Practices adopted</p> <p>b. 6 capacity building activities for dive guides and GNP technicians implemented.</p> <p>c. One monitoring system and DDS portal implemented for underwater diver behavior.</p> <p>d. 10 tourism operators and 30 persons with capacities to install and maintain Digital</p>	<p>a. Target assuming interest from tourists to engage in restoration activities</p> <p>d. Target based on financial study.</p> <p>e. Assuming vessel operators maintain their willingness to acquire debt.</p>

	<p>2.2.1.3e. Percentage of boats that have been granted with a loan for the installation of the DPS.</p> <p>2.2.1.3f Financing volume of loans provided for the installation of DPS.</p>			<p>e. 30% of boats granted with a loan for the installation of the DPS.</p> <p>f. 120,000 USD</p>	<p>Positioning Systems (DPS)</p> <p>e. 70% of boats granted with a loan for the installation of the DPS.</p> <p>f. 320,000 USD</p>	
	<p>2.2.1.4a. Percentage of turtle nests from critical areas translocated.</p> <p>2.2.1.4b. Percentage of translocated nests with successful birth rate.</p> <p>2.2.1.4c. Number of regulations in place, including the monitoring of regulations compliance, to avoid boat strikes in turtle nesting and feeding sites.</p>	<p>Studies reports</p> <p>Training workshops reports</p> <p>Skills and competences assessment</p> <p>Nesting beaches selection report</p> <p>Monitoring system reports</p> <p>Official document with regulations</p> <p>Assessment report</p>	0	<p>a. 10%</p> <p>b. 80%</p> <p>c. None</p>	<p>a. 50%</p> <p>b. 80%</p> <p>c. At least one regulation.</p>	<p>c, Target assuming a participatory establishment of the regulations, and GNPD and Navy engagement for regulation enforcement.</p>
Output 2.2.2 Increased area of native forest of high ecological value, under restoration schemes, considering climate change scenarios	<p>2.2.2.1a. Number of hectares of prioritized areas within the GNP under innovative control schemes.</p> <p>2.2.2.1b. Terrestrial invasive species program of the GNPD strengthened.</p> <p>2.2.2.1c. Conservation status index of 750 ha</p>	<p>Restoration monitoring reports</p> <p>GNPD restoration planning instruments improved.</p> <p>Training workshops reports</p> <p>Skills and competences of GNPD assessments</p>	<p>0</p> <p>0</p> <p>0</p> <p>0</p>	<p>a. 1 model.</p> <p>b. 200 ha.</p> <p>c. 1 program</p> <p>d. 200 ha</p>	<p>a.1 model.</p> <p>b. 750 ha.</p> <p>c. 1 program</p> <p>d. 750 ha</p>	<p>Target for women participation in agricultural sector based on Gender Action Plan</p> <p>Long term agreements with farmers are enforced by the GNPD and MAG</p>

	<p>of Scalesia forest in the agricultural area (includes species diversity, AGB stocks, and soil properties).</p> <p>2.2.2.1d. Number of hectares with strengthened active agricultural practices to control invasive species.</p>	Restoration monitoring reports	0			
	2.2.2.3a. Number of decision-makers from the GNPD; Ministry of Agriculture and ABG consuming and incorporating information from a digital platforms under a “Social-Ecological System Knowledge Node” format.	Digital platforms reports	0	a. 0	a. At least 20.	
Outcome 3.1	N/A	N/A	N/A	N/A	N/A	N/A
Output 3.1.1 Tools and financial mechanisms established for the sustainability of the programme’s actions	<p>3.1.1.1a. Number of staff trained on the management of the certification scheme (disaggregated by gender).</p> <p>3.1.1.1b. Number of tourism businesses with certifications awarded (disaggregated by gender).</p>	<p>Certification plan document</p> <p>Training workshops reports</p> <p>Skills and competences of local authorities and farmers assessments.</p> <p>Certification verification reports</p> <p>Official document awarding certification.</p>	0	<p>a. 60 staff trained (20% women)</p> <p>b. 0 certifications awarded (20% women-led).</p>	<p>a. 150 staff trained (20% women)</p> <p>b. 6 certifications awarded (20% women-led).</p>	Target based on similar initiatives

Output 3.1.2 The Galapagos community is mobilized towards a transformative climate action.	3.1.2.1a. % of increase in competencies of education for climate change in participants of the capacity building process.	Evaluation of competences for education	TBD	0	a. 30%	Assuming participation and interest of local people in the proposed activities
		Evaluation children's literacy	TBD	0	b. 20%	Assuming local authorities maintain their interest to establish the Board.
	3.1.2.1b. % of increase in climate literacy in children and youth (a climate literate person as someone that demonstrates the knowledge, dispositions, competencies, and behavior intentions to act, individually or collectively, to address climate change challenges)	Minutes from meeting of the Intersectoral Board for Educational Articulation.	0	c. 1 Board	c. 1 Board	
		Agenda document	0	d. 1 Agenda	d. 1 Agenda	e. Assuming agreements with local schools with MIneduc and the Program, are established and maintained.
	3.1.2.1c. Board of Education for Climate Change (MECC) created.	WWF training reports with evaluated competences and abilities.	0	e. 100	e. 200	
		Printed and audiovisual pedagogical resources	0	e. 4 pilot projects	e. 12 pilot projects	
	3.1.2.1d. Agenda for Climate Change Education at a provincial level is developed and implemented.	WWF reports on pilot projects	0	f. 5 experiences	f. 10 experiences	
		WWF report	0	g. 20 students	g. 80 students	
	3.1.2.1e. Number of teachers and school principals of all school levels and sub-levels of the 20 educational establishments of Galapagos, trained on climate change education, within the Teacher Professional	WWF report	0	h. 80 local people trained in the installation and preventive maintenance of ER and EE	h. 200 local people trained in the installation and preventive maintenance of	
		CFN and / or CONAFIPS / CAF reporting	0			

	<p>Development Program of Mineduc (ESG Program).</p> <p>3.1.2.1f. Number of climate-friendly pilot projects implemented in different Galapagos educational establishments.</p> <p>3.1.2.1g. Number of immersive and experiential educational experiences on climate change designed and implemented into the educational system.</p> <p>3.1.2.1h. Number students trained through technical education programs (second and third level) with a focus on sustainable value chains and climate change.</p> <p>3.1.2.1i. Number of local people trained in the installation and preventive maintenance of RE and EE technologies (gender-disaggregated)</p>			technologies (30% women)	ER and EE technologies (30% women)	
	3.1.2.2a. % increased knowledge of local community, key stakeholders and decision makers regarding climate	Interview CFN / CONAFIPS / CAF reporting	TBD 0	a. 10%	a. 30%	Assuming participation and interest of local people in the proposed activities.

	<p>change impacts and solutions in Galapagos</p> <p>3.1.2.2b. Local banks personnel reached by awareness-raising activities (gender-disaggregated)</p> <p>3.1.2.2c Number of knowledge management and outreach digital platform on climate change, designed and implemented.</p> <p>3.1.2.2d Number of behavioral change campaigns designed and implemented in the four populated islands.</p>	<p>Digital platform monitoring report</p> <p>Printed and audiovisual content and material. WWF reporting on activities.</p> <p>Monitoring report based on the behavioral insight analysis.</p>	<p>0</p> <p>0</p> <p>0</p>	<p>b. 120 staff (40% women)</p> <p>c. 1 digital platform</p> <p>d. 1 campaign activation</p>	<p>b. 200 staff (40% women)</p> <p>c. 0</p> <p>d. 3 campaign activations</p>	
	<p>3.1.2.3a. % of increase in competencies in participants for active citizenship towards climate action</p> <p>3.1.2.3b. # of climate action initiatives led by local citizens.</p> <p>3.1.2.3c. Number of participants on training program on climate change for facilitators designed and implemented in Santa Cruz and San Cristobal Islands.</p>	<p>Evaluation of competences</p> <p>Program monitoring reports</p> <p>Participants lists and learning monitoring reports.</p> <p>Climate change content, lessons, and resources for educational experiences (non- formal)</p> <p>Participants list and learning monitoring reports.</p> <p>Community-based projects planning an implementation report.</p>	<p>TBD</p> <p>0</p> <p>0</p> <p>0</p> <p>0</p>	<p>a. 10%</p> <p>b.2</p> <p>c. 50 participants</p>	<p>a. 30%</p> <p>b. 4</p> <p>c. 30 participants</p>	<p>Assuming participation and interest of local people in the proposed activities.</p>

	<p>3.1.2.3d. Number of non-formal educational and immersive field-based experiences on climate change in the four inhabited islands</p> <p>3.1.2.3e. Number of citizens of the four inhabited islands, have been trained and are part of the working platform on collective climate action (disaggregated by gender).</p> <p>3.1.2.3f. Number of independent youth and community-based projects or initiatives are initiated and have been successfully completed or are still under development.</p>		0	<p>d. 10 experiences.</p> <p>e. 200 citizens (50% women)</p> <p>f. 0 projects</p>	<p>d. 15 experiences.</p> <p>e. 100 citizens (50% women)</p> <p>f. 20 projects</p>	
Output 3.1.3 Strengthened institutional and regulatory systems for climate responsive planning and development.	<p>3.1.3.1a. Climate Action Plan designed and socialized.</p> <p>3.1.3.1b. Financial sustainability strategy developed.</p> <p>3.1.3.1c. Financial mechanisms functioning.</p>	WWF monitoring report	0	<p>a. CAP designed.</p> <p>b. 0</p> <p>c. 0</p>	<p>a. CAP socialized.</p> <p>b. 1</p> <p>c. At least 3 mechanisms functioning</p>	
Project/programme co-benefit indicators						
	Project/programme specific Indicator	Means of Verification (MoV)	Baseline	Target		Coverage
				Mid-term	Final	

Emissions reductions through the improved farming practices	tCO ₂ e emissions reduction from agriculture, forestry, and other land use (AFOLU)	tCO ₂ e	0	50,150 tCO ₂ e	250,751 tCO ₂ e during the 5 years	The Programme will lead to an estimated emissions reduction from agriculture, forestry, and other land use (AFOLU) of 50,150 tCO ₂ e per year, about 250,751 tCO ₂ e during the 5 years of implementation of the Programme.
Green Jobs	# Green Jobs created	Number of new green jobs from low-carbon investments.	0	150 green jobs	250 green jobs	

E.6. Project/programme activities and deliverables

All project activities should be listed here with a description and sub-activities. Significant deliverables should be reflected in annex 5 implementation timetable. Add rows as needed.

Please number the activities as shown below to indicate association of activities to the related outputs provided above in section E.5. Similarly, please number sub-activities as shown below to associate to the related activity.

Activities	Description	Sub-activities	Deliverables
Activity 1.1.1: Promotion of Centralized renewable energy generation	Installation of Conolophus Solar Photovoltaic Plant and associated storage system	-	1 centralized PV project financed, installed and operational
Activity 1.1.1.2. Distributed renewable power generation projects	Increase distributed energy generation by providing loans to invest in Micro distributed PV generation through the Galapagos' Climate Credit Line (GCCL)	1.1.1.2.a Renewable Energy promoted through the Galapagos' Credit Line 1.1.1.2.a Renewable Energy promoted through technical assistance	230 loans for distributed energy projects
Activity 1.2.1.1 Promotion of Efficient energy consumption by the Galapagos' livelihoods	Optimize the electrical energy consumption in the acclimatization and refrigeration areas	-	800 loans provided for energy efficiency investments
Activity 1.2.2.1: Technical Assistance facility for energy investments	Facilitate the implementation of the Programme by increasing knowledge on climate change and low carbon energy investment projects	1.2.2.1a Matchmaking events to facilitate development of mitigation projects. 1.2.2.1b Technical Assistance for Local Banks 1.2.2.1c Technical Assistance for Final Beneficiaries	Reports on training sessions carried out: matchmaking events, project assessment, E&S management, and BL and MRV for LFIs, beneficiaries of loans.

		1.2.2.1d New Employment Opportunities in RE and EE technologies	
Activity 2.1.1.1. Implement a capacity building program for government technical staff for dissemination of practical information, knowledge and training about climate change and climate resilient agricultural practices	Strengthen key local governmental agencies with technical knowledge	2.1.1.1a Develop a training programme of 4 modules for governmental staff. 2.1.1.1b Develop a framework to include climate change in the extension and rural advisory services for farmers	1 training program designed for government staff about climate change in the agriculture sector. 3 trainings executed during the 5 years of the program. Climate change framework design for rural extension developed. At least 755 farms received extension and rural advisory from the government staff prepared on the training program.
Activity 2.1.1.2. Install a hydro/agro-meteorological monitoring system to inform and tailor the information to the needs of vulnerable smallholder farmers	Collect relevant agro-hydrometeorological and climatic data and Process and distribute, on-time, climate change information to relevant users	2.1.1.2a Acquisition, placement, and implementation of sensors capable of measuring climate, water, and agriculture variables. 2.1.1.2b Develop an information system capable of collecting information, processing and perform data quality/data control activities. 2.1.1.2c Train technical staff for implementation of sensors and management of the information system.	12 automatic weather stations for atmospheric variables (Temperature, Precipitation, Humidity, Wind velocity, Radiation, Cloud fraction) 8 stations for measuring water flow and soil humidity. 1 network for Monitoring Groundwater (piezometer, transmissivity). 1 centralized center for collecting, processing and report hydroclimatic information. Government staff (INAMHI, MAG, CGREG, INIAP, GSC) trained for installation, operation, and management of hydroclimatic information. 19 000 hectares of agricultural land covered by hydroclimatic monitoring. Farmers, NGOs, universities, CGREG, MAG, GADs receive hydroclimatic information for decision making. Farmers receive permanent hydroclimatic information for planning crops and water management in their farms.
Activity 2.1.2.1. Develop a physical and knowledge network for conservation and use of phylogenetic resources	Improve timely access to quality seeds in sufficient quantity	2.1.2.1a Implement in-farms conservation activities: collect, conserve, use and distribute the agro-biodiversity existing in Galapagos (community-based seed bank),	At least 250 loans provided 25 seed farms established in the four islands with small structures for conservation-storage.

<p>through in-situ and ex-situ conservation activities</p>		<p>with special focus on the variety of crops resistant to biotic changes caused by climate change. 2.1.2.1b Improvement of existing infrastructure at INIAP, which will work as agrobiodiversity repository, knowledge center and distribution facility, for long-term conservation.</p>	<p>5 annual workshops training seed collection, management, selection. 1 annual technical report of seed harvest, use and distribution. 1 annual report of monitoring results of seed use in farms. INIAP infrastructure (storage room, fridges, curator) for agrobiodiversity repository. Protocols developed for quality control and quality assessment of seeds. At least 80% of Galapagos farms (624) received support from seed bank (INIAP) and seed farms</p>
<p>Activity 2.1.2.2. Implement an integrated climate resilient crop management system at farm level</p>	<p>Strengthen crops through the enhance energy efficiency, minimize pest pressure, and maintain soil fertility, creating greater tolerance to droughts, floods and the attacks of pests driven by climate change</p>	<p>2.1.2.1a Implement soil management practices in farms. 2.1.2.1b Establish crop and pest management practices, including a growing climate resilient seeds.</p>	<p>4 ICM practices (excluding livestock farms) implemented in 334 farms (small-medium scale). 4 ICM practices (excluding livestock farms) implemented in 70 farms (large scale). 3146 hectares implementing ICM practices. Farmers receive extension services and strengthen capacities for using ICM resilient practices</p>
<p>Activity 2.1.2.3. Implement silvopastoral practices at the farm level</p>	<p>Implement a silvopastoral system in Galapagos for cattle ranching to improve production efficiency and to integrate the management of the invasive species <i>Psidium guajava</i> (guava) and endemic/native species as associated arboreal species</p>	<p>2.1.2.3a Farmers training to implement silvopastoral systems (guava-grass-breeding association) 2.1.2.3b Implement of fodder banks in farms. 2.1.2.3c Implement internal division of paddocks to apply rotational grazing through regularly moving livestock between paddocks. 2.1.2.3d Implements a manure management through biodigester.</p>	<p>2 workshops/field schools every year for farmers about silvopastoral practices 1 training module available for farmers 1 report about economic benefits 1 monitoring system to evaluate the silvopastoral implementation at farm level. 244 farms planning design for implementing silvopastoral practices. 5497 hectares under silvopastoral management 68 farms implement fodder banks and paddock divisions. 66 farms implement biodigesters.</p>

<p>Activity 2.1.2.4. Develop and implement water collection and water management systems for climate-resilient food production.</p>	<p>Improve the water collection and distribution system for the agricultural sector</p>	<p>2.1.2.4a Install water sources and storage. 2.1.2.4b Install water distribution system. 2.1.2.4c Install climate smart irrigation systems</p>	<p>13 new wells (6 in Santa Cruz, 4 in San Cristobal, 3 in Isabela). New 16 509 m3 of water reservoirs (7220 m3 in Santa Cruz, 5358 m3 in San Cristobal, 3931m3 in Isabela) New 60km of water network distribution (25km Santa Cruz, 20km San Cristobal and 15km Isabela) 47 new fog catchers 459 ha covered by drip irrigation systems. 41 ha with sprinkler irrigation systems</p>
<p>Activity 2.1.3.1 Improve the design and management effectiveness of Galapagos marine zoning, based on conclusive scientific evidence on the impact of climate change on fishery resources, marine biodiversity, and fishers' livelihoods.</p>	<p>Recommendations to improve the design and management effectiveness of Galapagos marine zoning, to reconcile conservation and fishery management objectives, and effective implementation of the Consultative Board of Participatory Management (CBPM).</p>	<p>2.1.3.1a Assess the effectiveness of former Galapagos marine zoning to protect HEVAS, key target fishing resources and ecosystem processes. 2.1.3.1b Identify HEVAs particularly vulnerable to climate risks and select the most suitable areas to ensure commercial stocks recovery, based on climate change risk assessment. 2.1.3.1c Estimate the cost and potential benefits associated with the implementation of the new Galapagos marine zoning options. 2.1.3.1d Engage stakeholders and facilitate a negotiation process through innovative, extensive, and participatory consultation in the CCPM, to promote their formal endorsement of a new marine zoning.</p>	<p>1 Spatial regional marine information system. 1 Assessment of the effectiveness of the former Galapagos marine zoning to protect HEVAS, key target fishing resources and ecosystem processes. 1 Identification and selection of areas particularly vulnerable to climate risk report. 1 Cost-benefit analysis. 1 Set of recommendations for conciling conservation and fishery management objectives zoning. 1 Formal endorsement document of the new marine zoning by the small-scale fishing sector and other relevant stakeholders.</p>
<p>Activity 2.1.3.2 Design and implement an advanced data system for the adaptive co-management of the Galapagos marine zoning</p>	<p>Finance a new system that will reduce costs, facilitate adaptive and responsive decision-making procedures, to improve marine zoning management efficiency, and train decision makers on trained to facilitate the integration of the information</p>	<p>2.1.3.2a Design and implement an advanced data monitoring and information system for the Galapagos subtidal ecological monitoring program, including the development of sensitive adaptation SMART indicators.</p>	<p>1 Public data repository and a geographic information system on Galapagos marine biodiversity, oceanography, fisheries, transport, IUU fishing, and marine traffic to support marine spatial planning.</p>

	generated by the Subtidal Ecological Monitoring module into GMR management decisions	2.1.3.2b Strengthen capacities of key stakeholders to integrate the information generated by the advanced data information system into GMR management decisions.	1 “Subtidal Ecological Monitoring” module in place and integrated into the “Sistema Único de Información Ambiental (SUIA)”.
Activity 2.1.3.3 Structured decision-making framework to inform the adaptive co-management of the Galápagos Marine Reserve.	Facilitate the integration of the structured decision-making framework into GNPD decision-making process and existing monitoring programs and link them the Fondo para la Reserva Marina de Galápagos (FRMG) for long term implementation.	2.1.3.3 a Train decision makers and other relevant stakeholders to facilitate the integration of the structured decision-making framework into GNPD decision-making process. 2.1.3.3.b Link the structured decision-making framework and monitoring programs to the Fondo para la Reserva Marina de Galápagos (FRMG).	1 Training module for the integration of the framework in decision-making process and ongoing monitoring programs. 1 signed agreement between GNPD and the Fondo para la Reserva marina de Galápagos (FRMG)
Activity 2.1.4.1 Management conditions of small-scale tuna fisheries, strengthened to reduce the ecological impact of the fishery over secondary and endangered, threatened and protected (ETP) species	Improve the sustainability and governance of the Galapagos tuna fishery	2.1.4.1a Design and implement an electronic monitoring and blockchain traceability system. 2.1.2.4b Promote the adoption of a code of good fishing practices and handling techniques, based on the assessed impact of ghost fishing and illegal fishing aggregating devices (FADs) on vulnerable marine ecosystems. 2.1.2.4c Carry out research priorities to improve the management and sustainability of the Galapagos tuna fishery	3 reports of the tuna fisheries sustainability derived from the BMT 1 Code of good fishing practices and handling techniques agreement signed by Galapagos small-scale fishers. 5 reports covering research priorities to improve the management and sustainability of the Galapagos tuna fishery.
Activity 2.1.4.2 Management of sailfin groupers fishery strengthened to mitigate climate change impacts while restoring the species ecological role	Rebuild sailfin groupers stocks and restore their ecological role into Galapagos marine ecosystem	2.1.4.2a Assess current sailfin groupers population status, including projections under climate change conditions and fishing regulations. 2.1.4.2b Elaborate and adopt a climate smart community-based fishery improvement project (C-FIP) for the sailfin grouper.	1 Document with C-FIP model for sailfin grouper fisheries. 3 reports of the sailfin grouper fisheries sustainability derived from the BMT. 4 implementation reports on management measures for sailfin groupers.
Activity 2.1.4.3 Small-scale aquaculture and experimental allocation of Territorial Use Rights for Fishing	Rebuild sea cucumber stocks, to provide an alternative source of income to the small-scale fishing sector and promote the	2.1.4.3a Update stock assessment of <i>I. fuscus</i> , including projections under climate change conditions and fishing regulations.	2 assessment of <i>I. fuscus</i> stocks (at the beginning and at the end of the program).

<p>(TURFs) implemented to rebuild sea cucumber stocks and diversify fishers' livelihoods</p>	<p>adoption of a rights-based co-management approach.</p>	<p>2.1.4.3b Reproduce in captivity and release a substantial number of sea cucumbers into the remaining wild stock, to significantly accelerate rebuilding. 2.1.4.3c Experimental allocation and evaluation of TURF to regulate harvesting and fishing intensity of <i>I. fuscus</i>.</p>	<p>1 comprehensive report on implementation of captivity reproduction and release of sea cucumbers. 1 report on successful allocation of TURF and benefits derived.</p>
<p>Activity 2.1.5.1 Implement strategies to improve the livestock/meat and milk value chain</p>	<p>Improve the dairy and meat products positioning in the local market and increase their profitability</p>	<p>2.1.5.1a Strengthening livestock production systems with environmentally friendly practices that are adapted to the context of Galapagos and help breach the productive gap in farms in terms of quantity and quality. 2.1.5.1b Strengthening adequate livestock slaughter and meat processing systems. 2.1.5.1c Strengthening of dairy processing plants. 2.1.5.1d Positioning of the local market. 2.1.5.1e Implementing a program to strengthen local capacities.</p>	<p>1 credit line for farmers available for improving livestock/meat value chain.</p>
<p>Activity 2.1.5.2 Implement strategies to improve the Galapagos coffee value chain</p>	<p>Promote the local coffee market by covering the surface of Galapagos agroforestry systems with quality coffee plants</p>	<p>2.1.5.2a Strengthen knowledge on post-harvest strategies. 2.1.5.2b Mobilizing production to the local coffee agro-processing center. 2.1.5.2c Construction of a wet processing center 2.1.5.2d Construction of a dry processing center</p>	<p>1 credit line for farmers available for improving coffee value chain.</p>
<p>Activity 2.1.5.3 Implement strategies to improve the Galapagos vegetables value chain</p>	<p>The development of micro-enterprises that add value to potential agricultural products from integrated production systems</p>	<p>2.1.5.3a Implement agro-processing system of Banana, Plantain and Cassava flours and chips. 2.1.5.3b Implement agro-processing system of preserves and pulps of citrus fruits, pineapple, and tomato. 2.1.5.3c Implement agro-processing system of aromatic and medicinal herbs</p>	<p>1 credit line for farmers available for improving vegetables value chain.</p>
<p>Activity 2.1.5.4 Promotion of a blue circular economy through new sustainable and socially responsible seafood enterprises</p>	<p>Create the "Galapagos Virtual Innovation Lab" to support small-scale fishers, entrepreneurs, and other actors of the</p>	<p>2.1.5.4a Design and develop a G-Lab platform to provide analytical services, capacity building, knowledge sharing and facilitation services to fishers and</p>	<p>1 operative G-Lab platform 1 market and behavioral science analysis.</p>

	local community interested in enterprise development	<p>entrepreneurs to make their seafood enterprises investment-ready.</p> <p>2.1.5.4b Conduct a market and behavioral science analysis.</p> <p>2.1.5.4c Provide technical assistance to local fishers and entrepreneurs, to comply with all technical, legal, organizational, and administrative requirements for the creation or consolidation of new seafood enterprises.</p> <p>2.1.5.4d Train fishers and entrepreneurs on tuna grading and production of seafood value added products.</p>	<p>10 local seafood enterprises successfully implemented (comply with all technical, legal, organizational, and administrative requirements).</p> <p>2 Training modules for fishers and entrepreneurs on tuna grading and production of seafood value added products.</p>
Activity 2.1.5.5 Put in place a long-term financing mechanism to improve sustainability and competitiveness of Galapagos small-scale fishing sector	Soft credit line for entrepreneurs, to foster the financial inclusion of fishers and entrepreneurs from civil society interested in adopting sustainable fishing practices	<p>2.1.5.5a Design, establishment, and administration of a soft credit line for entrepreneurs interested in adopting sustainable fishing practices.</p> <p>2.1.5.5b Allocate soft loans to those entrepreneurs who submit the most attractive, innovative business plans and with the greatest probability of generating a positive social and environmental impact.</p>	<p>1 soft credit line for entrepreneurs available.</p> <p>50 certifications of 50 soft loans allocated to fishers.</p>
Activity 2.2.1.1 Strengthen marine biosecurity programs in the GMR, to prevent and control marine bioinvasions by Nonindigenous Species (NIS) that could proliferate due to the effects of climate change	Protect, empower, and strengthen the Galapagos biosecurity program, and the public and research institutions involved, to prevent and reduce the expected impacts of marine invasive species related to climate change scenarios	<p>2.2.1.1a Conduct one regional bioinvasion assessment for each MPA in the ETP region (Galapagos, Cocos, Malpelo, Gorgona, Coiba), considering climate change scenarios.</p> <p>2.2.1.1b Develop and implement an Alert System for incursions of NIS in the GMR.</p> <p>2.2.1.1c Adoption and implementation of improved marine biosecurity and Early Detection and Response (EDRP) protocols, by the DPNG and ABG.</p> <p>2.2.1.1d Implement a regional outreach campaign to showcase and promote the replica of the GMR NIS Alert System and EDRP, in other ETP region MPAs.</p>	<p>5 web-based portals modelled after the National Estuarine and Marine Exotic Species Information System (NEMESIS), to upload the updated lists of NIS in the ETP region</p> <p>1 Early Detection and Rapid Response (EDRR) protocol for marine invasive species is created for the GMR.</p> <p>20 risk assessments to determine the main pathways for marine invasions into the ETP by modelling dispersal mechanisms of potential invasive species considering variables such as climatic events and oceanographic circulation.</p>

			<p>20 risk assessments to determine the main pathways for marine invasions into the ETP by modelling dispersal mechanisms of potential invasive species considering variables such as climatic events and oceanographic circulation.</p> <p>1 NIS dashboard to facilitate dynamic queries and rapid information exchange in the GMR.</p> <p>1 NIS Alert System to mitigate the impact of NIS on marine ecosystems in the GMR.</p> <p>1 rapid response framework using a decision tree for new incursions created to mitigate the impact of NIS on marine ecosystems in the GMR, adopted by the DPNG and ABG.</p> <p>1 Marine biosecurity protocol for the GMR developed.</p> <p>4 training modules implemented by CDF and SERC scientists to increase the GNPD park rangers and ABG technician's knowledge on NIS identification techniques and biosecurity protocols.</p> <p>3 visual and graphic material produced to showcase the GMR NIS Alert System.</p> <p>1 regional workshop to present an alert system to all stakeholders in each MPA of the ETP.</p>
<p>Activity 2.2.1.2 Restore high ecological value coral reefs through coral planting and exclusion areas, to enhance their ecological role in the GM</p>	<p>Restore coral reef ecosystems and strengthen the controls of bioerosion and coral bleaching in critical High-Ecological Value areas (HEVAS) of the GMR.</p>	<p>2.2.1.2a Produce one updated assessment of the abundance and distribution of coral reefs and their associated biodiversity in the GMR</p>	<p>1 coral biodiversity assessment in each of the islands (Darwin, Wolf and Floreana).</p>

		<p>considering current and future climate scenarios.</p> <p>2.2.1.2b Transplant corals from the nursery developed in collaboration with the GNPd, to at least 1 degraded site in each island (Darwin, Wolf and Floreana)</p> <p>2.2.1.2c Design and implement a removal program for sea urchins to assess vulnerability by conducting experiments.</p> <p>2.2.1.2d Mainstream the participation of the tourism sector in conservation and restoration programs carried out by the DPNG, in key touristic coral reef sites.</p>	<p>1 report with sensitive areas of degraded coral reefs identified and mapped.</p> <p>1 report with selected sites for coral transplant in each island identified and a control site.</p> <p>1 particle tracking model created to model the coral dispersion under current and future climatic scenarios (RCP 4.5 and 8.5) to validate the effectiveness of transplanting corals to the selected areas.</p> <p>1 Knowledge exchange implemented between Nova Southeastern University (NSU), the GNPd and CDF on techniques and methodologies to grow and transplant coral. (NSU) farms coral to repopulate areas of coral degradation in Florida.</p> <p>1 report on result of experiments using different environmental conditions to assess resilience using the CDF aquariums during the first two years of the project.</p> <p>1 report on coral nurseries implement in a site (in-situ) approved by the GNPd to grow new corals that will be transplanted to degraded areas.</p> <p>3 reports with results of restoration schemes through transplanted corals from the nursery developed in collaboration with the GNPd.</p> <p>1 report on small-scale sea urchin removal plan implementation to minimize reef damage and assist recovery of coral reefs.</p> <p>1 report on a pilot project implemented with the tourism sector to mainstream their</p>
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			<p>participation in coral restoration processes.</p> <p>8 coral assessments to evaluate the health of the reefs at the intervened sites and control sites.</p> <p>1 report with identification of priority areas to implement active and passive restoration actions under current and future climate scenarios.</p>
<p>Activity 2.2.1.3 Reduce the impact of diving, anchoring and pollution related to tourism operations in selected marine HEVAs, to enhance eco systems resilience and adaptive capacity to the effects of climate change</p>	<p>Reduce the environmental impacts associated with marine tourism (diving, anchoring and pollution associated with tourism activities</p>	<p>2.2.1.3a Design and implement a conservation categorization system and management protocols for diving visitor sites.</p> <p>2.2.1.3b Development and adoption of the Diving Tourism Best Practices Toolkit co-created with dive tourism stakeholders.</p> <p>2.2.1.3c Reinforce the control and monitoring of pollution levels from boats</p> <p>2.2.1.3d Develop a Decision Support System (DSS) portal for policymakers, with information regarding marine tourism, including impacts from the tourism activities and the health of sites.</p> <p>2.2.1.3e Implement agreements with tourism stakeholders for replacing anchoring procedures and technologies with fixed-mooring buoys signaling and the Digital Positioning Systems (DPS).</p>	<p>1 report on dive sites categorized and mapped according to conservation levels.</p> <p>1 agenda and protocol for Best Diving Practices approved by all stakeholder parties.</p> <p>1 Diving best practices toolkit developed, including visual and graphic material to promote its adequate implementation.</p> <p>2 training modules for dive guides and GNP rangers implemented.</p> <p>4 Voluntary agreements by diving operators to apply the diving tourism Best Practices, designed.</p> <p>1 Report of monitoring system for underwater diver behavior and the associated impacts</p> <p>1 report from pollution monitoring system at visitor sites.</p> <p>1 formal document with reinforced control mechanism for pollution levels from the boats.</p>

