Part I: Project Information

GEF ID
10649

Project Type
MSP

Type of Trust Fund
GET

CBIT/NGI
CBIT **No**
NGI **No**

Project Title
Living in harmony with nature: Connecting biodiversity with production systems in the Gualaca Altitudinal Corridor Landscape.

Countries
Panama

Agency(ies)
CAF

Other Executing Partner(s)
Wetlands International, Ministry of Environment (MiAmbiente)

Executing Partner Type
CSO

GEF Focal Area
Biodiversity

Sector

Taxonomy

Focal Areas, Biodiversity, Mainstreaming, Fisheries, Agriculture and agrobiodiversity, Biomes, Tropical Rain Forests, Rivers, Mangroves, Protected Areas and Landscapes, Productive Landscapes, Coastal and Marine Protected Areas, Terrestrial Protected Areas, Species, Threatened Species, Influencing models, Convene multi-stakeholder alliances, Demonstrate innovative approache, Strengthen institutional capacity and decision-making, Transform policy and regulatory environments, Stakeholders, Indigenous Peoples, Civil Society, Academia, Non-Governmental Organization, Community Based Organization, Local Communities, Beneficiaries, Communications, Awareness Raising, Education, Type of Engagement, Participation, Information Dissemination, Partnership, Consultation, Gender Equality, Gender Mainstreaming, Sex-disaggregated indicators, Capacity, Knowledge and Research, Capacity Development, Learning, Theory of change, Enabling Activities, Knowledge Exchange, Field Visit, Knowledge Generation, Workshop

Rio Markers

Climate Change Mitigation

No Contribution 0

Climate Change Adaptation

Significant Objective 1

Biodiversity

Principal Objective 2

Land Degradation

Significant Objective 1

Submission Date

4/27/2023

Expected Implementation Start

3/1/2024

Expected Completion Date

3/2/2027

Duration

36In Months

Agency Fee($)

160,638.00

A. FOCAL/NON-FOCAL AREA ELEMENTS

Objectives/Programs	Focal Area Outcomes	Trust Fund	GEF Amount($)	Co-Fin Amount($)
BD-1-1	Mainstream biodiversity across sectors as well as landscapes and seascapes through biodiversity mainstreaming in priority sectors	GET	324,362.00	850,000.00
BD-2-7	Address direct drivers to protect habitats and species and improve financial sustainability, effective management, and ecosystem coverage of the global protected area estate	GET	1,460,500.00	11,684,661.00
		Total Project Cost($)	**1,784,862.00**	**12,534,661.00**

B. Project description summary

Project Objective

Improve the management of the Altitudinal Gualaca Corridor and Landscape (PCAG) to benefit biodiversity conservation and foster sustainable use of natural resources with a landscape approach.

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
Component 1. Strengthening the governance for biodiversity conservation and sustainable use of the PCAG .	Technical Assistance	Outcome 1.1 Landscape planning for PCAG biodiversity conservation and sustainable use of natural resources substantially improved. Indicator 1.1. Number of hectares of landscapes and seascapes under improved governance. Target 1.1 Total: 348,474 ha Terrestrial: 228,767 ha. Marine: 119,707 ha **Indicator 1.2.** Number of hectares of landscapes under improved management for the benefit of biodiversity **Target 1.2.** Total: 188.112 ha.	Output 1.1.1 Multi-sectorial PCAG governance platform formally created and functioning . Output 1.1.2. Land and marine use plan developed using a Sustainable Landscape Planning (SLP) and Reef to Ridge (R2R) approach to effectively integrate conservation actions with PCAG production systems. Output 1.1.3 Biodiversity-friendly farm and fisheries model management plans designed with	GET	305,200.00	850,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
			conservation and sustainability criteria. Output 1.1.4 PCAG financial sustainability strategy designed, and key actions implemented.			

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
Component 2. Improving the conservation of biodiversity and ecosystems within the PCAG	Technical Assistance	**Outcome 2**.1 Key terrestrial and marine ecosystems within the PCAG are better protected and restored to ensure conservation of biodiversity and ecosystem services. **Indicator 2.1** Number of hectares of protected areas with improved management effectiveness **Target 2.1** 61,386 ha (total) 40,655 ha (terrestrial) 20,731 ha (marine) (*baseline and target METT scores TBD during PPG*) **Outcome 2.2** Recovery of key connectivity areas outside protected areas beneficial for PCAG	Output 2.1.1 Operational Plans for five prioritized PAs are updated and harmonized with priority actions implemented, strengthening the integrity and resilience of the PCAG landscape (Fortuna Forest Reserve, Chiriqu? Gulf Marine National Park, David Mangroves Managed Resources Area, La Barqueta Wildlife Refuge, Boca Vieja Wildlife Refuge). Output 2.1.2 Revised and updated	GET	1,318,662.00	10,384,661.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
		biodiversity processes. **Indicator 2.2** Number of ha of degraded agricultural land in prioritized connectivity areas restored and/or reforested. **Target 2.2 A** 500 ha **Indicator 2.2.B** Number of hectares of forest and forest land restored/reforested, including mangroves. 450 ha forest and land forest 50 mangroves. **Indicator 2.2.C** Greenhouse gas emission mitigated in the AFOLU sector. **Target 2.2.C** **8,576 Ton. Co2 eq.** **Indicator 2.2.3** Number of ha under Conservation	regulations for the development and updating of management plans and their technical guidelines. Output 2.2.1 Restored biological connectivity outside protected areas in the PCAG. Output: 2.2.2 Farm management and fishing exploitation plans implemented to transform traditional livestock, agriculture and fishing into sustainable production and contribute to connectivity and reduction of threats to			

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
		Agreements with private owners. **Target 2.2.3** 1500 ha. **Outcome 2.3**: Knowledge, sensitivity, participation, and capacity building of PCAG actors improved, through the implementation of the communication and knowledge management strategy, the gender perspective integration plan, and the adaptive management of the project through its evaluation and monitoring.	ecosystems and their biodiversity. Output: 2.2.3 A PCAG landscape conservation and restoration scheme for Conservation Agreements with private owners outside of PAs.			
			Sub Total ($)		**1,623,862.00**	**11,234,661.00**
Project Management Cost (PMC)						
	GET		161,000.00		1,300,000.00	
Sub Total($)			**161,000.00**		**1,300,000.00**	
Total Project Cost($)			**1,784,862.00**		**12,534,661.00**	

Please provide justification

C. Sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
Recipient Country Government	Ministry of Environment (MiAmbiente	In-kind	Recurrent expenditures	2,500,000.00
Recipient Country Government	Ministry of Environment (MiAmbiente)	Grant	Investment mobilized	4,000,000.00
Recipient Country Government	Ministry of Agricultural Development (MIDA)	In-kind	Recurrent expenditures	1,000,000.00
Private Sector	OTEIMA Technological Unive	In-kind	Recurrent expenditures	1,236,956.00
Private Sector	BATIPA Ecological Foundation	In-kind	Recurrent expenditures	2,048,765.00
Private Sector	Wetlands International	In-kind	Recurrent expenditures	948,940.00
GEF Agency	CAF Development Bank of Latin America	Grant	Investment mobilized	800,000.00
			Total Co-Financing($)	**12,534,661.00**

Describe how any "Investment Mobilized" was identified

The resources of the Ministry of the Environment (US$ 2,500,000 In-Kind) correspond to the periodic investments that this Ministry makes in personnel, transportation, maintenance, equipment, protection actions, monitoring, research, environmental education, among others in the protected areas that are part of the PCAG. The other US$ (4,000,000.00 in Grant) correspond to environmental compensation resources for reforestation actions and recovery of forests and wetlands of investments made by FONAG in infrastructure, equipment, food, and fuel in support of the management of protected areas. The resources contributed by MIDA (US$ 1,000,000 In-kind) correspond to periodic investments in institution personnel and transportation expenses that support training and agricultural extension activities. This is in addition to the investments in the livestock and agriculture program that includes technological diffusion programs, genetic improvement, beekeeping, among others. Oteima Technological University: includes training programs, infrastructure, investments, and research projects developed by associate researchers and thesis students from the University to support the management and conservation of the Batipa Private Reserve and the mangrove complex located around the reserve. The investments of the Batipa Agroforestry

Development Company constitute by periodic investments in personnel, transportation, equipment, maintenance, and infrastructure that the company makes to maintain the conservation areas of the Batipa Private Reserve, its connectivity areas with mangroves, finance the operation of systems silvopastoral management of the farm and reforestation actions. The investments of Wetlands International correspond to periodic investments of personnel resources, transportation, offices, among others as executor of the project and of complementary projects that the organization develops in the study area, such as mangrove restoration actions. CAF's contribution constitutes the mobilization of technical cooperation in Forestry that will help to complement and strengthen actions to improve connectivity in forests and degraded agricultural lands.

D. Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
CAF	GET	Panama	Biodiversity	BD STAR Allocation	1,784,862	160,638	1,945,500.00
			Total Grant Resources($)		**1,784,862.00**	**160,638.00**	**1,945,500.00**

E. Non Grant Instrument

NON-GRANT INSTRUMENT at CEO Endorsement

Includes Non grant instruments? **No**

Includes reflow to GEF? **No**

F. Project Preparation Grant (PPG)

PPG Required **true**

PPG Amount ($)

50,000

PPG Agency Fee ($)

4,500

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
CAF	GET	Panama	Biodiversity	BD STAR Allocation	50,000	4,500	**54,500.00**
				Total Project Costs($)	**50,000.00**	**4,500.00**	**54,500.00**

Core Indicators

Indicator 1 Terrestrial protected areas created or under improved management

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
40,655.00	40,655.00	0.00	0.00

Indicator 1.1 Terrestrial Protected Areas Newly created

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
0.00	0.00	0.00	0.00

Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)

Indicator 1.2 Terrestrial Protected Areas Under improved Management effectiveness

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
40,655.00	40,655.00	0.00	0.00

Name of the Protected Area	WDPA ID	IUCN Category	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)	METT score (Baseline at CEO Endorsement)	METT score (Achieved at MTR)	METT score (Achieved at TE)
David Mangroves Multiple Resources Uses	Not listed in WDPA	Protected area with sustainable use of natural resources	16,702.00	16,702.00					
Fortuna Forest Reserve	303326	Protected area with sustainable use of natural resources	19,500.00	19,500.00					
Gulf of Chiriqui Marine National Park	99632	National Park	1,474.00	1,474.00					
La Barqueta Wildlife Refuge	303325	Habitat/ Species Management Area	2,979.00	2,979.00					

Name of the Protected Area	WDPA ID	IUCN Category	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)	METT score (Baseline at CEO Endorsement)	METT score (Achieved at MTR)	METT score (Achieved at TE)
Playa Boca Vieja Wildlife Refuge	99640	Habitat/ Species Management Area	0.00	0.00					

Indicator 2 Marine protected areas created or under improved management

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
20,731.00	20,731.00	0.00	0.00

Indicator 2.1 Marine Protected Areas Newly created

Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
0.00	0.00	0.00	0.00

Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)

Indicator 2.2 Marine Protected Areas Under improved management effectiveness

Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
20,731.00	20,731.00	0.00	0.00

Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)	METT score (Baseline at CEO Endorsement)	METT score (Achieved at MTR)	METT score (Achieved at TE)
Gulf of Chiriqui Marine National Park	99632	National Park	13,266.00	13,266.00					
La Barqueta Wildlife Refuge	303325	Habitat/ Species Management Area	3,725.00	3,725.00					
Playa Boca Vieja Wildlife Refuge	99640	Habitat/ Species Management Area	3,740.00	3,740.00					

Indicator 3 Area of land and ecosystems under restoration

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
500.00	1000.00	0.00	0.00

Indicator 3.1 Area of degraded agricultural lands under restoration

Disaggregation Type	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
Cropland		500.00		

Indicator 3.2 Area of forest and forest land under restoration

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
500.00	450.00		

Indicator 3.3 Area of natural grass and woodland under restoration

Disaggregation Type	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 3.4 Area of wetlands (including estuaries, mangroves) under restoration

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
	50.00		

Indicator 4 Area of landscapes under improved practices (hectares; excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
188112.00	188112.00	0.00	0.00

Indicator 4.1 Area of landscapes under improved management to benefit biodiversity (hectares, qualitative assessment, non-certified)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
188,112.00	188,112.00		

Indicator 4.2 Area of landscapes under third-party certification incorporating biodiversity considerations

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Type/Name of Third Party Certification

Indicator 4.3 Area of landscapes under sustainable land management in production systems

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 4.4 Area of High Conservation Value or other forest loss avoided

Disaggregation Type	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 4.5 Terrestrial OECMs supported

Name of the OECMs	WDPA-ID	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)

Documents (Please upload document(s) that justifies the HCVF)

Title	Submitted

Indicator 5 Area of marine habitat under improved practices to benefit biodiversity (excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
	8,576.00		

Indicator 5.1 Fisheries under third-party certification incorporating biodiversity considerations

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)

Type/name of the third-party certification

Indicator 5.2 Large Marine Ecosystems with reduced pollution and hypoxia

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (achieved at MTR)	Number (achieved at TE)
0	0	0	0

LME at PIF	LME at CEO Endorsement	LME at MTR	LME at TE

Indicator 5.3 Marine OECMs supported

Name of the OECMs	WDPA-ID	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)

Indicator 11 People benefiting from GEF-financed investments

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	33,173	33,173		
Male	34,528	34,528		
Total	67701	67701	0	0

Provide additional explanation on targets, other methodologies used, and other focal area specifics (i.e., Aichi targets in BD) including justification where core indicator targets are not provided

The project directly aims to strengthen landscape areas under improved practices (Component 1) with the preparation and implementation of a PCAG land use plan under the sustainable landscapes and R2R approach. The project is focused on improving the management of protected areas by incorporating the landscape approach into their operational plans and strengthening key regulatory frameworks (Component 2) and improving the connectivity of the CAG landscape through restoration actions and reforestation of degraded areas and reduction of pressures from traditional productive practices that are transformed into sustainable practices, supported by processes of awareness, education and communication.

Part II. Project Justification

1a. Project Description

1a. Project Description

Country Context:

1. Panama has an area of 74,177.3 km2 and 1,142.51 km2 of mainland waters. Its territorial sea covers 2,210 km2. The country is comprised of 10 provinces, 77 districts or municipalities, three indigenous ?comarcas?[1][1] with provincial status (Guna Yala, Embera and Ngabe-Bugl?), each with its own governor; and two indigenous comarcas with status of ?corregimientos?[2][2] (Guna de Madungandi and Guna de Wargandi). The districts comprise a total of 655 counties throughout the country[3][3].

2. Panama is in the most biodiverse of six known centres of global biodiversity on the planet, having high altitude variations that when juxtaposed with a tropical climate favour a diversity of ecosystems. It includes 12 of the 30 planet-wide Holdridge Life Zones [4][4] and 24 UNESCO denominated vegetation categories that represent configurations of ecosystems and habitats[5][5]. This facilitates high species diversity. According to the WWF classification system, which uses the concept of eco-regions to promote large-scale conservation through an ecosystem approach, Panama has eight of the 200 recognized eco-regions around the world[6][6]. Panama has 21 times more plant species per km2 than Brazil; a greater number of vertebrate species than any other country in Central America and the Caribbean; 3.5% of the world?s plants with flowers and 7.3% of the world?s ferns and fern-like plants[7][7]; 10% of bird species of the planet (more than 1,000 species between residents and migrants); 5% of the 4,327 species of mammals known in the world; 4% (198 species, IUCN 2013[8][8]) of the total amphibian diversity of the world; and 3% (228 species) of the world's reptile diversity. In addition to the species common to other regions of America, there are between 1,300 and 1,900 species of plants, 23 species of amphibians, 24 species of reptiles, eight species of birds and ten species of mammals that are endemic or unique to the country[9][9].

3. There are 4696 species of plants[10][10] and animals in Panama that are distributed among the different terrestrial ecosystems, according to the information listed in the IUCN red list. Among these species are 584 threatened species[11][11]: 10% (57 sp.) are critically endangered; 24% (142 sp.) are endangered; 37% (215 sp.) are vulnerable; and, 29% (170 sp.) are near threatened. A 16% (730 sp.) of the species have populations with declining trends. Eleven of the 12 categories of threat types established by IUCN affect Panama's species, of which the three most common were: Biological Resource Use (Hunting, collecting, gathering, or harvesting) with 1154 species threatened; Residential & Commercial Development with 632 species threatened; and Agriculture & Aquaculture with 526 species threatened. Panama is the second country, after Mexico, with the most threatened species in Mesoamerica. Of the 74 endemic species in Panama, 46% (34 sp.) are threatened.

4. The Panamanian economy, traditionally based on the development of service industries and the agricultural sector, has in the last decade suffered considerable setbacks as a result of poor access to quality materials and seeds, limited use of technology, insecurity in land tenure, lack of technical assistance and access to financing and markets. In consequence, the contribution of the agricultural sector to the Gross Domestic Product (GDP) has been decreasing. For example, in 1960 it was 25% of the GDP, in 1970 it was 15% of the GDP and today it is just 3% of the GDP[12][12]. Employment in the sector has also fallen; in the 80s it represented 28% of the total labour force, while in 2010 it was 12.5%.

5. The agricultural and productive sector is highly segmented at the national level. According to the 2010 census, 43% of farms were less than half a hectare, and 82% less than 10 hectares, which reflects a large fragmentation in farmland space and use that has reduced natural habitat connectivity. These types of farms are subsistence farms and have low productivity because of unsustainable soil management practices. Land tenure rights remain an issue with an estimated 26% of farms in Panama without legal tenure. This percentage is higher among small-scale producers.

6. The main threats to biodiversity arise from agricultural activities as well as expansion of the agricultural frontier and development of infrastructure without environmental considerations or safeguards. This has resulted in barriers to species movement, agrochemical pollution, untreated wastewater, and garbage causing ecosystem degradation and declining biodiversity. Other problems include indiscriminate hunting and the selective extraction of certain species. A backdrop of large-scale ecosystem shifts under global climate change as well as the introduction of invasive species presents a considerable challenge for informed management.

7. Currently the National Protected Areas System (SINAP, for its acronym in Spanish) serves as the principal mechanism for biodiversity conservation. Being composed of more than 100 management units the network covers 2.6 million hectares. However, most of the habitats of the lowlands and the Pacific

coast have already been lost due to urbanization and establishment of productive systems, which has degraded and fragmented the forest, directly affecting biodiversity of the Pacific slope of Panama. In practice, SINAP faces several challenges to improve its PA network including budgetary restrictions, insufficient qualified personnel, and a lack of infrastructure and equipment that limits effective on the ground management[13][13].

8. Given the (1) critical importance of connectivity for retaining biodiversity in fragmented landscapes, (2) the considerable natural heritage value of the PCAG region for Panama, and globally, and (3) the importance of ecosystem goods and services for producers and society as a whole, a landscape and ridge to reef conservation approach is needed to formulate development and conservation solutions with engagement of PA practitioners, resource managers and the private productive sector.