			<p>1 Decision Support System (DSS) portal for policymakers.</p> <p>1 document with participatory design of a fixed-mooring buoys solution, that guarantees its implementation and finds solutions to their maintenance costs.</p> <p>1 agreement adopted between tourism stakeholders as a mechanism to enable future co-responsibility in the use of the buoys.</p> <p>4 Training modules implemented to cruises operating in the Galapagos for understanding and awareness of the operation, benefits, and opportunities to adopt DPS systems.</p> <p>4 Agreed plans between DPNG and at least one third (3-4) of diving cruises operating in the Galapagos implemented for the adoption of DPS systems.</p> <p>1 document with lessons learnt disseminated to promote replica.</p> <p>10 soft loans for Digital Positioning Systems (DPS).</p>
<p>Activity 2.2.1.4 Improve surveillance and control measures for adequate sea turtle nesting and foraging in the GMR, to counteract potential effects of climate change in their reproductive success</p>	<p>Apply mitigation strategies to alleviate climate change impacts on the population of green turtles in Galapagos, by protecting their nests from direct impacts of climate change and reducing other threats of anthropogenic origin that increase the vulnerability of the population</p>	<p>2.2.1.4a Translocation of nests from current flooding areas to safer zones.</p> <p>2.2.1.4b Design and implement marine traffic regulations to avoid boat strikes at nesting and foraging sites.</p> <p>2.2.1.4c Monitoring the impact of climate change on Galapagos sea turtles and the effectiveness of adaptation measurements applied</p>	<p>1 report with maps of the nesting beaches.</p> <p>1 training module to strengthen the GNPDP in techniques and methodologies of nests handling and translocations.</p> <p>1 report of translocation in at least one nesting beach selected by the GNPDP.</p> <p>1 report from monitoring system for translocation effects and impacts.</p>

			<p>1 collision risk model improved to include key areas where male green turtles are present.</p> <p>1 regulations proposal to avoid boat strikes in turtle nesting and feeding sites, developed by the GNPD with the participation of stakeholders.</p> <p>1 Regulations to avoid boat strikes in turtle nesting and feeding sites, approved by the GGC.</p> <p>1 control mechanisms to monitor the compliance of the approved marine traffic regulations, adopted by the GNPD.</p> <p>2 Outreach material and activities to increase awareness of compliance with the new marine regulation.</p> <p>1 full assessment of four sea turtle's feeding sites of the archipelago, including turtle abundance, sex-ratios, feeding habitat conditions and boat strikes incidence.</p> <p>1 assessment of the thermal condition during the incubation period of at least two beaches, that could present a different thermal range that currently monitored nesting beaches.</p>
<p>Activity 2.2.2.1 Strengthen control programs for invasive plant species, especially blackberry, in protected and agricultural areas, based on projected dynamics of their expansion under climate change scenarios</p>	<p>Contain the spread of invasive plant species in high ecological value forest fragments in the GNP and on selected farms in the agricultural zone.</p>	<p>2.2.2.1a Strengthen control programs for invasive plant species in an area of 750 ha within the Galapagos National Park, with emphasis on guava and blackberry.</p>	<p>2 Guava and blackberry climate change distribution models verified and adjusted, based on ground surveys.</p>

		<p>2.2.2.1b Implement invasive species management and control measures on farms in an area of 750 ha in the agricultural area.</p>	<p>1 Report with prioritized areas within the GNP (a total of 750 ha) are under innovative control schemes.</p> <p>1 Report on implementation of dispersal of invasive species, mainly blackberry contention inside the GNP.</p> <p>2 Protocols developed to ensure successful ongoing invasive species control and to strengthen the Terrestrial Invasive Species Program of the GNPD under climate change scenarios.</p> <p>1 assessment of the conservation status of 750 ha of Scalesia forest fragments in the agricultural area (400 ha on Santa Cruz, 200 on San Cristóbal and 150 ha on Isabela).</p> <p>1 report on the implementation of active agricultural practices to control invasive species.</p>
<p>Activity 2.2.2.2 Restore key remnant forest fragments inside and outside the GNP, to enhance ecosystems adaptive capacity and provision of environmental services</p>	<p>Restore and conserve key remnant forest fragments on farms and in GNP areas and raise awareness of the importance of ecosystem services.</p>	<p>2.2.2.2a Restore key remnant forest fragments in an area of 750 ha within the Galapagos National Park.</p> <p>2.2.2.2b Conserve and restore key remnant forest fragments on farms in an area of 750 ha in the agricultural area.</p> <p>2.2.2.2c Outreach activities and workshops with local community on importance of ecosystem services and how they benefit livelihoods.</p>	<p>1 Assessment of the conservation status of 750 ha of Scalesia forest fragments inside the GNP.</p> <p>1 Report on strengthening the nurseries of the GNPD on the three islands to provide native species seedlings to implement restoration activities.</p> <p>1 Report on the establishment of 300.000 native plants in key restoration areas.</p> <p>1 Report on key Scalesia forest fragments within the GNP under restoration schemes to protect threatened species and biodiversity.</p>

			<p>1 Report on agricultural land restored with <i>Scalesia</i> spp. and other native tree species, totaling 300.000 planted individuals (400 ha on Santa Cruz, 200 ha in San Cristóbal and 150 ha on Isabela) on at least 10 farms (5 on Santa Cruz, 3 on San Cristóbal and 2 on Isabela).</p> <p>1 assessment of increased connectivity between key forest fragments on farms through restoration.</p> <p>2 training modules in restoration practices to be involved in project activities as a qualified labor force.</p> <p>1 Publication of an annual technical report to the local authorities with recommendations based on the results of the monitoring, to assure constant adjustment of project activities.</p> <p>2 presentations each are delivered at a national and international level about the project's outcome and importance for the conservation of the Galapagos biodiversity.</p> <p>2 publications in open-access peer-reviewed scientific journals, discussing the key results and outcomes of the project.</p>
<p>Activity 2.2.2.3 Monitor success and impacts of invasive species control and restoration measures.</p>	<p>Inform and improve the management of terrestrial invasive species and restoration actions in the highlands of Isabela,</p>	<p>2.2.2.3a Assess ongoing efforts and restoration needs, including evaluating current control techniques for invasive plant species. 2.2.2.3b Establish baselines for plant and animal species in areas under restoration, with a focus on rare species. 2.2.2.3c Monitor changes in plant communities in areas under restoration.</p>	<p>1 Assessment of control techniques for invasive plant species in the Galapagos highlands, including the identification of the most cost-effective techniques with the lowest environmental risk and major impacts on invasive species.</p>

		<p>2.2.2.4d Evaluate the impact of restoration by estimating the stored carbon and CO2 sequestration rates of the ecosystems under restoration.</p>	<p>1 report with the identification of priority areas to implement active and passive restoration actions, including the definition of locations to set up new permanent vegetation plots.</p> <p>1 report from a data management and information system, where all the information will be uploaded.</p> <p>1 open access, user-friendly, digital platform to readily access information about key species (e.g., invasive species) under a “Social-Ecological System Knowledge Node” format to inform decision-making and strengthen Galapagos local and regional governance.</p> <p>1 Assessment of plant and animal diversity in the GNP and on 40 farms to determine the status of biodiversity and to identify priority sites for future conservation activities.</p> <p>1 document with understanding of the conservation status of terrestrial biodiversity and their interactions with natural (GNP) the socio-ecological (agricultural zone) systems.</p> <p>3 updated assessments of terrestrial biodiversity and ecosystem services focused on ecological information from the highlands to support the implementation of the new zoning format (from 2016) in the GNP.</p>
<p>Activity 3.1.1.1 Implement an ecotourism certification scheme to adopt best practices across the tourism value chain</p>	<p>Design and implement an ecotourism certification scheme.</p>	<p>3.1.1.1a Design and establish a local certification scheme administered through a public-private partnership.</p>	<p>Report describing the design and set up of the ecotourism certification scheme.</p>

		<p>3.1.1.1b Identify and train local auditors on concepts, standards, and procedures of the ecotourism certification.</p> <p>3.1.1.1c Information and capacity building of tourism business, on the concepts, standards and procedures to obtain the ecotourism certification.</p> <p>3.1.1.1d Design a certification plan for each tourism business from a first set (pilots) of business, inscribed to work towards the certification.</p> <p>3.1.1.1e Provide technical assistance to pilot business for the compliance of the certification standards.</p> <p>3.1.1.1f Assist the implementation of audits of compliance to the first set (pilots) of business inscribed to receive the certification.</p>	<p>6 tourism business with a certification plan (pilots)</p> <p>Reports on training provided to staff for the management of the certification scheme.</p> <p>Report on certifications awarded</p>
<p>Activity 3.1.2.1 Strengthen the educational system to provide quality education to face climate change and promote sustainable development</p>	<p>Integrate a comprehensive educational approach to climate change within the formal educational system of Galapagos (basic education, high-school, and third-level education), that includes innovative and pertinent education models, approaches, methodologies and tools.</p>	<p>3.1.2.1a Establish a Board of Education for Climate Change, to articulate the efforts carried out in Galapagos by different institutions and organizations.</p> <p>3.1.2.1b Integrate quality climate change education into the existing professional development program of Mineduc in Galapagos for education leaders and teachers.</p> <p>3.1.2.1c Implement climate friendly practices in schools to promote an eco-friendly culture and strengthen environmental awareness.</p> <p>3.1.2.1d Implement experiential learning programs for students of basic education and high school, connecting to mitigation and adaptation initiatives promoted by the program.</p> <p>3.1.2.1e Design and implement a technical education program for youth, to address the labor markets local demand in areas related to Galapagos tourism, agriculture</p>	<p>1 Board of Education for Climate Change (MECC) created.</p> <p>1 Agenda for Climate Change Education at a provincial level is developed and implemented.</p> <p>3 training modules regarding climate change are designed and implemented for teachers.</p> <p>5 pedagogical resources about climate change are created to implement the contextualized curriculum of Galapagos.</p> <p>12 reports on pilot projects implemented at different Galapagos educational establishments focused on adaptation and mitigation to climate change.</p>

		<p>and fisheries value chain, within a climate change and post-covid context.</p>	<p>10 Reports on immersive and experiential educational experiences on climate change implemented.</p> <p>1 training module for teachers to co-facilitate real place-based education and experiential learning opportunities on climate change with students.</p> <p>2 technical high-school degrees in sustainable food value chains designed with a strong focus upon sustainability and climate change and implemented in close collaboration with the Ministry of Education.</p> <p>2 third-level technical degrees sustainable food value chains designed and implemented, with strong focus upon sustainability and climate change, and implemented in close collaboration with local universities</p>
<p>Activity 3.1.2.2 Strengthen knowledge and foster engagement of public and key stakeholders on climate change impacts and solutions.</p>	<p>Facilitate information, practical knowledge, tools and outreach opportunities, to encourage local community interest, support and active involvement in addressing climate change.</p>	<p>3.1.2.2a Develop a knowledge management and outreach digital platform that makes updated and relevant information, knowledge, lessons, and resources regarding climate change in the Galapagos, understandable and accessible to the public and key stakeholders.</p> <p>3.1.2.2b Develop and implement a communication strategy based on innovative approaches and methods, to strengthen knowledge and foster commitment for the adoption of climate change mitigation and adaptation measures.</p> <p>3.1.2.2c Develop a behavioral change campaign aimed at consumers of the food system in Galapagos, focusing on those behaviors that can be effectively</p>	<p>1 climate change knowledge management and outreach digital platform.</p> <p>1 communication and outreach plan, linked to the platform, delivers general communication and education climate change-related materials to key stakeholders.</p> <p>1 report on the implementation of a behavioral-informed and comprehensive climate change strategy.</p> <p>4 graphic, audiovisual, and written communication resources, and disseminated through a multi-channel and multi-platform approach.</p>

		addressed by communications interventions.	<p>1 Behavioral Insight Analysis focused on food consumers in Galapagos.</p> <p>1 report of social and behavioral change campaign implementation focused on consumers regarding fisheries, agriculture, and tourism value chains in Galapagos.</p>
<p>Activity 3.1.2.3 Facilitate non-formal education and mobilization opportunities to encourage youth and local community empowerment on climate action.</p>	<p>Implement action-based, non-formal educational and outreach experiences to foster youth and community empowerment, engagement and leadership on climate action, by providing them with practical knowledge, tools and skills, and most importantly, the opportunity and agency to translate those into climate action.</p>	<p>3.1.2.3a Develop a capacity building program for non-formal facilitators (government officials, NGOs, community leaders) to increase their understanding and practical application of climate change approach into communication, community outreach and non-formal education interventions.</p> <p>Sub activity 3.1.2.3b Develop immersive field-based and non-formal educational experiences for different audiences, to connect the local community with the natural environment and climate change mitigation and adaptation initiatives.</p> <p>Sub activity 3.1.2.3c Create a permanent working platform that brings together existing organized groups and citizens towards collective climate action, through capacity building and the implementation of pilot youth and community-based projects.</p>	<p>1 training program for facilitators of communication, non-formal education, and mobilization processes on climate change through a project-based learning methodology.</p> <p>1 report on the implementation of a training-of-trainers strategy for the replication and scaling of the program.</p> <p>2 reports on immersive field-based experiences regarding climate change.</p> <p>1 citizen working platform on collective climate action.</p> <p>20 Independent youth and community-based projects or initiatives successfully completed or are still under development.</p> <p>1 training program for local community leaders as facilitators of the working platform and lead their own independent groups towards collective climate action.</p>
<p>Activity 3.1.3.1 Mainstream climate change into regulatory frameworks and planning instruments</p>	<p>Strengthen legal instruments, design Climate Action Plan for Galapagos and develop sustainability strategy.</p>	<p>-</p>	<p>1 Report on the review of legal instruments for mainstreaming climate change</p> <p>Document of the Climate Action Plan for Galapagos.</p>

			<p>Document of the sustainability strategy developed.</p> <p>Document describing the design and implementation of the financing mechanisms.</p>
<p>E.7. Monitoring, reporting and evaluation arrangements (max. 500 words, approximately 1 page)</p>			
<p>CAF will set up a monitoring framework at the Programme level. For more details, Refer to Annex 11 Monitoring and Evaluation Plan.</p> <p>Reporting from Executing Entities (EEs) to CAF</p> <p>284. The Programme will apply the standard procedures established by CAF for monitoring and evaluation of investment operations. Based on the proposed results and a monitoring and evaluation plan to be agreed between CAF and the EEs, the evolution of indicators should be reported periodically during the Programme execution. In coordination with CAF, EEs will compile and maintain all information, indicators, and parameters necessary for the preparation of Programme reports, including annual reports, midterm review and final evaluation.</p> <p>285. It will be the responsibility of CFN and / or CONAFIPS and local banks, with the technical assistance of FAO and WWF, to ensure that the sub-borrower is eligible for funding from the Programme in accordance with the programme's eligibility criteria. It will be the responsibility of FAO and WWF to ensure that the beneficiaries of grants are eligible for funding from the Programme in accordance with the programme's eligibility criteria. Monitoring of disbursements for eligible expenditures will be reviewed by CAF. In coordination with EEs, CAF may schedule supervision visits to monitor and verify the proper use of resources and compliance with contractual conditions of the Programme with regards to the use of funds.</p> <p>286. The monitoring process intends to follow up the execution of the Programme in order to identify the intermediate milestones achieved in each phase and evaluate its outcomes and fulfilment of proposed targets. The indicators to be monitored will be those included the log frame in section E.</p> <p>287. EEs will collect the necessary data for monitoring and present annual reports to CAF. Beneficiaries of the loans will also be trained to be able to contribute with the MRV system and to provide accurate data. In some cases, CAF will make calculations required for some indicators, based on the information provided by the local banks in the annual reports. The EEs' own information systems will undergo a gap assessment by CAF to analyze whether they are sufficient and appropriate for monitoring the proposed indicators.</p> <p>288. EEs will deliver these annual reports within thirty (30) calendar days after the end of each year of the Programme's implementation. The reports will include information regarding the evolution of the indicators, as well as financial information regarding the use of the resources. CAF will be entitled to request additional information, if necessary. In addition to the annual reports and the scheduled activities for monitoring of the operations described above, CAF will contract an independent midterm evaluation within thirty (30) months from the effective date of the loan contract or when 50% of the Programme resources have been disbursed – whichever occurs first. Finally, EEs will present a final report to CAF up to six (6) months after the day of the last disbursement and CAF will contract an independent final evaluation. The EEs' final reports shall contain all relevant information to assess if objectives of the Programme and targets for each</p>			

indicator have been met. Based on this report, CAF will also prepare a Project Completion Report (PCR), which evaluates the fulfilment of targets, reviews the overall results of the operation, and describes lessons learned, among other relevant aspects.

Reporting from CAF to GCF

289. Monitoring, reporting and evaluation arrangements will comply with CAF's Accreditation Master Agreement and GCF policies, as well as the Funded Activity Agreement (FAA). CAF will provide annual progress reports on the status of the funded activity throughout the relevant reporting period, based on the above-described logical framework, and reporting from Executing Entities to CAF.
290. CAF will consolidate above described annual, mid-term and final reports from EEs and send them to the GCF within additional thirty (30) days of the above-mentioned reporting periods by EEs to CAF. In addition to these consolidated reports, CAF will report on the indicators defined in Section E. CAF will deliver numbers in a log frame format a) annually within sixty (60) calendar days after the end of each year of Programme implementation; b) at mid-term within thirty (30) months from the effective date of the loan contract or when 50% of the Programme resources have been disbursed – whichever occurs first; and c) at Programme end up to six (6) months after the day of the last disbursement.
291. An independent mid-term evaluation will be conducted within thirty months of the effective date of the loan contract or when 50% of the program resources have been disbursed – whichever occurs first. The mid-term evaluation will be based on a participatory and inclusive process, and will involve the following:
- Review of the institutional, technical, environmental, social, economic, and financial aspects of the Programme.
 - Review of the progress of activities, planned outputs, expected impacts, cost and financing.
 - Review of the achievement of planned impacts and indicators (according to the Log frame).
 - Assessment of the need to restructure or reformulate the program.

RISK ASSESSMENT AND MANAGEMENT

F.1. Risk factors and mitigations measures (max. 3 pages)

292. The main Programme risks are related to: Placement risk through the loan line caused by the non-reactivation of the tourism sector in the islands; Climate technologies not performing as expected; Resistance to change; Local institutional capacities for Programme execution; Potential policy changes of the new government. The risks are low to moderate in nature and CAF expects they can be largely mitigated through the implementation of planned Programme activities.

293. CAF, as Accredited Entity, will ensure that Executing Entities, local banks, and beneficiaries comply with the Environmental and Social safeguards in all activities, and comply with national and local regulations.

Selected Risk Factor 1: Placement risk through the loan line caused by the non-reactivation of the tourism sector in the islands.

Category	Probability	Impact
<u>Credit</u>	<u>Medium</u>	<u>Medium</u>

Description

294. The pandemic has severely affected the islands' economy and there are many doubts as to how the tourism sector will recover. Although the program already considers that loans will start to be granted as of 2023 - when it is expected that there will be a good reactivation -, projections may change, and the scenario may be worse than expected.

Mitigation Measure(s)

295. The strategy at the Galapagos level is one of local reactivation. The fact that the islands are 1,000 km from the mainland has as many drawbacks as those described in this proposal (dependence on external inputs, etc.), but it also has its own dynamics. Galapagos as a tourist destination is highly resilient because it is a well-known destination for nature tourism, which is precisely the type of tourism that is expected to be most in demand due to the pandemic. For this reason, the risk has been classified as "medium" rather than "high".

296. Also, based on the results of the survey conducted as part of the market study, there is confidence in the interest of potential beneficiaries in loans for the proposed investments.

297. The mitigation measures for this placement risk correspond to the activities related to Technical Assistance, awareness raising, and institutional strengthening. The project also has a stakeholder and citizen engagement methodology with awareness raising, citizen science and communication activities, which will help raise stakeholder interest in the Programme's investments.

298. Regarding how the COVID-19-related restrictions can impact on the progress of the Programme's activities, in the event of a health crisis CAF will make all means available to ensure that activities are carried out under the highest standards of prevention. In times of confinement, ways to continue with the implementation of the project will be evaluated, with the help of virtual tools where possible.

Selected Risk Factor 2: Climate technologies do not perform as expected

Category	Probability	Impact
<u>Technical and operational</u>	<u>Medium</u>	<u>Medium</u>

Description

299. Renewable energy, energy efficiency, land use, fisheries and ecosystems climate change projects implemented may not perform as expected; if this occurs, they will have a lower impact on climate change than estimated.

Mitigation Measure(s)

300. The Programme is specifically designed to mitigate this risk, particularly:

- Activity 1.3.1.1 Technical Assistance facility for energy investments
- Technical Assistance provided throughout all the activities in Component 2.
- Programme Management.

301. Technical support and capacity building will include development of technology-specific project assessment protocols. Also, in terms of Environmental and Social performance, CAF, as Accredited Entity, will ensure that

Executing Entities, local banks, and beneficiaries comply with the Environmental and Social safeguards in all activities.		
Selected Risk Factor 3: Resistance to change		
Category	Probability	Impact
<u>Other</u>	<u>Low</u>	<u>Medium</u>
Description		
302. There could be a risk of resistance to change and a history of poor performance of previous projects in the more traditional sectors. In particular, the agricultural and fishing sectors may show more resistance. In the case of the former, due to a generational issue (there is a majority of older people) and in the case of the latter, due to a tradition of activism, being a rather combative group.		
Mitigation Measure(s)		
303. It is necessary to seek an execution of the activities that takes care of the relations with these groups and works closely with them. Special emphasis will be placed on providing technical assistance, fostering ownership, and communicating through valid interlocutors. The Programme's Stakeholder Engagement Plan contemplates this relationship with stakeholders.		
304. The Programme will invest in strengthening the capacities of the institutions, will ensure that people from the Programme Management Unit (PMU) accompany and keep these groups informed of the Program's progress. The approach of the Executing Entities will be carried out in conjunction with the relevant authorities (e.g., Galapagos National Park).		
Selected Risk Factor 4: Local institutional capacities for Programme execution		
Category	Probability	Impact
<u>Governance</u>	<u>Low</u>	<u>Medium</u>
Description		
305. There is a possibility that local institutions have difficulty in supporting a Programme of this size and diversity and that the needs for its execution exceed their capacity.		
Mitigation Measure(s)		
306. The risk has been rated as low because, on the one hand, local institutions have a long experience in managing projects with international financing; on the other hand, the executing entities have great strengths and are used to managing large and ambitious projects.		
307. Mitigation measures will be related, on the one hand, to institutional strengthening activities, and on the other hand, to the quality of the information handled by the Programme Management Unit (PMU). The latter will pay special attention to detect early warnings signals, which will be supported by a Program Information Management Platform.		
Selected Risk Factor 5: Implementation risk		
Category	Probability	Impact
<u>Technical and operational</u>	<u>Low</u>	<u>Medium</u>
Description		
308. Successful implementation depends on the technical and operational capacity of the AE, the PMU, the Executing Entities, and their interactions with the local financial institutions and the Governmental partners that will be participating in the execution of the programme activities. This number of different stakeholders pose a risk to implementation, although it is rated low, due to the demonstrated ownership of the project by local institutions and the long track record of implementation of the Executing Entities.		
Mitigation Measure(s)		
309. The Programme will have several instances through which mitigate this risk, namely the Steering committee and the Technical Committees, in which all the stakeholders will be participating, and implementation challenges and possible solutions will be shared. The long track record of CAF and the Executing Entities brings high capacities to solve all kinds of challenges for the implementation of the activities.		
Selected Risk Factor 6: Potential policy changes of the new government		

Category	Probability	Impact
<u>Governance</u>	<u>Medium</u>	<u>Low</u>
Description		
<p>310. At the time of the presentation of this proposal to the GCF Secretariat, an electoral process was underway and culminated in April 2021 with a change of the government to a different party. It is not known what decisions will affect the project's activities. What can be said is that the beginning of this new government coincides with dates when development plans must be renewed, which could be to the benefit or detriment of the Programme's objectives. It is estimated, however, that some of the effects could be beneficial, since one of the great debates in the country is related to the removal of energy subsidies. If this proposal were to materialize, it is estimated that interest in investments in renewable energy and energy efficiency would increase.</p> <p>311. As per the first contacts with the new Government, it demonstrates being highly committed to supporting the Programme. Meetings have already been held with the Ministry of the Environment, Water and Ecological Transition, the Ministry of Energy and Non-Renewable Resources, the Ministry of Agriculture, the Ministry of Finance and Economy. The President of the CGREG was the last to take office and the AE is organizing an agenda to present the Programme. The MEyRNNR has submitted the information needed to be able to respond to the GCF requirements.</p> <p>312. However, even though the new government is now established, CAF's experience in Ecuador says that Ministries can change very often, and this always alters the implementation stability of a programme.</p> <p>313. The President of Ecuador has presented a draft Law Creating Opportunities, which was submitted on September 24, 2021 to the National Assembly as an urgent economic bill, proposes the creation of the Banco de Fomento Económico del Ecuador (Economic Development Bank of Ecuador). This new entity will be achieved through the merger of BanEcuador and Corporación Financiera Nacional (CFN). The merger of the two entities will be carried out in order to achieve the technical and capital parameters necessary to grant low-cost, long-term credit to the agricultural and productive sectors, according to the document. Even though, the law has not been approved the institutional situation of CFN is uncertain.</p>		
Mitigation Measure(s)		
<p>314. CAF monitors current events in the LAC region and Ecuador and monitor potential impacts on the Programme performance. Both CAF and the Executing Entities have great negotiation and relationship capacities with successive governments, through which the objectives of the Program will be safeguarded.</p> <p>315. CAF has added to the Funding Proposal another national financial institution CONAFIPS - National Corporation of Popular and Solidarity Finance taking into account that the Corporation's basic mission is to grants loans to organizations in the popular and solidarity-based financial sector, i.e., savings and credit cooperatives, mutuals, savings banks and community banks. The objective of CONAFIPS, by providing financing to these organizations, is to strengthen them so that they, in turn, will be able to provide credit to entrepreneurs in the popular and solidarity economy. Additionally, CAF has already an approved Programme "Microfinance program through Savings and Credit Cooperatives, with a focus on gender, sustainable credit and financial inclusion."</p>		
Selected Risk Factor 7: Potential money laundering, terrorist financing, and prohibited practices		
Category	Probability	Impact
<u>Governance</u>	<u>Low</u>	Select
Description		
<p>316. Potential money laundering, terrorist financing, and prohibited practices activities developed during the implementation of the Programme.</p>		
Mitigation Measure(s)		
<p>317. CAF has developed a System for the Prevention and Detection of Money Laundering and Terrorism Financing (SPDLAFT), although it is not subject to regulations on these issues as it is a multilateral organization. CAF's system is implemented in all Country Offices and includes:</p> <ul style="list-style-type: none"> • Policies and internal operating manuals • Compliance Officer appointed by the Executive President. • Prevention and detection program based on international standards and best practices regarding PDLAFT. • Risk assessments • Due diligence of counterparties 		

- Consultation systems that include international lists such as OFAC, United Nations, among others
- Annual audits on the SPDLAFT
- Annual training program for all CAF staff

<https://www.caf.com/es/sobre-caf/que-hacemos/acceso-a-la-informacion/prevencion-del-lavado-de-activos-y-financiamiento-del-terrorismo/>

CAF has its Procurement and Service Hiring Guidelines and its Manual of Selection, Acquisition and Contracting of Goods, Services, Consulting and Works - MN.038 Please refer to the webpage.

<https://www.caf.com/es/sobre-caf/que-hacemos/acceso-a-la-informacion/prevencion-del-lavado-de-activos-y-financiamiento-del-terrorismo/>

The EE even though have their own procurement policies, they should not contradict or be less strict than CAF's Procurement and Service Hiring Guidelines.

<https://www.caf.com/media/2825680/ln-019-caf-lineamientos-de-compras-y-contrataciones-27082020.pdf>

CAF has its Manuals for:

- MN-064 Technical Cooperation Operations Management Manual
- MN-049 Third Party Funds Administration Manual
- PR-082 PROCEDURE FOR DISBURSEMENTS OF Technical Cooperation
- Risk Control Directorate Operating Model Manual

318. FAO and WWF will apply its own fiduciary principles and standards relating to any "know your customer" checks, AML/CFT, and financial sanctions imposed by the United Nations Security Council, which should enable it to comply with the objectives of the Policy on Prohibited Practices and the principles of the AML/CFT Policy.

The project team will use structures, national and international consultants contained in its database and roster, to ensure they have been working with UN agencies before. New consultants as well as new structures will be assessed before being recruited. Missions in the field will be escorted, when needed, as per FAO's procedures.