Project Area Context

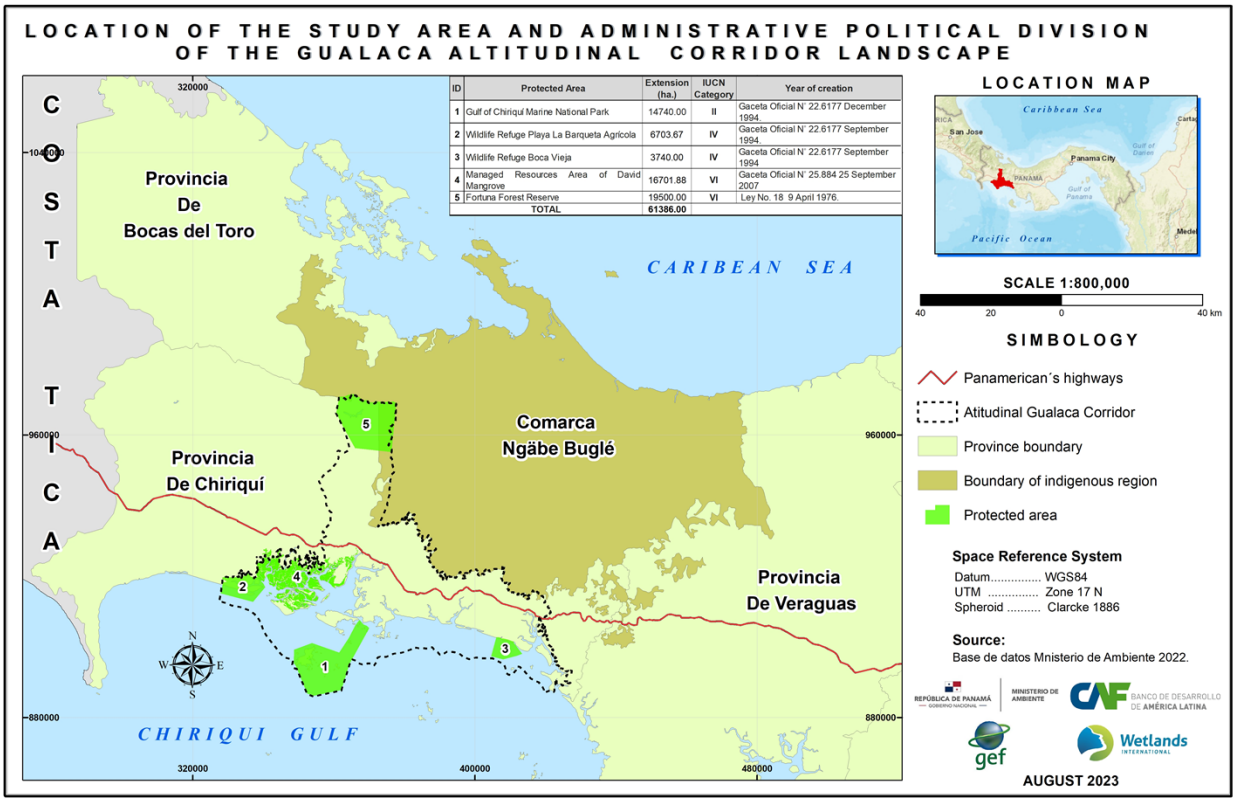
9. The proposed project will be implemented in the Western Region of Panama in an area that is part of the Provinces of Chiriqu? (6,548 km2), Bocas del Toro (4,644 km2) and the Ng?be-Bugl? Comarca (6,968 km2). A high cultural and biological diversity characterizes the area. Four different indigenous groups (Nogbe, Bugle, Naso-Teribe, and Bri-Bri) live in this region.

10. The definition of the Gualaca Altitudinal Corridor Landscape (PCAG, its acronym in Spanish) was based on a concept proposed by Tovar (1996)[14][14] in the National Plan for Protected Areas and Biological Corridors, which was later developed by The National Association for the Conservation of Nature (ANCON) in 1998[15][15] and updated by CI-CATIE 2018[16][16]. The original objective and justification for the establishment of this biological corridor was to guarantee the transit of wildlife in the region between its different altitudinal gradients.

11. The PCAG covers 348,474 ha, of which 228,767 ha (66%) are terrestrial, and 119,707 (34%) are marine. It is in the province of Chiriqu?, between the districts of Alanje, David, Gualaca, San Lorenzo, San Felix, Remedios, and a part of Tol?. Additionally, the PCAG includes a small section of the Besik? district that belongs to the Ng?be-Bugl? Comarca (Map 1). The PCAG aims to maintain altitudinal connectivity from the Fortuna Forest Reserve and part of Palo Seco Protective Forest of the northern sector, passing through the Chiriqu?, Chorcha and Gualaca Rivers, the great Chorcha Plateau, Batipa Hill to the Barqueta Wildlife Refuge in the west. The

landscape also includes the Mangroves of David, Alanje, San Lorenzo, San Felix, Remedios, and Tol?, as well as the Gulf of Chiriqu? National Marine Park14.

12. The greatest portion of the PCAG is concentrated in the districts of Gualaca, San Lorenzo and San Felix, with an estimated population of 25,074 people. This population is mainly engaged in agricultural activities. At the highest elevations, the main crop is coffee, although its production has been affected by the presence of pests and diseases. At intermediate elevations such as in the town of Los ?ngeles de Gualaca, dairy cattle are bred. In recent years, the number of cattle has decreased, and producers have converted grazing land into oil palm plantations. The main crops in the lower elevations are rice, beans, corn, industrial cane, palm oil, and pineapple. The latter two are mostly used for industrial production. In the coastal zone subsistence or small-scale fisheries activities focus on extraction of shellfish such as black clam and coastal fish, although there is also a small fleet with the capacity to fish in the open sea.



ID	Protected Area	Extension (ha.)	IUCN Category	Year of creation
1	Gulf of Chiriquí Marine National Park	14740.00	II	Gaceta Oficial N° 22.6177 December 1994.
2	Wildlife Refuge Playa La Barqueta Agrícola	6703.67	IV	Gaceta Oficial N° 22.6177 September 1994.
3	Wildlife Refuge Boca Vieja	3740.00	IV	Gaceta Oficial N° 22.6177 September 1994
4	Managed Resources Area of David Mangrove	16701.88	VI	Gaceta Oficial N° 25.884 25 September 2007
5	Fortuna Forest Reserve	19500.00	VI	Ley No. 18 9 April 1976.
	TOTAL	61386.00		

Map 1: Location of the study area and administrative political division of the Gualaca Altitudinal Biological Corridor Landscape.

13. The project area is subject to a wide range in temperatures. In the highlands, average temperatures remain below 18?C throughout the year, while the lowlands are characterized by a tropical savannah climate, reaching up to 30?C. The annual relative humidity in the province of Chiriqu? is high and ranges

from 70% to 90%, with the lowest humidity in February and the highest in October[17][17]. The district of Gualaca lies between intermediate and low elevation zones, and has a humid tropical climate[18][18] with annual rainfall exceeding 2,500 mm. However, during the dry period which lasts three to four months (December through March) temperatures in the coolest month are typically above 18? C[19][19].

14. A structural connectivity analysis conducted in 2017[20][20] found that the riparian forests of the Chorcha River connect the Forest Reserve of Fortuna. Fortuna is the highest part of the PCAG, with Batipa hill and the mangroves of the San Lorenzo district in the lower part of the altitudinal gradient. This analysis also identified that another altitudinal connection may exist through the Chorcha plateau and the margins of the Chorcha river. In contrast, the Est?, Gualaca, Chorcha and Chorchita rivers in the intermediate and lower zones of the Gualaca district are considered vital hydrological networks for agricultural and human consumption activities[21][21]. These areas provide water and influence the intertidal zones of David's mangroves. The Chorcha River is one of the most important rivers with significant mangrove stands in the Ba?les-Pedregal-Isla Sevilla-Estero Chorcha estuary.

15. The main activities that have reduced habitat connectivity in the area of the project have been expansion of traditional agriculture and livestock. Although important human settlements are not located in the project area, the Inter-American highway, which was recently expanded to four lanes, and three hydroelectric projects affect habitat connectivity and biodiversity conservation in the area.

16. A recent study on solutions based on nature through the use of green and gray infrastructure for the conservation of biodiversity in the PCAG (Rodriguez J.A., 2023)[22][22] developed a monitoring of the impact of running over wildlife on the Inter-American highway (section Guabal? to the intersection with Gualaca) registered a total of 180 individuals of mammals, birds and reptiles distributed in 32 species killed by vehicles that transit on the Inter-American highway in a period from November 2020 to April 2021. This study validated the richness of wildlife characteristic of the lowland ecosystems of the Western Pacific of Panama, the local movement of fauna in nuclei of vegetation and ecosystems through altitudinal floors and most importantly demonstrated the high impact that the Inter-American highway is having on the biodiversity of the PCAG, especially due to the presence of the wall or jersey that divides the roads that hinder the passage to wildlife, retaining them and exposing them more when they are run over. The study also proposes a series of technical recommendations to reduce the incidence of death by roadkill of PCAG wildlife.

17. Since the PCAG extends across varied climate and biomes, the resulting species richness is impressive. Approximately 1,300 plant species have been recorded in the Fortuna Forest Reserve[23][23]. The area harbours a significant proportion of national vertebrate biodiversity; at least 29% of mammals, 30% of birds, 44% of reptiles, 15% of freshwater fish and 59% of the amphibians being registered within the PCAG[24][24].

18. The marine-coastal area of the project area is uniquely important for the conservation of marine biodiversity with important upstream and downstream dependencies and interactions. The area encompasses part of a migration route for many marine species, and it is an important location for mating and reproduction of several cetaceans of the Eastern Tropical Pacific Seascape (ETPS). This includes some of the 13 registered species globally threatened cetaceans such as the blue whale (*Balaenoptera musculus*), sperm whale (*Physeter macrocephalus*), the fin whale (*Balaenoptera physalus*) and the false killer whale (*Pseudorca crassidens*)

19. The mangrove forests of the Gulf of Chiriqu? are considered some of the most important mangrove ecosystems in the Tropical Pacific region in terms of their biomass, extension, resident, and migratory species. These forests are considered one of the major environmental and landscape indicators of the Neotropical Biogeographic Region[25][25]. Fortunately, the mangroves in the province of Chiriqu? are still considered to be in good health. Across the estuarine deltas of the PCAG, there are seven mangrove species, of which two are considered ?vulnerable? by the IUCN: the salty mangrove (*Avicennia bicolor*) and mangrove pi?uelo (*Pelliciera rhizophorae*). The remaining five species: the gentleman mangrove (*Rhizophora racemosa*), the red mangrove (*Rhizophora mangle*), black mangrove (*Avicennia germinans*), button mangrove (*Conocarpus erectus*) and white mangrove (*Laguncularia racemosa*) are of least concern[26][26]. Also, the mangroves of David and Batipa are known as key biodiversity areas (KBAs) and important bird areas (IBAs). These mangrove forests harbour mammal species such as raccoon (*Procyon lotor*), a white-nose coati (*Nasua narica*), the Rothchild?s porcupine (*Coendou rothschildi*), jaguarundi (*Herpailurus yagouaroundi*) and the squirrel monkey (*Saimiri oerstedii*). Among noteworthy bird species reported in the area, are the yellow-billed cotinga (*Carpodectes antoniae*), which is endangered, the orange-collared manakin (*Manacus aurantiacus*), and the black-hooded antshrike (*Thamnophilus bridgesii*), both with a restricted distribution in Costa Rica and Panama.

20. A total of 88 globally threatened species under IUCN Red Listing criteria are documented in the project area (see Annex 1). Among vertebrates, birds have the greatest number of threatened species, followed by amphibians, mammals, and reptiles. Of the reported species, 41% are near threatened (NT)

according to the IUCN criteria, while 59% fall in the categories vulnerable (VU), endangered (EN) or Critically Endangered (CR).

Table 2 Summary of globally threatened species according to IUCN

Classes of Vertebrates	UICN Threatened				
	NT	VU	EN	CR	Total
Mammals	8	9	4	0	21
Birds	23	12	4	1	40
Reptiles	0	3	1	0	4
Amphibians	6	1	6	10	23
Total	36	25	15	11	88

NT (Nearly threatened); VU (Vulnerable), EN (endangered); CR (Critically endangered)

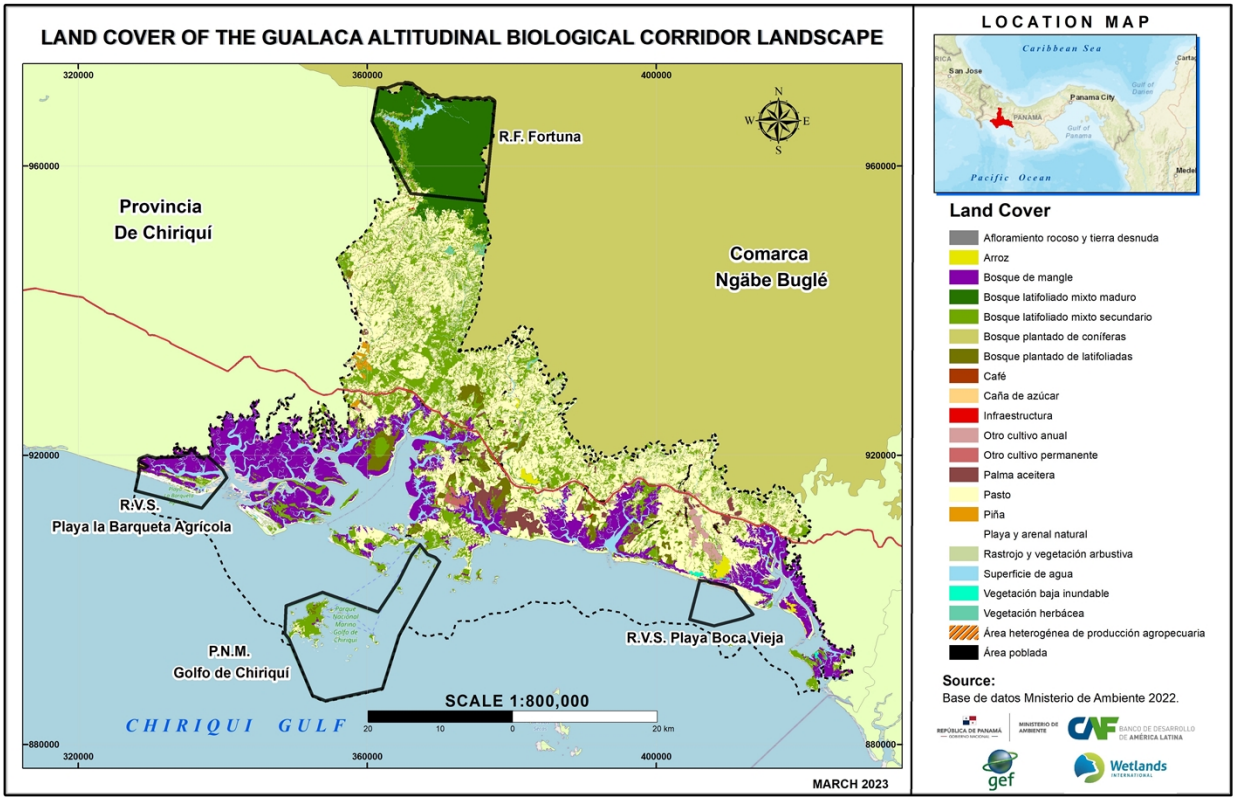
1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed (systems description)

Threats to Biodiversity and Landscape Integrity of the Gualaca Altitudinal Biological Corridor

21. The planning and ordering of land use and the marine-coastal area integrated into the terrestrial landscape continues to be one of the main challenges facing Panama for proper management of its natural resources and the development of a productive model that integrates environmental considerations, including climatic considerations. that allow development in harmony with natural capital and that guarantees the provision of ecosystem goods and services in the long term.

22. According to the diagnosis on the cover of forests and other forest lands in Panama prepared by MiAmbiente in 2019, the province of Chiriqu? has recovered some 4,341.86 ha. between the period from 2012 to 2019, but it continues to be one of the provinces of Panama (fourth out of nine) with the least forest cover in its territory, with only 5.5% of its surface under forest cover and 38% is under the category of pastures. Additionally, the province of Chiriqu? is the second province with the largest number of hectares in transition from forests to agricultural crops with some 5,146.63 ha between 2012 and 2019. In the case of the PCAG, one of the greatest threats facing the integrity of the landscape is the high fragmentation of the low and medium lands.

23. The province of Chiriqu? is the fourth largest province in Panama according to its surface area (6,548 km2). According to the MiAMBIENTE study, most of the forest cover is in areas higher than 1,200 meters above sea level and in mangroves. In the case of the PCAG, precisely the lower and middle parts of the PCAG are the most degraded by agricultural activities, as can be seen in the map of the study area (Map 2).



Map 2. Land Cover and Use in the Landscape of the Gualaca Altitudinal Corridor

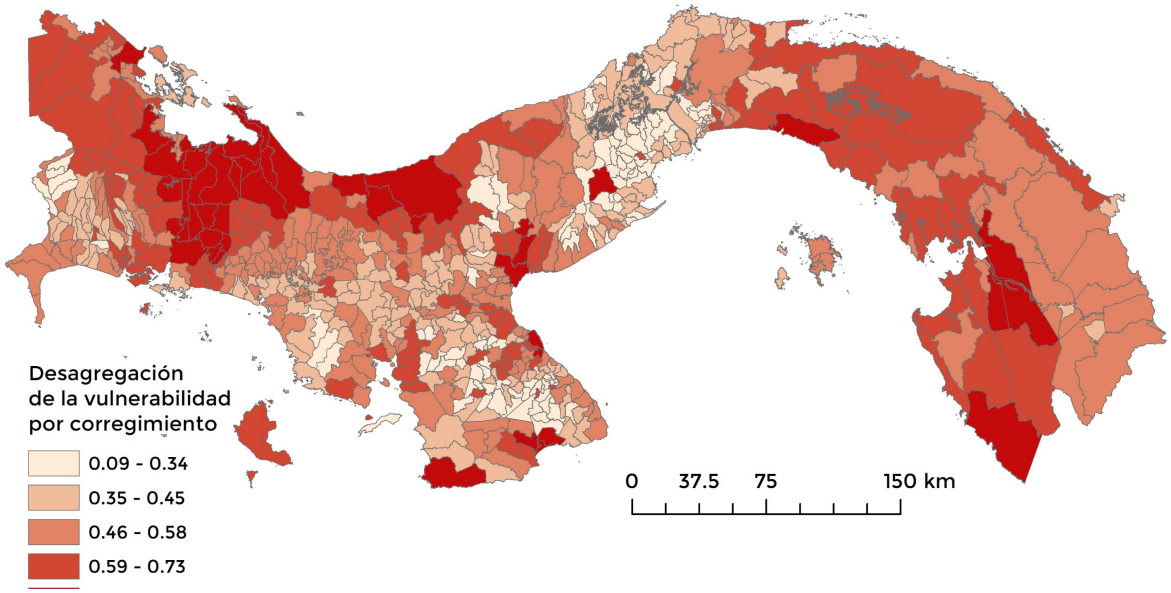
24. Climate change is another important factor to consider as a threat to biodiversity and the integrity of the PCAG. According to the national Climate Change scenarios, for the Gualaca Altitudinal Corridor Landscape, located in the Western Pacific Climatic Region of Panama, the following impacts and effects of Climate Change are expected:

? Greater frequency of extreme precipitation phenomena: greater susceptibility to floods and landslides, damage to crops by windstorms, runoff, water contamination, spread of pests and diseases to crops.

? Increase in the frequency, intensity, and duration of droughts: they cause effects such as soil degradation, availability of water for communities and agricultural activities, loss of crops and damage to livestock.

? Rise in sea level and tidal waves: exposure to marine intrusion, flooding, damage to crops, damage to homes and infrastructure.

25. On the other hand, according to the vulnerability index to Climate Change in the Republic of Panama, the vulnerability breakdown map by townships shows that most of the townships in the study area present high vulnerability indices (0.46 - 0.58) to very high (0.59 - 0.73) so the incorporation of adaptation actions through nature-based adaptation are key tools to strengthen the resilience of production systems to the effects of climate change.



Map 3**:** Disaggregation of vulnerability by corregimiento in the Republic of Panama

Causes of the main threats and those that affect the loss of biodiversity

26. As part of the preparation process for this project, the main causes of threats to biodiversity and the integrity of the PCAG landscape were validated with the beneficiaries and stakeholders. These threats include i) the expansion of cattle ranching and agriculture; ii) use of unsustainable and inefficient agricultural practices; iii) illegal logging; iv) illegal and unregulated fishing; v) the development of incompatible infrastructure and vi) soil depletion due to bad practices and lack of consideration of the agroecological capacity of the soil for the development of productive activities.

27. Expansion of livestock and agriculture. Habitat fragmentation and loss is largely due to agriculture activities across the project area resulting in deforestation as the agricultural frontier expands. In the project area, an estimated 50,000 ha are dedicated to agricultural activities (rice, coffee, beans, plantains, pineapple, oil palm, among others), and more than 68,000 ha are dedicated to livestock grazing[27][27].

28. Typically, expansion of agricultural land takes place through conversion of natural forest, causing a significant negative impact on biodiversity[28][28]. Although most of the deforestation occurs outside of protected areas, the impact on biodiversity remains significant. The loss of key forest cover (cloud forest, deciduous and semideciduous forest and mangrove) reduces or removes connectivity between important biodiversity areas and directly affects species that require large ranges and foraging habitat, for example the jaguar, puma, tapir, and collared peccary.

29. The landscape fragmentation analysis carried out by Barsev (2017)[29][29] for the study area shows a high number of fragments for the different categories of cover and land use, concentrating most of them in the lower and middle zone of the study area. For example, the shrubby vegetation that represents 12.44% of the study area presented a total of 38,463 fragments and the pastures and agricultural areas that occupy 33.48% of the area presented a total of 29,678 fragments (see Map 2).

30. Unsustainable and inefficient agricultural practices. This threat is associated with the first one presented above. The lack of technical and financial assistance to producers in the region does not facilitate the widespread adoption of more efficient, profitable, and sustainable production practices. Current agricultural practices are unsustainable because they do not consider biodiversity conservation. Most producers continue to implement the same practices they learned from their parents such as slash-and-burn, use of agrochemicals, many of which harm biodiversity, pollute water sources, and even affect soil viability and productivity. This situation is pervasive across all the PCAG, but it is notably more intense in the middle basin.

31. Illegal logging. Whether for commercial or subsistence purposes, illegal logging has an impact on the biodiversity in the upper basin (cloud forest), middle basin (deciduous and semi-deciduous forest) and lower basin (mangrove forest and associated ecosystems) of the PCAG. The threat becomes more serious if we consider that the authorities do not have the necessary resources to carry out effective

control and surveillance actions. Illegal logging occurs more frequently outside protected areas but continues to happen within protected areas for species of high commercial value.

32. Illegal or unregulated fishing. While poaching in protected areas remains a concern, the main threat in the region comes from the unsustainable extraction of fishery resources. In recent years, various threats to natural resources have been identified at the landscape level: extraction of turtle eggs, industrial fishing within the limits of protected areas, extraction of black clam below its minimum size, among others. The use of unsustainable fishing gear in the region, together with the failure to comply with seasonal bans, is causing over-exploitation of commercially viable fish species and thus a decrease in the populations of these species. These factors put at risk the marine biodiversity, the income sources of local fishermen, as well as the food security of the communities that depend on these resources.

33. The development of incompatible infrastructure: Infrastructure such as roads, ports, hydroelectric dams, among other works, constitute a significant threat to biodiversity. This threat is aggravated if, from the design stage, actions that reduce or mitigate these threats and compensation actions that allow strategic investments for conservation, recovery and management of biodiversity are not incorporated. The case of the Inter-American highway in the province of Chiriqu? constitutes a clear example of incompatible infrastructure in the PCAG, since by including a perimeter wall or Jersey to divide both directions of the highway, the passage of biodiversity is blocked and by retaining them increases the risk of death of fauna by run over. Considerations to mitigate these impacts were not adequately dimensioned, so it is common to see different individuals killed by run over in very short periods of time. The study carried out by Rodr?guez[30][30] in 2023 made it possible to measure in numbers the impact on biodiversity that this road has and that has been denounced by different Civil Society organizations. Rodr?guez registered a total of 180 individuals of mammals, birds and reptiles distributed in 32 species, killed by vehicles that transit the Inter-American highway between November 2020 and April 2021 and proposes different measures to mitigate or reduce the death of biodiversity by hit on this road.

34. Loss and impoverishment of the soil: Most of the loss and impoverishment of the soil occurs due to bad productive practices and the non-consideration of its agroecological capacity for the development of these productive activities. A significant proportion of the land in the study area is degraded or impoverished due to the lack of planning instruments and the development of activities that are incompatible with soil conservation, such as: the use of incompatible production models (slash and burn), overgrazing and unregulated use of agrochemicals. On the

other hand, the lack of monitoring of the state of the soil resource does not allow having information to guide its management, the limited technical capacity of the producers limits the integral management of the soil resource, the few extension services and technical advice limit the incorporation of solutions. based on nature and the use of technology that can contribute to a better management of the soil resource. In addition, the effects of global climate change, such as heavy rains, droughts, and storms, can further aggravate soil degradation and loss through runoff and erosion.

Main Barriers to Integrated Landscape Management

35. Through consultations with key actors, several main barriers were identified as challenges for project implementation. The barriers identified were i.) Lack of territorial planning under a landscape approach ii) limited management capacity in protected areas; iii.) Weak Governance; iv.) Lack of knowledge and capacity; v.) Lack of sustainable alternatives for local producers.

36. Barrier 1: *Lack of integrated territorial planning under a landscape approach*. A landscape management approach has not been applied to the PCAG area. Although isolated planning and management efforts for land and marine-coastal ecosystems exist, there is no landscape-level vision that considers connectivity and harmonization of conservation and production policies, laws, and regulations. Hence, without policies that recognize and accommodate connections and dependencies between natural and productive systems there is a fundamental lack of integrated planning efforts. There is weak coordination between multiple government institutions and their investments in the area which makes it a challenge to effectively align economic activities with biodiversity conservation goals. Planning and development of infrastructure in the landscape of the Altitudinal Corridor of Gualaca lacks environmental considerations and green - grey infrastructure is not considered as an alternative that contributes to diminish impacts of infrastructure on biodiversity.

37. The project proposes implementation of a Gualaca Altitudinal Corridor landscape plan that harmonizes development needs of the productive sector with conservation criteria that maintain and improve the provision of ecosystem goods and services across the upland, coastal and marine socio-ecological gradient.

38. Barrier 2: *Limited management capacity in protected areas.* The implementation of management actions within protected areas is perceived as inadequate due to insufficient budget, personnel, and equipment, as well as planning, monitoring, and financial management instruments, among other elements[31][31]. Except for the Fortuna Forest Reserve which has a specific management scheme, the other four of five protected areas found in the PCAG do not

have updated Management Plans or enough resources for their effective management. Additionally, none of the protected areas (PAs) have adopted a landscape approach in their planning. The project will support mainstreaming of landscape planning in protected areas and undertake a series of activities designed to address management capacity, cross learning, and economy of scale in and between protected areas.

Table 3 Protected Areas of the Landscape of the Altitudinal Corridor of Gualaca

Protected Area	Number of Terrestrial Ha	Number of Sea Ha.	Total Extension (ha.)	IUCN Category	Year of creation
Gulf of Chiriqu? Marine National Park	1,474	13,266	14,740	II	Gaceta Oficial N? 22.6177 December 1994.
Wildlife Refuge Playa La Barqueta Agr?cola	2,979	3,725	6,704	IV	Gaceta Oficial N? 22.6177 September 1994.
Wildlife Refuge Playa Boca Vieja	0	3,740	3,740	IV	Gaceta Oficial N? 22.6177 September 1994
Managed Resources Area of David Mangrove	16,702	0	16,702	VI	Gaceta Oficial N? 25.884 25 September 2007
Fortuna Forest Reserve	19,500	0	19,500	VI	Ley No. 18 9 April 1976.
TOTAL	**40,655**	**20,731**	**61,386**		

39. Barrier 3: *Weak governance*. Despite prior efforts looking to reduce pressures in protected areas and buffer zones to encourage connectivity, there are in practice no functional biological corridors yet in Panama. In part this is a result of the absence of an appropriate and inclusive governance structure that ratifies objectives, evaluates function, and ensures their long-term management.

40. The governance structure currently in place for the PCAG region follows that defined for the country with distinctions by provinces and indigenous lands, subdivided into districts and

?corregimientos? which represent smaller geographic units. In this scheme, different governmental actors interact at different levels (national, regional, local) orientated by their institutional goals, without a more holistic vision and platform that allows them to coordinate and synergize. Although there are some initiatives created for this purpose, such as the basin committees and the environmental advisory commissions established by the General Environmental Law, these commissions are not very active and do not have planning tools for the fulfilment of the roles for the which were created.

41. The project proposes to engage the existing drainage basin committees into a landscape governance structure of the Gualaca Altitudinal Corridor via a stepwise multi-sectorial process between PCAG stakeholders.

42. Barrier 4: *Lack of knowledge and capacity*. The facility of authorities (national and local) to design policies and regulatory frameworks with a landscape approach is yet limited. There is no inter-institutional coordination for adequate territorial management that serves to integrate productive, social, and environmental components. Also, local stakeholders are largely unaware of the value of biodiversity and associated ecosystem benefits and how their loss affects human well-being.

43. Agricultural land use often does not consider the agroecological capacity of the soil for different crops. The implementation of non-sustainable fishing gear (trawls, the use of explosives), the lack of compliance with closure periods for fished species and a lack of respect for minimum catch sizes are pervasive problems across coastal areas of the PCAG that reduce community resilience and biodiversity through associated ecological impacts. Additionally, the destruction and contamination of mangroves and reef habitat in the region affects the reproduction and recruitment cycles of fishery species. The absence of clear harvest control regulations impacts the quality and quantity of goods and ecosystem services across the PCAG, influencing the quality of life of local communities and increase local extinction risk.

44. Barrier 5: *Lack of sustainable alternatives for local producers*. Land use practices in the PCAG lack a landscape planning approach. Subsistence agricultural and fishing practices are often applied with little or no consideration of biodiversity and the integrity of natural ecosystems. The lack of sustainable and profitable alternatives for local farmers and fishers as well as the absence of an integrated planning that considers environmental and sustainability criteria prevents them from changing their production patterns into biodiversity-friendly ones. No models for management plans and no clear criteria exist for biodiversity-friendly and profitable farms and fisheries for the specific circumstances in the PCAG area.

2) The baseline scenario and any associated baseline projects

45. The PCAG Landscape is characterized by being an area with a high biological richness made up of five protected areas that are managed in isolation and without a vision of integration into the landscape that provides ecosystem services that are key to maintain the productivity of livelihoods. of the communities settled in this landscape. Since 1998, with the National Proposal for the Plan for Protected Areas and Biological Corridors of Panama, an integrally managed site (landscape vision) was envisioned that would allow connectivity through different altitudinal floors, which would facilitate the movement of biodiversity and the provision in the long term of environmental services at this site. Twenty five (25) years later, it is still necessary to develop planning and territorial ordering tools, to strengthen Governance with a more comprehensive vision (landscape) and to have financing to promote a different development management that includes environmental considerations in this diverse landscape.

46. Gualaca Altitudinal Corridor Landscape: The site does not have a planning and/or ordering tool for the soil and/or the coastal-marine area at the scale of the landscape or part of the landscape. The hydrographic basins of the R?o Chico (106), R?o Chiriqu? (108) and the R?o Fonseca basin and between the R?o Chiriqu? and the R?o San Juan, which are part of the landscape, do not have a detailed diagnosis, an environmental territorial ordering plan, or basin management plan. In the case of the R?o Chico basin, this basin with its Basin Committee formed since April 2016[32][32]. The Chiriqu? River basin has its Basin Committee formed since May 2016[33][33] and the Fonseca River basin (between the Chiriqu? river and the San Juan river) has had its Basin Committee since December 2018[34][34]. The landscape has a strategic plan developed by CATIE[35][35] with funding from Conservation International that establishes the need to mobilize resources for the implementation of this strategy, including the creation of a governance structure . In the absence of this project, it would not be possible to develop a planning instrument with a landscape approach that includes the terrestrial part and the coastal marine part with a comprehensive vision of the landscape taking into account their interactions and threats, the governance structure would have serious limitations to be formally established. and contribute to landscape management through the planning tool and strategy developed by CATIE.

47. Protected Areas: The National System of Protected Areas does not have a formally established strategy. Many of the protected areas within the PCAG do not have management plans, or they are outdated. The PCAG includes a total of 4 legally constituted protected areas and one in the process of legal establishment (David's Mangroves) that are currently not adequately managed and lack the financial resources to improve their management. These areas have a total area of

61,386 ha, including Mangroves of David (16,701.88 ha), Fortuna Forest Reserve (19,500 ha), Golfo de Chiriqu? Marine National Park (14,740 ha), La Barqueta Wildlife Refuge (6,703.67 ha) and Boca Vieja Wildlife Refuge (3,740 ha). In absence of this project the management of these protected areas will be isolated, the threats very likely to continue and even increase, and it will be more difficult to integrate and potentially reconnect each management unit into a broader sustainable landscapes vision over time as adjacent industry and agriculture infrastructure develops. The effectiveness of protected areas to prevent biodiversity loss as refuge areas under climate scenarios will be reduced if they are not considered as part of a complementary network. These networks should also consider important biodiversity challenges and the effectiveness of ?spill over? effects outside of those same areas.

48. Agriculture: Agricultural activities which were for many years the main activity of the region are declining. Low yields and the lack of access to markets are causing many of the children of farmers to consider more profitable activities such as trade, construction, or tourism. The farmers who remain continue to replicate inefficient and unsustainable practices. Agricultural production in the area occurs without planning and often without considering the agrocological capacity and environment. The farmers in the project area do not have the management guidelines, adequate technical extension services and/or the financing necessary to make the required changes needed, particularly to produce in a biodiversity-friendly way. The continued use of unsustainable production practices affects biodiversity conservation and ecosystem services in the area. Poor farming practices are contributing to the extinction of highly sensitive species such as amphibians.

49. There are districts within the PCAG that are within protected areas or have important extensions of mangroves under special protection regimes, where the change in land use is restricted and land previously dedicated to agricultural use has been recovered (See Map 2, part high and low GCP). But there are also districts in the lower-middle part of the PCAG where the main driver of the loss of coverage in recovery is agriculture and livestock. In this sense, traditional agricultural activities continue to be carried out with unsustainable methods (slash and burn) in areas of bushes or stubble in recovery and in transition to forests.

50. Fishing: Fishing is an important economic activity for coastal communities in the project area. It is estimated that only in the districts of Remedios, San Felix, and San Lorenzo about 450 people are engaged in fishing activities. Fishing is a key element for food security of some 2000 families in the coastal zone; people who mostly live below the poverty line. However, illegal fishing, fishing with non-permitted gear and not respecting the minimum sizes of catch, is generating the depletion of the resource. No clear management guidelines exist for biodiversity-friendly fishing practices. In absence of this project unsustainable fishing practices will continue in the area, depleting the resources and reducing ecosystem stability.

51. Connectivity: In recent years, the level of landscape fragmentation has increased due to the absence of policies and incentives that promote the protection and restoration of ecosystems. Although different initiatives have been developed to promote biological corridors in the country, Panama does not yet have a corridor formalized, recognized by its constituents and managed. The project's contribution is to establish the first formal biological corridor in Panama that is managed by a representative multisector governance structure using a sustainable landscape approach and where public-private investments are aligned to contribute to improving productivity and conserving and restoring ecosystems, and with it the goods and services that these ecosystems provide to people.

52. Governance: The project area lacks a governance scheme that effectively incorporates all existing government and non-government agencies and would allow a comprehensive vision for development of the region. Central government agencies (e.g., Ministry of Environment, Ministry of Agro-development, Ministry of Health, Ministry of Public Works, Aquatic Resources Authority) do not coordinate with each other or with local government (e.g., municipalities, counties). The private sector promotes development alternatives which are not necessarily compatible with the interests or needs of other stakeholders. The project will install a governance structure for the landscape management of the Altitudinal Corridor of Gualaca and will develop tools that will facilitate their work and will generate landscape changes.

53. Financing: There is no reliable information on the financial situation of Protected Areas in Panama, except an analysis of financial needs undertaken for the National System of Protected Areas years ago. Some PAs prepare annual operational plans that, rather than responding to the priorities and needs established in the corresponding management plans, are adjusted to the budget assigned by the Ministry. The project will support annual finance planning and undertake priority actions to be determined during the planning process. The project will also work on mechanisms for financial sustainability, capacity building, and technical guidance to create better conditions for landscape management. A key factor for the success of the governance structure and to maintain the landscape management vision in the long term will be the establishment of a financial mechanism as part of the financial sustainability strategy of the project. This will guarantee the sustainability of the governance platform and its long-term operation.

Baseline ? Related Projects

54. There are many projects and investments related to forests conservation and sustainable fishing, management of natural resources and protection of biodiversity, productive sector improvement, and indigenous peoples in the project area. Some of these projects are detailed in the table below.

Table 4 Baseline ? Related Projects

Project	Description (figures in US dollars)	A brief description of how it is linked to the proposed GEF project
Sustainable Production Systems and Conservation of Biodiversity	**GEF 5546 (2015-2019)** Aimed at consolidating the results obtained from the "Rural Poverty and Conservation of Natural Resources" (PRCRN, loan 4158-PAN), the "Atlantic Mesoamerican Biological Corridor" (CBMAP, GEF TF020454) developed in 2003-2007, and "Rural Productivity Project" (loan 7439-PA) partially combined with the "Rural Productivity and Consolidation of the Atlantic Mesoamerican Biological Corridor" project developed 2007-2014. This project contributed to the protection of 36,126 hectares in 12 protected areas. **Total value: $28,969,000**	This project seeks to strengthen the effective management of some protected areas and create connectivity areas in buffer zones of some of the PAs (Amistad, Bar? Volcano, San San Pond Sak, Fortuna, and Bastimentos).
Towards Joint Integrated, Ecosystem-based Management of the Pacific Central American Coastal Large Marine Ecosystem (PACA)	**GEF 10076 (under development)** Aimed at promoting ecosystem-based management of the Pacific-Central American Large Marine Ecosystem (PACA) through the strengthening of regional governance. This is a regional project which includes seven countries. **Total value: $6,877,626 (GEF)**	This project will develop the regional collaboration framework for PACA, including Panama?s territorial waters. It includes a regional pilot on coastal and marine spatial planning that has a site in the Gulf of Chiriqu?.

Project	Description (figures in US dollars)	A brief description of how it is linked to the proposed GEF project
Protection of Reserves and Carbon Sinks in Mangroves and Protected Areas of Panama	**BMUB ? IKI-UNDP (2013 ? 2018).** Funded by the German government, the project includes the mangrove swamps of the San Lorenzo, San Felix, and Remedios districts in the Gulf of Chiriqu?. The area is threatened by timber extraction, expansion of the agricultural frontier and pollution. These activities endanger the carbon stock and the biodiversity of the mangroves, diminishing their capacity to continue providing vital environmental services for coastal communities. This project, includes three components: the strengthening of protected areas and special management zones by incorporating local and municipal areas, biological corridors and other priority areas; the generation of scientific research and studies that promote the use and rational management of mangroves and associated ecosystems; and pilot programs for managing mangroves and associated ecosystems to maximize their potential for climate adaptation and carbon sequestration **Total value: $2,900,000**	The work completed by this project furthered knowledge of mangroves in the Pacific area and its relationship with the ecosystems located in the middle and upper watersheds. This knowledge was used as a reference for the design of the GEF proposal.
Marine Program for the Eastern Tropical Pacific	**Conservation International (2004-present)** This program covers the entire coastal-marine zone of the Pacific coasts of Costa Rica, Panama, Colombia, and Ecuador. CI's work has been focused on the restoration of critical coastal areas, working to change destructive fishing practices such as overfishing and trawling and coordinating cooperation among the governments of these four countries to create a more sustainable the Pacific Ocean. In Panama, the project is aimed at conserving protected marine-coastal areas in the Gulf of Chiriqu? (Montijo, Coiba, Gulf of Chiriqu?, Mangroves of David), recovering coastal community fisheries in the Gulf of Chiriqu? and conserving mangrove forests in the Gulf of Chiriqu?. **Total value: $6 million**	The conservation of mangroves and their associated ecosystems goes beyond the coastal marine areas. After more than ten years of work in the area, this program has concluded that the greatest pressure on these ecosystems comes from the middle and upper elevations of the PCAG. To face these challenges, Conservation International has tested innovative solutions and instruments in other areas of the region and the planet. Some of these instruments are Planning with a Landscape Approach, Conservation Agreements, Conservation Finance, and Watershed Health Index, among others. These tools will be applied in this project as part of the actions to conserve biodiversity and enhance sustainable production in connectivity areas.