GCF POLICIES AND STANDARDS

G.1. Environmental and social risk assessment (max. 750 words, approximately 1.5 pages)

319. An Environmental and Social Management Framework (ESMF) was developed for the Programme. Please refer to Annex 6 - E&S document corresponding to the E&S category.
320. Initially, a detailed analysis was carried out based on the GCF, CAF, FAO, and WWF safeguard standards. An alignment exercise was carried out to identify the scope of the analysis and the particularities of each standard. In addition, key secondary information was gathered. This was followed by a participatory analysis of potential environmental and social risks. Finally, the analytical document was prepared.
321. From the initial assessment of the Programme, it is mentioned that it has an A risk: activities with high adverse environmental or social risks and/or impacts that are diverse, irreversible, or unprecedented, due to the fact that the Programme is implemented in a world conservation area because of the number of endemic species of flora and fauna.
322. The Programme seeks to implement a multi-sectoral and cross-cutting climate initiative to catalyze a transformative shift towards a self-sustaining low-carbon island system with greater adaptive capacity to climate change and variability.
323. The Programme envisions a holistic approach, combining climate change mitigation and ecosystem-based adaptation measures, targeting the tourism value chain as the main driver of GHG emissions in the islands, while at the same time a highly vulnerable destination.
324. Within this framework, a group of impacts or risks are evident at two levels:
- (a) Environmental: (i) Loss or affectation in the flora and fauna of the power plant construction areas (ii) Environmental contamination from discarded materials from the constructed clean energy plants (dust, noise, material waste); (iii) Use of non-native seeds for strengthening the food chain.
325. b) Social: (i) inequality and exclusion of vulnerable populations (women, youth, and elderly) from program activities and benefits due to structural circumstances; (ii) exclusion of potential beneficiaries due to lack of land ownership or inputs for tourism care, (iii) lack of appropriation of knowledge and training processes by the local population; (iv) lack of appropriation and commitment of local people for sustainable livelihoods.
326. In light of these risks, the following mitigation measures will be established: (i) Establish environmental management plans for constructions that establish guidelines and procedures to manage the introduction of construction materials and waste, as well as a construction waste management plan. (ii) Establish affirmative actions for the equitable distribution of benefits and access to loans, and knowledge generation. (iii) Establish mechanisms to socialize and enhance communication with all participants; (iv) technical assistance for the enhancement of resources within the framework of sustainable tourism; (v) contribute in terms of improving the land tenure of the beneficiaries in terms of land tenure; (vi) enhance the governance of local productive spaces.
327. The stakeholder involvement plan included the identification of key stakeholders defined for the entire tourism chain, as well as in the interrelation with clean energy. In this regard, work was carried out from the project design stage on the linkage and participatory generation of feasibility inputs for the project. In addition, there is a plan for the empowerment of stakeholder interests throughout the implementation of the program.
328. In the Galapagos Islands, the percentage of the indigenous population is minimal, and they are not considered key stakeholders. Given these dynamics, it has not been deemed necessary to implement a Free, Prior and Informed Consultation (FPIC) process.

G.2. Gender assessment and action plan (max. 500 words, approximately 1 page)

329. Please find the full gender assessment and project-level gender action plan as Annex 8.
330. The Environmental and Social safeguards specialist of the PMU will be in charge of overseeing the implementation of the Gender Action Plan.
331. The gender analysis faced the challenge of analyzing the tourism chain, which ranges from understanding the dynamics of agricultural, livestock and fishing production, identifying gender relations in the services, as well as highlighting gaps in access and interest in promoting clean technologies within the framework of the services.
332. The methodology used consisted, at first, in identifying the legal regulatory framework and the progress made in the country in relation to the incorporation of the gender approach in environment and climate change.
333. The Gender Assessment shows that at the level of agricultural activity, the responsibilities of women in the production process were identified. In two of the three islands explored, it was found that women have the greatest responsibility in agricultural production. In terms of fishing activities, the number of women involved in extractive activities is minimal; women are involved in marketing activities and sometimes work in adding value to plastic waste from tourism. In terms of both river and land transport activities, women play a minimal role. Also, in terms of guiding activities, women are not visible. At the level of product commercialization and services, women participate in a higher percentage.

334. That said, the link with resource control is limited because the local population must move within the conservation "rules and policies" of the Galapagos National Park, which is why the possibilities may be limited. Women have fewer options for involvement in productive activities. These dynamics often affect women in terms of economic and structural dependence.
335. In terms of the environmental dynamics of the islands, two problems are evident that affect the quality of life of its population:
1. Reduced access to healthy, sovereign, and accessible food on the islands. Due to the high dependence on food from the mainland, families find themselves in a food insecurity that affects vulnerable populations.
 2. Access to water for human and productive consumption is an issue of concern for vulnerable populations.
336. In the framework of renewable energy and gender, the relationship is complex because there is no direct relationship. In general, the population already has electricity, and the priority is to raise awareness about the value of and interest in switching to clean energy. However, the need for all islanders to lower or reduce their energy consumption and migrate towards more sustainable energy consumption is known.
337. Once the gender analysis has been carried out, a gender goal is established according to each of the components defined for the project by type of actor.
338. Some of the main activities of the Gender Action Plan are:
- Capacity-building activities in Gender issues for the implementing organizations' technicians (workshops for adoption of gender perspective techniques for the effective participation of women in the programme).
 - Sensitization and capacity building for women and men taking into account their needs.
 - Design of positive actions for the incorporation of women in the tourism sector, especially in areas that are not "traditionally female", in access to loans and the management of sustainable businesses.
 - In general, women-led enterprises will be particularly supported with technical assistance to access loans. For instance, at least 30 women-led enterprises will be trained in green businesses²⁰ (Activity 1.2.1.2).
 - Strengthening women's knowledge of agrobiodiversity as subjects of change.
 - Fostering new sources of employment related to green energy and other jobs related to resilient activities for women and men who are not in their traditional role to be able to achieve more and better income.
 - Workshops for strengthening the capacities of women in social organizations and directive spaces will be held for the appropriation and empowerment of rights and environmental governance of their organizations.
 - Assessments on opportunities for women in the Galapagos' value chains.
- Please refer to Annex 8 for details.

G.3. Financial management and procurement (max. 500 words, approximately 1 page)

339. As per the Accreditation Master Agreement (AMA), CAF, as the Accredited Entity, shall be responsible for the overall management, implementation oversight and supervision of the Programme in line with its own internal rules, policies, and procedures, including administering and managing the use of GCF Proceeds, as well as the monitoring, evaluation, and reporting responsibilities.
340. CAF will enter into a Funded Activity Agreement with the GCF, for the Loan and the Grant, which will describe the specific requirements regarding the financial management of GCF's resources for the Programme.
341. As described in section B.4 Implementation arrangements, CAF will enter into loan agreements or amend existing loan agreements with CFN and / or CONAFIPS for the credit line. Loan resources will be administered as per CAF's Manual for the Credit and Equity Investment Process (MN/DCRR -017) which has been reviewed by the GCF during CAF's accreditation process. The Manual guides the process for all the phases of the credit, including: (i) Origination; (ii) Evaluation; (iii) Approval; (iv) Formalization; and (v) Administration.
342. GCF non-reimbursable resources will be executed by CAF in the case of Technical Assistance activities for Component 1, and by FAO and WWF in the case of Components 2 and 3. For the Technical Assistance executed by CAF, the Manual for the Management of Technical Cooperation Operations (MN /VPP – 064) will be applied. In the case of non-reimbursable resources executed by WWF and FAO, the regulations that apply are those of the agencies. These agencies have undertaken due diligence processes with CAF and thus risks are mitigated.
343. In the case of CAF, procurement processes will follow the last version of CAF's Manual of Procurement of Goods, Consulting Services and Works (NM/DFLA-038). The Chapter VIII of this Manual includes all the details and thresholds for the procurements.
344. **FAO** procurement is generally undertaken on the basis of competition and is based on the fundamental principles of Best Value for Money, fairness, transparency, economy and effectiveness. Additional objectives of FAO procurement are to:

²⁰ The GAP considers women-owned enterprises as per IFC definition:

(A) ≥ 51% owned by woman/women, OR

(B) ≥ 20% owned by woman/women; AND (i) has ≥ 1 woman as EO/COO/President/Vice President; AND (ii) has ≥ 30% of the board of directors is composed of women, where a board exists.

- Promote the standardization and use of Framework Agreements, when appropriate, to maximize efficient use of resources.
- Give due consideration to the importance of attaining an equitable international distribution of procurement sources while encouraging developing and emerging economies and supporting capacity building in beneficiary countries, particularly in emergency and post-emergency rehabilitative situations.
- Favor cooperation with other entities of the United Nations system; and
- Promote a competitive market by favoring procurement from the private sector over procurement from government entities, government-controlled enterprises or Vendors receiving government subsidies, except when the latter is the only viable option or would result in substantial benefit to the Organization or to the beneficiaries of its technical cooperation activities.

345. WWF has structured a Finance and Procurement Policy within its Procedures Manual that is published on the institutional intranet. As a summary:

346. WWF has a global accounting system that allows the proper recording of financial transactions. Country offices accounting software allows the information to be migrated to Panorama Global system and thus it is possible to consolidate the projects in the world. It was determined that the system allows accounting by cost centers. All financial transactions are regulated by documented procedures manuals, which cover among other things, tables of approval levels for payments or acquisitions by specific amounts. WWF has established the reconciliation of its ledgers with auxiliary books at least once a month. In addition, an explanation of the most significant reconciled entries is given in case of differences.

347. WWF has structured a Purchasing Policy with specifications on the contracting of suppliers and consultancies. Levels of approval and delimitation of functions are defined to carry out contracting and acquisitions. The purchasing policy contains tables that specify the levels of amounts and authorizations, for acquisitions, both in contracts of higher amounts and in small amounts. The procedures are handled taking into consideration a supplier database, managed by the Contract Administration and/or Project Administration. Staff in charge of acquisitions has an average experience of more than 10 years.

348. For the qualification of suppliers and consultants, WWF maintains a process that regulates procedures for the verification of anti-terrorism data or criminal records worldwide, through the Bridge Inside program of the Lexis Nexis page, as well as has access to a database of non-compliant suppliers in Ecuador, with whom contracts cannot be executed, nor can any process be awarded in Ecuador.

G.4. Disclosure of funding proposal

Note: The Information Disclosure Policy (IDP) provides that the GCF will apply a presumption in favour of disclosure for all information and documents relating to the GCF and its funding activities. Under the IDP, project and programme funding proposals will be disclosed on the GCF website, simultaneous with the submission to the Board, subject to the redaction of any information that may not be disclosed pursuant to the IDP. Information provided in confidence is one of the exceptions, but this exception should not be applied broadly to an entire document if the document contains specific, segregable portions that can be disclosed without prejudice or harm.

Indicate below whether or not the funding proposal includes confidential information.

No confidential information: The accredited entity confirms that the funding proposal, including its annexes, may be disclosed in full by the GCF, as no information is being provided in confidence.

With confidential information: The accredited entity declares that the funding proposal, including its annexes, may not be disclosed in full by the GCF, as certain information is being provided in confidence. Accordingly, the accredited entity is providing to the Secretariat the following two copies of the funding proposal, including all annexes:

- full copy for internal use of the GCF in which the confidential portions are marked accordingly, together with an explanatory note regarding the said portions and the corresponding reason for confidentiality under the accredited entity's disclosure policy, and
- redacted copy for disclosure on the GCF website.

The funding proposal can only be processed upon receipt of the two copies above, if containing confidential information.

H. ANNEXES

H.1. Mandatory annexes

- Annex 1 NDA no-objection letter(s) ([template provided](#))
- Annex 2 Feasibility study - and a market study, if applicable
- Annex 3 Economic and/or financial analyses in spreadsheet format
- Annex 4 Detailed budget plan ([template provided](#))
- Annex 5 Implementation timetable including key project/programme milestones ([template provided](#))
- Annex 6 E&S document corresponding to the E&S category (A, B or C; or I1, I2 or I3):
[\(ESS disclosure form provided\)](#)
 - Environmental and Social Impact Assessment (ESIA) or
 - Environmental and Social Management Plan (ESMP) or
 - Environmental and Social Management System (ESMS)
 - Others (please specify – e.g. Resettlement Action Plan, Resettlement Policy Framework, Indigenous People’s Plan, Land Acquisition Plan, etc.)
- Annex 7 Summary of consultations and stakeholder engagement plan
- Annex 8 Gender assessment and project/programme-level action plan ([template provided](#))
- Annex 9 Legal due diligence (regulation, taxation and insurance)
- Annex 10 Procurement plan ([template provided](#))
- Annex 11 Monitoring and evaluation plan ([template provided](#))
- Annex 12 AE fee request ([template provided](#))
- Annex 13 Co-financing commitment letter, if applicable ([template provided](#))
- Annex 14 Term sheet including a detailed disbursement schedule and, if applicable, repayment schedule

H.2. Other annexes as applicable

- Annex 15 Evidence of internal approval ([template provided](#))
- Annex 16 Map(s) indicating the location of proposed interventions
- Annex 17 Multi-country project/programme information ([template provided](#))
- Annex 18 Appraisal, due diligence or evaluation report for proposals based on up-scaling or replicating a pilot project
- Annex 19 Procedures for controlling procurement by third parties or executing entities undertaking projects financed by the entity
- Annex 20 First level AML/CFT (KYC) assessment
- Annex 21 Operations manual (Operations and maintenance)
- Annex 22 Assessment of GHG emission reductions and their monitoring and reporting (for mitigation and cross cutting-projects)²¹
- Annex X Other references

* Please note that a funding proposal will be considered complete only upon receipt of all the applicable supporting documents.

²¹ Annex 22 is mandatory for mitigation and cross-cutting projects.

No-objection letter issued by the national designated authority(ies) or focal point(s)



Ministerio del Ambiente, Agua
y Transición Ecológica

Oficio Nro. MAAE-SCC-2021-0377-0

Quito, D.M., 27 de octubre de 2021

Asunto: Funding proposal for the GCF by CAF regarding "CLIMATE CHANGE: THE NEW EVOLUTIONARY CHALLENGE FOR THE GALAPAGOS".

Señor
Yannick Glemarec
Executive Director
GREEN CLIMATE FUND
En su Despacho

Dear Mr. Glemarec,

We refer to the "CLIMATE CHANGE: THE NEW EVOLUTIONARY CHALLENGE FOR THE GALAPAGOS" Programme in Ecuador as included in the Funding Proposal submitted by CAF (Corporación Andina de Fomento) to us on October 26, 2021.

The content of which we acknowledge to have reviewed, we hereby communicate our no-objection to the programme as included in the Funding Proposal.

The undersigned is the duly authorized representative of the Minister of Environment, Water and Ecological Transition, the National Designated Authority of Ecuador.

By communicating our no-objection, it is implied that:

1. The government of Ecuador has no-objection to the programme as included in the Funding Proposal;
2. The programme as included in the Funding Proposal is in conformity with Ecuador's national priorities, strategies and plans;

In accordance with the GCF's environmental and social safeguards, the programme as included in the Funding Proposal is in conformity with relevant national laws and regulations.

We also confirm that our national process for ascertaining no-objection to the programme as included in the Funding Proposal has been duly followed.

We also confirm that our no-objection applies to all projects or activities to be implemented within the scope of the programme.

We acknowledge that this letter will be made publicly available on the GCF website if necessary.



Ministerio del Ambiente, Agua
y Transición Ecológica

Oficio Nro. MAAE-SCC-2021-0377-0

Quito, D.M., 27 de octubre de 2021

Kind regards,

Atentamente,

Documento firmado electrónicamente

Mgs. Karina Maribel Barrera Moncayo
SUBSECRETARIA DE CAMBIO CLIMÁTICO

Copia:

Señora Secretaria
Teresa Del Pilar Pérez Toscano
Secretaria de la Subsecretaria

Señorita Ingeniera
Gabriela Jeanneth Vargas Luna
Especialista de Políticas de Cambio Climático 3

Señora Magíster
Inés Patricia Arias Machado
Directora de Adaptación al Cambio Climático

ab/gv



Firmado electrónicamente por:
**KARINA MARIBEL
BARRERA MONCAYO**

Environmental and social safeguards report form pursuant to para. 17 of the IDP

Basic project or programme information	
Project or programme title	Climate Change: The New Evolutionary Challenge for the Galapagos
Existence of subproject(s) to be identified after GCF Board approval	Yes
Sector (public or private)	Public
Accredited entity	Corporación Andina de Fomento (CAF)
Environmental and social safeguards (ESS) category	Category A
Location - specific location(s) of project or target country or location(s) of programme	Galápagos Islands, Ecuador
Environmental and Social Impact Assessment (ESIA) (if applicable)	
Date of disclosure on accredited entity's website	Friday, June 4, 2021
Language(s) of disclosure	English and Spanish
Explanation on language	Spanish is the official language of Ecuador.
Link to disclosure	English: https://www.caf.com/media/3042413/social-and-environmental-assessment-galapagos-05-11-21.pdf Spanish: https://www.caf.com/media/3042414/evaluacion-social-y-ambiental-galapagos-marzo-2021.pdf
Other link(s)	https://www.caf.com/es/temas/a/ambiente-y-cambio-climatico/proyectos/
Remarks	An ESIA consistent with the requirements for a Category A project is contained in "Annex 6: Environmental and Social Management Framework (ESMF)".
Environmental and Social Management Plan (ESMP) (if applicable)	
Date of disclosure on accredited entity's website	Friday, June 4, 2021
Language(s) of disclosure	English and Spanish
Explanation on language	Spanish is the official language of Ecuador.
Link to disclosure	English: https://www.caf.com/media/3042413/social-and-environmental-assessment-galapagos-05-11-21.pdf Spanish: https://www.caf.com/media/3042414/evaluacion-social-y-ambiental-galapagos-marzo-2021.pdf
Other link(s)	https://www.caf.com/es/temas/a/ambiente-y-cambio-climatico/proyectos/
Remarks	An ESMP consistent with the requirements for a Category A project is contained in "Annex 6: Environmental and Social Management Framework (ESMF)".

Environmental and Social Management System (ESMS) (if applicable)	
Date of disclosure on accredited entity's website	N/A
Language(s) of disclosure	N/A
Explanation on language	N/A
Link to disclosure	N/A
Other link(s)	N/A
Remarks	N/A
Any other relevant ESS reports, e.g. Resettlement Action Plan (RAP), Resettlement Policy Framework (RPF), Indigenous Peoples Plan (IPP), IPP Framework (if applicable)	
Description of report/disclosure on accredited entity's website	N/A
Language(s) of disclosure	N/A
Explanation on language	N/A
Link to disclosure	N/A
Other link(s)	N/A
Remarks	N/A
Disclosure in locations convenient to affected peoples (stakeholders)	
Date	Friday, June 4, 2021
Place	Consejo de Gobierno del Régimen Especial de Galápagos Av. Perimetral, intersección: Martha Bucarán y 12 de Febrero. Isla San Cristóbal, Galapagos, Ecuador.
Date of Board meeting in which the FP is intended to be considered	
Date of accredited entity's Board meeting	Tuesday, September 28, 2021
Date of GCF's Board meeting	Tuesday, October 5, 2021

Note: This form was prepared by the accredited entity stated above.

Environmental and social safeguards report form pursuant to para. 17 of the IDP

Basic project or programme information	
Project or programme title	Climate Change: The New Evolutionary Challenge for the Galapagos
Existence of subproject(s) to be identified after GCF Board approval	Yes
Sector (public or private)	Public
Accredited entity	Corporación Andina de Fomento (CAF)
Environmental and social safeguards (ESS) category	Category A
Location – specific location(s) of project or target country or location(s) of programme	Galápagos Islands, Ecuador
Environmental and Social Impact Assessment (ESIA) (if applicable)	
Date of disclosure on accredited entity's website	Friday, June 4, 2021
Language(s) of disclosure	English and Spanish
Explanation on language	Spanish is the official language of Ecuador.
Link to disclosure	English: https://www.caf.com/media/3682471/environmental-and-social-management-framework-esmf-galapagos-gcf-ingles.pdf * Spanish: https://www.caf.com/media/3682472/environmental-and-social-management-framework-esmf-galapagos-gcf-espan-ol.pdf *
Other link(s)	https://www.caf.com/es/temas/a/ambiente-y-cambio-climatico/proyectos/
Remarks	An ESIA consistent with the requirements for a Category A project is contained in "Annex 6: Environmental and Social Management Framework (ESMF)".*
Environmental and Social Management Plan (ESMP) (if applicable)	
Date of disclosure on accredited entity's website	Friday, June 4, 2021
Language(s) of disclosure	English and Spanish
Explanation on language	Spanish is the official language of Ecuador.
Link to disclosure	English: https://www.caf.com/media/3682471/environmental-and-social-management-framework-esmf-galapagos-gcf-ingles.pdf * Spanish: https://www.caf.com/media/3682472/environmental-and-social-management-framework-esmf-galapagos-gcf-espan-ol.pdf *
Other link(s)	https://www.caf.com/es/temas/a/ambiente-y-cambio-climatico/proyectos/

Remarks	An ESMP consistent with the requirements for a Category A project is contained in “Annex 6: Environmental and Social Management Framework (ESMF)”.*
Environmental and Social Management System (ESMS) (if applicable)	
Date of disclosure on accredited entity’s website	N/A
Language(s) of disclosure	N/A
Explanation on language	N/A
Link to disclosure	N/A
Other link(s)	N/A
Remarks	N/A
Any other relevant ESS reports, e.g. Resettlement Action Plan (RAP), Resettlement Policy Framework (RPF), Indigenous Peoples Plan (IPP), IPP Framework (if applicable)	
Description of report/disclosure on accredited entity’s website	N/A
Language(s) of disclosure	N/A
Explanation on language	N/A
Link to disclosure	N/A
Other link(s)	N/A
Remarks	N/A
Disclosure in locations convenient to affected peoples (stakeholders)	
Date	Friday, June 4, 2021
Place	Consejo de Gobierno del Régimen Especial de Galápagos Av. Perimetral, intersección: Martha Bucarán y 12 de Febrero. Isla San Cristóbal, Galapagos, Ecuador.
Date of Board meeting in which the FP is intended to be considered	
Date of accredited entity’s Board meeting	Monday, August 1, 2022
Date of GCF’s Board meeting	Monday, May 16, 2022*

Note: This form was prepared by the accredited entity stated above.

*Subsequent to the disclosure of this form to the Board and active observers on 7 June 2021, the following update has been made: The accredited entity has updated the “Environmental and Social Management Framework” (ESMF) to clarify the procedures and requirements for managing environmental and social risks and impacts pursuant to the ESS standards, and comply with the revised Environmental and Social Policy adopted by decision B.BM-2021/18 as regards SEAH with respect to projects and programmes approved at or after the thirty-second meeting of the Board (B.32). The updated ESMF has been made available in new links. Moreover, the date of the GCF Board meeting in which the funding proposal is to be considered has been updated to B.32 date.

Secretariat's assessment of FP185

Proposal name:	Climate Change: The New Evolutionary Challenge for the Galapagos
Accredited entity:	Corporación Andina de Fomento (CAF) / Development Bank of Latin America
Country/(ies):	Ecuador
Project/programme size:	Medium

I. Overall assessment of the Secretariat

1. The funding proposal is presented to the Board for consideration with the following remarks:

Strengths	Points of caution
Programme expects to reduce approximately 600,000 tCO ₂ eq in lifespan from energy; more than 20,000 hectares, and 130,000 km of marine ecosystems made more climate resilient and sustainable	Category A environmental and social safeguards risks would need to be managed by the accredited entity
The programme will allow Galapagos Islands to reduce its overall energy dependence on diesel imported from the mainland, while promoting renewable energy use; it will contribute to regulatory, policy and knowledge management on climate change in the Galapagos, while promoting climate-resilient agriculture and tourism practices	The programme implementation period is only five years. With a longer implementation period more cross-enrichment opportunities for activities could evolve.

2. The Board may wish to consider approving this funding proposal with the terms and conditions listed in the term sheet and addendum VII, titled "List of proposed conditions and recommendations", respectively.

II. Summary of the Secretariat's assessment

2.1 Project background

3. The Galapagos Islands are considered a living laboratory of evolutionary processes. Its diversity and the uniqueness of its species, volcanic origin, and geological dynamics enable these processes and the development of a large number of species, both animal and plant, that do not exist anywhere else in the world. This makes the Galapagos a unique and globally important site for the common heritage of humanity (the area was declared a Natural Heritage Site by UNESCO in 1978). However, these unique conditions are put at risk by climate change.

4. Climate change impacts the Galapagos Islands' marine and terrestrial ecosystems, the inhabitants and their livelihoods as well as their economic activities such as agriculture,

fisheries and tourism through increased temperatures, changed rainfall seasonality, extreme hydro-metrological events, expected rise in evapotranspiration, increased sea surface temperature and sea level rise.

5. 33,000 people live in the Galapagos Islands, and the estimated number of tourists visiting each year is 270 ,000 (pre-COVID-19). Tourism, mainly nature-based tourism, is very important, accounting for 80 per cent of the local economy.
6. The Galapagos marine and terrestrial ecosystems suffer from climate change impacts that are also exacerbated by anthropogenic impacts, including from local agricultural, silvo-pastoral and fishing practices as well as from tourism. Anthropogenic impacts include, for example, oil spills, water contamination, wastewater mismanagement, overuse of tourist sites and trails resulting in disturbance to plants and animals. Unsustainable land management and land abandonment in the agriculture sector, as well as illegal, unregulated and unreported fishing, contribute to ecosystems being stressed. In all sectors, the introduction and spread of invasive species is challenging the ecosystems. The Galapagos heavily rely on imports such as fuel and food, which is unsustainable, and the logistics contribute to unnecessary stress on the marine and terrestrial ecosystems.
7. This project aims to address the local practices in Galapagos in terms of the local population's ecosystems management and energy use, but also with regard to the many tourists who visit the islands every year. The project comprises three components: Component 1, energy matrix change in the Galápagos archipelago; Component 2, building climate resilience for livelihoods in the Galapagos; and Component 3, sustainability mechanisms for climate resilience and low-emissions livelihoods.
8. Component 1 comprises the central power plant, Conolophus, investments in decentralised power supply and in energy efficiency. It also entails technical assistance.
9. Component 2 entails capacity-building for government technical staff in aspects regarding climate change, including appropriate climate impact monitoring systems for the agricultural and marine sectors. This component includes measures to improve farmers' livelihoods through the rehabilitation of ecosystems to strengthen their climate resilience, as well as measures to improve the local food value chains.
10. Component 3 aims to build local practices and structures that maintain the climate resilience and low emission measures. This component will comprise establishing an ecotourism certification scheme, including climate change in the educational curricula, strengthening knowledge and fostering engagement among the local citizens and tourists as well as mainstreaming climate change in regulatory frameworks and planning instruments.
11. The overall environmental and social safeguards (ESS) category for the programme is I-1, given the Conolophus project, which has Category A related risks. All other activities in the programme would have minimum ESS risks equivalent to categories B and C. The accredited entity (AE) has submitted an Environmental and Social Management Framework (ESMF) to manage the programme's potential risks for all activities.
12. A total funding of USD 65,271,299 in senior loans (USD 30,541,146) and grant (USD 34,730,153) is sought from GCF. Other financiers contribute senior loans (CAF: USD 30,230,000), grant (CAF: USD 210,000) and equity (USD 18,000,000 from the Conolophus bid winner Gransolar/Total Eren, and USD 3,880,000 from various small, local beneficiaries' credits).
13. Two types of loans are proposed, one commercial loan to the Conolophus project, where GCF provides USD 20 million out of the total investment of 63 million (as mentioned, the equity part is USD 18 million and CAF provides USD 25 million). The terms for this commercial loan are still not settled between the AE and GCF, but the aim is to complement the CAF contribution in a way that renders a calculated internal rate of return (IRR) below the present industry standard

of 19 per cent. The second loan is a low concessionality based, senior loan totalling USD 3,880,000 which will be blended with the CAF senior loan via the National Finance Corporation (CFN) and through local financial institutions. This credit line, Galapagos Climate Credit Line (GCCL), will provide local beneficiaries with a lower interest rate than that currently available (17 per cent), which makes investments barely profitable. The GCCL loan contributes to activities in both Component 1 and Component 2, including decentralised solar-PVs, energy efficient air conditioners and fridges, equipment for the agricultural, silvo-pastoral and fisheries sectors' enhanced food value chain, as well as equipment for the restoration of marine High Ecological Value Areas (HEVA).

14. The grant amount is used to cover costs of equipment and consumable materials such as laboratory and monitoring equipment and equipment for crop management systems at farm level that will become the property of local public sector parties, as well as costs of local and international consultants and service providers for capacity-building, field work and monitoring among others.

15. The concept note for this project was first submitted by CAF to the GCF Secretariat before COVID-19, in May 2019, and was approved by the second Climate Investment Committee (CIC2) a year later in May 2020. Project preparation funds were available. During the proposal development, COVID-19 has severely hit the Ecuadorian economy and the Galapagos local economy, to which tourism normally contributes significantly. There has been no possibility to do fieldwork in the Galapagos Islands during the pandemic.

16. With shrinking resources to continue its national plan for renewable energy (RE), including the Plan de Expansión de Generación en el Sistema Aislado Galápagos (PEGSAG), and given the high impact of Conolophus compared to other planned projects, the government decided to invite the private sector and to give high priority to the Conolophus project above other RE projects in Galapagos.

2.2 Component-by-component analysis

Component 1 – Energy matrix change in the Galapagos archipelago (total cost: USD 76.27M; GCF USD27.98M, or 36.6%).

17. This component will increase low-emission energy access and reduce the energy consumption of livelihoods in the Galapagos Islands by facilitating access to finance and technical assistance for renewable energy generation (PV plant and micro-distributed PV generation) and energy efficiency investments (replacement of air conditioners and refrigerators). The tourism sector is particularly targeted since it is identified as a driving force for climate actions, based on its importance in the local economy. Farmers and fisheries are also eligible for the micro-distributed PV generation credits.

18. Under this component, the programme will finance the following: A 14.8 MW centralized renewable energy-generation, PV power plant (the Conolophus PV project), which will also include a 40.9 MWh battery storage system, a switching station at 34.5 kV, 49 kilometre sub-transmission line, and a centralized automatic control system; credit lines to support distributed renewable power generation systems (small-scale solar PV systems) in tourism/commercial, agriculture and fisheries sectors, managed by Corporación Financiera Nacional B.P. (CFN) and Corporación Nacional de Finanzas Populares y Solidarias (CONAFIPS), and provided through local banks in the Galapagos; credit lines to support optimization and replacement of efficient energy equipment (air conditioners, refrigerators) to tourism/commercial sector, managed by CFN and provided through local banks in the Galapagos; and technical assistance to selected beneficiaries for climate change and low carbon energy investment project development, implementation and related issues.