Project	Description (figures in US dollars)	A brief description of how it is linked to the proposed GEF project
Agricultural Master Plan of the Western Region of Panama (PMARO)	**The Agricultural Master Plan for the Western Region (PMARO)** was prepared with support of CAF and consists of six cross-cutting programs, vertical value chain programs, business plans, and investment projects, and organizing public and private institutions for project development, as well as a system for monitoring and evaluating results. The total investment required is $155 million. The first trench of investment is a loan of$27.6 million from CAF that initiated implementation in 2019. **Total value: $27.6 million**	This project has been working closely with the PMARO coordinators to convert the PCAG into a development model to be replicated in the region. The project expects to align the results of C1 and C2 expected in this project with the PMARO interventions planed for the project area.
Support for the National Indigenous Peoples Development Plan	**World Bank (2018 ? 2023).** This project aims to strengthen the capacities of the indigenous authorities and the government of Panama to jointly plan and implement development plans and programmes in the 12 indigenous territories of the country. The project supports the implementation of the National Indigenous Peoples Development Plan. The project is financed with a loan of the World Bank. **Total value: $80 million**	This project will strengthen the capacities of indigenous authorities to undertake development actions. This will in turn will contribute to the conservation efforts in the Altitudinal Gualaca Corridor
Agricultural Transformation Project	**The government of the Republic of Panama (2001-present)** Law No. 25 of June 4, 2001, which dictates the provisions on the National Agricultural Transformation Policy, currently consists of an administrative and financial support tool aimed at improving productivity, competitiveness, and the overall development of the agricultural sector. **Total value: $43.6 million**	This project will coordinate with the Ministry of Agricultural Development to ensure they are part of the governance platform created for PCAG and that part of the financial resources for productive activities are channel to the project area to implement the biodiversity friendly farm and fisheries model management plans designed in this project.

Project	Description (figures in US dollars)	A brief description of how it is linked to the proposed GEF project
Improving mangrove conservation across the Eastern Tropical Pacific Seascape (ETPS) through coordinated regional and national strategy development and implementation	**GEF-WWF/ CI (2016-2019) GEF 5771** This project fits within the framework of existing initiatives, where regional-scale projects and national investments have contributed to establishing conditions that help in the success of mangrove conservation. On-the-ground conservation efforts that are linked to the development of sustainable societies present an opportunity to help strengthen the link between safeguarding local livelihoods and the improved practices that underpin the resource. Despite the challenges, the governments of the ETPS countries are generally more willing and committed to supporting conservation efforts, recognizing to some extent the role and general value of ecosystems for human well-being. Even so, most of these efforts operate on a small scale, and we continue to see losses due to lack of application, coordination, and capacity at all scales. **Total value: $6,588,741**	The Panama component of national work undertaken by this project included a feasibility analysis and construction of a development model for conservation and sustainable use of biodiversity across the Altitudinal Gualaca Corridor landscape, based on active participation of key stakeholders (central government, local governments, private sector, universities, producers, NGOs, community groups). The project proposed will used the results of the ETPS project as baseline to continue the work in the Altitudinal Gualaca Corridor Landscape.
Ecosystem-Based Biodiversity Friendly Cattle Production Framework for The Darien Region of Panama.	**GEF-CAF/ANCON (2020 - 2024) GEF 9589** The project aims at establishing an ecosystem-based biodiversity-friendly cattle production framework for the Darien Region of Panam?. Specifically, the project seeks to ensure that conservation-oriented Silvopastoral Systems (SPS) are adopted in cattle farms and the productive landscape of the Darien as part of biodiversity conservation and land restoration landscape model, while supporting cattle producers to obtain the technical know-how and managerial skills for implementing conservation-oriented SPS within cattle farms and productive landscapes. **Total Value: US$17,866,297**	This project seeks to reduce pressures on the Cangl?n Stem Edge Hydrological Reserve (RHFTC) through the transformation of traditional livestock farming to silvopastoral systems, while strengthening the management of this reserve. It also includes a study of land management and improvement of the connectivity of the RHFTC with other protected areas and ecosystems. The project is in its third year of execution, so its results, experience, and lessons learned can be of great value and useful for the PCAG GEF Project.

3) the proposed alternative scenario with a brief description of expected outcomes and components of the project;

Theory of Change:

55. The project's theory of change comes from a process of analysis with key stakeholders guided by experts. Based on the main drivers of threats and impacts, five key barriers were defined that must be overcome to achieve the objective of the project, which is "Improve the management of the Landscape of the Gualaca Altitudinal Corridor to benefit the conservation of biodiversity and promote the sustainable use of natural resources with a landscape approach".

56. In order to respond to these identified barriers, four strategic results were established, the first (1.1) has to do with establishing a plan that contributes to landscape management, strengthening its governance and establishing a financial mechanism that allows its long-term management. period to overcome Barriers 1, 2 and 3.

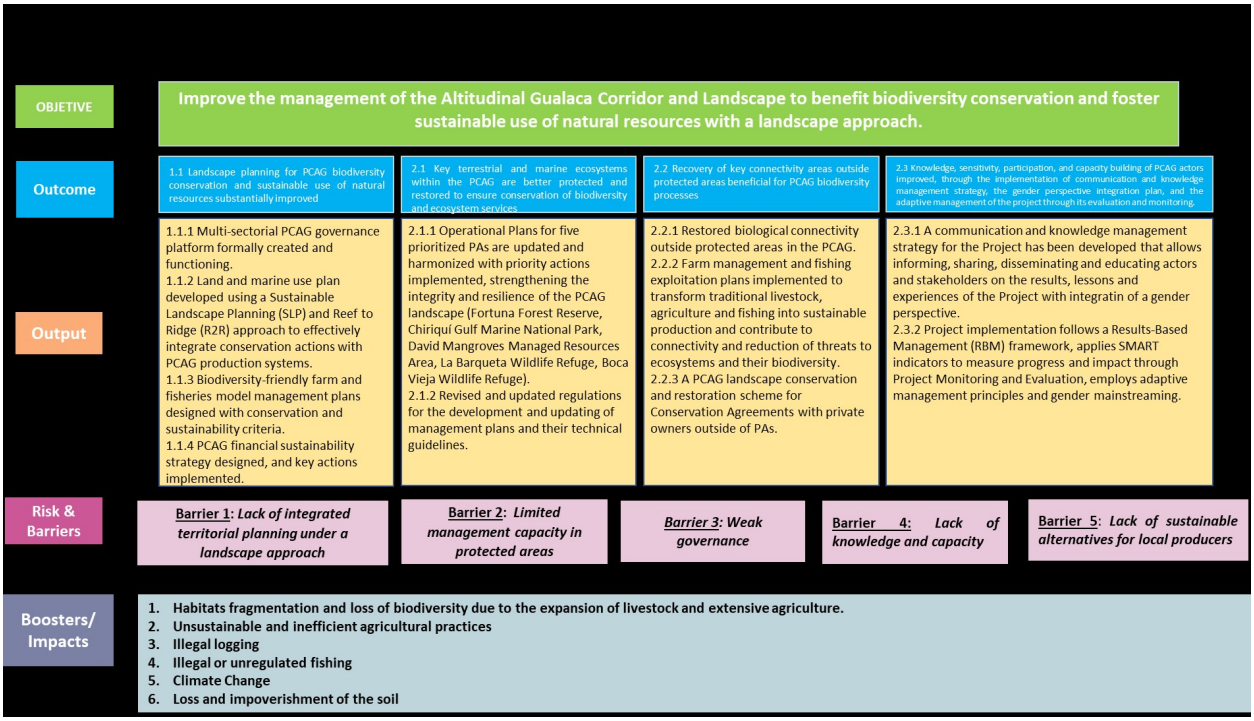
57. The second result (2.1) has to do with strengthening the management of PCAG protected areas and key regulations for their management related to Barrier 2.

58. The third result (2.2) addresses the strengthening of connectivity outside protected areas, which includes recovery actions for degraded areas and the reduction of threats generated by unsustainable productive practices through their conversion to sustainable productive practices to overcome Barriers 3 and 4.

59. The fourth result (2.3) addresses the communication and knowledge management actions of the project and the inclusion of the gender perspective, which are aimed at overcoming barriers 3 and 4.

60. In the project description section you can see more details about the description of the activities and their relationship with the barriers.

Theory of Change for the Landscape of the Gualaca Altitudinal Corridor



Project Description

61. The objective of the project is to improve the management of the Altitudinal Gualaca Corridor and Landscape to benefit biodiversity conservation and foster sustainable use of natural resources with a landscape approach. The landscape approach seeks to provide the tools and concepts needed to manage territories in a way that allows them to achieve social, cultural, economic, and environmental objectives in an area where agriculture and other productive uses of the land compete with environmental and biodiversity conservation objectives.

62. The project will be divided into two components. Component 1 will focus on "Strengthening the governance for biodiversity conservation and sustainable use of the PCAG," considering the levels of coordination of actions and investments in the landscape and Component 2 will work on "Improving the conservation of biodiversity and ecosystems within the PCAG", through the generation of information and the planning necessary for decision-making regarding the management of protected areas and key sites for the protection of biodiversity, and improve connectivity through reforestation and landscape restoration. In addition to mitigating the threats to the PCAG and its biodiversity through the conversion of traditional productive activities such as agriculture, livestock and fisheries to sustainable productive systems.

63. The project will be developed under a vision of comprehensive execution with adaptation based on results and supported by transversal tools, such as a Communication and Knowledge Management Strategy, a Gender Action Plan and a Project Monitoring and Evaluation Plan.

Project Components

64. Component 1. Strengthening the governance for biodiversity conservation and sustainable use of the PCAG (BD: US$ 439,000). This component will generate a planning process with a landscape approach with key actors. A functional governance platform will be established that will integrate actors and stakeholders with considerations of gender inclusion and vulnerable groups for the preparation and implementation of the Sustainable Landscape Management Plan of the Gualaca Altitudinal Corridor that will have a financial sustainability tool that will allow to continue with its management beyond the end of the project. The integration of the gender perspective will be taken into account in the development of this component, including the representation of women, youth and indigenous representatives in the constitution of the PCAG governance platform and in the consultation processes for the development of PCAG financial sustainability planning and strategy tools.

65. The analysis and establishment of a figure for the management of Corridors or Landscapes will allow the regulatory support of this figure of comprehensive management of a differentiated area that has a management vision at landscape scale and a differentiated governance structure.

66. The farm management plans and the use of fishing resources will allow the beneficiaries to recognize the natural capital of their farms or use areas and incorporate good productive practices that allow them to improve their productivity for their best economic benefit (greater inputs) and social benefits (such as food security and water security) and develop actions for the conservation of water, soil, biodiversity and connectivity, contributing to the CAG landscape management approach.

67. *Barriers Addressed by Component 1*. This component addresses four of the barriers identified in our analysis: the development of a landscape-focused planning process for the Gualaca Altitudinal Corridor (Barrier 1); strengthening of landscape governance with the creation of an articulation platform with a landscape vision that transcends the limits of protected areas, integrating other institutional actors (Ministry of Agriculture) and civil society (producers and community organizations) (Barrier 3); strengthening of knowledge (MIDA and ARAP technicians) and local capacities in the field (beneficiary producers) for the preparation of management plans for sustainable agricultural production and sustainable fishing use (Barrier 4) and the lack of sustainable alternatives for local producers (Barrier 5) through the incorporation of productive diversification on their farms in the farm planning process. To address these barriers, the project proposes the following outputs and outputs.

68. Outcome 1.1 Landscape planning for the conservation of PCAG biodiversity and the sustainable use of natural resources improved substantially. This result includes four output: *Output 1.1.1*) the multisectoral governance platform, *Output 1.1.2*) the Sustainable Landscape Management Plan of the Gualaca Altitudinal Corridor and its formalized regulatory framework, *Output 1.1.3*) farm management plans and sustainable use of fishing resources, which will allow progress with the local transformation of traditional production systems to sustainable ones, contributing to a new vision integrated management under the concept of sustainable landscapes and *Output 1.1.4*) the financial sustainability strategy; tools that will contribute to the effective management of the CAG Landscape supported under a regulatory framework.

69. Outcome 1.1 Landscape planning for the conservation of PCAG biodiversity and the sustainable use of natural resources improved substantially. This result includes four output: 1) the multisectoral governance platform, 2) the Sustainable Landscape Management Plan of the Gualaca Altitudinal Corridor and its formalized regulatory framework, 3) the financial sustainability strategy; tools that will contribute to the effective management of the CAG Landscape supported under a regulatory framework and 4) farm management plans and sustainable use of fishing resources, which will allow progress with the local transformation of traditional production systems to sustainable ones, contributing to a new vision integrated management under the concept of sustainable landscapes.

70. The sustainable landscape approach will consider three complementary actions to i) develop a landscape planning process through a participatory and inclusive process that considers the Reef to Ridge

(R2R) approach and climate-smart agriculture, ii) design and develop a platform of inclusive, equitable and participatory governance for the management of the sustainable landscape of the Altitudinal Corridor of Gualaca, iii) strengthen capacities in key stakeholders and sensitize the population about the importance of conserving natural resources as a way to maintain the ecosystem services that they provide. Target for outcome 1.1: 348,474 ha (terrestrial: 228,767 ha. and marine: 119,707 ha), of landscapes and seascapes under improved governance.

71. Output 1.1.1 Multi-sectorial PCAG governance platform formally created and functioning: PCAG multisectoral governance platform formally created and operational. As part of strengthening the governance of PCAG management, the multi-stakeholder platform will provide support and guidance to governments, community groups and companies in developing their formal and informal framework of rules, regulations, generally accepted practices, and processes. through which decisions are made. taken and implemented. The platform will foster coordination between the different levels of decision-making and stakeholders for the implementation of the landscape approach management in the project area.

72. The process for establishing the governance structure developed by CATIE-CI with the participation of actors and stakeholders that establishes an Executive Council for the PCAG and Coordination Tables for altitudinal floors (upper, middle, and lower part of the PCAG).

73. Output 1.1.2 Land and marine use plan developed using Sustainable Landscape Planning (SLSP[36][36]) and Reef to Ridge (R2R) approach to effectively integrate conservation actions with PCAG production systems. A comprehensive land use plan for both coastal-marine and terrestrial landscapes will be developed in the PCAG to incorporate conservation and production actions, making the two compatibles. A SLSP strategy identifies a set of objectives or results that stakeholders want to achieve to improve management and sustainably develop the scape, as well as a detailed set of activities to achieve them. Strategy targets include reducing threats, improving the status of natural resources, advancing the socioeconomic status of communities, building resilience to climate change, strengthening the enabling environment. It includes i.) Developing a thorough understanding of people + place; ii.) Establishing good governance through designing policies + practices; iii.) Effectively managing ecosystems services and productive systems; iv.) Ensuring benefits to people; v) capacity building and sensitization of actors and, vi.) Enabling, sustaining, and scaling impact. This land use plan will align with existing planning processes and will be used by the local stakeholders that will participate in the multi-governance platform.

74. As part of this process, the analysis of the regulatory frameworks related to the planning, ordering and sustainable use of landscapes is included, in order to establish a standard that gives legal support to the figure of "Sustainable Landscapes" or "Corridors" as an area (Landscape and/or Seascape) that has a

landscape planning tool and a structure that facilitates its governance and that integrates stakeholders and key actors in its management.

75. Output 1.1.3 Farm management plans and sustainable fishing exploitation plans are developed by the project and implemented by the beneficiaries. These plans incorporate criteria for biodiversity conservation, productivity improvement, adaptation to climate change and sustainability. Based on output 1.1.1, biodiversity-friendly farm management plans will be designed to include conservation and sustainability criteria and guidelines for farms and fisheries that are part of the project area while improving productivity for generate economic, social, and environmental benefits to the beneficiary families. These farm plans will be designed as an input for the area's farms and fisheries and to support the alignment of their productive activities and management of their natural capital with the CAG's Sustainable Landscape Plan. The management plans will also be aligned with the connectivity strategy and the financial sustainability strategy that aims to provide sustainable and biodiversity-friendly alternatives for producers.

76. The project will be coordinated with the Ministry of Agricultural Development to use the farm management plans as reference models to guide the work and investments of the agricultural sector according to PCAG's vision. On the other hand, the development of a fishing exploitation plan that will serve as a reference model for its investments in the area and its work with groups or associations of artisanal fishermen of the PCAG will be coordinated with ARAP.

77. Output 1.1.4 PCAG financial sustainability strategy designed, and key actions implemented. This Output includes the design of an Integral Financial Sustainability Strategy for the management of PCAG and that, in consensus with key stakeholders, implements some of the prioritized key actions. This strategy will consider, at least, the areas of governance, conservation inside and outside protected areas, sustainable production, and connectivity (restoration / reforestation) in order to maintain and improve the conservation of biodiversity and ecosystem services of the PCAG.

78. The establishment of the governance platform for the PCAG (Output 1.1.1), the development of planning tools at the landscape scale (Output 1.1.2) and at the farm scale (Output 1.1.3) and the financial sustainability strategy (Output 1.1.4) constitute key tools that, through their implementation, will impact through improved management on a total of 188,112 hectares of the Gualaca Altitudinal Corridor Landscape for the benefit of its biodiversity.

79. Component 2: Improving the conservation of biodiversity and ecosystems within the PCAG (BD: US$ 1,119,362). The ecological integrity and long-term viability of the region's landscapes will be protected and improved, repairing historical impacts, reducing and where possible eliminating threats and restoring ecological processes. It implies better management of the key priority areas of the

sustainable landscape of the Gualaca Altitudinal Corridor through the updating and harmonization of its management tools, and the reforestation and restoration of key areas of connectivity that will favour the conservation of biodiversity. This will contribute to reduce the impacts from climate change by strengthening resilience and adaptation. The integration of the gender perspective will be taken into account in the development of this component, including the participation of women, youth and indigenous groups as beneficiaries of productive activities and capacity-building, communication and awareness-raising processes.

80. This component also includes the design and implementation of the project's communication and knowledge management strategy, as well as the gender action plan, tools that will strengthen information, education, training, exchange and dissemination actions of the main results, experiences and lessons learned from the project integrating the gender perspective in all its stages with the inclusion of women and vulnerable groups in the benefits of the project.

81. *Barriers addressed by component 2*. This component addresses three barriers identified in the analysis: it will strengthen the capacity of the Ministry of the Environment to manage the main protected areas in terms of prioritizing efforts towards strategic actions (Barrier 2) and the weak governance that limits the decision making of all the actors and hampers a better management and planning of the territory, considering for example improving connectivity through reforestation and restoration actions for the sustainable use of its environmental services (Barrier 3). Additionally, through the implementation of the communication and knowledge management strategy that will seek to strengthen the capacities of the beneficiaries and technicians, in addition to educating and sensitizing stakeholders about the results, experiences and lessons learned from the project, with the inclusion of the gender perspective, Barrier 4 will be addressed.

82. Outcome 2.1. Key terrestrial and marine ecosystems within the PCAG are better protected and restored to ensure conservation of biodiversity and ecosystem services. The project will safeguard five priority protected areas and improve the connectivity between key core areas in the PCAG, through the development and implementation of a connectivity strategy that contributes to identify and prioritize reforestation and restoration actions among core areas with remarkable biodiversity ??and the provision of goods and ecosystem services. The prioritization of actions to strengthen the management of the PAs within the PCAG will be based on the priorities established in their management plans and operational plan that will update and harmonize with a landscape vision and the results of the application of a Protected Areas Management and Monitoring of Effectiveness tool. Targets for this outcome are: 61,386 ha (terrestrial: 40,655 ha and marine: 20,731 ha), of protected areas with improved management effectiveness.