19. Estimated emission reductions amount to 584,169 tCO₂eq over the lifetime of the project, which renders a GCF cost per tonne of USD 111.73/tCO₂eq.
20. In 2020, the Government of Ecuador delegated development of the project to private national and/or foreign equity companies for a period of 25 years, thus becoming the concessionaire for Conolophus. The Government further established a Trust in order to assure transparency and compliance in the financial management, quality, and sustainability of energy generation in the Baltra-Santa Cruz Islands in the Galapagos. The Conolophus project is designed for viability. However, the Ecuadorian financial market is unable to accrue the required finance at sufficiently beneficial terms, as CAF found upon issuing its letter of intent to the bidders.
21. The winning bid offered to sell electricity at a price of US 45.89 cent/kWh, which was agreed by the Government. This is a high per unit price. Given the cost of capital however, the IRR for the concessionaire would still be moderate. The bid winner is requested to sign an agreement with the Government within 180 days (which will be no later than March 8, 2022). Our assessment concludes that GCF proceeds are motivated. First and foremost, without GCF there will not be sufficient commercial capital lending available in Ecuador. Secondly, with commercial rates in Ecuador, the IRR would fall in the range of 7 per cent to 11 per cent which would be much below the industry rate of between 17 per cent and 19 per cent according to the feasibility report. A lower tariff would also affect the IRR negatively (while the tariff is already set by the bidder's financial offer, this was a hypothetical option presented in the financial sensitivity analysis).
22. The level of concessionality for the Conolophus tranche is still to be settled but will be based on a target IRR around 18 per cent for the concessionaire. CAF will issue credits from their "commercial productive" window because this is how projects such as the Conolophus are classified in the Ecuadorian banking and financial system. CAF propose that GCF match their senior commercial loan *pari passu*, with a senior commercial loan at a lower interest rate.
23. CAF has the ambition to become a green financier and stretches their offer beyond standard practice in the Conolophus case. For example, it is extremely rare that CAF would offer loans to the amount of USD 10 million and over, but in this case the bank is proposing USD 25 million. Moreover, they consider decreasing their interest rate even further from the current rate and initially offered 8.12 per cent.
24. The Galapagos Climate Credit Line is clear and well designed, building on previous experiences (from the Refrigerator Renewal Programme RENOVA). A barrier for these types of activities has been access to credit at reasonable rates, which is why the credit has been developed with a blend of GCF concessional loan. CAF will sign a Term Sheet and an Agreement to ensure the concessionality passes down from local financial institutions (LFIs) to the end beneficiaries, and will offer 11.2 per cent interest rate as opposed to 17 per cent for the decentralised energy assets. For the energy efficiency credits, the offer will stay at a higher rate (presumably 15.2 per cent), but without GCF funding it is likely that the LFIs in Galapagos will offer no credit at all for transitioning to more energy efficient equipment. The activity entails capacity-building and pipeline development for the credit line, which is strengthened by Components 2 and 3, in which value chain development and ecotourism are being carried out. As such, the pipeline and results from individual projects can be more sustainable.
25. According to our assessment, the GCCL eligibility criteria serve to address two major areas of relevance for shifting the energy end use towards a more efficient and flexible load. Efficiency gains of around 15 per cent to 20 per cent are considered a reasonable minimum target for equipment, and the embedded energy supply further helps to cut the required net electricity supply. Beyond assets acquisition and installation by the individual beneficiaries, business models to achieve higher targets through market-based instruments could potentially have further enhanced the project's impact, including how the ecotourism certification in

Component 3 can support resource optimization and energy efficiency in the design of buildings. In addition, the energy optimization of the food value chains in Component 2 could be linked to the GCCCL opportunities. These possibilities have been communicated to the AE and may potentially be considered in the detailed design of the ecotourism certification.

26. In terms of grid-connected equipment, a study on grid stability is underway. Although there are regulations to control that equipment does not cause disturbance or imbalance in the distribution network, the Secretariat has advised that this study need to be accomplished prior to first disbursement.

Component 2 – Building climate resilience for livelihoods in the Galapagos (total cost: USD 36.1M; GCF USD 32.18M or 89%)

27. Component 2 aims to strengthen Galapagos farmers' and small-scale fisheries' adaptive capacity in order to: increase local food production through the provision of reimbursable and non-reimbursable funds; foster the adoption of sustainable land and fisheries practices; promote more efficient value chains and a blue circular economy; foster the protection and restoration of key marine and terrestrial ecosystems that sustain livelihoods in the Galapagos, including tourism; and strengthen the decision-making frameworks related to ecosystem management.

28. In the case of agriculture, the project will increase the adaptive capacity of farmers by achieve participatory and integral farm planning with producers, technical assistance, and concessional credit to facilitate the implementation of climate change adaptation measures, adequate materials and equipment. Income diversification opportunities for resilient climate production will create new market channels with the tourist industry and the local population.

29. The programme will implement three main ecosystem-based adaptation measures to improve the resilience and adaptive capacity of the Galapagos small-scale fisheries: improving the design and management effectiveness of the new Galapagos marine zoning to reconcile conservation and fishery management objectives; restoring the ecological function of overexploited populations and diversifying the livelihoods of the fishing sector and local community through a climate-smart approach to small-scale fishing and aquaculture; and diversifying fishers' livelihoods based on four pillars: innovation and technology, circular economy, public-private investment and the sustainable development of the Galapagos tuna fishery.

30. This component will also improve the knowledge of Galapagos government staff and vulnerable farmers on climate change issues and climate-resilient agricultural best practices through activities such as farmer field schools and field demonstrations. The generation of and access to hydro-meteorological information for decision-making will be strengthened.

31. Our assessment concludes that the activities will lead to an increased, sustainable climate resilience. As the entire population of the Galapagos is included in many measures, activities will effectively bring about change. For example, it is considered that the activities related to proactive prevention of the spread of invasive species and marine zoning for ecosystems recovery are sufficiently comprehensive to achieve results. Many activities are designed as no-regret measures given the uncertainty and unpredictability of future climate conditions.

32. It is also valuable that monitoring of the ecosystems' vulnerability to changes in climate is enhanced in the Galapagos, as this will contribute to long-term sustainability and development pathways.

33. The activities proposed are aimed at improving data availability, carbon sequestration, livelihoods (farmers, fishers, tourist operators), establishing better institutional conditions and planning tools that incorporate climate change for managing ecosystems and agriculture landscapes.

34. The monitoring and evaluation system of the programme will ensure that field data, surveys, income, productivity, COS, and other relevant factors will be monitored and measured during project implementation and the programme will create a robust monitoring system based on the national institution to guarantee sustainability of the actions and activities.

35. Due to the COVID-19 emergency, information used for designing the project activities will need to be completed and updated at the beginning of the programme because many local conditions have changed in the past year and a half. The project specifically acknowledges the different needs and aspects of women and men in their work to achieve increased resilience, and the situation may well have changed as COVID-19 has caused unemployment and provoked other shifts in livelihoods, ecosystems management and consumer patterns. It is foreseen that this update will further strengthen resilience.

36. The risk of low acceptance or uptake of the proposed activities among the fisheries and foreseen beneficiaries is assessed as medium to low. Small-scale fishers' associations have been consulted during the development of the proposal and are fully aware of the proposed activities. Letters of commitment from these associations will be provided, stating their interest in participating in and promoting programme activities. A behavioural insights analysis will be conducted at the beginning of the programme to refine strategies for engaging all beneficiaries and stakeholders in the programme activities.

37. GCF funds for staff, services and consultants is relatively high. Our assessment concludes that these costs are mostly motivated by the wholistic approach, including field work in many different islands. A further aspect is the specific scientific competences and methods that will be established for monitoring climate impacts and invasive species. Executing entities (EEs) have opted to hire highly competent and skilled teams from abroad, which leads to relatively higher staff costs.

Component 3 – Sustainability mechanisms for climate resilience and low-emissions livelihoods (total cost: USD 3.53M; GCF USD 3.43M or 97%)

38. Component 3 aims to strengthen the response of local livelihoods and population through education and communication programmes, and to increase the capacities of key institutions by mainstreaming climate change in policy and planning instruments, thus empowering their decision-making.

39. Activities under this component will include: implementation of an ecotourism certification scheme for local auditors to adopt best practices across the tourism value chain; strengthening the educational system of Galapagos to provide quality education to face climate change and promote sustainable development; strengthening knowledge and fostering engagement of the general public and key stakeholders on climate change impacts and solutions; and strengthening institutional and regulatory systems for climate responsive planning and development.

40. Actions will be implemented in the four populated islands (Floreana, Isabela, San Cristóbal, Santa Cruz), in High Ecological Value Areas (HEVA), and the Galapagos Marine Reserve (GMR), and, unless otherwise specified, will cover the entire population of the islands.

41. The main direct stakeholders are the local governments (Government Council of the Special Regime of Galapagos and the Galapagos National Park Directorate, the tourism sector (hotels, restaurants, operators), the agricultural sector (farmers), small-scale fisheries and the education sector (schools and universities). More than 470 beneficiaries from the tourism sector will have access to finance for investing in energy-efficient technologies and distributed renewable energy generation, a total of 624 farmers or agricultural production units (1,872 persons), and 1,000 fishing households (3,000 persons) will benefit from implementation of the adaptation measures.

42. Our assessment concludes that the proposed sustainability activities are well motivated and needed. The ecotourism certification is promising, although unfortunately we cannot assess it in detail at this point since it will be design as part of the programme. Because they target all sectors of the population, including both the public and private, the educational programmes are perceived as contributing to the cross-cutting values of the project.

43. As regards cross-cutting values, in our assessment we have sought for more articulated integration, for example that energy efficiency and optimisation should be part of the food value chains and ecotourism. Also, the funding proposal could have more explicitly mentioned that ecotourism also entails prioritizing local food over imported. There are many other ways in which management and monitoring of ecosystems could be integrated into tourism.

44. Regarding the shift to RE in the centralised power system and the national fiscal policy opportunities given that diesel expenses will decrease significantly, the AE has proposed to explore the possibility that government funds may in part be allocated towards Galapagos climate sustainability (regularly or occasionally), although the common practice is that funds are not earmarked.

III. Assessment of performance against investment criteria

3.1 Impact potential

Scale: Medium

45. The project results in lower emissions from the centralised electricity system, from decentralised power supply and energy efficient measures.

46. The project further results in increased resilience to climate change for the most vulnerable people, including farmers and local fisheries.

47. The project will result in a significant shift towards renewable energy in the electricity generation mix. Of the electricity generated 55 per cent will be based on renewable energy compared to zero in the business as usual scenario. Regarding the decentralised renewable energy and energy efficient measures, the project will support beneficiaries to achieve a more sustainable and reliable energy situation, at the same time contributing to their local environment, health and reduced greenhouse gas (GHG) emissions. In summary, the central and decentralised energy options that materialise through this project will result in GHG emissions reduction amounting to 584,168.98 tCO₂eq over 25 years.

48. Beneficiaries include the direct beneficiaries on Galapagos Islands, the general public, farmers in the agricultural and silvo-pastoral sectors and fisheries. Through the project activities, the land and marine ecosystems will be more resilient to on-going climate change because the species and seeds selected will be more resilient and will also minimise the impact of invasive species that flourish when temperatures and rainfall patterns change. Marine zones will be maintained to enable the subsequent recovery of marine ecosystems from climate impact that is also aggravated by local marine activities.

49. The programme will enhance climate resilience in 19,000 hectares of agricultural areas, 1,500 hectares of Scalesia forests and 138,000 km² of marine ecosystems. The total beneficiaries of the programme are the total population (33,000 people) and the more than 270,000 annual tourists, who are one of the main users of ecosystem services in the Galapagos and have a significant energy footprint. These beneficiaries will further benefit from the distributed power generation that will make the electricity from each island's grid cleaner and inclusive.

50. Tourism is an important backbone of the local economy and the islands ecosystems, including its fauna, are important attractions. For this reason, it is essential to strive to keep the tourism industry sustainable and climate neutral as far as possible, which this project

contributes to in several ways: the energy supply; the food supply; and ecosystem management and monitoring.

51. In this way, all inhabitants of the Galapagos Islands will be able to reduce the carbon intensity of their activities, become more resilient by reducing their overall energy dependence on diesel imported from the mainland, and enjoy better air quality by reducing the generation of electricity in thermoelectric plants.

3.2 Paradigm shift potential

Scale: Medium to high

52. The project addresses a shift towards renewable energy, local financing of sustainable climate resilient investments and introduces methods and standards for marine management and monitoring, ecotourism and local food production. Overall, the shift breaches the trend of an unsustainable import-dependent local economy, with significant net GHG emission due to imports of fuel and food, as well as unsustainable tourism management that challenges the very ecosystems that tourists value. As such, the project aims to change the attitude to and understanding of integrating climate resiliency and low emission codes of conduct in the various sectors, as well as significantly decreasing the use of fossil fuels. The renewable energy supply that is complemented with battery storage is a game changer for potentially reducing or eliminating import dependency. The Galapagos have a plan for further investment in renewable energy and energy efficiency, which together with the inclusion and capacity-building of financial institutions such as commercial banks, ensures that there can be a continued scale-up of successful investments. Component 3 in particular aims to fortify regulations, educational curricula and ecotourism certification schemes that will support the shift.

3.3 Sustainable development potential

Scale: High

53. The project tackles both mitigation and adaptation aspects of climate change and works to enforce the sustainability of relevant economic sectors in the Galapagos Islands, first and foremost the fuel imports and the tourism industry, together constituting significant proportions of the local economy. In particular, the project addresses long-term aspects of the challenge by shifting to renewable energy, introducing resilient species and establishing sustainable business models where practices are developed for sustainable marine zoning, ecotourism and local food production. In particular, the project will result in 250 new jobs. Energy provision in the Galapagos Islands has been heavily subsidised through diesel subsidies. The Government of Ecuador is working to remove subsidies at the national level. In the particular case of the Galapagos, government savings from diesel will be supporting the general sustainability agenda of the country. In addition, the AE will bring the need for specific support for the local sustainability agenda to the government's attention and will seek opportunities whereby funds can be reinvested in the local climate ambitions, such as for example PEGSAG, the marine programme, and programmes for agricultural and fisheries. As such, sustainability is supported by the cross-cutting approach.

3.4 Needs of the recipient

Scale: Medium

54. The Galapagos Islands are remote and highly characterized by extreme climate events. Limited financing and high dependency on imported food and fuel increase climate vulnerability of local populations. There is a credit deficit for individuals and businesses in the Galapagos. The tourism industry has become an essential part of the local economy, and as such contributes significantly to the anthropogenic impact on local livelihoods and ecosystems. The local community needs support to comprehensively shift attitudes towards managing these ecosystems and nature resources as opposed to earning money from exposing them to tourism.

Beyond credit, there is a need for broadly anchoring community codes of conduct and to ensure that greening local businesses is also profitable.

3.5 Country ownership

Scale: High

55. The programme is developed in strategic alignment with the policy objectives of the Government of Ecuador in the areas of climate change and development. More specifically, for Ecuador the programme also adheres to local plans and strategies. Notably, with COVID-19, some local public organizations have had difficulties in maintaining normal practices and have lost staff. The programme can capacitate these institutions and help maintain some of the crucial activities. A new nature reserve in the Galapagos was just recently launched (at COP26). The Government of Ecuador highly values the unique nature-based values of the Galapagos Islands and intends to maintain these. Climate change is therefore a high priority, both nationally and internationally. Consequently, the programme will be built through local capacity-building with the incorporation of international experts, given the exclusive high value ecosystems of the Galapagos Islands.

3.6 Efficiency and effectiveness

Scale: Medium

56. Of the GCF financing 39 per cent will go towards mitigation activities. This results in a cost of USD 14.6/MtCO₂, in line with comparable projects and direct access entities' average in the GCF portfolio. The cost effectiveness for adaptation projects is high at USD 1,021/MtCO₂. However, this can be justified by the remoteness of the project location and low population density. The AE mentions in the funding proposal (paragraph 350) that costs in the Galapagos are 1.8 times higher than on the mainland and salaries are 80 per cent higher than on the mainland by law.

57. The economic efficiency of the mitigation interventions is good. The estimated economic internal rate of return for the centralized renewable energy intervention is 45.5 per cent, for the distributed solar intervention it is 17.86 per cent, and for the energy efficiency component it is 17.49 per cent, all above the discount rate of 12 per cent used for Peru. Economic returns were not assessed for the climate resilient agriculture, restoration and fisheries components.

58. In terms of appropriateness of concessionality and financial adequacy, the AE provided with and without GCF financial scenario analysis for all the components under consideration.

59. According to the AE's analysis the centralized renewable energy investment would have a negative net present value (NPV) and an IRR below the weighted average cost of capital without the GCF contribution. This IRR increases from 7.23 per cent to 17.83 per cent thanks to the GCF 15-year concessional loan, a level closer to the investor's hurdle rate of 16 per cent according to the AE. The GCF level of concessionality therefore seems appropriate for the component.

60. For the distributed renewables component and energy efficiency the AE estimates IRRs of around 7.7 per cent without GCF funding and 9.86 per cent with GCF funding, still below the discount rate of 11.62 per cent, and payback periods of between 8 and 10 years even with the GCF contribution. These components do not exhibit sufficient profitability to be fully financed through commercial bank loans. Therefore, the proposed GCF incentive through concessional loans for component 1.2.1 seems appropriate.

61. The climate-smart agriculture activities 2.1.2 and 2.1.3 exhibit negative NPV and an IRR of 3.98 per cent. With GCF support the IRR increases to 8.64 per cent, still below the 10 per cent discount rate and the payback is still standing at 6 years. The proposed use of grant is the appropriate level of concessionality given the lack of profitability of the interventions selected by the AE to calculate profitability (paragraph 388 of the funding proposal).

62. For the small-scale climate-smart fisheries, the AE indicates that the GCF concessional loans and grants will result in reducing interest rates for small businesses from 9 to 25 per cent. This will result in improving the NPV from negative to positive, the IRR from 3 to 10 per cent, and the payback period is around 6 years.

63. Overall, the mix of financing instruments used seems appropriate based on the figures provided by the AE. In the long run, financial viability of the activities proposed is however fragile given the fact that most activities are not profitable without the GCF concessionality. The same concerns arise regarding the ability to mobilize further private sector financing for similar activities in the Galapagos, and therefore scaling deployment of the activities.

IV. Assessment of consistency with GCF safeguards and policies

4.1 Environmental and social safeguards

64. The proposal is classified as Category A primarily because of the sensitive environment of the Galapagos Islands. Development in the islands always increases the chance of any non-native species being introduced into the archipelago which would present a very serious risk to its unique and highly fragile ecosystem. While the activities are small scale and spread over five sectors (energy, agriculture, forestry, fishery, tourism), some of the activities involve direct intervention on/manipulation of the natural habitats/natural regeneration processes (e.g., restoration of forest, restoration of coral reef, removal of invasive species, restoration of remnant forests, etc.) which could have adverse environmental and social risks and impacts. On the other hand, some of the environmental and social co-benefits of the proposal include: protection of agricultural diversity, soils, and water resources; reduction of the use of agrochemicals; restoration and protection of marine and terrestrial ecosystems; job creation; healthy food environment, water security and increasing resilience of the communities. An updated Environmental and Social Management Framework (ESMF) incorporating safeguards to address sexual exploitation, sexual abuse and sexual harassment (SEAH) and a Stakeholder Engagement Plan (SEP) have been prepared which are undergoing further review by the Secretariat and revision by the AE prior to the proposal's consideration by the Board. In relation to indigenous peoples, the AE has noted that the requirements of the Indigenous Peoples Policy do not need to be applied as indigenous peoples are not key stakeholders in the Galapagos Islands. Recognizing the ethnic diversity in Galapagos, the AE has identified and incorporated the different groups in the initial consultation process. Additionally, the AE notes that staff training on interculturality will be provided.

4.2 Gender policy

65. The AE provided a gender assessment and action plan with the funding proposal and therefore complies with the requirements of the GCF Gender Policy.

66. Ecuador has established a framework for promoting gender equality through provisions made in the national constitution, including a law on the prevention and eradication of gender-based violence. Ecuador is a signatory to international agreements such as the Convention on the Elimination of All Forms of Discrimination against Women, and regional conventions such as the Inter-American Convention on the Prevention, Punishment and Eradication of Violence against Women. The country also has public policies that seek to reduce gender gaps, for example the National Agenda on Women and Gender Equality. At the institutional level, the National Council for Gender Equality is responsible for ensuring that gender issues are mainstreamed in policies and institutions. Although the country has put in place a legal and

institutional machinery for gender equality, prevailing gender stereotypes still promote multiple forms of discrimination against women.

67. A description of the general context of gender issues in Ecuador is described in the gender assessment and is based on desktop reviews of available information. In the Galapagos region where the programme will be implemented, gender dynamics ensure that men dominate decision-making concerning communities and families, and women mainly participate in raising and caring for family members. Gender-based violence in various forms, physical, sexual and psychological, is common in the Galapagos Islands and the programme will design a referral system for related cases.

68. Access to energy in Galapagos is widespread in both rural and urban settings, though there are some households that still do not have electricity. As in other regions of Ecuador, women in Galapagos have limited access to finance from financial institutions due to reasons such as lack of assets to use as collateral, credit history and requirements for authorisation from husbands to validate residence on the islands, among others. Livelihoods on the islands are reliant on agriculture, fisheries and tourism, the latter being the main source. Though women are involved in agricultural activities and in some cases manage farms as men work in the tourism sector, they tend to be excluded from decision-making and benefits accrued from trading agricultural products because the agricultural produce are transported and traded by men. The COVID-19 pandemic has increased the migration of men to the mainland thereby reducing the agricultural labour force. The fisheries sector is characterised by a social division of labour: men participate in capture activities, decision-making and receiving economic benefits, whilst women lead a number of pre- and post-capture activities in the value chain such as processing products for sale and trading. Fishing cooperatives in the area are also dominated by men. In the tourism sector both women and men are employed in services such as lodging and transportation, respectively.

69. Stakeholder engagement undertaken in the area during programme preparation involved workshops and discussions mainly on the impact of the pandemic. Priorities highlighted at the meetings are field schools and technical assistance on sustainable agricultural activities adapted to the ecological characteristics of Galapagos and climate change; access to finance and markets for businesses; adoption of technological improvements such as drip irrigation and local expertise for maintenance and repair of technologies; and value addition and green certification of local products.

70. The proposal includes a gender action plan. The action plan, which is developed based on the assessment conducted, includes gender-related activities such as access to microloans for energy efficiency technologies, farmers and fishers from local financial institutions though the target for approved loans for women-led households and businesses is at 10 per cent. Budget is allocated, timelines and responsibilities for implementation have been provided for each activity in the action plan. Additional gender studies will be undertaken in the first year of implementation. The need for technical assistance will be addressed through financial education for female entrepreneurs, training to improve livelihoods in the agriculture, tourism and fishery sectors, biodiversity restoration, and repair and maintenance of energy efficient technologies. There are gaps in the gender action plan; it is observed that the targets for women-led households and businesses is only 10 per cent; not all the activities included are aligned with appropriate outputs. For example, the activity to generate capacities for women for their empowerment and the enhancement of their abilities and differentiated knowledge in each livelihood in the three islands is aligned to an output that is focused on fisheries without considering similar activities aligned to other livelihoods that will be supported by the programme. In addition, the relevance of some of the gender-related activities included in the action plan, and what needs these will address, is not clear. Furthermore, some of the performance indicators provided are not well defined and not all targets are disaggregated by sex. The criteria that will be used to determine women-led enterprises have not been provided

by the AE. The assessment finding indicates the need to develop affirmative actions that will assist women to have improved access to finance, however such initiatives are not included in the gender action plan.

71. The AE is required to ensure that the grievance mechanisms of the programme are accessible to both women and men. The AE is requested to take the opportunity of further gender studies in the first year of implementation to improve the gender action plan by: defining indicators that are aligned with activities; establishing a baseline; setting sex-disaggregated targets rationalised by the baseline; establishing affirmative actions for women's access to microloans and criteria for women-led businesses; aligning activities with appropriate programme outputs; and articulating the role of the programme management unit's gender specialist.

72. The term sheet includes a requirement to include a gender specialist in the programme management unit to guide and supervise the implementation of the gender action plan and submission of a revised gender action plan for the programme within 12 months following the effectiveness of the funded activity agreement.

4.3 Risks

4.3.1. Overall programme assessment (medium risk)

73. The project will be supporting a centralized renewable energy generation and distribution, energy efficiency, sustainable land use, fisheries and forestry, and tourism sector at the Galapagos island in Ecuador. The GCF financing consists of (i) a senior loan of up to USD20million to the private sector; (ii) a sovereign loan of USD10million; and (iii) a grant of USD30 million. The AE will co-finance with (i) a senior loan of up to USD35 million to the private sector; (ii) a senior loan of USD5.23million to the government; and contribute a grant of USD0.21million. There will be an equity contribution of USD18million and USD3.88 million from the project sponsor and end beneficiaries, respectively. The AE will be parri-passu with GCF for the private sector loan as well as in each sub-loan under the Galapagos' Climate Credit Line (GCCL).

74. The reimbursable funding from the GCF and CAF to the private sector will finance the centralized renewable energy generation and the sovereign loans will be channeled through a credit line managed by the Public National Development Bank (PNDB) and local banks present in Galapagos. The credit line will support mitigation and adaptation investments in energy efficiency, tourism, agriculture, fisheries, and ecosystem conservation, with the goal of reaching a wide range of beneficiaries. In addition, the grant will be used for supporting the placement of the loans, investments in enhancing ecosystem resilience, and technical assistance, knowledge management, and awareness-raising activities.

4.3.2. AE/executing entity capability to execute the current programme (medium risk)

75. The CAF is the AE and serve as one of the co-EEs for the three activities, 1.1.1.2, 1.2.2.1 and 3.1.3.1, and in the direct supervision of the loan eligibility of the GCCL. As a direct access entity, the AE has a track record in financial structuring of projects in public and private sector in Latin America. Over 28% of CAF's portfolio includes green finance such as energy efficiency, renewable energy and climate change adaptation. The AE has a track record in energy and sustainable land use with Adaptation Fund in Galapagos.

76. Apart from CAF, there will be additional executing entities (EEs), namely Conolophus SPV, CFN or CONAFIS, FAO Ecuador and WWF Ecuador. The EEs and the LFI selected for the project have gone through a pre-assessment screening, based on the AE's criteria and in most cases have pre-established financial relations with CAF. Due to the draft law submitted to the

national assembly regarding the economic development and fiscal sustainability measure after the COVID19 Pandemic, the CFN is in the process of merging with another institution and the institutional situation is currently uncertain. The capacity assessment of the Conolophus SPV and the successor entity to CFN is a condition prior to the first disbursement to the respective loans. The AE is responsible for the evaluation of the EEs and more robust due diligence during the project implementation.

4.3.3. Programme specific execution risks (medium risk)

77. Credit risk: The GCF and AE shall take the credit risk of the concessionaire (SPV to be established by the tender winner) for the Conolophus project (Component 1.1). The AE will conduct the due diligence of the project and the borrower (Conolophus SPV) and will complete the credit evaluation document annually. The PPA will be signed at the agreed tariff between the concessionaire and the distributor which is a government entity. Comfort is derived from co-financing provided on pari-passu basis by the AE. As for the GCCL, the GCF and AE will have an exposure to the sovereign credit risk. The government of Ecuador has below investment grade credit rating; it is rated as Caa3 by Moody's.

78. Impact risk: the project envisages to benefit 21,525 people (65% of the Galapagos population) as direct beneficiaries and 761,974 people as indirect beneficiaries which include 33,000 of the entire Galapagos population and 728,974 tourists in 5 years. Thus, the actual number of distinct beneficiaries may be different based on the continued inflow of tourists and possibility of same tourist visiting in different years.

79. Financial tie-up risk: The sponsor is in the process of selecting the EPC contractor as well as the O&M contractor. The tender winner (Gransolar/Eren) expects that the required initial investment excluding financial costs will range between USD 60 million and 65 million. Hence, approx. 30% of the project cost needs to be raised as equity from the sponsor's (tender winner) own sources. The final figure will be known once the EPC contractor is appointed. It is recommended that disbursement of GCF funds to the borrower begin after all funding is tied-up and is limited to 32% of the project cost as estimated in the funding proposal.

80. Delay in the implementation: the concessionaire shall reach a financial close for the project cost within [24] months of signing the Conolophus Loan Agreement between the AE and Conolophus SPV. If the process is delayed and the financial close is not achieved within the time period, the GCF loan for the Conolophus project will be cancelled.

81. Demand risk: the success of the GCCL depends on the EEs' ability to support LFIs to source appropriate borrowers, evaluate eligible technologies and/or projects for sub-loans, and monitor the project impact is achieved. There is a risk in low demand of the loan due to (i) resistance to change the traditional way of farming and fishing from the beneficiaries; (ii) inability to meet the minimum co-financing requirement (10-20% of the loan amount); (iii) lack of commercial incentives for cruise companies to invest in Digital Positioning System; and (iv) lack of interest for tourism sector to invest in EE measure in case of continuous COVID-19 related restrictions and consequently non-reactivation of tourism sector in the island. To partially mitigate this low demand risk, the grant is going to be used for the awareness raising and technical assistance activities.

82. Project viability and concessionality: For the GCCL, the GCF is requested to provide a high concessional loan to the Government of Ecuador. The loans from GCF and AE will be provided to the public financial institutions (EE: CONAFIS/CFN) at a blended rate, which will then be on lent to LFIs. The end user pricing and margins added by the EE and LFIs are not provided, but the EE and LFIs will grant similar terms and tenor that they receive from GCF. The AE is required to ensure that the concessionality of GCF financing is passed on by the LFIs to the end beneficiaries

83. For the Conolophus project, the viability project depends on the concessionaire’s ability to reach a financial close, select an appropriate EPC and O&M contractor. The current financial model assumes the IRR of 13-17% based on different scenarios with 10% increase in CAPEX and OPEX. The detailed breakdown of O&M cost is yet to be provided. The AE stated that the sponsors are still working on the details to share with potential financiers, and all figures in AE’s financial model are indicative and subject to substantial deviations impacting the project returns. As a higher concessional term will not be benefitting the end beneficiaries , but will increase the equity holder’s returns due to the fixed tariff, it is recommended that AE conduct a prudent check on the project cost, O&M cost and co-financing pricing as part of its due diligence in the implementation of the project.

4.3.4. The GCF portfolio concentration risk (low risk)

84. In the case of approval, the impact of this proposal on the GCF portfolio concentration in terms of result area and single proposal is not material.

4.3.5. Compliance (medium risk)

85. The recipient country, Ecuador, is not subject to United Nations Security Council (UNSC) restrictive measures. The AE will implement the programme jointly with the following executing entities (EEs): two state-owned companies, Corporación Financiera Nacional B.P. and Corporación Nacional de Finanzas Populares y Solidarias; and the Food and Agriculture Organization (FAO) and World Wildlife Fund (WWF), operating through their respective country offices in Ecuador. The AE has undertaken due diligence and did not identify any red flags, which would prevent them from fulfilling their responsibilities related to fiduciary risk management. The Office of Risk Management and Compliance notes that a number of Ecuadorian ministries will act as the implementing partners and there are no red flags associated with these counterparties, which would expose GCF to heightened risks. The AE has performed programme-level risk assessment and has determined a low probability and high impact for money laundering, terrorist financing and prohibited practices risks. As mitigating measures, the AE intends to implement its standard set of internal controls, inclusive of a mechanism to report any irregularities that may materialize throughout the programme lifecycle.

4.3.6. Summary risk assessment and recommendation

Summary risk assessment	
Overall programme	Medium
Accredited entity/ executing entity capability	Medium
Project specific execution	Medium
GCF portfolio concentration	Low
Compliance	Medium

4.4 Fiduciary

86. Corporación Andina de Fomento (CAF) will hold the dual role of accredited entity (AE) and executing entity (EE) in the programme and is responsible for a few activities and the direct supervision of the loan eligibility of the GCCL. CAF will co-work with the World Wildlife Fund (WWF), Food and Agriculture Organization (FAO), and National Financial Corporation (CFN), namely the Ecuadorian Development Bank, as EEs of the programme.

87. The EE's will engage government partners such as the Government Council of the Special Regime of Galapagos; Galapagos National Park Directorate, Ministry of Agriculture and Livestock, Ministry of Energy, and Non-Renewable Natural Resources, and Ministry of Tourism to implement activities. These governmental partners will safeguard the interests and application of the local government legal framework and are part of the Sectoral Technical Committees. The Ministry of Environment, Water and Ecological Transition, as the national designated authority, will oversee the performance of the whole programme and will hold a leading role in the Steering Committee.

88. The Programme Management Unit (PMU) will be established in the Galapagos Islands and will have a dedicated team to guarantee all components and activities are carried out according to the programme design. It will oversee the monitoring and evaluation activities (covered by CAF as the AE) to ensure that all expected results will be achieved on time and within budget. The PMU will have a Programme Coordinator, a Monitoring and Evaluation Specialist, a Sectoral Adaptation Specialist, a Sectoral Mitigation Specialist, a Capacity-Building Specialist, an Environmental and Social Safeguards Specialist and an Accounting Assistant. The coordinator and the specialists will be financed by the programme budget. The PMU will work closely with the sectoral business (private and public) and administrative (legal, procurement, human resources, etc.) areas within CAF.

89. CAF will provide technical and administrative backstopping to the PMU to ensure results-oriented management and proper administration of funds. It will maintain programme accounts, monitor resource mobilization of baseline and co-finance. Financial transactions will be subject to annual audits undertaken by internationally certified auditors. The AE functions will also involve the provision of monitoring and evaluation services, the review and approval of annual work plans based on consultations with EEs and other necessary parties in the programme.

90. CAF and CFN or CONAFIPS will carry out the execution of the activities financed by the loan tranche. CAF will enter into loan agreements or amend existing loan agreements with CFN, for the Galapagos' Credit Line. Also, CAF will establish a methodology to follow appropriate commercial practices and procedures in all operations financed with GCF resources. In the provision of financing, CAF will perform a due diligence of the EEs and the LFIs and carefully assess their ability to meet their obligations under the loan agreement.

91. FAO and WWF will ensure the coordinated execution of activities under the grant tranche. Based on their respective experience, FAO will execute the activities related to agriculture and livestock and WWF will develop the activities related to support fisheries, the restoration and conservation activities in marine and terrestrial HEVAs, and the sustainability activities of the programme, working closely with CAF, CFN and FAO especially in components with cross-cutting characteristics. FAO and WWF will provide technical support to the Mitigation and Adaptation Technical Committees. CAF, CFN, FAO and WWF will ensure quality in their operations and are accountable for executing the projects according to the principles and modalities applied to the operations of GCF. They shall also ensure appropriate monitoring, independent evaluation, and financial audits of all activities funded by GCF.

92. As per the Accreditation Master Agreement (AMA), CAF, as the AE, will be responsible for the overall management, implementation oversight and supervision of the programme in line with its own internal rules, policies and procedures, including administering and managing the use of GCF funds, as well as the monitoring, evaluation and reporting responsibilities. CAF

will enter into a funded activity agreement with GCF, for the loan and the grant, which will describe the specific requirements regarding the financial management of GCF resources for the programme.

4.5 Results monitoring and reporting

93. The proposed project is contributing to a transformational change towards a self-sufficient island system in which local livelihoods are developed under a low-carbon model and enhanced capacity to adapt to climate change.

94. The project is expected to have a cumulative mitigation impact of 584,168 tCo₂eq over project life span of 25 years and reach 33,000 direct and 728,974 indirect beneficiaries. The impacts of the project were estimated following transparent and credible methodologies and will allow for consistent measurement of results during the project implementation.

95. The Theory of Change is designed to clearly show the logical pathways for generating results by the project activities, and how those contribute to the outcomes and impacts. The relevant assumptions have been also made and explanation of the ways barriers are addressed has been provided.

96. The logical framework of the programme was designed in line with the GCF RMF/PMF and following the programme ToC. The logical framework has selected relevant impact, outcome and output indicators aligned with the result areas that the programme is contributing to, as well as the programmes specific activities.

97. The implementation table has been prepared in Annex 5 and the M&E plan in Annex 11.

4.6 Legal assessment

98. The Accreditation Master Agreement was signed with the Accredited Entity on 15 November 2016 (the “AMA”), and it became effective on 19 March 2018.

99. The AE has not provided a legal opinion/certificate confirming that it has obtained all internal approvals and it has the capacity and authority to implement the programme. It is recommended that, prior to submission of the funding proposal to the Board (a) the AE has obtained all its internal approvals and (b) GCF has received a certificate or legal opinion from the AE in form and substance satisfactory to GCF confirming that all final internal approvals by the AE have been obtained and that it has the authority and capacity to implement the programme.

100. The proposed programme will be implemented in the Republic of Ecuador, a country in which GCF is not provided with privileges and immunities. This means that, amongst other things, GCF is not protected against litigation or expropriation in this country, which risks need to be further assessed. The Secretariat provided a draft agreement on privileges and immunities to the NDA on 25 April 2016. Discussions are still in progress and the last communication was on 5 October 2018.

101. The Heads of the Independent Redress Mechanism (IRM) and Independent Integrity Unit (IIU) have both expressed that it would not be legally feasible to undertake their redress activities and/or investigations, as appropriate, in countries where GCF is not provided with relevant privileges and immunities. Therefore, it is recommended that disbursements by GCF are made only after GCF has obtained satisfactory protection against litigation and expropriation in the country, or has been provided with appropriate privileges and immunities.

4.7 List of proposed conditions (including legal)

4.7.1. List of conditions proposed

102. In order to mitigate risk, it is recommended that any approval by the Board is made subject to the following conditions:

- (a) Submission by the AE to GCF of a certificate or legal opinion, in form and substance satisfactory to the GCF Secretariat, within 120 days after Board approval, confirming that the AE has obtained all final internal approvals needed by it and has the capacity and authority to implement the proposed programme;
- (b) Signature of the funded activity agreement in a form and substance satisfactory to the GCF Secretariat within 180 days from the date of Board approval, or the date the AE has provided a certificate or legal opinion confirming that the AE has obtained all final internal approvals needed by it and has the capacity and authority to implement the proposed programme; and
- (c) Completion of the legal due diligence to the satisfaction of the GCF Secretariat.

Independent Technical Advisory Panel's assessment of FP185

Proposal name:	Climate Change: The New Evolutionary Challenge for the Galapagos
Accredited entity:	Corporación Andina de Fomento (CAF) / Development Bank of Latin America
Country/(ies):	Ecuador
Project/programme size:	Medium

I. Assessment of the independent Technical Advisory Panel¹

1.1 Impact potential *Scale: Medium to high*

1.1.1. Overview

1. The proposed project requests USD 65.3 million from the GCF for a total project value of USD 117.6 million to support an integrated approach of cross-sectoral and cross-cutting interventions to advance the transition of a distinct geographic area, the Galapagos Islands, towards a more sustainable future. The measures foreseen encompass large-scale and small-scale renewable energy production, energy efficiency interventions, focused adaptation measures, and nature and biodiversity conservation, placed in the context of a site of global importance in terms of nature and natural history.

2. The approach taken by the project, of integrating a range of cross-sectoral and cross-cutting measures at territorial level, is novel and should be followed and evaluated closely during its implementation to see whether it could be applied in other settings. If implemented successfully, it holds the promise of creating positively reinforcing actions across sectors, which have the potential for impacts well beyond the action themselves by also fostering different mindsets, achieving beneficial interlinkages and self-reinforcing success stories.

3. This approach comes with a price, however. The impact potential of a project of this nature could be affected by the complexity of implementing it, even though the confined territory over which the implementation will occur is expected to alleviate this risk.

1.1.2. Climate impact

4. The proposed project is cross-cutting, and the climate impact is generally clearly set out and acceptable on the mitigation side, with estimated greenhouse gas (GHG) emission reductions totalling 584,169 tonnes of carbon dioxide equivalent (tCO₂eq) over the project's lifetime, largely through the switch to solar energy generation (using photovoltaics (PV)), as well as some energy efficiency investments. On the adaptation side, observed historical trends and future projection models indicate that communities and economic sectors in the Galapagos Islands are increasingly vulnerable to rising average annual temperatures, increasing sea surface temperatures, ocean acidification, sea level rise, increased seasonality of rainfall, and

¹ This assessment by the independent Technical Advisory Panel (TAP) is based on the funding proposal documents submitted on 08 November 2021 and the responses provided by the accredited entity (AE) to questions raised by the independent TAP during the assessment.

more intense El Niño/Southern Oscillation (ENSO) events. The adaptation impact of the project will be derived through enhancing climate resilience in 19,000 hectares of agricultural land, restoring 1,500 hectares of indigenous *Scalesia* forest that provides important hydrological services (i.e. the *Scalesia* forest intercepts additional water from the characteristic mist (*garúa*) of the highlands in the cool season), and improved marine management involving 138,000 km² of marine ecosystem restoration.

5. On the marine side, the previous submission of the funding proposal left open significant questions relating to the climate additionality of the adaptation activities, in particular in relation to fisheries and coral reef activities, but also the question of control of invasive species.

6. For example, there was a lack of clarity in the submitted proposal regarding which climatic parameters were having a negative impact on coral reefs in the archipelago and how this impact could be reduced through planting corals; and in particular whether the resilience would be enhanced because the planted corals would be more resistant to climate change or whether it is expected that planting maintains ecological balance through planting the same amount that was lost in the past.

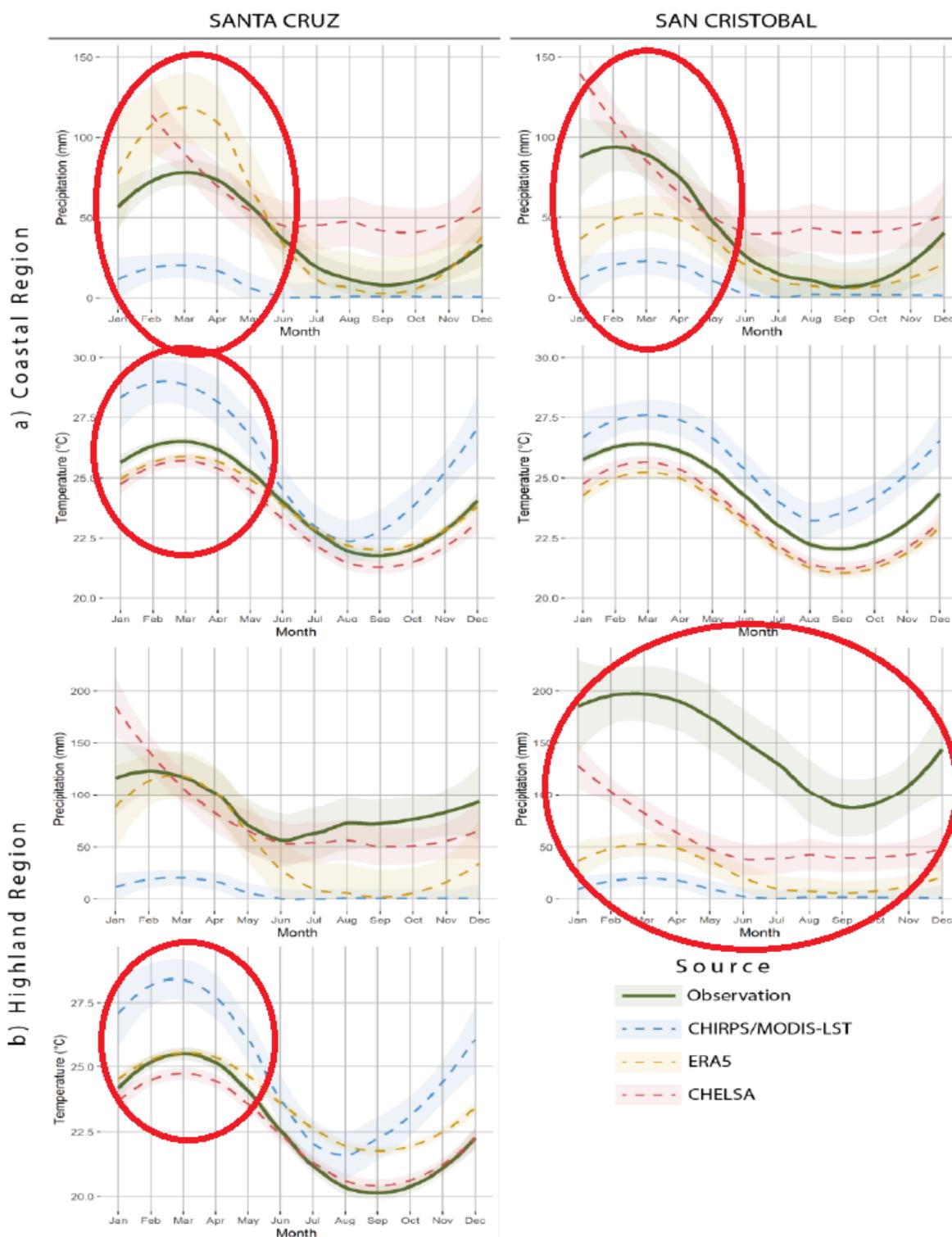
7. Similarly for fisheries, the proposal was not clear on how managing the production side of the fisheries value chain would address the climate vulnerability of the shellfish and finfish stocks in the archipelago and what specific climate parameters present a risk for these resources. On terrestrial and marine invasive species, insufficient evidence was presented in the funding proposal of their spread being driven by climate change, as the basis for using GCF funds for measures to combat this.

8. The AE, Corporación Andina de Fomento – Andean Development Corporation (CAF), addressed these issues substantively and to the satisfaction of the independent TAP in its responses to questions raised, but also acknowledged that, in the case of fisheries, “the outcomes of multiple drivers’ interactions in Galapagos’ ecosystems remain unknown” and that further research was needed, with important evidence to be generated through the project. The present version of the funding proposal was updated to include these issues and further responses were provided to the questions posed by the independent TAP.

9. On fish stocks, coral reef survival and preventing the spread of invasive species, it was argued that a precautionary approach should be applied, even in the absence of a full understanding of the role of climate drivers that intersect with anthropogenic pressures, given the Galapagos Islands’ dependence on the fisheries and tourism sectors, and on livelihoods that rely on natural resource systems. The proposed actions on coral reefs and fisheries, as well as on invasive species, can be considered no-regret measures that should be undertaken in any case.

10. The independent TAP also notes the conservative assumptions regarding the GHG emission savings potential, with interventions in the agriculture, forestry and other land use sector only being considered as co-benefits. This provides a valuable safety cushion. Nevertheless, for future projects the independent TAP would prefer to see these emission reductions assessed properly and integrated fully into the results framework of the project.

11. The funding proposal uses data from meteorological stations for analysing historical climate trends, complemented by satellite observations and climatological reanalysis products, which are validated against observed meteorological datasets. The funding proposal states that “...the products used here are already calibrated against local observations...”. However, supplementary figure 2 of appendix 5.1 shows mean annual precipitation and temperature values as observed by the meteorological stations in Santa Cruz and San Cristobal between 1981 and 2017 compared with the CHELSA, ERA and MODIS datasets, and some charts show significant discrepancies, mostly regarding precipitation observations:



Supplementary figure 2. Mean annual precipitation and temperature values as observed by the meteorological stations in Sant Cruz and San Cristobal between 1981 and 2017 and compared with the CHELSA, ERA and MODIS datasets. Shaded areas represent monthly variation. Note that this does not show temperature estimates for highlands in San Cristobal because the station in this region is only pluviometric. Shaded areas indicate the confidence interval (95%).

12. The mean annual rainfall and temperature time series presented in supplementary figure 1 of appendix 5.1 shows no significant trends for 1981–2017. However, documentation

provided suggests that precipitation (i.e. rainfall including mist/fog) is heavily influenced by the ENSO and also by the migration of the Intertropical Convergence Zone. The El Niño has become invigorated: its greater wetting ability with much increased rainfall and bias towards wet season rainfall is leading to a more acute seasonal rainfall distribution. Moreover, there is a general drying effect on the dry season rainfall, becoming a dominant feature during the La Niña, which leads to escalation of actual evapotranspiration (ETA) for most economically important crops. The ETA-led droughts lead to reduction of crop productivity and hence affects farmers' livelihoods.

13. The feasibility study defines changes in particle movements and sea surface temperature (SST) increases as the main threats to the sustainability of shallow coral populations. A rise in SST² in association with ocean acidification leads to coral deterioration, which is compounded by coral degradation as a result of unsustainable tourism. The description in the funding proposal of these impacts is based in a literature review, but lacks the description and validation of the models that were used to arrive at the climate projections presented.

14. The models used to project future precipitation scenarios have the same problem. The lack of validation is demonstrated by the contradiction between the wetter future predicted by models compared with the observed drying trend. The high degree of uncertainty regarding precipitation is recognized in the proposal.³

15. It is important to mention that activities related to agricultural practices and ecosystem restoration and conservation would be beneficial independently of the evolution of precipitation patterns. For example, soil management practices would enhance resilience in drier conditions by reducing evaporation, and increased agro-biodiversity would enhance resilience under both drier and wetter conditions. Crop diversification involving resilient varieties is key to reduce agricultural climate risks. In a diversified system, when a climate parameter changes only a fraction of the crops are affected, thus reducing the impact and making it possible to implement corrective adaptation measures.

16. The water storage, distribution and irrigation components of activity 2.1.2.4. (Develop and implement water collection and water management systems for climate-resilient food production) were justified under a future scenario that had increased rainfall (with much pronounced rainfall distribution between wet and cool/dry seasons), mostly by the need to improve water management for irrigation.

17. Regarding the relationship between non-indigenous invasive species and climate change, the proposal describes the potential expansion of the macro algae *Caulerpa chemnitzia* linked to warming-related range shifts in Darwin Island, and a dynamic model of the expansion of guava (*Psidium guajava*) under all climate change scenarios. However, the proposal fails to demonstrate that the current invasion of guava populations was caused by climate change. It seems more likely to be a consequence of agricultural land use. The proposal recognizes that "guava invasion is more likely to occur in proximity of actual guava dominated patches that currently are located within agricultural areas".⁴

18. The proposal states the whole Galapagos' population (33,000 inhabitants) would indirectly benefit from project activities. The funding proposal gives numerical estimates for most of the activities and assumes that concessional loans, ecosystem restoration, institutional strengthening and education activities would benefit the whole population. Direct beneficiaries

² The MODIS satellite data that has been accessed for the analysis takes into account data for 2002–2018, which is inadequate for conducting a scientifically valid analysis. The feasibility study states that no other source was made available for the accession of SST data, so the inadequate dataset was considered as a proxy to conduct a study on SST.

³ See answer of the AE to question 3 from the independent TAP.

⁴ See funding proposal annex 2, appendix 2.4, section 5.1.4.

of the programme are estimated at over 21,000 Galapagos residents, who will be targeted for investments and technical assistance.

19. The promotion of centralized PV energy generation would reduce the carbon footprint of the electrical grid that serves Santa Cruz Island, with a population of 15,000.

20. The tourists that visit the islands, estimated at approximately 530,000 people during the 5-year project duration, are counted in the funding proposal as indirect beneficiaries. The independent TAP notes that, generally in projects that include activities that benefit the tourism sector, the indirect beneficiaries are the inhabitants of the target area who would benefit from the increased economic activity due to additional resources coming from enhanced tourism, and the inhabitants that make use of the restored ecosystems. However, it was noted that the tourists that visit the target area are, for the most part, from Ecuador so they could be counted as indirect beneficiaries.

21. Overall, in line with the discussion above, the independent TAP considers that the impact potential of the project is “medium/high”.

1.2 Paradigm shift potential

Scale: High

22. The title of the proposed project, referring to the evolutionary challenge posed to the Galapagos Islands by climate change, is apt and correctly reflects both the scale and the effort that will be required to address these challenges. The Government of Ecuador and the AE and executing entities (EEs) should be congratulated for bringing this project forward, since it provides a comprehensive vision of a different, climate-compatible future for a natural heritage asset of worldwide current as well as historical importance. Given the nature of the project, the paradigm shift potential is high but comes with substantial risk.

23. On the mitigation side, the Conolophus solar PV and storage project will act as an enabler for further renewable energy to be installed on the archipelago, which will ultimately allow the islands to move electricity production towards 100 per cent renewable energy. This will be supported by the credit lines, which can be expected to create a small-scale renewable and energy efficiency industry that will remain active and provide energy services to local clients over many years, even after the end of the proposed GCF project. These are almost certainly going to be lasting impacts. In response to questions from the independent TAP on the issue of disposal of used batteries, the AE responded that there is legislation and there are existing programmes that deal with adequate management of batteries throughout their life-cycle.

24. On the resilience side, impacts on biodiversity, nature and communities have high potential to be paradigm shifting, generating new ways of interacting with nature and preserving the unique assets of the archipelago. in the face of evolving climate impacts. Shifting to local food production through agro- and fish-processing involves a major shift, because 80 per cent of the islands’ food requirements are currently imported from the mainland, and would facilitate sustainable revenue streams out of which long-term investments could be made in climate-resilient agriculture, agroforestry and fisheries.

25. Adoption of innovative technologies, such as the use of fog catchers to enhance water supply in areas with unreliable rains, and dynamic positioning systems that enable dive boats to stay in place without dropping anchor and damaging corals, have the potential to be scaled up through unlocking private-sector investment. For dynamic positioning systems, this could occur through an interaction between this project and the Global Coral Reefs Programme of the GCF in which Ecuador is participating, which can facilitate equity investment in companies seeking to sell this technology to tourism operators – if and when the concept is proven.

1.2.1 Risks to paradigm shift

26. Risks to paradigm shift relate primarily to the complexity of implementing a multisectoral project of this nature, especially the need to coordinate multiple EEs and stakeholders to maximize project impact. This will be a considerable challenge while also ensuring that target groups maintain full buy-in to the objectives and approaches of the proposed project.
27. There are also specific risks. For example, on the mitigation component, the key risk is the dependence on a single bidder for the Conolophus PV and storage project, which exposes the project to risks if the winning bidder consortium decides to no longer pursue the project, or encounters delays. At the same time, there are also specific risks to the implementation of the credit lines, which could be affected by increases in financing cost and/or continued financial uncertainties in the context of the COVID-19 pandemic. These risks will need to be closely managed by the EEs.
28. On the resilience side, the key risk will relate to the ability to work with farmers and fishing communities to encourage them to deliver sustainable changes to the way they make a living. Similarly to mitigation, credit lines face risks related to the macroeconomic and post-/ongoing pandemic situation. Stakeholder/recipient management will also be a key issue in achieving the resilience objectives.
29. In view of the above discussion on impact potential and balancing the overall impact potential and the risks, the independent TAP rates the project's paradigm shift potential as "high" based on the available information.

1.3 Sustainable development potential

Scale: High

30. The proposed project pursues an integrated, territory-based approach to addressing a range of challenges in a defined area, across several sectors. While this increases its complexity substantially, it also provides the ability to generate changes that will prove long-lasting, because they are occurring across a range of sectors and intervention areas, raising the potential for the creation of a virtuous circle in which environmental improvements reinforce each other.
31. Beyond the investment operations, activities such as strengthening the education system, research into the multidimensional challenges imposed by climate change and human activity on fish stocks, and cooperation with universities, have the potential to generate long-lasting impacts that go well beyond the boundaries of the proposed project.
32. This is particularly relevant to fisheries, where the combination of finance offers through the credit lines, community engagement and the creation of an innovation lab, together with strengthening the value chain, have the potential to effect long-term positive changes for both fishing communities and nature.
33. In relation to supporting climate-resilient agriculture and adding value through agri-food processing, the project has significant potential to boost job creation, by creating local markets for food products including in the tourism sector. Increasing consumption of diversified fresh produce will also improve health and nutrition, as well as food security, for residents of the islands.
34. Although the funding proposal says that the project would enhance the local coffee market by "covering the surface of Galapagos agroforestry systems with quality coffee plants", the related activity would include 100 per cent of the local farms that exclusively produce coffee (20 farms; 640 ha), and 45 per cent of the smaller farms that produce coffee mixed with other crops (30 farms; approx. 1,700 ha). Coffee monoculture lacks the environmental co-benefits inherent to agroforestry systems: it does not contribute to enhancing biodiversity, and it is more difficult to manage without the use of chemical pesticides and herbicides. Moreover, the

listed subactivities and the detailed budget do not include coffee seedlings, nurseries or coffee planting. In the meeting with independent TAP, the AE recognized these challenges and responded that the project will address these issues during implementation.

35. The Social and Solidarity Framework to be used for establishing the proposed new gourmet coffee-processing industry will ensure that economic benefits are distributed as widely as possible. The funding proposal states that this will be accompanied by a clear branding and marketing strategy for the Galapagos coffee varieties, and support to participate in the Ecuador Cup of Excellence.

36. It is to be anticipated that some households that rely on fishing for a living will experience a decline in income as a result of stronger enforcement of legislation to prevent illegal fishing and the creation of new no-take zones. However, the value-added industries to be promoted in the fisheries sector may also help to compensate households for decreased catches as a result of stronger enforcement to prevent overfishing. During the review process, the AE has shown that, for the case of tuna, the new longline fishing methods to be promoted through the project will increase the quality of the catch and, potentially, prices, if certification can be achieved.

37. In terms of environmental benefits, the project has some impressive circular economy features, such as capture and treatment of wastewater from agroprocessing for use as biofertilizers for plantations; using manure from the silvopastoral systems for biogas and biofertilizer; and processing fish waste into fertilizer. Building up local agri-food value chains will also reduce the need for expensive and high-emissions diesel-powered boat trips bringing food to the islands.

38. In view of the above discussion on impact potential and balancing the overall impact potential and the risks, the independent TAP rates the project's sustainable development potential as "high".

1.4 Needs of the recipient

Scale: Medium to high

39. The Galapagos Islands is neither a small island developing State nor a least developed country and, prior to the COVID-19 pandemic, the gross domestic product of the islands was supported by substantial income from tourism. Nevertheless, like other island locations, the costs of living are comparatively high, as are the costs of operating a business. The proposed project will address these costs directly and indirectly; for example, by reducing energy costs and supporting long-term sustainability of income from tourism through the preservation and strengthening of the unique environment of the archipelago.

40. Electricity generation in the Galapagos is highly dependent on imported fossil fuels: grids are inefficient; distributed renewable energy generation is not the mainstream; and there is important room to promote the adoption of energy efficient appliances. Tourism has grown at almost the same rate as electric power demand in Galapagos, with an annual average growth rate of 7.7 per cent, representing more than half of the total electric consumption, thus suggesting a direct driver for associated GHG emissions.

41. At the same time, the needs of the archipelago as a territory are high, because it is heavily exposed to the impacts of climate change. The proposed project will address many of these impacts, by addressing elements such as preservation of fish stocks, strengthening coral reefs, removing invasive species and reducing the risk of oil spills. These are highly welcome interventions that directly link to climate change, and where nature is respected.

42. The proposed project thus promotes an integrated approach to addressing both human and natural challenges created by climate change, aiming to resolve them in an integrated manner.

43. Considering the above, the independent TAP rates the needs of the recipient as “medium/high”.

1.5 Country ownership

Scale: *High*

1.5.1. Alignment with national climate strategy and policies

44. The proposed project is fully aligned with the relevant country strategies and policies. The nationally determined contribution focuses not just on the energy and agriculture sectors, but also includes heritage as a key focus.

45. The proposed project is also closely aligned with the Galapagos Zero Emissions strategy, which aims to replace fossil fuels in the archipelago. The establishment of the Conolophus solar PV and storage project is, in fact, a key element of achieving the aims of this strategy: it will enable additional renewable power to be generated, and also support distributed renewable energy and energy efficiency, contributing to a reduction of overall system stress.

1.5.2. Capacity of accredited entities or executing entities to deliver

46. The AE, CAF, and the EEs for this project (the Food and Agriculture Organization of the United Nations and WWF), are well established; and the two EEs are AEs of the GCF in their own right. As such there are no concerns about their ability to deliver this complex project.

47. The third EE, Corporación Financiera Nacional B.P. (CFN), is a national development bank and, as such, is an experienced partner that can be expected to deliver the components under its control competently.

1.5.3. Engagement with civil society organizations and other relevant stakeholders

48. The AE and EEs have engaged with relevant stakeholders in detail, trying to find solutions that will work on the ground and deliver changes that will have the buy-in of their partners. This is particularly evident in the answer to a question on the involvement of artisanal fishing communities in project design.

49. In the previous submission, the independent TAP was not provided with a final gender plan, and did not receive the Secretariat assessment by the gender specialist. This was one of the reasons for non-endorsement from the independent TAP.

50. The present submission incorporates a revised and more thorough description of the gender action plan, including gender aspects in project activities and the economic sectors involved; workshops and meetings held, and derived conclusions; and the impact of the COVID-19 pandemic. It should be noted that provisions for equal access to loans include fairly low minimum levels of participation of women-led small and medium-sized enterprises/households, set between 10 and 30 per cent, depending on the sector.⁵ During the meeting with the independent TAP, the AE recognized that these percentages are low and explained that the project will improve them during implementation.

51. Considering the above, the independent TAP rates country ownership as “high”.

1.6 Efficiency and effectiveness

Scale: *Medium to high*

1.6.1. Overview

⁵ See annex 8 of the funding proposal (Gender action plan, section 4).

52. The project is located in a group of islands, which implies restrictions in the number of possible beneficiaries, the potential for renewable energy production and energy efficiency, and the area of landscape to be improved. Nevertheless, these islands form part of the natural world heritage, and the comprehensive approach taken through this project is likely to be highly effective in improving the natural value of the islands and to ensure that the benefits and richness of the ecosystem can be enjoyed and studied in the future. Furthermore, the approach taken will ensure that 100 per cent of the islands' population of 33,000 people benefit from the project, alongside at least 100,000 tourists who visit the islands every year.