83. Output 2.1.1. Operational Plans for five prioritized PAs are updated and harmonized with priority actions implemented, strengthening the integrity and resilience of the PCAG landscape (Fortuna Forest Reserve, Chiriqu? Gulf Marine National Park, David Mangroves Managed Resources Area, La Barqueta Wildlife Refuge, Boca Vieja Wildlife Refuge). The project will improve the effectiveness of the

management of five protected areas: David Mangroves (16,701.88 ha), Fortuna Forest Reserve (19,500 ha), Golfo de Chiriqu? Marine National Park (14,740 ha), La Barqueta Wildlife Refuge (6,703.67 ha.) and the Boca Vieja Wildlife Refuge (3,740 ha) - covering a total of 61,386 ha. To this end, annual operational plans will be updated jointly with the relevant authorities, incorporating the connectivity approach, and strategic actions of those updated plans jointly identified with the Ministry of Environment will be financed and implemented by the project. The project will support the updating of PCAG protected area management plans that the Ministry of the Environment decides to update, through complementary financial and technical resources.

84. Output 2.1.2 Revised and updated regulations for the development and updating of management plans and their technical guidelines. The project will support the strengthening of the management of protected areas and the National System of Protected Areas of Panama (SINAP) through the updating of regulatory frameworks and key tools for their management. To strengthen the management of key protected areas inside and outside the PCAG, it is necessary to strengthen its regulatory framework, which is why the Ministry of the Environment has prioritized the review and update of the tool called "Technical Guidelines for the preparation of Management Plans in Panama ? and the review and update of Resolution No. 170[37][37] of March 31, 2006, which establishes the procedure for the approval of management plans for protected areas and Resolution No. 617[38][38] of October 17, 2011 that modifies Resolution No. 170 It is essential to update this tool and its complementary regulatory framework, in order to adapt the procedure for preparing and updating management plans for SINAP protected areas and improve the efficiency and effectiveness in their preparation and updating according to the conditions and the new plans and policies developed by the Ministry of the Environment.

85. Outcome 2.2 Recovery of key connectivity areas outside the protected areas beneficial for PCAG biodiversity processes. The project will identify key areas to improve connectivity through reforestation and restoration actions of these critical habitats to benefit biodiversity and ecological processes in the PCAG. Sustainable agriculture, livestock and fishing actions will be incorporated to reduce pressures on biodiversity and contribute to the connectivity of the CAG landscape. The Target for this outcome is: 500 ha in degraded agricultural areas in priority connectivity zones restored and/or reforested; 500 ha. of forests and wetlands (mangroves) degraded, restored and/or reforested in priority areas of connectivity, and 1500 ha under Conservation Agreements with private owners.

86. Output 2.2.1. Restored biological connectivity in key outside protected areas within PCAG. 500 hectares of degraded agricultural areas in critical zone for connectivity in the landscape of the Altitudinal Corridor of Gualaca are recovered through reforestation and restoration actions of key ecosystems to favour biodiversity and ecosystem services in the project area, while productivity is improved in these agricultural farms. The priority intervention area is defined by the zone that connects the Fortuna Forest Reserve with the Finca Batipa Private Reserve and the adjacent mangrove complex. This priority area is defined by connectivity routes in accordance with the prioritization process developed by CATIE and CI

in 2018[39][39], which highlights the sub-basins of the Chorcha and Gualaca rivers that originate in the Fortuna Forest Reserve and connect with the Batipa Private Reserve. and the David and San Lorenzo wetland complex. This output also contemplates the recovery of 450 ha of degraded forests and 50 ha of degraded mangroves through reforestation or restoration actions in the priority connectivity area of the project and in accordance with the results of the connectivity strategy developed.

87. Output 2.2.2. Farm management and fishing exploitation plans implemented to transform traditional livestock, agriculture and fishing into sustainable production and contribute to connectivity and reduction of threats to ecosystems and their biodiversity. This output includes the implementation of farm management plans and a sustainable fishing plan prepared with beneficiaries. These plans are contemplated to be prepared by the project in Component 1 (output 1.1.3). The goal is to support the recovery of 500 ha. degraded by agricultural activities. The transformation of traditional cattle farms to farms under Silvopastoral Systems will contribute to the reduction of livestock pressures on biodiversity since management under a Silvopastoral System implies incorporating management actions such as the incorporation of trees in farms, installation of live fences, reduction in the use of agrochemicals, protection and management of water sources, incorporation of soil conservation techniques, installation of fodder banks, among other actions.

88. The transformation of traditional agricultural and livestock practices towards sustainable production systems (Agroecological Systems and Silvopastoral Systems) also implies the productive diversification of the farm (integral orchards, beekeeping, aquaculture, firewood, wood, and others) as a strategy for family food security and generation of income. income, which is key to overcome the lack of productive alternatives (barrier 5).

89. On the other hand, the project would promote the transformation of traditional slash and burn agriculture with significant effects on ecosystems and their biodiversity, to Agroecological Systems and/or Integral Orchards, which would reduce the incidence of slash and burn forests and stubble in the PCAG, improve productivity, contribute to family food security, improve income and incorporate women into productive activities. The project would also develop a model of sustainable fishing use with an organized group or fishing association. This would make it possible to improve fishing practices, incorporate actions to maintain the stock of the product or fishery products in the long term, develop actions to protect and improve ecosystems that are key to the fishery resource and seek better payment options for fishery products in markets. with sensitivity to these responsible fishing systems.

90. The project will provide technical advice for the preparation and implementation of management plans for the conversion of traditional livestock to silvopastoral systems and agroecological systems until completing at least the 500 ha. established in the goal. The

interested beneficiaries must finance the implementation of their management plan with their own resources or with agricultural credits that will be considered counterpart to the project.

? Silvopastoral Systems: With the support of MIDA technical staff, a total of four sustainable livestock model farms will be installed under the concept of Silvopastoral Systems supported with technical resources and strategic investments from the project, as well as contributions from interested beneficiaries. Good sustainable livestock practices will be incorporated that will help improve productivity while soil, water and connectivity conservation actions are incorporated in support the biodiversity of the area and other ecosystem services of the PCAG. Work will be done on the diversification of the farm and on other actions to adapt to climate change. These model farms will serve as field-schools for actions to strengthen training and exchange knowledge with other producers interested in the conversion of traditional farms under extensive models to farms under Silvopastoral Systems.

? Agroecological systems and integrated orchards: With the support of MIDA technical staff, seven sustainable agricultural production systems with adaptation to climate change will be developed under the concept of agroecological systems, integral orchards or house crops and incorporating efficient and low-cost technologies for the provision of water (water harvesting) and irrigation systems. Four sustainable production systems will be with interested beneficiaries in the priority area of the PCAG, one in the indigenous community of Zapotal and two in the schools in the area. These model farms will allow the strengthening of beneficiaries interested in replicating the model. Learning by doing techniques, exchanges of experiences, among other methods, will be used to train producers interested in changing traditional production methods that cause significant impacts on ecosystems and biodiversity, such as slash and burn, towards more environmentally friendly methods. The project will support with technical advice and strategic investments that will be complemented by the contribution of beneficiaries.

? Sustainable Fishing Use Plan: together with ARAP technical personnel, an organized group or fishing association will be chosen that is interested in developing a plan for the sustainable use of a fishing resource in the priority area of the PCAG. The plan will make it possible to improve fishing techniques with the incorporation of better equipment and the use of technology and the training of beneficiaries in the efficient use of this equipment and technology. The plan will consider actions for the protection and recovery of the ecosystems used by the fishery product during some phase of its development (biological cycle) and the beneficiaries will be trained in the implementation of the fishery management plan that allows the sustainability of the resource in the long term. Additionally, together with ARAP and other key partners, markets with better prices will be identified to place the fishery product(s) collected under the concept of responsible fishing.

91. Output 2.2.3 A PCAG landscape conservation and restoration scheme for Conservation Agreements with private owners outside of PAs. Using the landscape planning approach with other complementary planning tools, critical areas for connectivity will be identified, in particular: areas with remarkable biodiversity, areas of interest for the generation of ecosystem goods and services, and environmentally vulnerable areas given the pertinent climate change scenarios. To relieve pressure on ecosystems and

improve connectivity between core areas this output seeks to establish Conservation Agreements with local communities. Conservation agreements are voluntary arrangements between beneficiaries and investors (the project in this case) that encourage enduring nature stewardship through incentives. The pressure on ecosystems is reduced, and connectivity between central areas improved through the establishment of such Conservation Agreements with private landowners. The conservation agreements will encourage protection and restoration of forests and recover key ecosystems, effectively complement the conservation in the protected areas. As a result, ecosystem functions that support biodiversity across the broader region will be retained or restored.

92. Outcome 2.3: Knowledge, sensitivity, participation, and capacity building of PCAG actors improved, through the implementation of the communication and knowledge management strategy, the gender perspective integration plan, and the adaptive management of the project through its evaluation and monitoring. This outcome includes the design and execution of a comprehensive communication and knowledge strategy for the project that considers the key actors, stakeholders, and beneficiaries of the project. That also allows to inform, educate, and share key messages of the project, as well as results of the progress in the execution of the project, experiences and lessons learned with integration of the gender perspective and of vulnerable groups. This outcome also includes the monitoring and evaluation actions of the project under a results-based management approach, the adaptive management of the project based on analysis of the impact of results and lessons learned in the execution of the project and the implementation of the action plan for the integration of the gender perspective into the project. Targets for this outcome are: 200 beneficiaries trained in sustainable production disaggregated by sex; 25,000 people informed about the actions and results of the project and 10,000 people sensitized through awareness campaigns and 1,000 students trained through formal and non-formal environmental education processes disaggregated by sex.

93. Output 2.3.1 A communication and knowledge management strategy for the Project has been developed that allows informing, sharing, disseminating and educating actors and stakeholders on the results, lessons and experiences of the Project with integration of a gender perspective: The implementation of the communication and knowledge management strategy will allow a better understanding of the connections between social, ecological, economic and governance processes, as well as the benefits that the project offers through sustainable production models, and the protection and recovery of natural resources. This will be complemented with actions to strengthen the capacities and awareness of stakeholders with the integration of the gender perspective. The communication and knowledge management strategy will be developed and implemented, incorporating the results and products that the project generates. This strategy must identify key messages, as well as tools, means and strategic alliances that facilitate reporting, educating, sharing, and disseminating the experience and results of the project, as well as the development of awareness and education campaigns around the management of the PCAG. The Lessons learned from project implementation will be systematized and information disseminated with key stakeholders at local, regional, and national levels as a means of building capacity and sharing information that can amplify or inform other processes or decision-making. The systematization of information and dissemination will be part of this communication strategy of results, experiences, and lessons generated during project implementation. Producing different types of

communication materials and organizing specific events to disseminate the information is part of what this product provides to educate, sensitize, and inform the project's key stakeholders.

94. Output 2.3.2 Project implementation follows a Results-Based Management (RBM) framework, applies SMART indicators to measure progress and impact through Project Monitoring and Evaluation, employs adaptive management principles and gender mainstreaming: This includes the implementation of the Project Monitoring and Evaluation program under the Results-Based Management approach and the application and follow-up of SMART indicators that will allow measuring progress in the execution of the project and facilitate decision-making based on information (adaptive management). to improve its efficiency and effectiveness in the execution and expected impact. This output also includes the implementation of the Action Plan for the integration of the gender perspective in a transversal manner in all the activities carried out by the project and the strengthening of the capacities of women and vulnerable groups on basic concepts regarding gender equality and its importance. for the conservation of natural resources and the environment.

Alternative Scenario

95. The project aims to conserve unique national biodiversity by encouraging a sustainable and compatible use of natural resources across the Altitudinal Gualaca Corridor through a series of coordinated actions under a cooperative and participatory landscape planning approach. The intention is to reduce pressures and threats to the region's biodiversity through the design and implementation of a land-use planning mechanism that will allow sustainable use of its natural resources as well as by improving connectivity through conservation and restoration activities.

96. To achieve this objective, the project proposes two key strategic lines. The first relates to the strengthening of governance and application of landscape planning. The second strengthens the management of priority conservation areas (five protected areas) as well as the restoration of connectivity between these areas.

97. The key project contributions will be: i) Improved project area management by using a landscape approach for land and marine activities, ii) strengthened management of the five protected areas within the project area to support the Panama's National System of Protected Areas, iii) an integrated landscape planning model to guide local, regional and national actions through the land and marine use plans, iv) strengthened governance structures that contribute to the conservation of biodiversity and the maintenance of ecosystem services in the PCAG, v) improved awareness and capacity building for local actors, in particular children in primary and secondary level, women and indigenous communities, vi) increased financial sustainability for the integral management of the landscape, vi) improved connectivity in key areas that generate

tangible benefits for biodiversity through landscape restoration, vii) reduced pressures or threats that affect conservation of biodiversity in the long term.

98. With the support of the project, the financing strategy for the PCAG will be prepared, which includes the determination and management of financing alternatives to strengthen the management of the five protected areas of this landscape (output 1.1.4). Additionally, updating and harmonizing the operational plans of the five protected areas based on the results of the management effectiveness evaluation (output 2.1.1) will be key to prioritizing activities and defining strategic investments based on the results of the evaluation of management effectiveness of protected areas (METT), but it will also allow the identification of financing opportunities (internal: Ministry of Environment) and external (other institutions, NGOs, private sector) that complement the limited financing of the State budget and the project, becoming in mechanisms for the financial sustainability of the landscape and its protected areas.

4) alignment with GEF focal area and/or Impact Program strategies

99. The proposed project actions are aligned with the GEF 7 Biodiversity focal area. In particular, objective 1-1 Mainstream biodiversity across sectors as well as landscapes and seascapes through biodiversity mainstreaming in priority sectors, and objective 2-7 address direct drivers to protect habitats and species and improve financial sustainability, effective management, and ecosystem coverage of the global protected area estate of the GEF 7 Biodiversity Strategy The project is in line with objective 1 because it aims to reduce biodiversity loss caused from reduced connectivity and continued habitat loss, by improving management with a landscape approach. This represents an integrated approach to strengthen existing conservation tools to improve biodiversity management and use. Such considerations include strengthening the land and marine use planning, creating a governance platform for the project area and improve the management of five protected areas while supporting biodiversity conservation outside protected areas through restoration and reforestation of key connectivity areas that are important for the biological corridor of PCAG.

5) Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing

100. GEF resources will leverage additional funds (i) to strengthen governance of the PCAG area by implementing a landscape approach as means to enhance conservation and

sustainable use of biodiversity and (ii) improve biodiversity conservation of the PCAG area by improving management of protected areas and implementing reforestation and restoration actions in key connectivity areas defined for the PCAG. In addition, GEF resources will be invested into gaining experience and building in-country capacity into biodiversity conservation and sustainable use by building collaborative relationships with stakeholders, and to advance on building connectivity between inland ecosystems and coastal areas within the PCAG.

101. The incremental resources of the GEF will allow the development of a different territorial management scheme, with a Landscape approach, with the establishment of a structure to facilitate its governance and a financial sustainability tool that allows maintaining the management of this landscape with the support of the platform. long-term governance. The experience and lessons learned that this new management model will leave in Panama will be key to replicating this experience in other areas or scaling this management model.

102. GEF incremental resources will lead to a boost in the implementation of the Biodiversity Policy which is part of Panama?s National Environment Strategy and aims at integrating biodiversity conservation in socio-economic development and address key barriers, institutional and operational, in the process of establishing and implementing a landscape approach for biodiversity conservation in the PCAG area.

103. This project will take advantage of and build on the investments made by the Ministry of Environment, Ministry of Agriculture and previous GEF projects in biodiversity conservation and management of protected areas. It will also build on the investments made by the Government in the agricultural sector by improving land use planning and hence reducing pressure on natural resources. The project will create the conditions for synergic landscape management of the PCAG area through effective collaboration that links the national and regional government with the local communities.

Table 5 Incremental Cost Analysis Matrix

BASE LINE	**ALTERNATIVE**	**INCREASE**
(A)	(B)	(B) ? (A)
Component 1. Strengthening the governance for biodiversity conservation and sustainable use of the PCAG.		
Result 1.1: Landscape planning for the conservation of PCAG biodiversity and the sustainable use of natural resources substantially improved.		

There are no land use planning instruments prepared and approved within the PCAG, even though the actors are aware of their importance. MiAmbiente has made progress in recent years in establishing Basin Consultative Committees, but none of the Committees have a tool to guide their work. The impact of the pandemic on public finances will limit State investment in this type of instrument. On the other hand, farm management plans and sustainable fishing are instruments used in other areas such as the Chiriqu? Viejo and Santa Mar?a River Basins, but with very limited replication in the PCAG.	GEF resources will support the development of a landscape ?ordering? Plan using tools and concepts from Seascape, Landscape. R2R, and watershed management considerations. Additionally, the GEF resources will help to establish a governance structure for the integrated management of the landscape with the stakeholders, respecting the processes already developed by CI-CATIE with these actors, and will facilitate the process of establishing a strategy for financial sustainability and its implementation to maintain the coordination and decision-making work from the governance platform for the best management of the PCAG in the long term. On the other hand, the GEF will make it possible to advance in the preparation of Farm Management Plans for the agricultural and livestock part, as well as plans for the sustainable use of fishing resources. These tools will be key to improving farm productivity and integrating actions for better management and conservation of the farm?s natural capital (water, soil, biodiversity) while improving farm connectivity in the PCAG and reducing pressures on biodiversity.	A comprehensive Landscape Management Plan for the Gualaca Altitudinal Corridor has been developed and is being implemented by a Governance Platform made up of stakeholders that also has a financial sustainability strategy that allows them active participation and compliance with its management plan work in favor of the management of this landscape. At the local level, there are farm management plans and sustainable fishing use that allow improving the productivity of the farm for the economic benefit of the producing families through the implementation of good practices: while water, soil, biodiversity, and connectivity conservation actions are integrated that benefit the PCAG. The design and implementation of a Comprehensive Landscape Management Plan for the Gualaca Altitudinal Corridor will be monitored, evaluated, and its lessons learned will be systematized and shared for its potential replication in other subregions of the country. This constitutes an additional contribution that transcends the geographical area of direct impact of the project, contributing to the construction of alternative models of territorial development based on the principles of conservation and sustainable use of natural resources, social inclusion, and climate resilience.
Component 2. Improving the conservation of biodiversity and ecosystems within the PCAG		
Result 2.1 Key terrestrial and marine ecosystems within the PCAG are better protected and restored to ensure the conservation biodiversity and ecosystems services.		

The protected areas of the PCAG do not have updated management plans, their operational plans are limited to the planning of key program activities, such as the protection of these protected areas through patrolling, control and surveillance actions and they do not consider the importance and impact of protected areas on the landscape. The limited budget of the Ministry of the Environment means that the review and updating of regulations for the preparation and updating of management plans and their technical guidelines are postponed, despite their urgent need.	The GEF investment would improve the preparation of operational plans for protected areas and harmonize them with priority actions within the PCAG. Support the updating of management plans, as key management instruments for PA?s and facilitate the processes of review and update of key regulations for the System of Protected Areas of Panama (SINAP) such as the regulations for the development and updating of management plans and its technical guidelines.	The project contributes to improving the efficiency and effectiveness of the management of protected areas and their integration as key elements (core areas) of landscape management. For this, the key regulations for the management of protected areas are updated, as well as the tool that establishes the guidelines for the preparation and updating of management plans with an approach that integrates a much broader passage.
Result: 2.2: Recovery of key connectivity areas outside the protected areas beneficial for PCAG biodiversity processes		
The actions of reforestation and restoration of ecosystems in the PCAG are isolated and do not contribute to a strategy or plan that defines the best areas or zones to restore connectivity for the benefit of biodiversity and other important ecosystem services for the region. The importance of incorporate private owners into sustainable production connectivity schemes is recognized, however their incorporation is limited.	GEF investments can provide a process for the development of a connectivity strategy for the PCAG priority area, based on the use of geographic information tools. In this way the actions and investments of the project will be more cost effective to improve the connectivity of the landscape.	The project will demonstrate that the compensation resources for environmental impacts of the projects will have greater impacts when used in priority sites to improve connectivity and ecosystem services. This experience will be monitored, evaluated, and systematized and the lessons learned will be shared to be replicated in other areas of the country.
Result 2.3: Knowledge, sensitivity, participation, and capacity building of PCAG actors improved, through the implementation of the communication and knowledge management strategy, the gender perspective integration plan, and the adaptive management of the project through its evaluation and monitoring.		

There is not structured communication and public awareness mechanism for the PCAG that allows sharing results, tools, maps, experiences, lessons and disseminating awareness and education campaigns around the management of the PCAG and the integration of the gender perspective in a comprehensive manner to the PCAG. The actions of participation and inclusion of women and vulnerable groups are isolated, which does not contribute to closing the existing gaps in different areas between men and women.	The GEF alternative will finance the development and implementation of a communication and knowledge management strategy aimed at actors and stakeholders that will allow the sharing of results, experiences, lessons, educate and sensitize the actors through awareness and education campaigns around the management of the PCAG considering the gender perspective.	The communication and knowledge management strategies of the project will make it possible to inform and sensitize the Interested Parties (key stakeholders, beneficiaries) and citizens about the achievements made in the implementation of a Territorial Development Model based on Landscape management constructed on local needs. Proving to be an inclusive, efficient, and socially and environmentally profitable model, as well as sustainable and resilient to climate change.
Baseline cost: US$ 3.150.000	**Alternative Cost: US$ 14.284.802**	**Increased cost: US$ 11.134.802**

6) global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF)

104. The proposed project area is key for global biodiversity. It is home to several habitats that are part of three global priority ecoregions: montane forests of Talamanca and the Pacific mangroves as well as two ecoregions of national importance: the humid forests of the Pacific. Likewise, the project incorporates one marine ecoregions of global importance: Coco Island and Nicoya of the Eastern Tropical Pacific. Those areas are part of the global hotspot for biodiversity of Mesoamerican Forests, with an impressive biological richness, represented by more than 2000 species of wild plants and animals, of which 88 species of vertebrates (mammals, birds, reptiles, and amphibians) are globally threatened.

105. In total, the project will improve the management of the total area of the PCAG - 348,474 ha - to benefit the conservation of biodiversity. Within the PCAG, it will improve the management effectiveness of 5 protected areas, with a total terrestrial area of 40,655 ha and a total marine area of 20,731 ha. Outside protected areas, the project will contribute a total of 188,112 hectares. of landscape under improved management to benefit biodiversity. Furthermore, 1,000 ha of land will be restored and/or reforested, and 1,500 ha of land will be conserved through conservation agreements with private owners. All this will contribute to improve the microclimate of the region to be more resilient to the impact of global climate change.

106. The long-term conservation of 1,500 ha. of forests under the figure of Conservation Agreements, will facilitate the construction of connectivity between core areas of the landscape to facilitate the altitudinal and latitudinal movement of biodiversity and the provision of other long-term ecosystem services (water production, sediment retention, ecotourism, among others), this strategy is key to generating benefits for global biodiversity, especially for threatened and altitudinal migratory species that require large areas of habitat or altitudinal connectivity due to their ecological requirements.

107. Global environmental benefits will be achieved through strong alignment of the Project with the objectives of the focal areas and the GEF programmatic results. The Project is consistent with the objectives of the biodiversity focal area (BD) and its corresponding operational programs:

? BD-1-1 Mainstream biodiversity across sectors as well as landscapes and seascapes through biodiversity mainstreaming in priority sectors.

? BD-2-7 Address direct drivers to protect habitats and species and improve financial sustainability, effective management, and ecosystem coverage of the global protected area estate

108. Specifically, the Project will be developed in a multi-use area in the western region of the country in the province of Chiriqu? called Gualaca Altitudinal Corridor, which has five protected areas and exceptional biodiversity on a global scale, where a significant number of threatened species stand out. on a global scale (88 species) and where a set of key environmental services for the region and the country are generated, including water production, hydroelectric and solar energy, agricultural production and fishing, biodiversity conservation, tourism, among others. The Project will seek to harmonize the development of the PCAG with the conservation and restoration of its ecosystems and biodiversity, which will also allow maintaining and improving the ecosystem services provided by the landscape through: 1) the preparation of a land use management plan and the sea that facilitates reconciling conservation and sustainable development, 2) the establishment of a governance structure that allows managing the landscape through the implementation of the "Plan for the Use of Land and the Sea", 3) the development of a financial sustainability tool that facilitates the work of the governance platform and the implementation of the plan for this landscape in the long term, 4) the development and implementation of sustainable farm and fishing management plans that contribute to the transformation of traditional productive practices to sustainable productive practices, improving landscape connectivity and reducing threats, 5) strengthening the management of the five protected areas and the regulatory framework to improve their management, 6) implementing restoration and reforestation actions in agricultural areas, areas of degraded forests and mangroves and 7) promoting the conservation of forests on private lands.

109. The Project has a "Sustainable Landscapes" management approach, which aims to maintain and even increase biological diversity and ecosystem services in multiple-use areas and that it is possible to increase production in harmony with the environment, this through the implementation of sustainable production models that incorporate natural capital management techniques (soil and water management), the use of efficient technologies and nature-based adaptation practices.

110. The project, in addition to contributing to the objectives of the biodiversity focal area (BD), its operational programs BD 1-1 and BD 2-7, contributes to the focal area LD -1-1 Maintain or improve flow of agro-ecosystem services to sustain food production and livelihoods through Sustainable Land Management (SLM) and CCM-2-6 Demonstrate mitigation options with systemic impacts for food systems, land use and restoration impact program.

111. The Project also contributes to the Aichi Targets of the Convention on Biological Diversity, specifically to the fulfillment of the following objectives: Objective 1, with respect to raising awareness about the values of biodiversity; Objective 2, on the integration of biodiversity values in local development; Goal 4, stakeholder action towards sustainable consumption and production; Objective 5, associated with reducing the degradation and fragmentation of natural habitats; Goal 6 on sustainably managed fisheries; Objective 7, to promote the sustainable management of agricultural, aquaculture and forest areas; Goal 11 focuses on areas of importance for biodiversity and ecosystem services under effective management; Objective 14, on the restoration and safeguarding of ecosystems; and Objective 19, regarding knowledge and technologies applied to Biological Diversity, learned, shared and applied.

112. In summary, the Project will generate global environmental benefits that will be measurable and that must be based on the CAG Plan for Sustainable Landscape Management, which will harmonize the development and conservation of this landscape with the support of the established Governance Platform. Environmental benefits include:

- ? The establishment of a new management model for a large terrestrial and marine area that will generate experience and lessons learned that will be reported and shared.
- ? Restoration of ecosystems and improvement of connectivity for the benefit of biodiversity.
- ? Change from traditional production systems to sustainable production systems that generate social (food security), economic (production diversification, income improvement) and environmental (biodiversity conservation, threat reduction) benefits.
- ? Recovery or reforestation of degraded areas and with it the improvement of connectivity that generates various environmental benefits.
- ? Reduction of deforestation and soil degradation.

- ? Strengthening the management of protected areas will allow the ecosystem services that they provide to society to be maintained and even improved.

- ? Implementation of plans for the sustainable use of fishing resources that will help improve the stock of the resource for its long-term use and better benefits for local fishermen.

- ? Strengthening the capacities of beneficiaries in sustainable production techniques.

- ? Increase in the sensitivity of stakeholders regarding the importance of sustainable management of the PCAG.

7) innovativeness, sustainability and potential for scaling up

Innovation

113. This project is innovative because it proposes a combined landscape and seascape approach that connects terrestrial and marine ecosystems through integrated altitudinal management. Implementation of the most effective current thinking on landscape planning to connect PAs to agriculture and societal needs by working on key connectivity areas outside the protected areas and improving the management of five PAs within the PCAG area is proposed for this project.

114. The PCAG will be the first biological corridor formally established in Panama with a public-private governance platform that will guide its management. The establishment and implementation of the governance platform constitutes a learning experience for the country which can be an example for other parts of the country that want to improve biodiversity conservation and management at a landscape level. Stakeholder coordination and involvement for joint decision-making processes will be key for the project success. This type of involvement where public and private stakeholders coordinates for joint decision making at landscape and seascape level is innovative for Panama.

115. The PCAG governance platform, with support for the implementation of the financing strategy, will evaluate compliance with Conservation Agreements with private landowners and promote the establishment of new conservation agreements that contribute to maintaining and improving connectivity in the PCAG. The governance platform, in alliance with private landowners under the figure of conservation agreements, will seek new opportunities to strengthen the strategic investments necessary for conservation on private lands in the PCAG.

Sustainability

116. Environmental sustainability: the project will contribute to the environmental sustainability of the terrestrial and coastal marine ecosystems of the PCAG. This contribution includes a reduction in the negative impacts on biodiversity by agricultural and fishing activities in the project area by applying an integrated landscape and seascape approach. The objectives will be achieved through the landscape planning processes within protected areas, municipalities, farms, and fisheries, as well as alignment with the government initiatives aiming at protecting biodiversity such as the ?Alliance for one million hectares reforested?. Actions aimed at strengthening governance, along with capacity building, training and knowledge management will contribute to achieve environmental sustainability and landscape and seascape resilience.

117. Social sustainability: Social sustainability will be achieved through strengthening the capacities of local governments and local community organizations that will participate in the project activities and benefit from its results. The design of a governance mechanism to strengthen the PCAG management and improve the conservation and use of biodiversity in the area will have the active participation of local stakeholders that will continue with the project activities after it is completed. The development of biodiversity friendly model management plans for farmers and fishers constitutes an important tool to guide the production practices into more sustainable and profitable ones.

118. Institutional sustainability: The Ministry of Environment, the Ministry for Agricultural Development, the Aquatic Resources Authority and other governmental entities have been involved in the design of the proposal and are committed to collaborate with this project as it aligns with their objectives of mainstreaming biodiversity conservation in agricultural and fishing activities. Government institutions being main executing agencies and beneficiaries of this project will ensure the institutional sustainability after the project is completed. Creating capacities within the government institutions and jointly implementing the activities of the project in the PCAG area is

key to ensure institutional sustainability. The creation of an inter-institutional coordination platform for the PCAG will also contribute to institutional sustainability through the consolidation of permanent cooperation links between the different institutions and the creation of a governance platform for the project area that will continue operating after the project ends.

119. Financial Sustainability: Very little resources are currently allocated towards natural resource management, to planning and the protected areas protection of PCAG. It is also well acknowledged that the Panama government has many competing priorities. The project intends to guarantee the financial sustainability of its activities through the design and implementation of a comprehensive financial sustainability strategy for the management of the PCAG. The financial sustainability strategy will consider natural resources management at a landscape and seascape level and will propose how to mainstream biodiversity conservation in sustainable production, leveraging financial resources to achieve this objective. The project will work with the Ministry of Environment and Ministry of Agricultural Development to assure that public funds are directed to the PCAG area and that those investments are in line with the land and marine use plans and sustainability criteria developed by this project.

Potential for replicability and expanding the scope of the project.

120. This project aims to develop a strategic landscape and seascape approach for the PCAG area, creating the first altitudinal biological corridor in Panama. The planning process, information gathered, and technical outcomes from the project (tools, management plans) are replicable by the Panama Government such that this project will facilitate the implementation of similar initiatives across the country to ultimately incorporate biodiversity conservation and sustainable use of land and marine resources. Information gathered, tools, and national capacity developed under the project will be the basis for creating and strengthening other corridors and conservation areas.

121. Additionally, the platform that will facilitate the governance of the CAG landscape and the financial sustainability tool that will allow it to continue its management in the long term, will leave learning, experiences and lessons learned that will be essential to replicate in other potential areas and carry out a different and adapted territorial management. to its environmental, sociocultural and economic values.

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[1] *Comarcas* are indigenous territories with semi-autonomous administration. Within comarcas indigenous people largely govern themselves under their own political system.

[2] *Corregimientos* are the smallest political-administrative divisions in Panama and are administratively similar to a county in that municipalities are typically subordinate to the government of a *corregimiento*.

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[9] Ministry of the Environment. Fifth National Report for the Convention on Biological Diversity 2010

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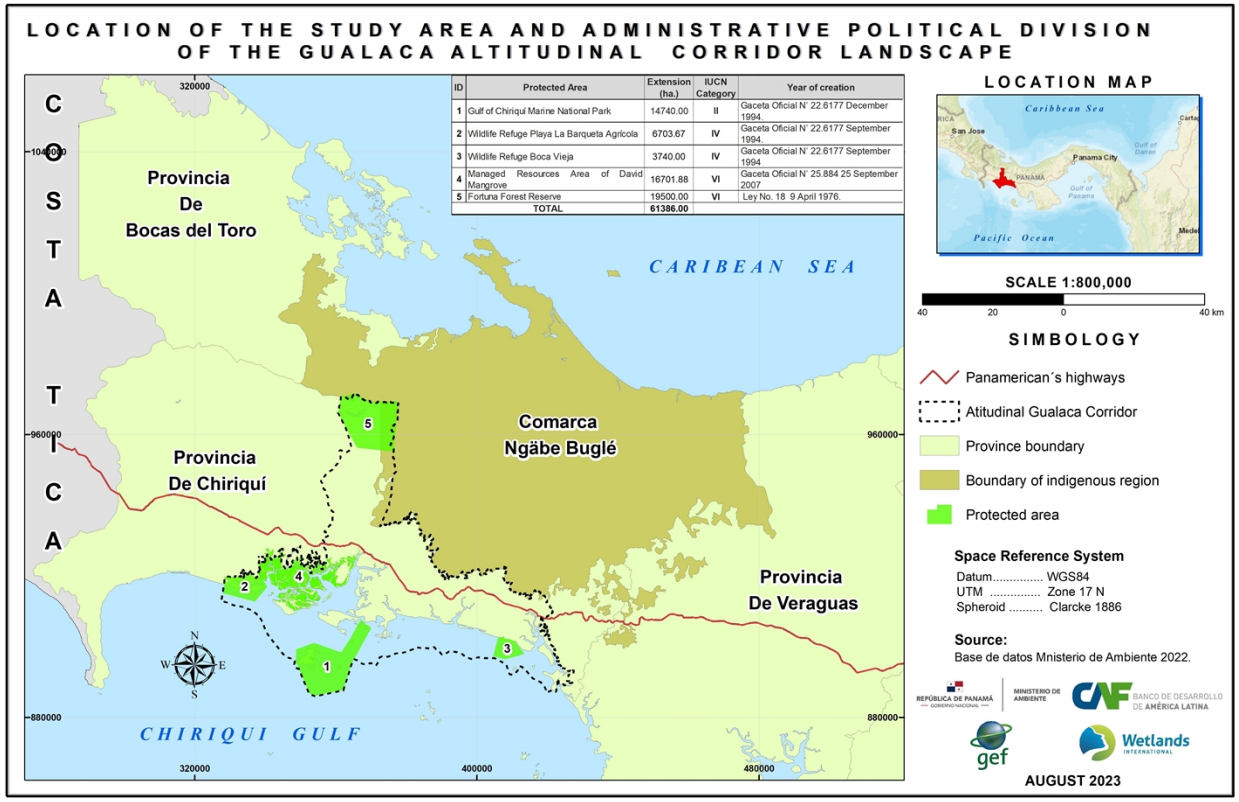
1b. Project Map and Coordinates

Please provide geo-referenced information and map where the project interventions will take place.



Project Map and Coordinates

1. The PCAG territory covers an area of 348,474 ha, of which 46% has forest cover. It is in the province of Chiriqu?, between the districts of Alanje, David, Gualaca, San Lorenzo, San Felix, Remedios, and a part of Tol?. The PCAG aims to maintain altitudinal connectivity from the Fortuna Forest Reserve and part of the Protected Forest of Palo Seco in the northern sector, passing through Chiriqu?, Chorcha, Gualaca, the great Chorcha Plateau, Batipa Hill to the Playa Wildlife Refuge La Barqueta in the western sector, including the Manglares de David protected area. There is also near-shore (horizontal) connectivity between the mangrove nuclei of the sectors of Boca Chica, Santa Cruz to the mangrove extensions between Remedios and Tol?.

2. The limits of the PCAG territory, was defined and validated in a consultation workshop with key actors, where it was agreed that "at the political level the boundaries of the territory include the districts and corregimientos[1] of Gualaca, San Lorenzo, San Felix and Remedios; as well as the corregimientos of Guarumal and Quer?valo belonging to the district of Alanje; the corregimientos of Pedregal, Chiriqu? and the lower part of David Cabecera and San Pablo Nuevo that belong to the district of David; and part of the corregimientos of Quebrada de Piedra, Lajas de Tol? and Tol? cabecera in the district of Tol? ". Also, it was agreed to include "the sub-basin" of the Hydrographic Region of the middle part of Chiriqu? and "Lower part of the Chiriqu? River of Basin 108 of the Chiriqu? River" to define the limits of the northwest region,

3. The PCAG is located between UTM 286929,16 W; 1063844,17 N, and between UTM 427481,70 W; 427481,70 N (WGS84, Zone 17 North), The map below shows the project area as defined above.

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[1] Corregimiento: corresponds to a territorial subdivision of the districts, whose political representative is the corregimiento representative.

1c. Child Project?

If this is a child project under a program, describe how the components contribute to the overall program impact.

Does not apply

2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

Civil Society Organizations Yes

Indigenous Peoples and Local Communities Yes

Private Sector Entities Yes

If none of the above, please explain why:

122. The design of the project included a participatory phase of public consultation with key actors and stakeholders between January and March 2023 (Annex 2.1). The key actors and stakeholder consultation document contains their observations and comments. Many of these actors have been participating in the prior consultation processes during the PIF preparation phase.

123. Additionally, the memorandum document for stakeholders includes the consultation with the community of Zapotal, an indigenous Ng?be Bugl? community to which the project was presented and its inhabitants helped to determine the activities that would be of interest to them as project beneficiaries (Annex 2.2).

124. The interested parties have a presence in the Steering Committee of the Project from its beginning until its completion. The PCAG governance structure will also allow for the inclusion of project stakeholders who will assist in the consultation phases for the preparation of the CAG Landscape Land Use Plan and its financial sustainability mechanism.

125. Component 2 of the project includes a communication and knowledge management strategy that will contribute to stakeholder and stakeholder participation. The gender action plan will contribute to the integration of the gender perspective in all project actions and the inclusion of women, youth and indigenous people as beneficiaries of project actions.

Select what role civil society will play in the project:

Consulted only;

Member of Advisory Body; contractor;

X Co-financier;

X Member of project steering committee or equivalent decision-making body;

Executor or co-executor;

X Other (Please explain) Beneficiary.

126. The project provides instances of participation in decision-making and demonstration of actions linked to the sustainability management of the PCAG at different levels. It includes the strengthening of capacities and the exchange of knowledge in sustainable production,

reforestation and recovery of degraded areas to improve connectivity. It will also provide spaces to educate, raise awareness, share and inform key stakeholders and the general public about the results of the project and topics of interest using the different means of communication that are determined in the communication strategy.

127. The communication and knowledge management strategy of the Project (product scheduled at the beginning of the project - output 2.3.1) will establish the key activities to be developed, identify the stakeholders involved, the means of communication that should be used for calls and presentation or dissemination of results and key moments (programming) for these consultations and participation processes to be developed in accordance with the Project Document. The budget allocated to the development and implementation of the communication and knowledge management plan is US$ 120,000.00 during the execution of the project.

Please provide the Stakeholder Engagement Plan or equivalent assessment.

128. The information be conteined in the Annex 2.1 Consultation Workshop Report and Annex 2.2 Steakholder Consultation Workshop Report.