53. The funding envelope for the project is USD 117.6 million, of which USD 65.3 million (55.5 per cent) is requested from the GCF in the form of a grant of USD 34.7 million (53 per cent of the GCF request) and USD 30.5 million (47 per cent) as a concessional loan. Given the nature of the projects and the location, this is a reasonable breakdown.

1.6.2. Economic impacts

54. The project is expected to result in total GHG emission reductions amounting to 584 ktCO₂eq over the expected lifetime of the equipment installed (25 years). Considering (i) the cross-cutting nature of the project, and (ii) that most of the GHG savings are generated by the large-scale renewable energy project, which accounts for 81 per cent of project-related savings of CO₂, it appears reasonable to assess the cost of CO₂ primarily against the mitigation component. Doing so implies a project cost of USD 152/tCO₂ over the lifetime of the project, and a GCF cost of USD 53/tCO₂ over the lifetime of the project.

55. While these numbers appear high compared with other renewable energy projects, it has to be considered that this is a project with integrated battery storage in an island location. As such, the cost does not appear to be extraordinarily high. Furthermore, it is important to consider that the winning bid came in considerably below the price ceiling set by the government, meaning that the overall cost of supplying electricity in Galapagos, which is currently subsidized by the rate payers of Ecuador, is substantially reduced.

56. In a similar way, providing finance for distributed renewable energy and energy efficiency will also have substantial economic benefits by substituting/avoiding paying the relatively high power tariff on the islands. Given the power tariff, distributed solutions and energy efficiency should already be cost-competitive on a purely economic analysis. Nevertheless, the proposal makes the case very well that there are a range of other barriers preventing investment in these solutions from going ahead, including high financing costs and lack of familiarity of local financial institutions.

57. As such, establishing dedicated credit lines is an effective and efficient tool, but it will be important to ensure that the participating financial institutions are encouraged to maintain the offer of such credit lines even after the GCF finance through CFN has run out, when these barriers will have been removed.

1.6.3. Eligibility criteria

58. The proposed project includes a range of divergent and, in some cases, seemingly non-aligned eligibility criteria for access to the loan components of the project. Ideally, the independent TAP would like the funding proposal to include a simple set of criteria for the selection of relevant sectors and mitigation/adaptation/cross-cutting activities, not going into too much detail, and not trying to artificially divide up subsectors. For example, the independent TAP expects that many hotel operators on Galapagos may also own boats for tours, or be eligible for loans in multiple sectors, such as appears to be the case with fisheries.

59. As presented, however, the funding proposal does not include well-defined eligibility criteria for the selection of sector/subsector/activities. Instead, it provides a mixed (sectors and

recipients) set of eligibility criteria (agroindustry; fishery; hotels; restaurants; tour operator offices; food processing and beverage industry; education and sport centres; general commerce facilities; offices, residential and private buildings), which will be difficult for a loan officer to implement and monitor. Considering that the proposed project is already highly complex, adding this complexity appears to be unnecessary.

60. Instead, a simple list of eligible sectors and recipients would be preferred, with loan criteria being defined in a more standardized manner, in contrast to the proposed criteria which are very broad and not specified for subsectors and activities. Having simple criteria would contribute to ease of implementation after approval, and remove strain not just from loan officers, but also from those responsible for reporting on the performance of the loan components.

1.6.4. Governance

61. The proposed project is being implemented through a complex structure, with a mix of large-scale renewable energy project finance, intermediated finance, and straight grant support advanced through a range of channels. It will also address multiple sectors, increasing the overall complexities.

62. This structure will ensure substantial benefits for the recipients and territory, and will deliver modern and clean power supply systems, as well as increase the ability of beneficiaries to gain agency and thereby deliver environmental, social and economic benefits that are directly experienced in peoples' lives. Nevertheless, it is not straightforward and is likely to require substantial coordination efforts that are not normally present in projects of this type or size.

63. In view of the above considerations, the independent TAP rates the effectiveness and efficiency of the project as "medium/high".

II. Overall remarks from the independent Technical Advisory Panel

64. The independent TAP endorses this funding proposal for approval by the GCF Board.

Response from the accredited entity to the independent Technical Advisory Panel's assessment (FP185)

Proposal name:	Climate Change: The New Evolutionary Challenge for the Galapagos
Accredited entity:	Corporación Andina de Fomento (CAF) / Development Bank of Latin America
Country/(ies):	Ecuador
Project/programme size:	Medium

I. Assessment of the independent Technical Advisory Panel

1.1. Impact potential (Scale Medium/ High)

Overview

We thank the iTAP for the comment that considers the proposal as “novel and should be followed and evaluated closely during its implementation to see whether it could be applied in other settings”

Regarding the last comment on this overview: “the impact potential of a project of this nature could be affected by the complexity of implementing it”, CAF will be leading the entire implementation and has the experience and the technical support to do so. Also the EE’s were selected taking into account their expertise in technical aspects, previous experience working in Galapagos, capacity to manage large scale projects with diverse partners, among other criteria; these guarantees their knowledge and strict compliance of GCF’s policies and procedures.

Climate impact

We are thankful, for reviewing the updated version of the funding proposal in which the responses were provided to the questions posed by the independent TAP.

Para 10. Regarding the GHG emissions of AFOLU, the co-benefits related to agriculture are visible in the FP. As part of the proposed MRV system, emissions reductions and CO2 removals, associated to Scalesia forest restoration, will be estimated and reported to GCF. CAF as AE, is committed to include these as a direct benefit in future projects.

Para 11 – 17: Regarding the climate impact on the adaptation side, we are glad that our responses “addressed these issues substantively and to the satisfaction of the independent TAP”.

iTAP recognition of the Ecuadorian tourists as relevant indirect beneficiaries is important, giving the growing market for this population segment in Galapagos

Thanks for considering the impact potential of the project as “medium/high”.

1.2. Paradigm shift potential (Scale High)

Para 22; We thank iTAP for the comment: “The Government of Ecuador and the AE and executing entities (EEs) should be congratulated for bringing this project forward, since it provides a comprehensive vision of a different, climate-compatible future for a natural heritage asset of worldwide current as well as historical importance.”.

Risks to paradigm shift



Para 26; CAF as AE and the EEs are aware of the challenges that the project complexity imposes, and are ready to implement this multisectoral programme.

Para 27; regarding Conolophus Project. We would like to inform that there is already a winner. CAF is negotiating with them. After the project is approved by GCF Board, CAF will do the final DD. Regarding Credit Line, the implementation of the credit lines will start the allocation of loans one year after the first disbursement of grant; approximately in 2024. This, lowers the risk substantially. However, some mitigation measures could be added in the Operational Manual.

Para 28; Both EE: WWF and FAO, are aware of the need to encourage farmers and fishers to deliver sustainable changes to their livelihoods. We strongly believe that implementing all project interventions with farmers and fishers with a behavioural change approach (Output 3.1.2), combined with financing option and market incentives (Output 2.1.4), are powerful strategies and tools to drive favourable changes in local communities. Thanks for considering the project’s paradigm shift potential as “high”.

1.3. Sustainable development potential (Scale High)

Para 30 – 38; We thank iTAP for all the comment in this section.

Para 31. Thanks for the comment “provides the ability to generate changes that will prove long-lasting, because they are occurring across a range of sectors and intervention areas, raising the potential for the creation of a virtuous circle in which environmental improvements reinforce each other.”

Para 32. Thanks for the comment “have the potential to effect long-term positive changes for both fishing communities and nature”.

Para 34. Thanks for the comment. As we mention in the meeting, this project aims to promote coffee cultivation based on agroforestry systems, not as an extensive monoculture. Agroforestry based on coffee improves and restores agroecosystems health thanks to the environmental co-benefits (mentioned in the proposal). Despite that the listed subactivities do not include coffee seed management, activities such as the development of physical and knowledge network for conservation and use of phytogenic resources through in-situ and ex-situ conservation activities include seed production and management by farmers. To ensure an improvement in the local market in both quality and quantity, capacities will be generated at different stages from the selection of the seeds, the preparation and management of the germinator to the sowing and management both in the field and in the post-harvest. The activities will be in line with “agroecological approach” and considering the Integrated Pest Management (IPM)

Para 36: We are glad that the strategy with the small-scale fishing sector has been well received and understood. Indeed, the program is seeking more diversification and a reduction in fishing effort to offset potential losses due to climate change impacts while enforcing fishing regulations.

Para 37; Thanks for recognizing that the project “has some impressive circular economy features” for the environment.

Thanks for considering the project’s paradigm shift potential as “high”.

1.4. Needs of the recipient (Scale Medium/ High)

Para 42. “The proposed project thus promotes an integrated approach to addressing both human and natural challenges created by climate change, aiming to resolve them in an integrated manner.” It is gratifying to see that our efforts to express the need of a territory in a multisectoral way, was well captured. Thanks.

Thanks for considering the needs of the recipient as “medium/high”.

1.5. Country ownership (Scale High)

CAF recognizes the importance of the alignment of the Programme with the national climate strategy and policies, the need of executing entities with the capacity to address the activities and the

engagement with civil society organizations as well as the relevance of a gender perspective throughout the Programme.

Thanks for considering the country ownership as “high”.

1.6. Efficiency and effectiveness (Scale Medium / High)

Economic impacts

Para 57. “It will be important to ensure that the participating financial institutions are encouraged to maintain the offer of such credit lines even after the GCF finance through CFN has run out”. Regarding this, it is important to mention that CAF as a regional development bank is aware of the importance of maintaining this credit lines opened after the Programme has finalized. The exit strategy presented in the programme was developed accordingly.

Eligibility criteria

Para 58 - 60. And as mentioned before, the Programme will be developing a Web Platform Information Systematized Project Implementation. With this platform, the LFI loan officers will be able to easily include the projects in the platform and assess the eligibility. We will consider iTAP’s recommendation during project implementation first year, seeking a balance between ensuring conditions important for impact and sustainability, and facilitating access and implementation of the loans.

Governance

Para 49. “Nevertheless, it is not straightforward and is likely to require substantial coordination efforts that are not normally present in projects of this type or size.” As mentioned before, CAF as AE is aware and ready.

Thanks for considering the country ownership as “medium / high”.

II. Overall remarks from the independent Technical Advisory Panel:

CAF and the EEs appreciates the iTAP endorsement of the funding proposal for approval by the GCF Board

Project

Program Formulation

Climate Change: The New Evolutionary Challenge for The Galapagos

Annex: GENDER ANALYSIS AND GENDER ACTION PLAN



August, 2021

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Acronyms

CAF	Latin American Development Bank
CGREG	Governing Council of the Special Regime of Galapagos
CNIG	National Council on Gender Equality
DPMAG	Provincial Directorate of the Ministry of Agriculture and Livestock
ESIA	Environmental and Social Impact Assessment
ENVIGME	Survey of family relations and gender-based violence against women
FAO	United Nations Food and Agricultural Organization
GCF	Green Climate Fund
GADM	Municipal Decentralized Autonomous Governments
GEF	Global Environmental Fund
GHG	Greenhouse gases
INEC	National Institute of Statistics and Censuses
INER	National Institute of Energy Efficiency and Renewable Energy
INIAP	National Institute of Agricultural Research
MAATE	Ministry of Environment Water and Ecological Transition
MAG	Ministry of Agriculture and Livestock
MEER	Ministry of Electric and Renewable Energy
MESAS	Strategic Framework of Social and Environmental Safeguards
NDC	Nationally Determined Contributions
PEGSAG	Generation Expansion Plan for the Galapagos Isolated System
PGSA	Environmental and Social Management Plan
PLANEE	National Plan of Electric Efficiency
PNG	Galapagos National Park
TCN	Third National Communication
TdC	Theory of Change
IUCN	International Union for Conservation of Nature
UPA	Farming Production Units
WWF	World Wildlife Fund

Introduction

The gender analysis and action plan document pertains to Annex 6 of the documents defined for the generation of a Funding Proposal for the Green Climate Fund. The program under development is called “Climate Change: The New Evolutionary Challenge for The Galapagos”

The purpose of this document is to show and address the gender specificities in the Galapagos as regards livelihoods of the Galapagos population. It seeks to identify structural gaps limiting active participation of women in terms of livelihoods, including farming, fishing and tourism.

This gender analysis was conducted in the Galapagos Islands, most precisely in the islands of Santa Cruz and San Cristóbal, considered to be among the world’s most renowned natural sites and with greatest conservation status. These islands hold near 95% of their original species, 97% of their land surface, and 100% of their marine area, and have been declared protected areas (González, et.al, 2008). However, the islands face significant challenges: i) reducing their reliance on fossil fuels, ii) reducing their population vulnerability and that of the ecosystems in the face of climate change adverse impacts.

It is politically organized into 3 cantons and 5 rural parishes.

There are small towns that have a high percentage of basic services. For example, electricity coverage is almost 100%, only 3% of the inhabited islands does not have electric coverage. Also, in terms of energy, 16% comes from renewable sources.

In this context, we will work on the gender analysis, describing in detail the different groups of actors and their gender dynamics¹.

This document contains:

- a. The summary of the program and its extent for each component.
- b. Objectives of the gender analysis and action plan
- c. The section after that introduces the document methodology.
- d. There follows the analysis itself, in section 1, introducing the national and international regulatory legal framework ensuring women’s rights.
- e. A section with the gender evaluation.
- f. And the GAP itself

¹ The gender analysis focused on women in Galapagos because, according to the baseline data, the greatest gender gaps are among women. They have the least access to health services, education, job opportunities, land ownership, among others.

Program Summary:

Program “Climate Change: The New Evolutionary Challenge for The Galapagos” defined its general purpose as implementing a multi-sectoral, cross-cutting, climate-related initiative to catalyze a transformative change towards a self-sufficient insular system with low-carbon emissions and greater adaptive capacity to climate change and variability”. In this context, mechanisms are intended to be designed to promote an extended global or inter-governmental responsibility allowing for management actions in the territories to focus on developing inherent capacities of resilience, adaptation, and mitigation.

At the socio-economic level, the local population is highly dependent on tourism. Production activities belonging to the tourism value chain (energy, agriculture, fishing, hotels, ships, restaurants) need a technological leap to prepare to climate change, requiring sources of financing in advantageous conditions and non-refundable resources.

The indirect beneficiaries of the Programme are the total population (33,000 people) and the ecosystems of the Galapagos islands. The main direct beneficiaries are the tourist sector (hotels, restaurants, operators), farmers, small-scale fisheries, main governmental institutions, local banks, private sector (generation companies and suppliers), and the education sector (schools and universities).

Under the current circumstances (high country risk and the aftermaths of the pandemic), it would not be possible to catalyze a coordinated change in the Archipelago without GCF funding. In this context, a program is anticipated to be implemented with the following components and results:

Component 1: Change of the energy matrix of the Galapagos Archipelago.

- Reduction of energy reliance of Galapagos livelihoods through enhanced access to and generation of low-emission energy.
- Reduction of energy consumption of Galapagos livelihoods through the implementation of energy efficiency measures.

Component 2: Building climate resilience of the Galapagos livelihoods.

- Galapagos food system is climate resilient in terms of consumption for both the domestic market and the sustainable tourism sector.
- Marine and land ecosystems are under effective restoration plans.

Component 3: Sustainability mechanisms for climate resilience and low-emission livelihoods.

- Strengthening of response capacity of key institutions, local livelihoods and Galapagos population.

Considering the project specificities, the gender analysis will emphasize on the livelihoods of the Galapagos population, on natural resources management and on socio-environmental sustainability of the beneficiaries defined for the Program.

Document objectives

The document seeks to understand, systematize, and analyze the social, economic, and political factors underlying gender inequality in the Galapagos Islands, which dynamics is worsened by climate change, as well as the specificities behind women's and men's livelihoods of the Galapagos population.

The document's specific objectives include:

- To document and analyze the gender differences and specificities relevant for the program.
- To identify gender gaps in livelihoods of the Galapagos population.
- To identify opportunities for gender mainstreaming in the program design and components.
- To define a gender plan tailored to the needs of the livelihoods under climate change adaptation and mitigation.
- To issue recommendations for the mainstreaming of the gender approach into the program.

Methodology

The gender analysis and action plan is based on the guidelines and recommendations of the Green Climate Fund and on a detailed publication providing a step-by-step guide for mainstreaming gender approach into climate change related programs and projects (see: UNWOMEN, 2017. Mainstreaming Gender in Green Climate Fund Projects).

Following this line, three methodological processes are set forth in achieving a gender action plan.

Next, there follows detail thereof.

PHASE 1: Gender Analysis Design

The gender analysis itself consists in a process of information gathering and analysis. The methodological detail is as follows:

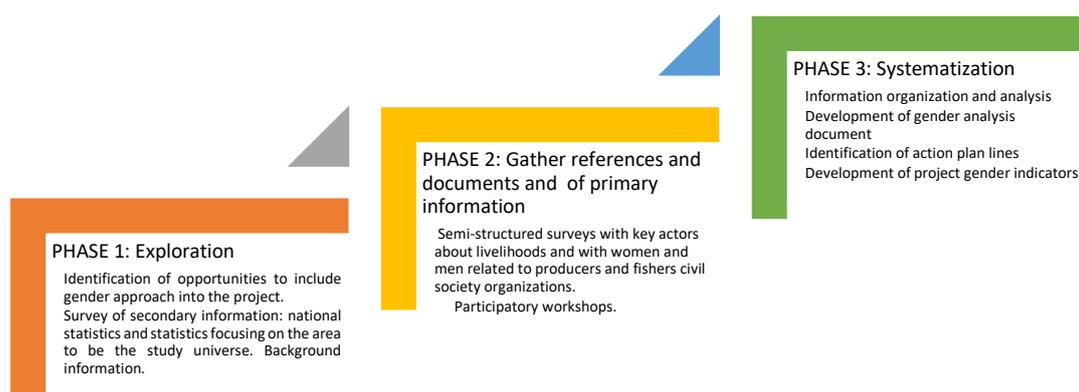
1.1 A desk review of the national legal framework related to women rights and gender mainstreaming, including national statistics and systematization of secondary information, national statistics, and statistics of reference on Santa Cruz, San Cristóbal and Isabela.

Thus, we also explored existing and key documents, and bibliographic references that address the socio-cultural dynamics in the Islands, with special attention to relevant documents dealing with women's rights and gender mainstreaming.

1.2 Primary data collection

Information systematization, once field information was collected. The same was organized and analyzed. On the one hand, analytical charts were developed with the information obtained, and on the other, reports of the workshops conducted were prepared to distribute among the participants. Through that exercise, a preliminary gender analysis was obtained.

Methodological chart 1 Gender analysis



Prepared by the authors

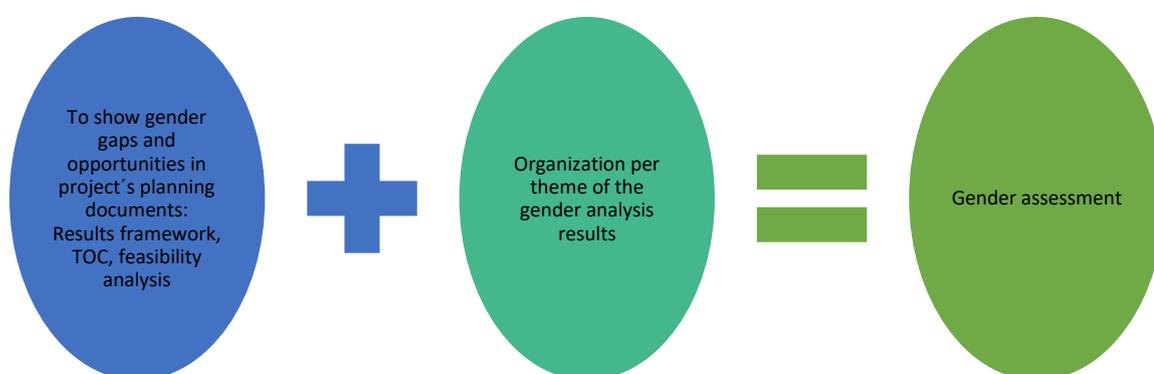
PHASE 2: Gender assessment

This is an analytical process that allows to contrast the results of gender analysis against the project's specificities. "The results of the gender analysis, based on the information and data collected, together with the stakeholder analysis, are synthesized into a gender narrative, which constitutes the basic component of the gender assessment. The gender analysis and the narrative that it yields typically uncover and describe the issues, gaps and problems that will be addressed by project interventions. Sometimes a deeper analysis is required to identify

the central problem and gender-responsive solutions. A problem tree analysis helps to clearly define the central problem, and its causes and effects” (UNWOMEN, 2017, 35).

Thus, gender assessment provides a thematic analysis of the results of the gender analysis, contrasted against the program’s planning documents, including its logical framework, theory of change, feasibility study, among others, resulting in the gender plan.

Methodological chart 2: Gender assessment



Source: prepared by the authors

Action Plan Development. This process built on the Gender Analysis document and on the gender assessment performed. With the analysis, gender gaps and opportunities to mainstream gender approach were identified.

The gender action plan includes activities, indicators, means of verification and goals. It is developed under the gender-responsive approach, meaning: the possibility of identifying, understanding and applying interventions to address gender gap, overcome gender prejudice in policies and interventions. “Gender sensitiveness upon application proactively and deliberately contributes to advancing gender equality, reducing gender gap and overcoming prejudice to attain gender results that improve women’s conditions (UICN, w/d,28).

SECTION 1: National and international legal framework guaranteeing gender approach

1.1 International conventions

Additionally, on the international level, there are the following international agreements relating to the guarantee of women's rights. These are mandatory meaning the country expressly commits to promote gender equality.

In this context, the main international agreements have been subscribed and ratified ensuring women's human rights, including:

- The Convention on the Elimination of All Forms of Discrimination against Women CEDAW (1981), international instrument promoting the prohibition of discrimination. Its scope is based on the principles of substantive equality, non-discrimination and the principle of State's duty.
- The Belén do Pará Convention (1994). The Inter-American Convention on the Prevention, Punishment, and Eradication of Violence against Women - Convention of Belém do Pará - "ratified in 1995 by Ecuador, is the first binding treaty to acknowledge that violence against women constitutes a violation of human rights. This legal instrument also provides for the responsibility of the State parties for adopting concrete measures to prevent and eliminate all kinds of violence against women" (CNIG, 27).
- Beijing Platform (1995), the Fourth World Conference on Women was held - Beijing Declaration and Platform for Action - providing for actions and measures to address the needs of diverse women. The country developed a report in 2019, which "gathers women's situation across the board in all their diversity. However, for the country's reporting methodology, a specific question was applied on specific measures for women and girls on the multiple, inter-related forms of discrimination. There is a specific option to account for the actions adopted for indigenous women" (Consejo de la Igualdad, w/d, 7)
- Mexico Consensus (2004) and Quito Consensus (2007) under the CEPAL. Tenth Regional Conference on Women of Latin American and the Caribbean, Quito, Ecuador, 6-9 August, 2007 With these, consensus is reached to improve women's living conditions in terms of: i) political participation and gender equality in decision-making processes at all levels, and ii) women's contribution to social economy and welfare especially in relation to unpaid work. With this purpose, actions are defined for the development of institutional arrangements and a framework of action (CEPAL, 2007)
- The Millennium Development Goals (2000) and the Sustainable Development Goals (2015). These are worldwide goals provided in 2015 with the purpose of ending poverty,

protecting the planet and ensuring prosperity for the population by 2030. In this context, development seeks to balance out environmental, economic and social sustainability. The scope of the SDGs is global, and it provides the Agenda 2030 with objectives and strategies to achieve those goals. Ecuador has a National Development Plan, aligned with the SDGs, at macro level (FLA/FARO, 2018).

1.2 National regulations addressing gender and environment issues in Ecuador

Ecuador has made considerable progress in terms of national regulations to ensure women's rights. They are described herein below:

- **Constitution of the Republic of Ecuador**

Some sections guaranteeing against discrimination are included:

Section 3, subsection 1, provides that “the State's prime duties include guaranteeing without any discrimination whatsoever the true possession of the rights set forth in the Constitution and in international instruments, especially the rights to education, health, food, social security and water for its inhabitants”.

Section 11, subsection 2, provides that “all persons are equal and shall enjoy the same rights, duties and opportunities. No one shall be discriminated against for reasons of ethnic belonging, place of birth, age, sex, gender identity, cultural identity, marital status, language, religion, ideology, political affiliation, legal record, socio-economic condition, migratory status, sexual orientation, health condition, being a HIV carrier, disability, physical difference or any other distinguishing feature.”

Also, section 70 provides that “the State shall draw up and implement policies to achieve equality between women and men, through the specialized mechanism set up by law, and shall mainstream the gender approach in plans and programs and shall provide technical assistance for its mandatory enforcement in the public sector.”

Section 331 provides that “the State shall guarantee women equal access to employment, vocational and professional training and advancement, equitable pay, and the option to self-employment. Any form of discrimination, harassment or violent action, of any nature, whether direct or indirect, affecting women at work are also forbidden.”

Over the last years, public policies have been created seeking to reduce gender gaps. Chief among them was the mainstreaming of the gender approach in the Constitution of Ecuador, enacted in 2008, the “Plan National para el Buen Vivir 2013-2017 (PNBV)” (National Plan for the Good Way of Living), and the National Agenda on Women and Gender Equality 2014-2017.

- **Agenda on women**

“This is a political-technical instrument resulting from the compromise between the State and the Civil Society. Its purpose lies in the transformation of discriminatory social relations towards a State in which real or substantive equality is guaranteed with the Good Way of Living in the horizon of the State’s work. The agenda includes focus areas, policies and strategic guidelines. Among them, number eight pertains to the Environment and highlights the full participation of women and their empowerment in environmental management, management of natural resources and habitat contributing to the balance between nature and the community” (MAAE, 2017, 485).

All of the above is deemed an indispensable element to generate the appropriate environmental conditions for life preservation.

In 2018, the National Council for Gender Equality passed the 2018-2021 National Agenda for Women and LGBTI Equality, containing lines, policies and actions to adopt by the institutions and the civil society, beginning with equal treatment.

The women agenda includes lines of independence and peace culture and addresses issues about leading a free-violence life, actions in the educational sphere, and public policies on health, sexual and reproductive rights, or in fields such as sports. Another line related to life sustainability expressly refers to the environment.

“Focus area 2: Life sustainability: Policy 1 - Promote women empowerment and participation in decision-making regarding use and conservation of natural resources, and recognition of ancestral knowledge. 2- Implement programs strengthening practices, knowledge and know-how of rural Indigenous, Montubio, Afro-Ecuadorian women favoring environmental conservation, promoting business shared responsibility and strengthening resilience to face natural disasters. Policy 7 - Ensure access to and ownership of the means of production, such as land, water, financial services for the LGBTI people” (CNIG, 2018).

This focus area, in the Agenda on Women, includes the following environmental policies:

- Promoting women empowerment and participation in decision-making as regards use and conservation of natural resources, recognizing ancestral knowledge.
- Implementing programs strengthening practices, knowledge and know-how of rural Indigenous, Montubio, Afro-Ecuadorian women favoring environmental conservation, promoting business shared responsibility and strengthening resilience to face natural disasters.

- **Ecuador National Climate Change Strategy, ENCC 2012-2025. MAAE**

The Ministry of Environment, through the Under-Secretariat of Climate Change, published the “2012-2025 National Strategy on Climate Change”, encompassing the different sectors to face the challenges posed by climate change.

“To face the impacts of climate change, it is necessary to include variables considering, for example, the human aspect through criteria such as: priority groups, on account of age, gender, poverty, marginality, among others” (MAAE, 2012, 22).

Also, nine principles are provided for the implementation of the ENCC, with the purpose of completing the vision by year 2025. These include: the protection of vulnerable groups and ecosystems, with actions focusing on tending to the most vulnerable settlements and areas first, and with proactive measures to be taken to protect the population and the ecosystem at risk, and the principle of inter-generational responsibility, which states that all actions deriving from this Strategy will take into account mid-term and long-term effects, as well as potential consequences for future generations (MAAE, 2017, 486).

Additionally, among its Strategic lines focusing on reducing vulnerability and GHG emissions there are: Climate change adaptation and mitigation The Strategy seeks to:

- Create and strengthen the capacity of the social, economic, and environmental system to face climate change impacts.
- Create favorable conditions for the adoption of measures to reduce GHG emissions and to increase carbon sumps in strategic sectors.

- **NDC progress in gender approach**

On the national level, the Nationally Determined Contribution (NDC) to the United Nations Framework Convention on Climate Change, encompassing the 2011-2015 period, includes Chapter 5, “Other relevant information”, which shows perceptions of climate change, ancestral knowledge, gender approach mainstreaming, transfer of technology, research and education on climate change” (MAAE, 2017, 480).

This chapter identifies the regulatory framework and some projects related to climate change adaptation and mitigation with a gender approach. Lastly, one of the conclusions included was that of “consolidating the available instruments to mainstream gender in projects on climate change, developed within the MAAE or by NGOs, which will allow to have shared methodological criteria to guide the process of training, intervention, implementation, indicator design, assessment, among others.” (MAAE, 2017, 518).

Furthermore, there is the NDC Support program, which is a global initiative providing technical and financial support for the design and implementation of climate change mitigation and adaptation strategies under the Agreement of Paris (NDC-SP, 2019). Under such framework, there is methodology to mainstream the gender approach into the various priority sectors.

SECTION 2: Gender analysis

Gender analysis first introduces general data on women´s situation in Ecuador with emphasis on gender gaps. Secondly, gender gaps are introduced for the sectors connected with the project: energy sector, agricultural sector and tourism sector (hotels, restaurants, ships and boats). All of those, related to the strategic lines defined by the project.