In addition, provide a summary on how stakeholders will be consulted in project execution, the means and timing of engagement, how information will be disseminated, and an explanation of any resource requirements throughout the project/program cycle to ensure proper and meaningful stakeholder engagement

129. The beneficiaries and stakeholders of the project are identified through a map of actors that have been enriched and complemented through the consultation processes. Beneficiaries and stakeholders that could have a more relevant and direct impact on the activities and results of the Project have been identified and prioritized, as well as those who will be direct beneficiaries of the project.

130. The direct beneficiaries are those who have a more direct and strong link with the project activities such as the landscape planning process, the development of the governance scheme and the financial sustainability tool in the case of Component 1 where institutional actors participate (MiAMBIENTE , MIDA, MEDUCA, MIVI, ANATI, MEF, etc.), civil society organizations (NGOs, Universities, OBC, JAAR) and other actors.

131. For Component 2, actors related to the management of protected areas (MiAMBIENTE) are included, in addition to the beneficiaries of their environmental goods and services, such as Community-Based Organizations (CBOs), Producer and Community Associations; in addition to beneficiaries of ecosystem services such as hydroelectric plants (ENEL Power Green), among others. In addition, those actors directly related to productive activities in livestock, agriculture and fisheries are included, including government institutions that provide support services or technical extension to producers, research and access to agricultural credit (MIDA, ARAP, IDIAAP, BNP, BDA, ANAGAN) and the beneficiaries that constitute producer associations, community-based organizations (CBOs), and interested individual producers. This component also includes actions for the recovery and/or reforestation of degraded forest and mangrove areas and the conservation of forests outside protected areas, for which reason it involves the participation of institutional stakeholders such as the Ministry of the Environment, who will provide seedlings and/or mobilization of resources for reforestation or enrichment actions and the beneficiaries

include producers, CBOs, producer associations and the Rural Aqueduct Administrative Boards (JAAR) that will be beneficiaries of these reforestation and/or enrichment actions of forests and mangroves through the maintenance and improvement of their ecosystem services.

132. The Table 6, presents the results of an interested part mapping, carried out to determine its current relevance or importance based on the fulfillment of the objectives and results of the project, and the potential impact they may have during and after the implementation of the project.

Table 6 Main stakeholders and beneficiaries of the project

Interested Part	Relevance to the Project	Responsibility/Influence on the Project	Impact Level on Project Implementation
Ministry of Environment of Panama (MIAMBIENTE)	Government Agency GEF Political and Technical Focal Point Responsible for the management of all protected areas. Responsible for the management of natural resources and the environmental policy of Panama.	Part of the Project Steering Committee Co-financier Designation of national and regional focal point for the project. Appointment of local technicians to support the execution of the project. Facilitation of equipment, transportation, and infrastructure for the execution of the project. Supply of seedlings for reforestation and enrichment actions. Contributes to ensure the governance of the project through the participation of Hierarchy personnel such as Ministers and National Directors of counterpart institutions.	**HIGH**

Interested Part	Relevance to the Project	Responsibility/Influence on the Project	Impact Level on Project Implementation
Ministry of Agricultural Development (MIDA)	Government Agency Responsible for the country's agricultural policy. Responsible for technical extension services through provincial agencies and local agencies. In charge of the country's food security; seeks to raise the quality of life of the rural population through a competitive agricultural sector.	Part of the Project Steering Committee Co-financier Designation of national and regional focal point for the project. Appointment of national, regional and local technicians to support the execution of the project. Facilitation of equipment and supplies for sustainable production programs and productive diversification.	**HIGH**

Interested Part	Relevance to the Project	Responsibility/Influence on the Project	Impact Level on Project Implementation
Panama Aquatic Resources Authority (ARAP)	Government Agency Responsible of promotes and develops policies and programs for fishing, aquaculture, and coastal marine management for the responsible and sustainable use of Panama's aquatic resources.	Part of the Project Steering Committee Co-financier Designation of national and regional focal point for the project. Appointment of local technicians to support the execution of the project. Facilitation of equipment, transportation, and infrastructure for the execution of the project.	**HIGH**
Ministry of Health (MINSA)	Government Agency Regional Office of Chiriqu?.	Responsible for the Rural Aqueduct Administrative Boards that supply water to local communities and are important actors in the project in actions to protect and recover forest cover in sub-basins.	**HIGH**
Ministry of Education (MEDUCA)	Government Agency Regional Office of Chiriqu?.	Support the formal and non-formal environmental education actions of the project, as well as awareness actions. Provide spaces for meetings and training actions for local producers. It constitutes a strategic partner for the establishment of sustainable production models such as integral orchards, facilitating training and exchange of experiences.	**HIGH**

Interested Part	Relevance to the Project	Responsibility/Influence on the Project	Impact Level on Project Implementation
Ministry of Housing and Territorial Planning (MIVIOT)	Government Agency National housing policy and territorial ordering.	Important actor for the process of Integral Landscape Planning of the CBAG.	**MEDIUM**
Ministry of Public Works (MOP)	Government Agency Regional Office of Chiriqu?.	Responsible for construction and maintenance of communication routes. Key actor to reduce threats to biodiversity due to incompatible road infrastructure in the PCAG	**MEDIUM**
National Land Administration Authority (ANATI)	Direct, regulate and ensure compliance and application of the national land policy, through the regularization of the national cadaster.	Important actor for the process of Integral Landscape Planning of the CBAG.	**HIGH**
Indigenous authorities at the level of the Nagbe Bugle Comarca and the Besik? district.	indigenous traditional authorities	Relevant key actors as stakeholders in landscape planning processes, conformation of the CBAG governance structure and sustainability mechanisms.	**HIGH**

Interested Part	Relevance to the Project	Responsibility/Influence on the Project	Impact Level on Project Implementation
Municipal governments of the districts of Gualaca, David, San Lorenzo, Besik?, San F?lix, Remedios and Tol?.	Autonomous local governments at district level	Key local government instance for landscape planning processes, conformation of the PCAG governance structure and its sustainability mechanism. Important in project monitoring and coordination of local actions and support. They have decentralization resources for the potential use of strategic activities complementary to the Project.	**HIGH**
Oteima Technological University	Academic sector	Co-financier Strategic partner who can provide facilities for workshops, support research and extension actions in communities.	**HIGH**
Autonomous University of Chiriqui	Academic sector	Strategic partner who can provide facilities for workshops, support research and extension actions in communities.	**HIGH**
Batipa Field Station and Livestock Batipa.	Private sector	Partner who could provide facilities for workshops, training and experience exchanges. Manage the Batipa livestock farm under Silvopastoral systems integrated with teak plantations for use and a conservation area.	**HIGH**
Batipa Ecological Foundation	NGO	Partner in charge of the management of the Private Reserve of Batipa which is an important private core zone for PCAG connectivity.	**HIGH**
Community Base Organizations	OBC?s	Organized community groups that mostly have among their objective?s conservation and sustainable production. They are important actors for sustainable production actions in the project.	**MEDIUM**
Competitiveness Center of the Western Region of Panama	Private sector	Organization that promotes programs such as the agro master plan and the coffee route.	**LOW**

Interested Part	Relevance to the Project	Responsibility/Influence on the Project	Impact Level on Project Implementation
Enel Green Power	Private sector	Co-financier Company in charge of the management of the Fortuna Forest Reserve, one of the protected areas that is within the CBAG landscape, key connectivity area and generation of important environmental services	**HIGH**
Rural Aqueduct Administrative Boards (JAAR)	Community organization	Community organizations in charge of the administration of community aqueducts and the preservation of the micro basins provided by water. You can inform about conflicts between agricultural activities and the conservation of ecosystems, especially in the provision of water. They can contribute to reforestation actions.	**MEDIUM**
AUDUBON	Private sector	NGO dedicated to the study and conservation of bird habitats.	**MEDIUM**
Fundaci?n Natura	NGO	Organization specialized in administration of environmental funds. Experience in project management with topics similar to the proposal. It maintains donation programs and has financed projects in the PCAG in recent years.	**HIGH**
CELSIA	Private sector	Company that generates hydro-solar energy. Develop environmental compensation actions.	**MEDIUM**
Puerto Baru	Private sector	Company that promotes the establishment of a large port in the Gulf of Chiriqu?. Support reforestation processes and other conservation actions.	**MEDIUM**
AES	Private Sector	The company has established four solar parks in Chiriqu?. Develop actions for environmental compensation and conservation projects.	**MEDIUM**

Interested Part	Relevance to the Project	Responsibility/Influence on the Project	Impact Level on Project Implementation
National Association of Cattlemen (ANAGAN)	Civil society organization	You can provide information about potential interested in being part of the project. Participation in training processes	**MEDIUM**

Select what role civil society will play in the project:

Consulted only;

Member of Advisory Body; Contractor;

Co-financier; Yes

Member of project steering committee or equivalent decision-making body; Yes

Executor or co-executor; Yes

Other (Please explain) Yes

3. Gender Equality and Women's Empowerment

Provide the gender analysis or equivalent socio-economic assesment.

133. The Project will guarantee the inclusion and equitable participation of women as beneficiaries in all project activities, including landscape planning actions, establishment of the PCAG Landscape governance scheme, training activities and exchange of experiences, sustainable production actions. and reforestation and landscape restoration to improve connectivity in priority areas.

134. As established in the Global Gender Gap Index 2022[1], Panama has a gender gap of 74.3%[2]. Currently, Panama ranks 9th in the LAC region and 40th worldwide[3]. According to information from the latest Population and Housing Census (2010), the population of the Province of Chiriqu? reached a total of 416,873 people, of which 49.2% are women and 50.8%.

135. The PCAG area housed a total of 154,092 (76,695 man: m and 77,397 women: w), counting the entire population of some districts such as Besik?, Tole and David Cabecera that are not totally within the PCAG. The population is distributed as follows: Pedregal (1,051 m and 1,083 w), Chiriqu? (2,231 m and 2,038 w) and the lower part of David Cabecera (40,208 m and 42,699 w), San Pablo Nuevo (899 m and 853 w) and the districts of Gualaca (5,133 m and 4,617 w), San Lorenzo (4,011 m and 3,496 w), San F?lix (3,236 m and 3,068 w), Remedios (2,138 m and 1,914 w), Tol? (6,144 m and 5,741 w) y Besik? (11,644 m and 11,888 w).

136. As part of the consultation process, the project carried out a survey on gender perspective to key actors of the PCAG, with a sample of 50 people, of which 54% identified themselves as women and 46% identified themselves as men. Of the participants, 72% were in the age ranges between 18 and 49 years, while the remaining 28% were between 50 and 60 years of age or older.

137. Regarding ethnic and linguistic diversity (bio-cultural group), 78% designated themselves to be mestizo, and the remaining 22% stated that they were of indigenous descent ? native, Caucasian, or white, and Afro-descendant. In relation to marital status, 58% are single, 24% are in a free union, 18% are married, or are widowed. In educational matters, 66% have completed some level of university studies, 24% have completed secondary studies and 10% have not completed the ninth grade of basic education, which shows a medium ? high level of education.

138. Among the main limitations that arise for the participation of men and women in economic activities, 60% indicated that the barriers they face are: lack of sources of employment, lack of economic resources, lack of training, lack of studies, machismo, limitations in agriculture (seeds, inputs) and physical strength. Regarding the perception of gender and leadership, more than two thirds (62%) of those surveyed believe that women do participate and are included in the activities they carry out.

139. In general, 56% of the participants (12 man and 16 women) consider that men and women have equal access to social activities such as workspaces, training courses, contribution to decision-making, among others; indicating that they do not feel excluded due to their gender. But 55% of the women interviewed (15 women) do consider that there are no equal conditions for women to access jobs, training, they are considered in decision-making, among other things.

140. On the other hand, 54% of those surveyed (9 men and 18 women) consider that the remunerations or payments for the same activities carried out by women are not equally remunerated if they are carried out by men, that is, there is a gap in the amount of payment for development of the same activities between men and women.

141. In environmental matters, 90% are knowledgeable about climate change, and they believe that among the challenges they face to be productive are: reducing the environmental impacts of the climate, overcoming poverty as the main problem, and satisfying future demands of agricultural products.

142. These population residing in these districts represents the key actors, and project`s beneficiary population, so regardless of the function they perform, it will be essential to include them in the activities to be carried out, directing the implementation of capacity building with a gender perspective, particularly aimed at promoting of female leadership, the harmonization of family life, the equitable use of resources, the protection and conservation of natural resources in the PCAG, among others.

143. The action Plan for the integration of the Gender perspective is consistent with the objectives of the National Gender and Climate Change Plan[4], which aims to provide the basic concepts regarding gender quality and its importance for the conservation of natural resources and the environment, this document will be mandatory in the Project policy and must be consulted and followed in the definition, conceptualization, and execution of all its components and investments. In addition, it will be part of the monitoring and evaluation required by the Project, in accordance with CAF Safeguard 09[5], whose objective is to ensure that men and women benefit equally from the projects financed by CAF and that there is an equitable participation on the part of both.

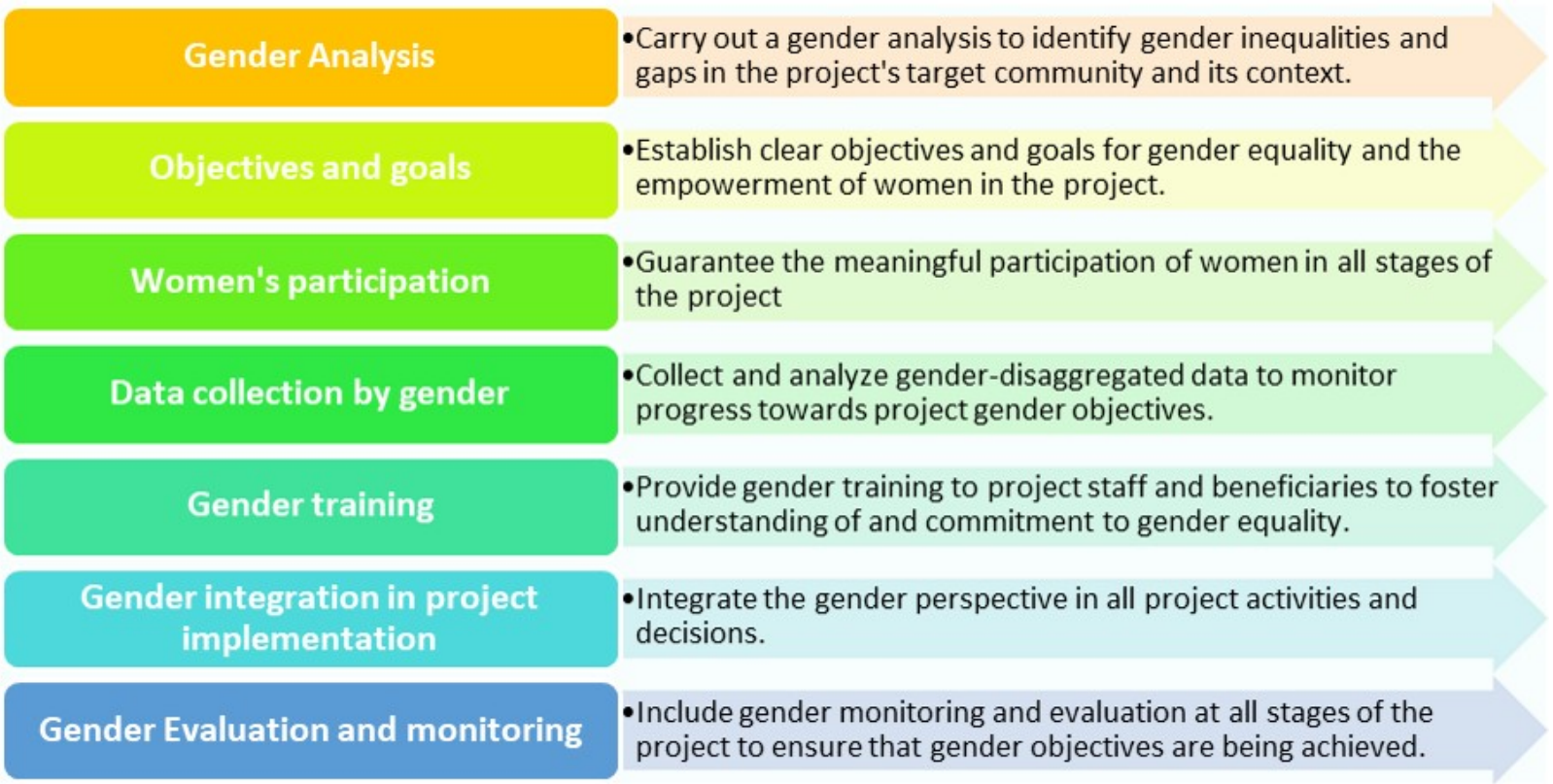
144. The Project in its activities contemplates actions aimed at the integration of women, through Gender Equity and Women`s empowerment, for which it will be covered through training activities in: exchange of experiences, capacity building under technique of learning ? by doing in sustainable

production (agriculture, livestock and fishing), and in reforestation and landscape restoration to improve connectivity in priority areas, which will guarantee the inclusion and equitable participation of women as beneficiaries in all project activities. The inclusion of women in the project also includes their participation in landscape planning actions, decision-making for the establishment of the PCAG governance scheme and its financial sustainability mechanism, which will contribute to important changes in terms of participation of women in relation to the access, use and management of biodiversity resources within the areas of intervention of the Project, in addition to profoundly favoring the organizational transformation in the PCAG, and can generate repercussions on the well-being and economic growth and their incorporation into the labor market.

145. Efforts will be made to ensure that concerns around the issue of gender equity are expressed during Project consultations at all levels, in all activities and processes related to Project policies, programs, administration and finances, thus contributing to a deep organizational transformation in all the entities directly involved in the Project; gender training for men and women in all opportunities offered by the project; increase women`s access to opportunities for continuous personal growth, increase their leadership and capacity as agents of change in their communities.

146. The gender strategy in GEF projects seeks to promote gender quality and the empowerment of women, as well as integrate the gender perspective in all stages of the project life cycle. The integration of the gender perspective is important because women tend to be the most affected by negative environmental impacts and, at the same time, are key agents in environmental conservation and sustainable development. To achieve this, it is recommended to follows a series of steps[6]:

Figure 1 Elements of the Gender Strategy in the CAG



Source: GEF. 2017.

147. The Action Plan for the Integration of the Gender Perspective is an essential policy document that must be followed in all phases of the Project, from its definition and conceptualization to its execution. In addition, this plan will also be an integral part of the monitoring and evaluation process of the Project. The integration of the gender perspective is an imperative need to guarantee that all aspects of the Project are equitable and fair to all involved.

148. In order to ensure the incorporation of the gender perspective all the components of the Project, the results Framework has been modified to include specific information on the number of women and men who directly benefit from the project. This modification is consistent with basic indicator 11 of the GEF-7.

149. To ensure that the products and standards required by the Action Plan for the Integration of the Gender Perspective are met, independent external audits will be carried out. These audits will be specifically mentioned in the Project Operations Manual, in the Subsidiary Agreements between CAF and the Project Executing Agency, and in the Terms of Reference for the Intermediate and final Evaluation of the Project.

150. In Annex 3 you will find the gender gap analysis and in Annex 4 you will find the PCAG Gender Action Plan.

If possible, indicate in which results area(s) the project is expected to contribute to gender equality:

X closing gender gaps in access to and control over natural resources;

X improving women?s participation and decision making; and or

X generating socio-economic benefits or services for women.

Does the project's results framework or logical framework include gender-sensitive indicators? (**yes** /no)

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[1] https://datosmacro.expansion.com/demografia/indice-brecha-genero-global/panama

[2] http://elsiglo.com.pa/panama/panama-avanza-cierre-brecha-genero/24208424

[3] Panam? avanza en el cierre de la brecha de g?nero, seg?n el ?ltimo Informe de Brecha Global de G?nero ? Ministerio de Desarrollo Social (mides.gob.pa)

[4] https://www.undp.org/es/panama/publications/plan-nacional-de-g%C3%A9nero-y-cambio-clim%C3%A1tico

[5] https://www.caf.com/es/lineamientos-y-salvaguardas-ambientales/

[6] CAF. (2016). Salvaguardias Sociales y Ambientales. Lima: CAF.