2.1 Ecuador Socio-Economic Indicators

Indicator	Key data												
Population	<p>Total: 17,373,662</p> <table border="1"> <tr> <td>Women</td> <td>Men</td> </tr> <tr> <td>8,683,172</td> <td>8,690,490</td> </tr> </table>	Women	Men	8,683,172	8,690,490								
Women	Men												
8,683,172	8,690,490												
Child death rate	<p>Child death rate for Ecuador in 2016 was 9.1 (INEC, 2016).</p> <p>According to WHO, child death rate is of 8.9 (OMS, 2017).</p> <p>Life expectancy: women, as regards % of men, 2012.</p>												
Poverty rate	<p>According to INEC (2018), income-based poverty at national level remains constant, at 24.5%.</p> <p>For the same period, both rural poverty (43.0%) and urban poverty (15.9%), have no substantial statistical variations. (INEC, 2018)</p>												
Employment-to-population ratio	<p>According to INEC (2019), the appropriate employment rate was of 37.9%.</p> <p>Underemployment was of 18.7%.</p> <p>Other non-full employment rate was of 27.2%.</p> <p>Unpaid employment, 11.0%.</p>												
Unemployment rate	<p>In March 2019, unemployment rate at national level was of 4.6%. At urban level, this rate was of 5.8%, and at rural level, 2.2%. National and urban-rural variations compared with March 2018 were not substantially significant (INEC, 2019).</p> <table border="1"> <tr> <td></td> <td>Women</td> <td>Men</td> </tr> <tr> <td>Employment</td> <td>94%</td> <td>96.40%</td> </tr> <tr> <td>Underemployment</td> <td>16.90%</td> <td>20%</td> </tr> <tr> <td>Unemployment</td> <td>6%</td> <td>3.60%</td> </tr> </table>		Women	Men	Employment	94%	96.40%	Underemployment	16.90%	20%	Unemployment	6%	3.60%
	Women	Men											
Employment	94%	96.40%											
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Unemployment	6%	3.60%											

	In March 2019, nationally, 5.7% of women of the EAP were unemployed whereas unemployment among men was of 3.8%. This gap (1.9 p.p.) per sex was statistically significant (INEC, 2019).																																
Teenage pregnancy	According to Ecuador Social Observatory (2016) - latest year with data - 2,115 girls of 10 to 14 years of age, and 23,809 teenagers of 15 to 17 years of age gave birth in Ecuador.																																
Participation rate of women	At national level, this indicator reached 47.3% whereas at urban - rural levels, it reached 45.8% and 50.3%, respectively. (INEC, 2019).																																
Violence	There follow the results of the national survey on family relations and gender-based violence (extracted from: INEC, 2019): <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">National indicators</th> <th style="text-align: center;">National</th> <th style="text-align: center;">Urban</th> <th style="text-align: center;">Rural</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">(In % violence type throughout lifetime)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Total violence</td> <td style="text-align: center;">64.90%</td> <td style="text-align: center;">65.70%</td> <td style="text-align: center;">62.80%</td> </tr> <tr> <td>Psychological violence</td> <td style="text-align: center;">56.90%</td> <td style="text-align: center;">56.70%</td> <td style="text-align: center;">57.40%</td> </tr> <tr> <td>Physical violence</td> <td style="text-align: center;">35.40%</td> <td style="text-align: center;">34.40%</td> <td style="text-align: center;">38.20%</td> </tr> <tr> <td>Sexual violence</td> <td style="text-align: center;">32.70%</td> <td style="text-align: center;">36.60%</td> <td style="text-align: center;">22.90%</td> </tr> <tr> <td>Economic violence</td> <td style="text-align: center;">16.40%</td> <td style="text-align: center;">17.00%</td> <td style="text-align: center;">14.90%</td> </tr> <tr> <td>Gynecological-obstetric violence</td> <td style="text-align: center;">47.50%</td> <td style="text-align: center;">44.70%</td> <td style="text-align: center;">54.80%</td> </tr> </tbody> </table>	National indicators	National	Urban	Rural	(In % violence type throughout lifetime)				Total violence	64.90%	65.70%	62.80%	Psychological violence	56.90%	56.70%	57.40%	Physical violence	35.40%	34.40%	38.20%	Sexual violence	32.70%	36.60%	22.90%	Economic violence	16.40%	17.00%	14.90%	Gynecological-obstetric violence	47.50%	44.70%	54.80%
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Gynecological-obstetric violence	47.50%	44.70%	54.80%																														

2.2 Description of Galapagos Population

According to INEC, 2015, Galapagos population is as follows:

Chart 1: Galapagos population

Grupos de edad	Hombres	Mujeres	Composición
Menor de 1 año	179	184	27,7%
De 1 a 4 años	902	894	
De 5 a 9 años	1.215	1.169	
De 10 a 14 años	1.264	1.185	
De 15 a 19 años	1.047	1.047	68,2%
De 20 a 24 años	941	878	
De 25 a 29 años	1.100	1.125	
De 30 a 34 años	1.263	1.228	
De 35 a 39 años	1.099	1.110	
De 40 a 44 años	962	872	
De 45 a 49 años	801	781	
De 50 a 54 años	711	633	
De 55 a 59 años	513	468	
De 60 a 64 años	355	286	
De 65 a 69 años	241	178	4,1%
De 70 a 74 años	146	129	
De 75 a 79 años	95	65	
De 80 a 84 años	40	44	
De 85 a 89 años	33	21	
De 90 a 94 años	14	17	
De 95 a 99 años	5	4	
Total	12.926	12.318	100%

Source: INEC, 2015

Currently, the population of the Galapagos Islands is mostly young, with 68.2% of its inhabitants being 15 to 60 years of age, and within this range, most of them are 25 to 39 years of age. There are more men than women in reproductive age due to a high incoming migration

rate related to male-dominated productive activities given the characteristics of the islands (Desarrollo Sustentable y Ordenamiento Territorial del Régimen Especial de Galápagos, 2016).

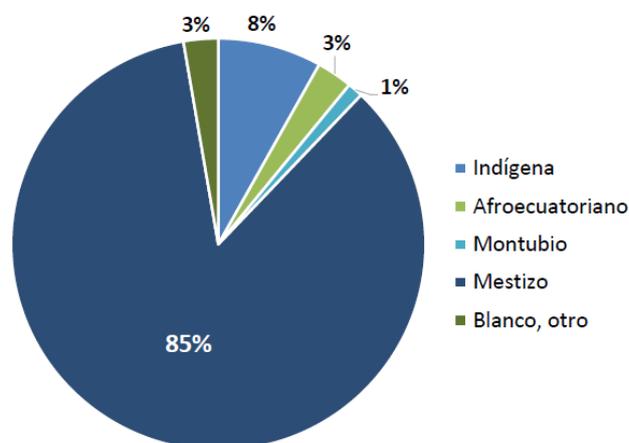
The Population and Houses Census (2010) shows that Working Age Population (WAP) in Galapagos amounts to 17,055 people (67.9% of the province's total), whereas 73.2% of that population pertains to Economically Active Population (EAP) and the remaining 26.8%, to Economically Inactive Population (EIA). Of the province's EAP, 60.2% pertains to men and 39.8% to women.

The Santa Cruz canton gathers over 62% of the territory's EAP. In San Cristóbal, where the provincial city is located, there is at least 30% of the province's EAP. (CGREG 2016, 57).

Galapagos population is mainly composed by immigrant "mestiza" population, indigenous, Afro-Ecuadorian and a substantial percentage of foreign population.

There follows a chart of ethnic self-identification in the Islands.

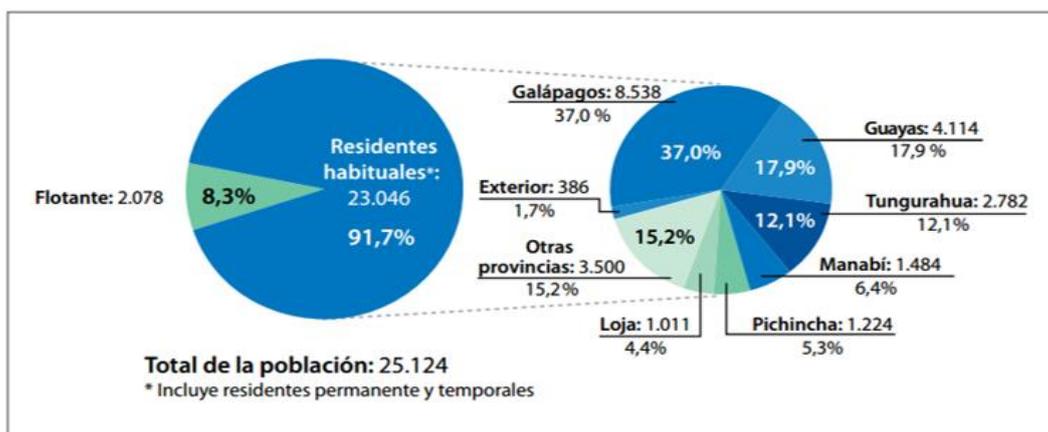
Chart 2 - Ethnic Self-Identification in Galapagos



Source: INEC, 2015

A substantial group of the population comes from the provinces of Guayas, Tungurahua, Manabí, Pichincha, Loja and others from the Amazonian region.

Chart 3: Composition of Galapagos population per place of origin



Fuente: "Principales Características Demográficas de Galápagos - Resultados del Censo 2010"

As shown by the chart, the residing population has very diverse characteristics since they have arrived at the islands from different regions ("ecological floors") in the mainland, mostly the coast and the mountains. There is also a substantial percentage of floating population², who arrive at the islands drawn in by the productive and subsistence dynamics of the islands.

2.3 Gender gaps in livelihoods of the Galapagos population.

This subsection shows the gender gaps or inequalities in terms of access to, use and control of, and share in the distribution of resources, benefits, services, opportunities and even rights and freedoms across all life spheres between women and men in the Galapagos Islands. Thus, relations between men and women are analyzed given they are, and have been, asymmetrical, because in the islands, as in other places, a dynamics prevails whereby women are relegated to life's private sphere, to the reproductive aspect (raising and caring of the family) whereas men have participated of the public sphere, in decision making concerning the community and the family, in dealings with external actors.

Once the project's specific scope is established, it is key to address the different activities related with the chance to improve power consumption, and the links regarding the actual scenario and the different productive activities, which are the daily livelihoods including tourism, agriculture, hotel services, fishing and biodiversity conservation. The project's ties and dynamics show a direct inter-relation among each one of the chains of value with environmental sustainability and the potential to improve gender inequitable dynamics.

The production specificities and the dynamics of the economically active population of each island will be used as baseline (CGREG, 2017,17).

- Santa Cruz: most population is devoted to tourism (54%) and business (44%);
- San Cristóbal: public administration and defense (25%);

²Floating population means that population with temporary residence on the islands, for example, in Galapagos a considerable number of people arrive in to cover tourism demand.

-Isabela: fishing (29%).

Next, each economic activity is reviewed from the gender perspective.

2.3.1 Energy sector and gender

The energy is essential for caring activities such as lightning, cooking and air-conditioning. In Galápagos, in the urban areas, almost the whole population have access to basic services. In the urban areas, 7.972 are having electricity and 351 haven't electricity. On the rural areas, there are 1388 households with electricity, and just 45 families do not have electricity (INEC. 2015, 40).

This context is directly related to the well-being of women and girls, because they are primarily responsible for the bulk of household work. Access to clean energy will make a significant difference to their quality of life, including their health.

In terms of caregiving tasks, there are no major gaps in the islands, since they have electricity services and women do not have greater responsibility for access to services for their caregiving roles (See more on the interview annex).

In terms of energy use and consumption, the Galapagos population has electrical appliances, but they also use a lot of gas cooking. That being said, it is again necessary to work on raising awareness about where the energy comes from.

The socio-cultural dynamics in Galapagos demonstrate the need to empower women to achieve a paradigm shift in which adaptation, resilience, and energy efficiency are internalized and allow for real and efficient improvements in the quality of life.

In addition, the recognition of the differentiated work and tasks between women and men will make it possible to adequately meet the energy needs of both, which are strictly related to productive activities. Women and men are linked to the sale of services, labor for tourism, fishing and agriculture. In this context, it is evident that the main needs for both are access to technology, training, and financing opportunities.

Taking into account the above, the expected outcome for the program includes:

- Access to loans and the possibility of engaging a larger number of women in the monitoring initiatives.
- Generate information broken down per gender
- Define affirmative action to access loans: such as a percentage of enterprises owned by women interested on the improvement of the energy sources.

- Incentives to generate and strengthen capacities in terms of energy consumption and renewable energy.

2.3.1.1 Gender and finance

In Galapagos, as in other cities, women have few possibilities of accessing credit, as they face situations such as:

- Lack of own resources to be used as equity capital.
- Lack of property titles or other assets that could function as collateral.
- Lack of business knowledge and financial education.
- Lack of credit history.
- Lack of experience in obtaining some type of financing.

In this sense, and considering the particularities of women in relation to access to credit for the energy sector, it will be necessary to define affirmative actions to promote women's small businesses, as well as their access to clean energy.

2.3.2 Agricultural sector and gender

Agricultural activities in the islands take place mainly in rural areas. In the three inhabited islands, agricultural and farming activities take place in the upland areas. However, small family orchards have also been identified contributing to family's food.

In terms of the productive parcels, some specificities are introduced that allow to better understand this activity in the Islands.

Average age of female and male producers at UPAs is 54 years: men (54 years) and women (52 years). Roughly 1 out of 5 producers are older adults (65 years or more) (CGREG, 2016, 57).

There follow the number and distribution of Farming Production Units (UPA) in the Islands.

Table 1: Number and distribution (UPA) in the Galapagos Islands

Canton	UPAs			
	Number	Percentage	Hectares	Percentage
Santa Cruz	355	47%	9,592	51%
San Cristóbal	257	34%	5,577	29%
Isabela	128	17%	3,611	19%
Floreana	15	2%	230	1%

Total	755	100%	19,010	100%
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Source: (Salvador, 2015); (García, 2018)

In the Galapagos islands, agricultural activity started with immigration in each one of the islands. However, the dynamics and timing of the crops varies.

Next, there follows a summary chart with the existing crops in the Islands:

Table 2: Land use per surface area and number of UPAs in the Galapagos Islands

Uso del suelo	SUPERFICIE (km ²)		CANTIDAD DE UPA	
	Censo 2000	Censo 2014	Censo 2000	Censo 2014
Cultivos permanentes	22,08	15,17	417	570
Cultivos transitorios	1,53	2,20	303	342
Barbecho o restrojo	1,95	1,10		120
Descanso	1,91	4,33	39	132
Pastos	141,55	111,26	347	370
Especies invasoras		9,34		155
Montes y bosques	62,16	41,89	280	435
Otros usos	3,09	4,82	436	586
Total	234,27	190,10	604	755

Source: Extracted from Vera. w/d. quoting the Governing Council of the Special Regime of Galapagos (2016).

Most production systems in the islands are typically owned by and for the benefit of the families. As a result, most female and male farmers can use resources to produce food to ensure the island's food security (Barrera, Valverde, Escudero y Allauca, 2019, 159). However, local agriculture is not enough to cover the needs of the fluctuating population related to tourism.

The tourist-related activity in the Galapagos is one of the activities that demands agricultural and livestock produce the most. However, much of that produce is imported from the mainland. This reliance on the "outside" threatens with an increase in invasive species, and it likewise threatens the improvement of local economies, which cannot compete with the offer of products coming from the mainland, and makes it difficult for them to keep lands productive (Palacio, 2012: 4).

In addition, local crops face a series of challenges throughout their chain of production especially related to the limited access to seeds, little or no knowledge of sustainable agricultural practices, little or no interest by the local population in understanding and using local and seasonal produce for their meals and lastly the difficulties in trading their products in the tourist-related activities (interview conducted in 2019 to a representative of "Finca Luna").

In terms of gender dynamics, agricultural crops are characterized by long working hours mostly led by women. Also, women in many of the single-parent family groups have assumed the care work while working in farms typically away from their houses, in what is known as the upland. Even though women are found in those scenarios, gender relations are characterized by the exclusion of women from decision-making and from the benefits from trading agricultural produce. However, a high percentage of the population related to agriculture are women, as men need to leave their households to take jobs in several activities, especially rendering services, in population centers.

To better illustrate this, there follows the UPAs dynamics in the Galapagos and the existing workforce.

Table 3: Workforce in agricultural activities

Type of workforce hiring	Number of UPAs	Percentage
Permanent staff	149	20%
Short-term staff	117	15%
Family workforce	489	65%
Total	755	100%

Source: Extracted from Vera. w/d. quoting the Governing Council of the Special Regime of Galapagos (2016).

According to this chapter, when “family workforce” is mentioned, women of various ages and young men are included. Whereas permanent staff typically refers to men and when short-term staff is mentioned, these are women and men, part of the fluctuating population of the islands (interview to a coffee-grower).

The study conducted by FAO (2020, 22), claims that: “According to Barrera et al. (2019), about 86% of heads of households are men and 13.94% are women. However, despite the fact that women represent only 8.3% to 18.9% (parish-wide) of farm administrators, women play important leadership roles within their households and have a strong presence in the economic, social and political spheres. This is consistent with the 2014 Agricultural Census, where 75.24% of the farms are run by men. By 2014, when the last census was conducted, average age of men running farms was 54 years of age, whereas average age of women was 52 (Figure 1.14). These gender rates and advanced age of agricultural producers remains invariable (Barrera et al., 2019). It is worth mentioning that data gathered by the census does not reflect the actual dynamic roles of women within the family agricultural sphere. By way of example, the 2014 Census reports that women are disproportionately in charge of running integrated small orchards”.

There follows the characterization of the agricultural activity in each island. This was based on primary information gathered for this consultancy³.

- ✓ Isabela is one of the islands with greater agricultural productivity in the uplands, where fruits, varied legumes and orchard vegetables are grown. Typically, as it turns out, women and men work in this activity. However, it is the women who have the greatest responsibility in agricultural chores. This is so because many of the men work in activities related to the tourist and hotel sector, and in fishing. In this scenario, families are forced to hire workers from the mainland to conduct cleaning and harvesting activities.

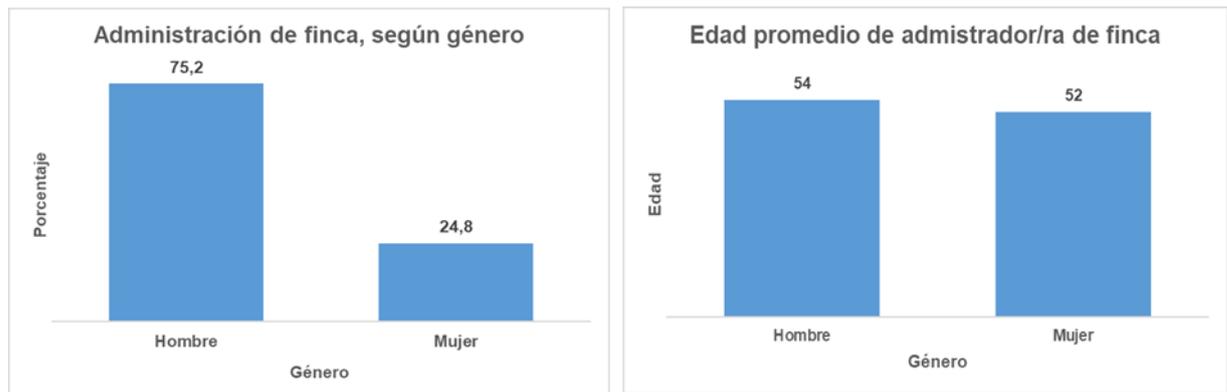
The production from the area is sold in the local market, which is conducted typically by men, as they are the ones who transport the products and who trade it. From the interviews conducted mention was made of the difficulties of connectivity between the upland and the lowland. Much fruit is lost - fail to reach the market - and it can barely make it to other islands.

- ✓ In San Cristóbal, the agricultural dynamics is mainly related to subsistence. Also, small parcels with agro-ecological products and coffee-growing lands have been identified. There are about 388 producers (INEC, 2010). However, most of those devoted to agriculture in the upland are men.
- ✓ In Santa Cruz, the agricultural dynamics are quite similar to those of San Cristóbal. Agricultural lands are located in the upland. Many families, and women especially, are related to traditional agriculture, and do not use environment-friendly practices. Women and men are both related to the agricultural activity. However, men and women interviewed mention the need to maximize knowledge, capacities and experimenting of sustainable agricultural activities.

Even though the above is based on first-hand information, the FAO study (2020) based on the 2014 census (INEC) shows that men, and typically men of over 50 years of age, are those running the farms. This entails that women have no great decision-making power on crops, on their trading and most probably on the use of any income thereof. There follows the background information chart:

Gender in agriculture chart:

³Interviews of October 2019 and workshops.



Extracted from INEC, 2014. Agrarian census, quoted by FAO 2020.

In terms of land ownership, no major conflict has been identified. According to the land zoning there is land for smallholders and to the National Park. In Galapagos, family productive units have been surveyed by the census and identified. In those scenarios, the question of access is by inheritance, and to a much lesser extent, through purchase or exchange.

In this scenario the origin of landowners is worth mentioning, as “it was found that 43.27% are Galapagos people, 21.64% come from the province of Loja, and 9.13%, from the province of Tungurahua, as the most representative percentages. It is worth mentioning that production systems are run by heads of households coming from 18 provinces across the country. Floreana island is where the lowest number of heads of households have come from other provinces of Ecuador, these being Loja and Cotopaxi. The number of years where heads of households have devoted to agricultural activities, on average, is 24.22 with a minimum of one year and a maximum of 81 years.” (FAO, et al.)

In this context, it is deemed necessary to continue working towards:

- a. Making visible and valuable gender-specific differential knowledge in agricultural activity.
- b. Promoting women capacities to improve sustainable production across all spheres of crop growing.
- c. Improving women knowledge to position themselves in decision-making spheres.
- d. Designing affirmative-action measures to access financing for renewable energy and sustainable initiatives, for example, policies and programs for women inclusion in eligibility criteria for financial facilities⁴ and training programs to enable their participation.

4 Considering the women needs on the FP is include that we are going to support “Women-owned Enterprises”, (IFC definition) If is:

(A) \geq 51% owned by woman/women, OR

(B) \geq 20% owned by woman/women; AND (i) has \geq 1 woman as EO/COO/President/Vice President; AND (ii) has \geq 30% of the board of directors composed of women, where a board exists.

2.3.3 Fishing sector and gender

The fishing activity in the Galapagos Islands has raised dramatically during the 1990s with the boom of the sea cucumber. Migrants from the mainland, who were part of the local workforce, conducted much of the fishing activity from back then. As a result, the sea cucumber and the lobster were subjected to overexploitation, reaching the endangered status.

The artisanal fishing activity is one of the main sources of income for the local population. There is a set of strict regulations to protect biodiversity while achieving different livelihoods. Presently, a group performs artisanal fishing and another group devotes to experiential fishing⁵ strictly connected to tourism. As for deep-sea fishing⁶, as of 2013, there were 308 active fishers registered within the Galapagos National Park (Ramírez y Reyes, 2014), although the main activities related to fishing are those related to artisanal and experiential fishing.

There are 446 fishing vessels, about 284 fiberglass fast boats (“fibras”) for artisanal fishing, and 29 registered boats in the islands, each type of vessel devoted to a specific fishing style including artisanal and deep-sea fishing.

In this context, gender dynamics are characterized by inequality and invisibility of women across the fishing chain. In Galapagos, most fishers are men and are typically entrusted with decision-making, as well as benefit and resource distribution. In order to be able to better define fishing gender dynamics, information gathered by Vanessa Almachi - a dissertator at Ecuador’s Pontificia Universidad Catolica and intern of the Charles Darwin Foundation in 2020⁷- was organized and systematized as follows:

Men	Women
Expressly devoted to catching pelagic species and crustaceans. Their participation occurs before boarding, boarding, extraction, stowage, administration, and trading.	Women invest time, resources and energy before (sailing off) and after catching (stowage, processing and trading) activities.
Through this role, they have direct relation with trading in fishing activities, especially linked with commercialization ones.	It is mentioned that 1 woman for every 2 men work in the activities after catching.
	Women perform activities supplemental to the extraction of sea products. Meaning women depend

⁵ Experiential fishing: “consists in taking a guided tour through authorized areas for the practice and display of the artisanal fishing activity and surface diving. The trip is rounded off with stops in wonderful rest areas surrounded by luxuriant nature. During the tour, the crew share their traditional fishing knowledge with the tourists, showing the culture and life style of Galapagos fishers.” From: [Pesca Vivencial, una opción para explorar Galápagos en este feriado – Ministerio de Turismo](#)

⁶ Deep-sea fishing is practiced off the shore, in open sea. Typically, this is industrialized fishing with trading purpose. From: [【 PESCA de ALTURA 】 ¿Que es y que Tipos existen? - EsPesca](#)

⁷See: [\(2\) Facebook](#) Webinar: La igualdad de género en la pesca (“Webinar: Gender equality in fishing”). Fundación Charles Darwin, November 18, 2020.

	on those doing the catching and sometimes take part in trading.
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The fishing and added value dynamics differ from island to island. Next, their specificities are described:

a. Isabela:

Men	Women
Men work in the fishery value chain in the preparation, sailing and catching of various species. Men of Isabela process the fish and prepare it for its trading.	Women take part in the activity through storage work in the domestic space, in their houses' fridges, in stores and only 1 person has a dedicated place: a fishmonger's shop. Trading and money collection from fishing is mostly the chore of women. However, the benefits obtained from these tasks are not always their own decision.

b. San Cristóbal

Men	Women
Men work in the following phases of the fishery value chain: pre-sailing, sailing, production, storage and trading.	Women play a very specific role relating to processing, cleaning and selection, as well as trading and money collection.

c. Santa Cruz

Men	Women
Men's responsibilities in Santa Cruz focus on pre-sailing, sailing, catching, storage, trading and administration chores.	Women especially take part in fish cleaning, processing and trading. Many of the women purchase the product from the fishers and sell it to independent traders and uplands.

In this context, work in the following areas is paramount:

- a. Making women's work in the fishery value chain visible.
- b. Sensitization to women's contribution to the fishery value chain, guaranteeing representation and participation of men and women on equal footing.
- c. Support for the identification and creation of participation and decision-making spaces in the fishery sector.
- d. Affirmative-action measures to improve women's participation in the fishery value chain according to the needs of the women identified.

2.3.4 Tourism sector and gender

Tourism is one of the main economic activities of the islands. The great biodiversity and their pristine ecosystems have made the Galapagos Islands one of the world's most important tourist destinations.

Over the years, Galapagos has become one of the main destinations for ecotourism and diving. "Despite some years of decline, related to an unfavorable national or international context, the trend has remained invariable and attempts to set an annual cap to tourist arrivals have ceased. Tourism growth creates jobs and boost the economy drawing in migrants and producing greater demand for food and supplies, which in turn increases the freight volume transported. Over the last 15 years, the growth in economic terms of tourism to Galapagos has registered an annual rate of 14%, while the total gross income from hotels has increased from USD 1.2 million to USD 10.7 million in the last 15 years (INGALA, 2007-2008,42, in Agenda del CGREG, 2010: 16).

Tourism includes a number of activities namely: guiding activities, lodging, food and beverage, travel agencies, boats without overnight stays, liveaboard boats, and land transportation. In each of these activities, there are gender dynamics in place characterized by inequality in terms of access and pay.

In several of the activities of the tourism value chain, women are the ones with more presence, thus, 21% work in lodging and food activities, 17.01% in transport and mobilization and 17% in commercial activities. Whereas men mostly work 17% in transportation and 16% in construction activities and 14% work in agriculture, forestry and fishing activities (INEC, 2015). A similar dynamic is also shown by the information generated with the survey for tourism and lodging services⁸.

⁸Survey carried out for consultancy "Professional services contract to prepare and formulate 'Output 6.1. Ecotourism certification program, implemented to adopt the best practices and international standards for sustainable consumption and production patterns throughout the tourism value chain', carried out by Cristina Borja.

As to guiding, gender distribution is as follows: 28% of Galapagos guides are women, compared to 73% of male guides; 60% of the guides are domiciled in Santa Cruz, followed by 22% in San Cristóbal. Regarding age, the average is 41 years (39 for women and 42 for men) (Observatorio de turismo en Galápagos. 2018, 27).

According to the data of the Survey carried out for consultancy “Contract of professional services to prepare and formulate Output 6.1. Ecotourism certification program, implemented to adopt the best practices and international standards for sustainable consumption and production patterns throughout the tourism value chain”, carried out in 2019, the number of women and men working in tour operation, in food and lodging activities are similar, with 50 percent women and 50 percent, men. Participation dynamics in dialogue spaces for women and men

Citizen participation processes focus on environmental activities since Galapagos is an area of high biodiversity and with very specific characteristics in ecosystem terms. Organizations typically focus on maximizing biodiversity conservation. Thus, social or development issues are left out of organizational agendas and dynamics. In these spaces, only 4% of women actively participate in organizations (CGREG 2016, 57).

However, in stakeholders mapping carried out in 2019, as part of this process, there is evidence of a group of organizations of which, up to date, no more information has been obtained, but when such information is obtained, they could be considered strategic partners for the implementation of the project (see annex 4: list of organizations).

Here is a typology of the organizations found by this analysis:

a. Organizations promoting biodiversity conservation:

They are mixed organizations with the participation of the young. They are based in Santa Cruz, and their purpose is to sensitize and generate key actions for the management of solid waste, as well as for the training of environmental male and female leaders. We refer to Frente Insular. Their activities can be enhanced with the involvement of more women to maximize their climate change resilience capacity, improving the quality of life of the population with sustainable initiatives.

b. Living laboratories:

These are private organizations that promote organic agriculture, permaculture and sustainable production so that Galapagos will no longer rely on foreign food. These experiences are key because they make a difference in generating a sustainable product and positioning it in the market. For example, coffee production in Lava Java (Santa Cruz), or in Luna farm (Santa Cruz).

Both farms have managed to produce non-invasive introduced species as an alternative for soil recovery, as well as endemic plants. Due to their trajectory and developed knowledge, these living laboratories can support experimentation and the promotion of women in organic, sustainable agriculture.

Additionally, these farms also work jointly with small producers interested in producing in a sustainable way, with local seeds and with a view to achieving the production of products with added value, for which it is considered that these could be capacity-building spaces.

c. Organizations working for human rights:

MAGMA, a group that seeks to make visible and eradicate gender-based violence in Galapagos, with incidence on the three Islands. They have been supporting various investigations related to gender-based violence in the Galapagos. Additionally, they have worked hard to position the issue of women's rights in fishing and agricultural activity.

d. Organizations of women craft producers:

Said organizations are located in San Cristóbal and they work together to enhance the abilities of women to produce stuffed animals that represent endemic animals of the Islands, as well as to "export" from the islands a percentage of existing plastic within the stuffing of the animals. These productive initiatives could be enhanced to improve the quality of life of the population.

e. COPES PROMAR – Fish production cooperative organization

They are a cooperative related to the trading and administration of seafood with action on the three Islands. They are an initiative that can show the potential of women in fish and crustacean trading.

f. There are trade union organizations in the area grouped around tourism, like the Board of Tourism, Hotel Owners Association, Transporters Association.

Although women leaders have not been clearly identified in the archipelago, and “there is a very low percentage of women who actively participate in organizations in the Galapagos” (Barrera, V .; Valverde, M .; Escudero, L .; Allauca, J. , 2019, pp 175), it is important to promote the non-stop contribution of women to the productive development of the islands, of which tourism is a fundamental part. These actions should aim at increasing their inclusion and

participation in all spheres of action, especially in those where their participation is essential, such as agriculture.

Any organizational action must prioritize resources and policies to strengthen governance, small-scale business initiatives, training and follow-up as women consider essential to improve their livelihoods and ensure proper and responsible management of natural resources.

This could mean their activities can act as organizational principles, in favor of actual gender equality, where focus is placed on their autonomy and empowerment.

Division of labor by gender, energy context and livelihood. As previously mentioned, the energy dynamics of Galapagos can be seen as that of any city that has energy (IEA).: "...the energy dynamics of Galapagos can be seen as that of any city that has energy; "Globally, household energy consumption patterns differ between men and women. For example in family households women spend more time on unpaid energy intensive household labour like cooking and laundry. .. Overall, men were found to consume more energy and this was mainly related to transport and eating out (R. Raty, A. Carlsson-Kanyama, 2009). The European Institute for Gender Equality found that women are more sustainable consumers than men as they value eco-labelled products and green procurement higher. They were also found to be more willing to change their energy-related behaviour in favour of sustainable options (EIGE, 2012).

In consideration of these dynamics, policies should focus on addressing forms of energy consumption, as well as the specific needs of women in terms of household management.

In terms of livelihoods, as mentioned above, livelihoods in Galapagos are: tourism, agriculture and fishing, which is why it is key that the capacities of women and men are strengthened for the enhancement of livelihoods, as well as the guarantee of rights to dignified work.

Next, there follows a table showing the findings of the workshops in relation with the participation of women and men in the different sectors.

Activity	Women and men participation, per Island					
	Women Isabela	Men Isabela	Women San Cristóbal	Men San Cristóbal	Women Santa Cruz	Men Santa Cruz
Agriculture	Decision-making					
	More women	Fewer men	Fewer women	More men in decision-making in planting	Fewer women in decision-making	More men in decision-making

	Seed reproduction, planting and harvesting					
	Fewer women as workforce	More men as workforce	Fewer women as workforce	More men as workforce	Fewer women as workforce	More men as workforce
	Trading					
	Equal responsibility in trading					
	Pre-sailing					
	No women	Only men	No women	Only men	No women	Only men
	Sailing					
	No women	Only men	No women	Only men	No women	Only men
	Fishing/extraction					
	No women	Only men	Few women	More men	No women	More men
	Cleaning					
	More women	Few men	More women	Few men	More women	Few men
	Trading					
	Women	Men	Women	Men	Women	Men
	Hotel owners					
	Women working in cleaning services Administrative services	Men working in management services	Women and men can have similar roles in cleaning services Administrative and management services			
	Restaurants					
	Women and men can have similar roles in the tourism value chain, that is, cleaning, administrative and management services					
	Boats					
	Women and men can have similar roles in cleaning, administrative and management services.					
	Guiding					
	Without information.					
Transport and boats	Without information.					
Construction	Very few women working in construction.	Mostly men work.	Without information.			

Source: Workshops held in November 2019

2.3.5 Analysis of women and men vulnerabilities in the project's intervention areas.

The project's area of intervention is an area of high social and environmental vulnerability. Socially, the islands rely extensively on the mainland, as they have high food and supplies requirements. In this context, the question of low production for life sustenance is one of the main vulnerabilities. On the other hand, there are the reliance on tourism and the growth of the State sector (CGREG, 2020: 30-31).

Lastly, there is the perception by the local population that the chances of getting a job on the islands are limited as a result of the presence of the Galapagos National Park and the chances of producing and exploiting natural resources are limited as well.

With this in mind, the project's potential benefits and risks were analyzed at a participatory space (the 2019 workshop). Two levels were analyzed: one local, at the level of livelihoods and day-to-day dynamics, and another, at the sectoral level connected with tourism.

At the local level, the following benefits and risks were established:

Activity	Benefits for women	Risks for women	Benefits for men	Risks for men
Agricultural production	Chances of generating sufficient food for the Galapagos population, in sustainable manner.	Reliance on the mainland.	Chances of generating sufficient food for the Galapagos population, in sustainable manner.	Little interest in working in agricultural and livestock production due to low productivity and profitability.
Fishing activity	Chances of making women visible in fishing activities	The fishing and collection activities are not limited to tourist-oriented consumption.	Access to resilience and sustainable fishing capacity building processes.	Resource overexploitation
Work in the project.	Chances of connecting with sustainable, clean-energy initiatives.	Difficulties to access project's benefits.	Chances of connecting with sustainable, clean-energy initiatives.	Perception of not enough regulations to work in productive initiatives (transport), retail trading. Perception of incapacity to produce connected with the presence of the PNG.

Basic services deficiency		Potential for epidemics, diseases, children lose weight, there are not resources to take care of them. Difficulties to access water.		Difficulties to access fruit production areas.
Source: Survey of field information through interviews and workshops in Isabela, Santa Cruz and San Cristóbal, 2019.				

As it arises from the previous table, the project has implications not only in the context of the project, but also in improving the quality of life of women and men who inhabit the islands, for example, by improving crops and strengthening marketing capacities. Also, it shows climate-related vulnerabilities, which can be enhanced by the overexploitation of natural resources.

Understanding the above specificities, the Gender Action Plan will focus its efforts on establishing specific actions to address the needs for capacity building, to enhance the possibilities of participation in governance dynamics and also to define affirmative actions that guarantee actual participation of women in decision-making and in the management of access to and use of natural resources.

Likewise, sensitization processes are expected to be incorporated aimed at women and men, to make women's knowledge, capacities and possibilities of contributing to productive activities and to climate resilience visible.

2.3.6 Gender-based violence in the context of the Galapagos

At a global level, efforts are being devoted to make gender inequalities and structural violence visible as these are omnipresent throughout the world and act as obstacles to the access to, use, control, and equitable and sustainable benefits of, land and natural resources. On a recurring basis, many women from different spheres of action continue to be discriminated against, socially and economically marginalized, they still have difficulties accessing their own spaces to produce, to access training, technologies and access to loans (Castañeda y otros, 2020, 24). These dynamics are no different in Galapagos, since it has been shown that violence continues to cause difficulties and violence across the board.

In this section, the situation of gender-based violence on the islands is analyzed. Gender-based violence is a key issue to analyze, since it manifests itself in different dimensions

(political, economic, physical, psychological and social), with different phases for its approach (perception, prevention, control and monitoring). According to ENVIGME, 2019, 11.8% of women has sustained some type of violence over the last 12 months, and 56% claim to have experienced violence at some point in their lifetime.

Across-the-board violence occurs throughout women's lives, with the following resulting gaps (USFQ/CTT y CGREG, 2020):

- Academic-wise: at university level, it is proven that 15% of men has completed their training, in contrast with 6% of women.
- Pay-wise: salaries varying between \$1560 and \$2340 are mostly for men (29%), and only for 7% of women.
- Work-wise: 13% of men and 3% of women work in the public sector.

In specific terms, comparing national figures versus those of the province of Galapagos, regarding types of violence, sexual violence rates are lower. However, they are still representative (22.8%) taking into account the province's population density. This incidence calls for special attention to sexual offenses, both regarding women and boys and girls.

In addition, the accumulated number of women who have suffered some form of gender-based violence in the province of Galapagos is higher than for the rest of the country. Although in 2015, 92% of the population claimed that living in Galapagos was safe, this figure warrants some context and must be contrasted against gender-based violence figures.

In this context, efforts are required to reduce situations of discrimination against women in terms of access to employment, equal pay, working hours sensitive to gender needs, etc. Although it is also true that in Galapagos the percentage of workplace violence is below the national average (Plural, 2020), with 15.9% of cases of at least once during lifetime, and 4.5% in the last year (INEC, 2019), these are still high numbers.

In terms of economic, financial and asset issues, some patent specificities appear in all three locations (PLURAL, 2020, 77):

"For women, the possibilities of accessing resources for production are very limited, which is due to the delimitation of land for production and to land tenure. Likewise, they have difficulties in accessing credit except for savings accounts or small loans for household consumption expenses. Women do not have assets of their own to be able to establish surety in order to obtain loans"⁹.

⁹ This is one of the main reasons because we are thinking on positive actions.

Men, on the other hand, have the possibility of higher income, as well as access to formal credit. Additionally, in one of the locations, there are the benefits of *campesino* insurance for small-sized farmers, especially in San Cristóbal.

An example of inequalities in terms of access to resources is financial violence. Most women who would like to separate from their partners cannot do so for economic reasons directly connected to, among other aspects, the socio-cultural assignment of the nurturance role, which falls mainly on women, and to the patriarchal checking - disciplining, which restricts their sphere of socio-labor action to the household (Memoria, 2020). Likewise, “there are few cases where women can keep control of resources within the marriage union, and more are the cases in which women lose their legal status when their marriage dissolves, such as situations of appropriation, removal or destruction of personal or jointly acquired property by their partner with permanent residence. Some women, when they separate from their husbands, must even leave most of their property behind due to the logistical and economic difficulties of transferring their assets to the mainland.”

SECTION 3: Gender assessment

Once the gender analysis is completed, gender assessment is necessary to build the Gender action plan on. As explained in the methodology section of this document, once the analysis is completed, work is conducted on the key findings and on the chances of showing and mainstreaming the gender approach in the project.

3.1 Main issues identified based on the gender analysis

✓ Energy

In terms of energy, the islands have significant electricity service coverage. However, the energy that reaches homes is produced in an unsustainable manner, so local people need to be sensitized about the benefits of clean energy. To this end, this gender plan is aligned with the behavioral change proposal: “applying insights from behavioral science will enhance the effectiveness of the project activities. We foresee we will leverage an array of behavior change techniques to shape the projects’ implementation strategies. Depending on project needs, these may include applying behavioral insights to the way in which we communicate (framing messages so that they are as easy to understand and attractive as possible, having a clear call to action, using trusted messengers, emphasizing potential losses, etc.); to the way in which processes are implemented (levering social networks, making it as easy as possible, making people feel they have a

head start, giving clear examples “rules of thumb”, etc.); as well as in the way in which the products / services are presented (choice architecture, incentives, framing of products, reminding people at the moment of action, making pro-environmental behavior visible, etc.)” (WWF and other. 2021, 5).

And, speaking specifically in relation to access to credit, a benefit provided for in the Program, it is necessary to take into account that women can access to loan just with affirmative actions. Those might be defined with the financial institutions, however, they could be classified as follows, those are:

- reduction of requirements: use of sales billing statements.
- guarantees for credit against employee payroll detail.
- reduction of interest rates for women's businesses and microenterprises.

✓ **Socio-cultural aspects:**

According to the information surveyed, the production issue is key for the population of the Islands. In this regard, Galapagos population is highly reliant on tourism services. However, in the current context of the COVID pandemic, the population's vulnerability has been made utterly clear.

Also, according to the information surveyed, the education gap in the Galapagos is quite lower than for the rest of the country, as the urban-rural differences are minimum - a substantial portion of the population has attained secondary and higher education. In terms of capacity-building through informal circumstances, this is mostly male, as men are the ones with greater chances of accessing means of transport and traveling to population centers.

In Galapagos, a higher prevalence of gender-based violence is observed against women with a low schooling level; whereas there is lower prevalence of violence in women with higher education.

Women's differential knowledge of ecosystems and their potential use in strategies of climate change adaptation must be promoted.

That said, the chances of accessing technological knowledge is limited. However, with recommendations and special attention to gender dynamics, both women and men capacities could be really enhanced.

✓ **Gender-based violence**

Gender – based violence is one of the main problems in Galapagos, however it cannot be covered by the project. There is a high rate of physical, sexual, psychological, and structural violence (PLURAL, 2020).

The project will work on the design of a referral route for cases of sexual violence. The project, in terms of reducing structural violence, will have affirmative actions aimed at capacity-building, promoting women's participation in productive activities and affirmative actions for access to credit.

✓ **Access to information and technologies**

So far, the communities have received general information about the program. However, it is necessary to deepen the extent of such information. It is also necessary to work with women to improve their ability to understand and make the Program their own.

The gender plan will include positive actions¹⁰ to enhance women participation in the Program and to enhance their activities and contribute to reducing the gap.

It is deemed important to retrieve the associative spirit of women and their ties to Tourism.

✓ **Organizational dynamics**

As mentioned before, organizational dynamics in Galapagos are restricted to promoting biodiversity conservation, so that social or development issues are left out of organizational dynamics, with only 4% of women actively participating in organizations (CGREG 2016, 57). However, it is deemed that existing organizations have the potential to improve governance and to work to promote renewable energy and climate resilience initiatives.

✓ **Economic dynamics**

Galapagos population is in the top quintile of income generation. This is so because of its connection with tourism. However, this has changed in the context of the pandemic during the last year.

Having established that, it is worth mentioning that there is a substantial component of social stratification on the Islands as the population has different migratory statuses (resident, in-

¹⁰“Affirmative actions are public policies intended to compensate conditions that discriminate against certain social groups when exerting their rights. They are also known as “positive actions”, “positive measures”, “reverse discrimination” and “positive discrimination”. These types of actions are recommended for disadvantaged social groups. In the case of women they are mandatory since their gender condition is a factor that limits their access to economic, cultural and political resources important for their development. Its application in favor of women does not constitute discrimination against men since for them gender does not represent a limitation when exerting their rights. It is necessary to consider that the temporary nature of affirmative actions is subject to the result expected to be achieved and is not subject to determinations established beforehand. Therefore, affirmative actions will be suspended only if the problem has been solved and the results are ongoing”. From: [Acciones Afirmativas - Glosario para en línea \(inmujeres.gob.mx\)](#)

transit, illegal¹¹). Migratory status makes a real difference in terms of income and life quality. Lastly, it is worth mentioning that, in the Galapagos, there are “poverty levels, which are indicative of present inequalities. Despite the fact the richest quintiles have more and more income, the poorest quintiles remain in the group where opportunities are limited”. According to the 2015 census, at provincial level, 25.06% of inhabitants was poor on account of Unsatisfied Basic Needs (UBN)” (ODS Territorios, web site).

✓ **Environmental dynamics**

Climate change is a phenomenon with multiple dimensions, causing impacts in the environment and in societies, with differentiated impacts on men and women, due to the fact that women have less formal education than men, less income, less participation in and access to decision-making, and the burden of household work and family care is vested in them. In the context of Galapagos, these dynamics are enhanced by the ties with biodiversity conservation.

Conservation of the unique biodiversity of Galapagos has allowed for a group of tourist-oriented activities to develop related to the natural and ecological potential. Few women are tour guides or have some tie with biodiversity conservation.

In this context, women participate selling services at hotel and restaurant level, and they also take part in small-scale commercial activities, and lastly selling of food.

There is also a group of women who own their own spaces for the selling of crafts with recycled material deriving from boat supplies.

In terms of agriculture, there is also the chance for women to strengthen their knowledge base and participate more resolutely and with more equal benefits in the tourism value chain.

Recognizing the growing role of women in the development of agricultural production activities, the program will promote their direct participation in the processes of good production and feeding practices, as well as adaptation to climate change;

Through the GAP, it will aim to train women promoters for the local transmission of the skills acquired through the training processes; it will promote that a number of comprehensive land use plans and market access mechanisms are led by women. Through activities such as those described above, the project expects to contribute to strengthening the social recognition and valuation of women, as well as promoting women's equal participation in the management of

¹¹ According to the qualitative information surveyed in 2019, there is considerable number of people without work permits or with a passer-by status on the islands, who as a result are considered “illegal”. These typically experience labor exploitation on account of their status.

practices, in decision-making on the location of innovations proposed by the project, the techniques used, their management and maintenance.

Also, in fishing, women hold key knowledge and responsibilities which could be made visible and better valued in the fishery value chain.

SECTION 4: Gender action plan

The Gender Action Plan for this project is based on the GCF's recommendations to address the gender approach, meaning "gender-responsive"¹². This perspective proposes the need to define objectives and results that include¹³:

- Gender- responsive policies, institutions, coordination mechanisms and regulatory frameworks, which improve incentives for climate resilience and its effective implementation.
- Climate information and scientific research outputs/services identifying differential knowledge and impacts that contribute to adaptation measures. This helps plan development and decision-making in climate-sensitive sectors.
- Climate-related early warning systems and other risk reduction measures discriminating between women and men, making clear gender specificities in reducing vulnerability. In this specific case, we will focus on capacity building.
- Men and women being aware of climate threats and related appropriate responses. For this specific case, the need for initiatives has been defined to improve sustainability and quality of life of the population that inhabits the islands.

4.1 That said, we must mention that once the gender analysis and assessment were completed, it was possible to identify a series of activities to respond to the risks and opportunities of the project, as well as to maximize the shared benefits. Those activities are part of the results metering and framework anticipated for the Program. Gender Action Plan implementation

As the Implementing Agency, CAF will be responsible for the administration and execution of GCF funds and through the management of agreements with WWF and FAO. CAF will be in charge of providing technical advice and direct execution of project outputs under its responsibility.

We will also work closely with MAATE's gender specialists for the implementation of the GAP.

CAF is in charge of the overall responsibility of applying social and environmental safeguards as well as the gender approach. To this end, it will have a safeguards and gender technician who will work closely with CAF specialists. CAF specialists are responsible for technical assistance, follow-up and monitoring of the Program's technicians.

The person in charge of gender and safeguards is responsible for:

¹²The term "gender-responsive" derives from the instruments of the United Nations Framework Convention on Climate Change (UNFCCC) to promote and mainstream the gender approach, especially as regards the alignment between climate change initiatives and initiatives to conform to the CEDAW and the Beijing Platform. As well as with the fundamental aspects established by the NDC-SP Global for gender approach based on the guidelines of the Gender Action Plan of the UNFCCC. A gender-sensitive, gender-responsive, gender-transformative scale is established. This scale shows the scope and political decision of each project to incorporate and mainstream gender in its initiative. https://unfccc.int/sites/default/files/resource/cp2019_L03S.pdf

¹³ Ibid.

- General oversight and monitoring of compliance with safeguards commitments.
- Specific support and recommendations on specific safeguards issues, if necessary.
- Implementation of the gender action plan.
- Once the Program is implemented, it will be necessary to make visits to the territory to deepen the analysis and to target the current gender-differentiated needs.
- Review annual work plans and budgets and analyze planned community/individual sub-projects and their impacts, so that risks of not implementing the approach adequately can be addressed;
- Ensure that consultations with local communities are conducted in an inclusive and participatory manner and are well documented;
- Provide accompaniment and referrals to women victims of gender-based violence.

GENDER ACTION PLAN

Component / Result / Output /Activity	Gender activity	Indicator	Target	Time schedule	Budget
Component 1: : Change of the energy matrix of the Galapagos Islands.					
Outcome 1.1: Increased renewable energy generation to reduce GHG emissions, diversify the energy matrix, and reduced dependency on imported fuels.					
Output 1.2.1: Improved energy-efficient measures to reduce GHG emissions and energy dependency of the Galapagos livelihoods.	Define a line of credit for women that contains affirmative actions designed in a participatory manner with financial institutions.	A line of credit to improve energy efficiency at the household and livelihood-related business level.	At least 10% of the cooling and refrigeration units replaced are from female-headed households	Upon second year of project implementation	Include on the programme output.
	Community consultations undertaken during the Program implementation to ensure that women are adequately represented in the consultations, including ethnic minorities and other vulnerable groups	Proportion of women and men attending consultations.	At least 50% participants of consultations are women	During the whole project	Include on the programme output.
	Include gender mainstreaming in the training and capacity building courses	The implementation staff have the expertise to review and assess project gender responsiveness and impacts. Number of men and women participating on the capacity building courses.	At least the 40% of the staff has participate on the capacity building process.	Upon second year of project implementation	Include on the programme output.
	Generate gender capacities for female and male technical experts related to financial institutions, and to institutions responsible for monitoring those actions.	Evidence of differential capacities in officers. Percentage of women and men who improve their skills.	By the end of the first year of project implementation, 40% of staff trained.	Starting in the second quarter of the first year, and once every year after that.	Appraised in the responsibilities of Safeguards and Gender specialist Gender and energy specialist consultant

		Number of lessons learned based on capacity building.			
Output 1.2.2 Strengthen CFN, LFIs, and beneficiaries' capacities for the development of mitigation projects, and to comply with the ESMS and MRV requirements	Include at least 40% of fund (including project planning and design teams) and 25% of employees will be female	Number of women and men working as staff of the project.	At least 25% of women are part of the project staff.	On the first year of the project	Include on the programme output.
	Awareness raising for women and men on the importance of energy efficiency and adaptation measures.	Number of workshops conducted. Percentage of women and men who improve their skills. Number of lessons learned based on capacity building.	At least 30% of men and women participating on the awareness process.	On the first year of the project	Include on the programme output.
	The tourism activities of women entrepreneurs (guiding, hotel management, food, etc.) are publicized and promoted.	Number of entrepreneurs promoted. Disaggregated information about the participants on the entrepreneurs. Initial diagnostic. One business plan	At least 10% of tourism businesses managed by women that change their energy source improve their businesses. Number of actions implemented through the business plan.	Starting second year.	Appraised in Safeguards and Gender specialist's responsibilities Budgeted for in the grants.
	Support financial institutions with the design of affirmative actions for access to microloans and loans to improve energy dynamics of the tourism and hotel services, as well as	Number of actions established. Case-monitoring report.	Upon second year of project, at least 30 women obtaining loans.	Starting second year.	Appraised in Safeguards and Gender specialist's responsibilities

	to enhance women's productive activities.	Number of women and men participating on the workshops. Number of workshops conducted.			Budgeted for in the grants.
Component 2 - Resilience strengthening of Galapagos livelihoods.					
Result 2.1: Galapagos food system is climate-resistant in terms of both domestic consumption and consumption by sustainable tourism sector.					
Outcome 2.1: Galápagos food system is climate resilient for both internal consumption and for the sustainable tourism sector.					
Output 2.1.1. Enhanced institutional capacity for climate-resilient planning and development.	Collect information on women's knowledge about biodiversity conservation, and climate change adaptation and mitigation strategies.	At least one study per island.		Upon completion of the second year, there are 3 studies.	Appraised in Safeguards specialist's responsibilities Local consultant (25000)
	Sensitize women and men to make visible women's potential in biodiversity conservation .	Number of sensitization processes conducted. Number of women and men participating on the workshops.		6 workshops by the first quarter of years 2 and 3	Starting first quarter of year 2, one per year. Local consultant
	Generate capacities for women for the empowerment and enhancement of their abilities in productive spheres in the 3 islands (Isabela, San Cristóbal, and Santa Cruz).	Percentage of change in women's and men's capacities, knowledge, empowerment, and participation in productive spheres.			Appraised in Safeguards specialist's responsibilities

	Establish an accompaniment and referral route for cases of gender-based violence within the scope of the project.	One derivation route (grievance redress mechanism) for gender violence cases	A route in operation by the end of the second year.	At the end of the second year.	Appraised in Safeguards specialist's responsibilities Specialized consultancy (10000)
Output 2.1.2. Improved farmers livelihoods and rehabilitated ecosystem services through climate-resilient water and agricultural food productions systems.	Make a difference in the incorporation of affirmative action for women participation in productive initiatives, namely: food and production systems	Number of activities incorporating affirmative actions to cover women's needs. Evidences of the uses on the knowledge and methodologies to improve water, food and production systems.	At least one mitigation activity and at least three adaptation activities (agriculture, fishing, tourism services).	By year two of project, number of activities with gender approach.	Appraised in Safeguards specialist's responsibilities
	Perform a diagnosis of sustainable productive activities and initiatives for women enhancing adaptation and mitigation activities and strengthening the tourism value chain.	Diagnoses prepared for the 3 areas.	One diagnosis per island by year two of implementation	A six-month diagnosis starting second semester of year one.	Appraised in Safeguards specialist's responsibilities Local consultant (50000 USD)
	Generate capacities for women and women regarding empowerment and enhancement of their food systems and natural resources (Isabela, San Cristóbal, and Santa Cruz).	Training material List of attendants, Knowledge evaluation	At least 40% of attendants show more knowledge after training of year one and 60%, by year two (measured through surveys before and after)	Starting year two of project implementation.	Appraised in Safeguards specialist's responsibilities

	Promote the empowerment of women in producer organizations through community promoters of good agricultural practices, water and sustainable food.	<p>Training material</p> <p>List of attendants, Knowledge evaluation</p> <p>Number of women and men participating on the workshops.</p>	At least 4 promoters per island.	Starting year two of project implementation.	Appraised in Safeguards specialist's responsibilities
	Development of material and information on good agricultural and livestock practices based on women's knowledge.	At least one study per island.	Upon completion of the second year, there are 3 studies.		<p>Appraised in Safeguards specialist's responsibilities</p> <p>Local consultant (25000)</p>
	Support job creation for women through ecosystem restoration	<p>Number of women trained.</p> <p>Number of women working in restoration initiatives.</p>	Upon project completion, number of women participating in restoration initiatives.	Starting first quarter of year two, annually.	Restoration specialist consultant. Local consultant (50000 USD)
	Enhancement of post-harvest and fish processing initiatives supported by the program.	<p>Defined activities on post harvest and fish processing implemented.</p> <p>Number of women and men participating on the activitie.</p>	By the end of year one, activity implemented.	From first quarter of year two of project implementation.	<p>Appraised in Safeguards specialist's responsibilities</p> <p>20.000 for the 6 activities, included on the outcome.</p>

Output 2.1.3. The combined effect of climate change, overfishing and IUU fishing is prevented and mitigated through an adaptive co-management of the Galapagos marine zoning.	Implemented an inclusive governance system in fishermen's organizations.	An assessment of the skills and practices of women and men in the extraction and commercialization of fish and crustaceans. At least 10% of women in sustainable fishing activities.	A diagnostic Follow-up reports		
Output 2.1.4. Ecological role of shellfish and finfish stocks are restored, and livelihoods are diversified through the adoption of climate-smart small-scale fisheries and aquaculture approach.	Improve participation of women and men in sustainable initiatives	Plan to implement sensitization campaign and incentives for sustainable activities Number of women and men participating on the activitie.	By the end of year two, at least one plan implemented.	From second quarter of year two of project implementation.	Appraised in Safeguards specialist's responsibilities
	Enhancement of post-harvest and fish processing initiatives supported by the program.	2 defined activities on post harvest and fish processing implemented	By the end of year one, activity implemented.	From first quarter of year two of project implementation.	Appraised in Safeguards specialist's responsibilities 20.000 for the 6 activities, included on the outcome.
Component 3 - Sustainability mechanisms for climate resilience and low emissions livelihoods					
Outcome 3.1 Strengthened response capacity of key institutions, local livelihoods, and population from Galapagos.					
Output 3.1.1 Tools and financial mechanisms established for the sustainability of the programme's actions.	Lay down a communication and participation plan providing for women's needs, and their participation specificities in the project.	Communication plan Number of messages and communications positioning women as agents of change.	By the end of year two, at least one	Starting year two of project implementation	Appraised in Safeguards specialist's responsibilities

			defined communication plan		
	Strengthening of women’s capacities, coming from social organizations and management spheres, favoring ownership and empowerment of rights and environmental governance of their organizations.	Training material List of attendants Knowledge evaluation	At least 40% of attendants show more knowledge after training of year one and 60%, by year two (measured through surveys before and after).	Starting year two from project implementation.	Appraised in Safeguards and Gender specialist’s responsibilities Local consultant
	Collect and promote differentiated knowledge of women and men on sustainable production, and sustainable fishing and business.	A report including such knowledge. A plan of knowledge socialization and ownership.	Percentage of knowledge gathered and systematized.	Starting second quarter of project.	Appraised in Safeguards and Gender specialist’s responsibilities Local consultants
Output 3.1.2 The Galapagos community is mobilized towards a transformative climate action.	Improve participation of women and men in sustainable initiatives	Plan to implement sensitization campaign and incentives for sustainable activities	By the end of year two, at least one plan implemented.	From second quarter of year two of project implementation.	Appraised in Safeguards specialist’s responsibilities

Annexes:

Annex 1 List of people interviewed

Name	Organization	City	Subject
Andrés Ordoñez	Board of Tourism	Santa Cruz	Tourism
Zoila Larrea	Artisan, stuffed animals manufacture	Isabela	Gender analysis
María Elena Guerra	Lava Java	Santa Cruz	Agriculture and production
Karina Bautista	Huerta Luna	Santa Cruz	Gender analysis
Alberto Andrade	Frente Insular	Santa Cruz	Gender analysis
Suelen Figueroa	Colectivos MAGMA	Santa Cruz	Gender analysis

Annex 2

a. Interview systematization

b. Matrix of activities done:

Tool	Participants	Place	Responsibility
Workshops and interviews	Men and women from the different sectors	San Cristóbal, Isabela and Santa Cruz	Mentefactura
Surveys and interviews for agricultures	Men and women	San Cristóbal, Isabela and Santa Cruz	FAO / USFQ
Surveys for tourism sector	Men and women	San Cristóbal, Isabela and Santa Cruz	WWF

Annex 3. Reports from workshops. See <https://drive.google.com/file/d/1X-ugogU2c52oISuwXJO0Mq1eZKjrdJAf/view?usp=sharing>

Annex 4. Civil society organizations

Name	Acronyms	Members	Parish	Corporate purpose
MANOS MAGICAS Production Association	ASOPROMAGIC	10	Puerto Ayora	Manufacture of high-quality garments and crafts with recyclable material
ECOMODA Tailors and Dressmakers Association	ASOEMOD	11	Puerto Ayora	Manufacture of all kinds of garments, lingerie, handmade, tapestry and trading of all kinds of accessories for uniforms.
FIBRA DE BANANO Crafts Production Association	ASOPROFIB	20	Puerto Ayora	Crafts production using banana fiber.

MUJERES POSITIVAS Food preparation association	ASLIMPOS	10	Puerto Ayora	Preparation of all kinds of foods
CAMINO VERDE GALAPAGOS Crafts Production Association	ASOCAMVER	12	Puerto Ayora	Manufacture and selling of all kinds of crafts with recycled material
MUJERES ESMPRENDEDORAS INSULARES Fruit Byproducts Prod.Assoc.	ASOPROINS	12	Puerto Ayora	Manufacture and selling of all kinds of fruits byproducts.
EL CHATO Crafts Production Assoc.	ASOPROCHAT	12	Santa Rosa	Crafts production in wood, metal, cloth, and all kinds of recycled material, costume jewelry, etc.
EMPRENDEDORES DE GALAPAGOS Service Providers Association	ASOSERGAL	11	Bellavista	Rendering of services of food preparation, cleaning, courier, reception and security, janitorial, laundry and plumbing.

Name	Acronyms	Members	Parish	Corporate purpose
Floreana Community Center	CECFLOR	71	Santa Maria – Floreana (San Cristonal canton)	Promote community-based tourism, development of production activities, use and conservation of natural resources
BALSER Multi-service association	ASOPRESBAL	10	Puerto Baquerizo Moreno (San Cristobal canton)	Rendering of services of food preparation, cleaning, courier, reception and security, janitorial, laundry and plumbing.
ARTE VERDE GALAPAGOS Crafts Production Association	ASOGALAP	20	Puerto Baquerizo Moreno (San Cristonal canton)	Manufacture of crafts
EMPRENDEDORES DE ISABELA Multi- service association	ASOEMPISA	10	Puerto Villamil	Catering, cleaning, courier, reception and security, janitorial, laundry and plumbing services.

			(Isabela canton)	
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Source: IEPS 2015.

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