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment?

Yes

Closing gender gaps in access to and control over natural resources; Yes

Improving women's participation and decision making Yes

Generating socio-economic benefits or services or women Yes

Does the project?s results framework or logical framework include gender-sensitive indicators?

Yes

4. Private sector engagement

Elaborate on the private sector's engagement in the project, if any.

151. Table 6 contains the participation of the private sector in the Project, according to the type of actor, its location in the landscape and its relationship with the project outputs.

Table 6.2 Private sector engagement in the Project

Private Sector	Actor type.	Location PCAG	Participation in the project	Project Output
Batipa Field Station and Livestock Batipa.	Co-financier. Beneficiary	Lower part of the landscape	Model farm that can serve to exchange experiences with traditional ranchers since it implements Silvopastoral Systems: electric fences, livestock rotation, management of trees in pastures, livestock aqueduct, among other good practices. As a beneficiary, you could be supported with technical assistance for preparing a farm management plan and introducing other good sustainable livestock practices.	Output: 2.2.2
Enel Green Power	Co-financier Beneficiary	Upper and middle part of the landscape.	Identified as co-financier of the Project. It could report an important counterpart related to the management of the Fortuna Forest Reserve, although it did not formalize a letter of commitment to the estimate of its counterpart before the Ministry of Environment. Company in charge of the Management of the Fortuna Forest Reserve under the supervision of MiAmbiente. Key partner to participate in component 1: Governance platform, sustainable landscape management plan and the PCAG financial sustainability strategy. For component 2, your participation is key to: updating and harmonizing the operational plan of the Fortuna Forest Reserve with the integrity of the PCAG.	Output 1.1.1 Output 1.1.2 Output 1.1.4 Output 2.1.1

Competitiveness Center of the Western Region of Panama	Strategic partner	The whole landscape	Strategic partner that could contribute to mobilizing support for the establishment and implementation of the governance platform and financial sustainability strategy of the PCAG. It could facilitate the integration and coordinated work of the project with other initiatives such as the Coffee route.	Output 1.1.1 Output 1.1.4 Output 2.2.2
CELSIA	Strategic partner	Outside the landscape	Company that generates hydro-solar energy. Develop environmental compensation actions. Resources could be channeled with the support of MiAMBIENTE to strengthen restoration and reforestation actions to improve connectivity in the PCAG.	Output 2.2.1
Baru Port	Strategic partner	Outside the landscape	Company that promotes the establishment of a large port in the Gulf of Chiriqu?. Support reforestation processes and other conservation actions. Resources could be channeled with the support of MiAMBIENTE to strengthen restoration and reforestation actions to improve connectivity in the PCAG.	Output 2.2.1
AES	Strategic partner	Outside the landscape	Company that generates hydro-solar energy. Develop environmental compensation actions. Resources could be channeled with the support of MiAMBIENTE to strengthen restoration and reforestation actions to improve connectivity in the PCAG.	Output 2.2.1

Livestock farmers	Beneficiary	The whole landscape	Key actor for various project actions such as the preparation and implementation of farm management plans and to transform traditional livestock farms into Silvopastoral Systems. Additionally, they are key actors for landscape restoration processes to improve connectivity and for the establishment of forest conservation agreements within their properties.	Output 1.1.3 Output 2.2.1 Output 2.2.2 Output 2.2.3
Farmers	Beneficiary	The whole landscape	Key actor for various project actions such as the development and implementation of farm management plans and the transformation of traditional agricultural production (slash and burn) to sustainable agroecological models. In addition, they are key actors for landscape restoration processes that help improve connectivity and for the establishment of forest conservation agreements within their properties.	Output 1.1.3 Output 2.2.1 Output 2.2.2 Output 2.2.3
Fishing Cooperatives	Beneficiary	Seascape in coastal area	Key actors for the preparation and implementation of sustainable fisheries management plans and landscape restoration processes in mangrove areas.	Output 1.1.3 Output 2.2.1 Output 2.2.2

5. Risks to Achieving Project Objectives

Elaborate on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, the proposed measures that address these risks at the time of project implementation.(table format acceptable):

152. Table 7 summarizes the risk analysis and mitigation measures validated with key actors and stakeholders.

Table 7. Risk analysis and mitigation measures

RISK	SERIOUSNESS	PROBABILITY	LEVEL	MITIGATION MEASURES	COMMENTS
Change of Government When the Project begins its implementation, a change of government will have occurred in Panama. It is possible that there are new authorities that are unaware of the process or, even knowing it, they could have a different vision of what should be done in the area.	ACEPTABLE	UNLIKELY	MEDIUM	In the initial phase of the project, socialization and awareness activities will be carried out with the authorities and key actors on the importance of building a sustainable and climate-resilient local development model that responds to the needs of the population and that can become a model to be replicated in other areas of the country and region.	A link is established with the transition team of the new government to position the project.

RISK	SERIOUSNESS	PROBABILITY	LEVEL	MITIGATION MEASURES	COMMENTS
Lack of support to vulnerable groups indigenous communities located in the project area may not feel adequately benefited from project activities and consequently may not approve the project.	UNDESIRABLE	UNLIKEY	MEDIUM	A process of dialogue and concertation aimed at obtaining the Free Prior and Informed Consent of the indigenous communities will be established.	Dissemination of the Project, to prepare the multidisciplinary team to carry it out. Environmental Education, environmental benefits, mastery of the dialect language.
Low participation of strategic partners Other key stakeholders and/or potential project beneficiaries located in the project area might disagree with the project activities and consequently not approve the project.	UNDESIRABLE	UNLIKEY	LOW	In the preparation of the PRODOC and the initial phase of implementation of the Project, the process of dialogue and awareness will be resumed, as well as alliances with other key actors (institutions, organizations, academia, and companies).	The transmission of messages and key ideas of the project must be clear to the community.

RISK	SERIOUSNESS	PROBABILITY	LEVEL	MITIGATION MEASURES	COMMENTS
Lack of interest from direct beneficiaries Ranchers, Farmers and/or fishermen may not be interested in participating in the project.	UNDESIRABLE	UNLIKEY	LOW	The processes of dialogue, consultation, and awareness-raising about the benefits that the project will provide to the direct beneficiaries that began in the PIF preparation phase will be resumed.	
Expansion of the agricultural frontier The actions of the project could promote the expansion of the agricultural frontier and/or the overexploitation of the soil in the area of direct influence.	UNDESIRABLE	POSSIBLE	MEDIUM	Work will be done on already established farms, with farmers and ranchers willing to receive training, develop farm management plans and commitment agreements that will include the conservation of the farm`s natural capital and participation requirements. The communication in the initial workshops with potential beneficiaries should clarify the objectives and commitments with the beneficiaries.	Participation of MIDA and IDIAP in this measure. Integrate degraded areas for recovery.

RISK	SERIOUSNESS	PROBABILITY	LEVEL	MITIGATION MEASURES	COMMENTS
Climate change Extreme weather events such as heavy rains in short periods of time, prolongation of the dry season or tropical storms can affect the actions of the reforestation and sustainable production project.	UNDESIRABLE	PROBABLE	MEDIUM	The implementation of measures to reduce the vulnerability of people and natural systems to extreme weather events will be promoted. This includes the promotion sustainable agricultural practices and nature-based adaptation (EBN).	

RISK	SERIOUSNESS	PROBABILITY	LEVEL	MITIGATION MEASURES	COMMENTS
Low participation of women and youth The participation of women and youth in rural development projects is crucial to achieve sustainable and equitable development in rural areas. However, this is not always easy due to the existence of socio-cultural barriers.	UNDESIRABLE	PROBABLE	MEDIUM	Sensitization and training on the benefits of participation in rural development projects and train them so that they can participate effectively. Women and youth will be included in the planning of rural development projects from the beginning, allowing them to actively participate in decision-making and the definition of objectives and goals. Steps will be taken to ensure that both women and youth can access resources such as financing, technology, and training. Work will be done to strengthen the capacities of women and young people, so that they can actively participate in rural development projects and	Establish programs that are attractive to youth and women.

RISK	SERIOUSNESS	PROBABILITY	LEVEL	MITIGATION MEASURES	COMMENTS
				contribute to the development of their communities.	

RISK	SERIOUSNESS	PROBABILITY	LEVEL	MITIGATION MEASURES	COMMENTS
Project does not continue beyond its execution horizon. Without adequate empowerment of the project by the key stakeholders and beneficiaries, there is a risk that the project will not continue once the financing ends.	UNDESIRABLE	POSSIBLE	HIGH	Planning for sustainability will be incorporated into all stages of the Project, from conception to implementation and evaluation. This ensures that sustainability is a priority from the start. In the same way, the participation of the communities will be promoted and alliances will be established with relevant organizations and entities, such as local governments, private companies, and non-profit organizations, it can contribute to the long-term sustainability of the project in terms of joint development initiatives or access to additional financial resources.	It is key for the project to get the interest of the Producers. Guarantee the success of the project with monitoring, vigilance, and corrections so that the key actors and the communities feel the need to continue and maintain the project and so that they take ownership of it.

RISK	SERIOUSNESS	PROBABILITY	LEVEL	MITIGATION MEASURES	COMMENTS
Project Execution is Affected by COVID-19.	UNDESIRABLE	POSSIBLE	LOW	The worst stage of the spread and impact of COVID-19 has passed. Government authorities have lifted most of the restrictions generated by COVID-19 in the country. The mask is only mandatory in health centers and hospitals. Additionally, about 98% of Panamanians and residents in Panama are vaccinated. The only risk factor is that a new strain appears that is resistant to vaccines, which is monitored by the Ministry of Health and the World Health Organization. Furthermore, the population and medical services are already trained to handle this type of pandemic.	

6. Institutional Arrangement and Coordination

Describe the institutional arrangement for project implementation. Elaborate on the planned coordination with other relevant GEF-financed projects and other initiatives.

153. The execution and coordination of the Project between various actors will be in charge of Wetlands International (WI), an international non-profit organization registered in Panama, whose mission is "It is to preserve and restore wetlands, their resources and biodiversity".

154. WI will establish a Project Coordination Unit (PCU) to facilitate and oversee the day-to-day execution of the project. The PCU will be responsible for fiduciary supervision and project reporting, including financial management and procurement consolidation in accordance with the Project's operating manual and Procurement Plan to be established. The PCU will also be responsible for monitoring and evaluation (M&E), providing and coordinating technical advice, and coordinating and assisting in the general orientation regarding the conception, strategies, criteria, and methodologies of the Project, as well as organizing and supporting regional activities.

155. The PCU will have a Project Coordinator, a Sustainable Production Specialist, an Administrator, a monitoring and evaluation specialist and a field extension agricultural technician. Financial management and procurement services will be provided by WI, and the technical delivery of Project outputs will be supplemented by specialized consultants as needed under the supervision of the Project Coordinator. Other personnel such as consultants in protected areas, governance, planning and reforestation will be in specific time periods supporting the management of the project.

156. Annex 6 contains the Terms of Reference for the hiring of the Project Coordinator.

157. Two bodies will be established to facilitate the governance of the Project:

1. Project Steering Committee (CDP): It will be the highest management body of the Project and will be responsible for guaranteeing that the Project objectives detailed in the Project Results Framework are met. It will have the responsibility of establishing the technical and resource priorities for the fulfillment of the objectives and results established in the Project. It will approve the Annual Operating Plans and budget, as well as the annual procurement plan. The CDP will meet every six months physically and/or virtually. The composition of the CDP will be defined in the Project Operations Manual (MOP). The Project Steering Committee (PSC) will be made up of a representative and alternate from the following institutions and organizations with the right to speak and vote:

- ? Ministry of Environment (MiAMBIENTE) who will chair the PSC.
- ? Ministry of Agricultural Development (MIDA),
- ? Aquatic Resources Authority of Panama (ARAP),
- ? Development Bank for Latin America (CAF)
- ? Wetland International (WI), and
- ? Project Coordinator who will act as Secretary of this Steering Committee with the right to speak.

The specific functions and responsibilities of the Project Steering Committee are as follows:

- ? Contribute to the planning and coordination of the Project.
- ? Review and approve the Operational Manual of the Project in consultation with WI and CAF; as well as approving subsequent changes and amendments that are introduced in the MOP prior approval of WI and CAF.
- ? Review and approve the Annual Operating Plans and their Procurement Plan.
- ? Review quarterly reports or other periodic and/or exceptional reports submitted by the Project Coordinator on the status of the Project, the activities carried out, the execution of the annual budget, the financial situation of the Project and/or other topics that are requested.
- ? Review Annual Audit reports and the results of the Mid-Term Evaluation of the Project.
- ? Review the progress of the Project and ensure that the activities are consistent with the approved budget and annual operating plan;
- ? Ensure that the required resources are allocated and arbitrate any conflict within the Project or negotiate a solution to any problem between the Project and external entities.

? Promote partnerships with relevant government ministries/agencies/departments for the preparation, monitoring, and execution of the Project.

? Facilitate the coordination of activities financed by the Project with other related investments in Panama, when appropriate; and

? Ensure accountability when making decisions in accordance with standards that ensure that the administration generates development results, the best value for money, equity, integrity, transparency, and effective international competition.

2. Technical Coordination Committee (TCC): This Committee should facilitate inter-institutional technical coordination to promote the execution of the project. Additionally, this Committee must provide supervision and technical guidance for the development of the programmed activities and the achievement of the expected Results in accordance with the Project Results Framework. The composition and functions of the TCC will be defined in the Project Operations Manual. The Technical Coordination Committee (TCC) will be made up of a representative and alternate from the following institutions and organizations with the right to speak and vote:

? Project Coordinator who will preside over the TCC and the Sustainable Production Specialist who will act as Secretary of the TCC with the right to speak.

? The Provincial Director of the Ministry of Environment (MiAMBIENTE) in Chiriqu? or whoever he designates.

? The Provincial Director of the Ministry of Agricultural Development (MIDA) in Chiriqu?, or whoever he designates.

? The Provincial Director of the Aquatic Resources Authority of Panama (ARAP) in Chiriqu?, or whoever he designates.

? The Special Project and Alliances of Wetlands International (WI).

Its functions and responsibilities are as follows:

? Ensure that the activities of the Project adhere to the Annual Operating Plan, the Social and Environmental Safeguards of the GEF, CAF, and those of the Government of Panama.

? Participate in meetings, workshops, consultations, trainings, and other key related activities as required.

? Facilitate coordination actions with the PCU for the development of the activities programmed in the Annual Operating Plan.

? Support the supervision and technical advice of their area of expertise.

? Mobilize complementary technical, equipment and budget support for the development of scheduled activities.

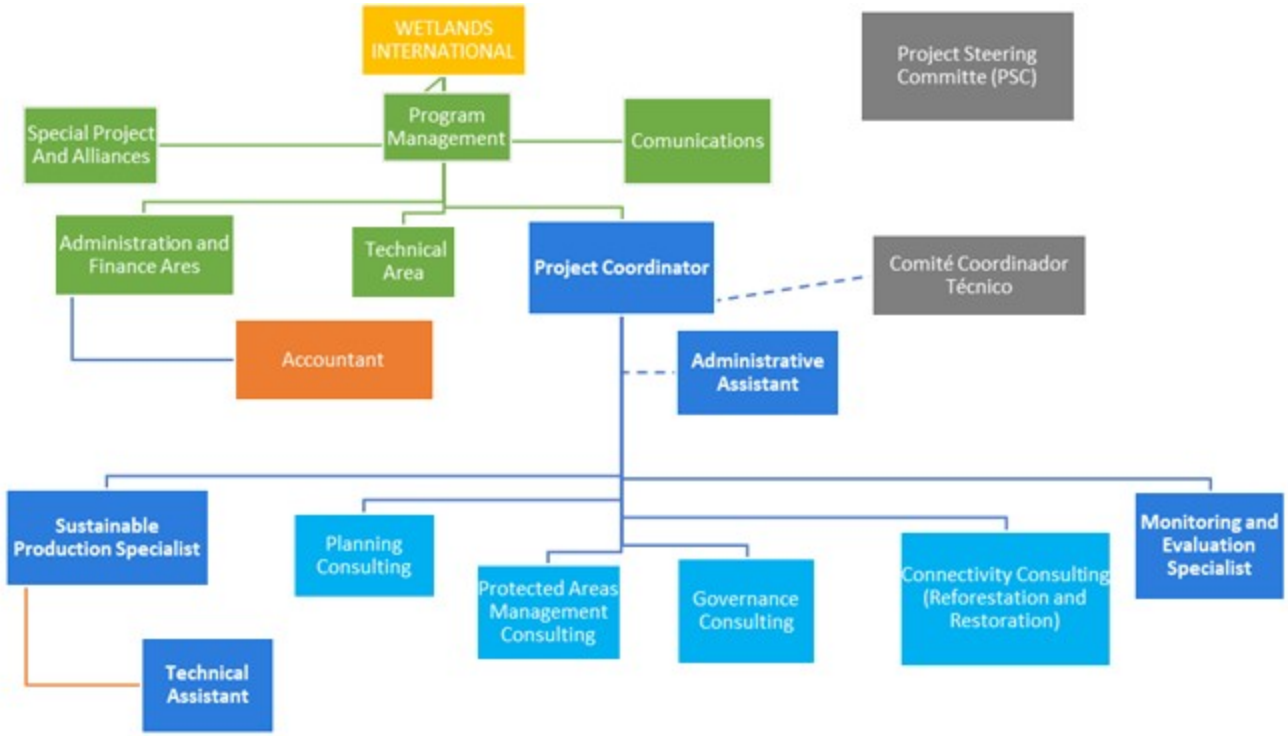
? Support the process for reporting institutional counterparts to the Project.

? Make visits to the Project site to evaluate the development and impact of the actions and be able to generate recommendations or technical solutions to the problems encountered.

? Ensure accountability when making decisions in accordance with standards that ensure that the administration generates development results, the best value for money, equity, integrity, transparency, and effective international competition.

158. The coordination of the Project must consider meetings with UNDP based on the management and implementation of the Protection of Reserves and Carbon Sinks in Mangroves and Protected Areas of Panama project, which left a series of tools, results and lessons learned in the project area. Additionally, recommends a coordination meeting with the Ecosystem-Based Biodiversity Friendly Cattle Production Framework for The Darien Region of Panama Project, which is executed by ANCON and which is working on sustainable livestock actions, connectivity of the Filo de Tallo Cangl?n Hydrological Reserve, has established a support for the Management of this Hydrological Reserve, which is multisectoral and which is also already leaving experiences and lessons learned that can be considered for the execution of this project.

Institutional Structure of the Project



159. All activities related to financial management will follow the Financial Procedures Agreement (including all annexes) between the Development Bank of Latin America (CAF) and the International Bank for Reconstruction and Development (IBRD) as trustee of the Trust Fund of the Fund for The Global Environment Facility Trust Fund (GEFTF), signed on September 28, 2015. This agreement contains provisions for Project operations to meet and exceed all internationally accepted fiduciary and financial management standards, which will be verified through annual, final, independent audits and other periodic audits of the Project accounts, as necessary. The personnel of the executing agency of the Project that is involved in the daily management of the Project's resources will be trained in financial management policies consistent with the provisions of the agreement, during and after the start of the Project.

7. Consistency with National Priorities

Describe the consistency of the project with national strategies and plans or reports and assesments under relevant conventions from below:

NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc.

- National Action Plan for Adaptation (NAPA) under LDCF/UNFCCC

- National Action Program (NAP) under UNCCD

- ASGM NAP (Artisanal and Small-scale Gold Mining) under Mercury

- Minamata Initial Assessment (MIA) under Minamata Convention

- National Biodiversity Strategies and Action Plan (NBSAP) under UNCBD

- National Communications (NC) under UNFCCC

- Technology Needs Assessment (TNA) under UNFCCC

- National Capacity Self-Assessment (NCSA) under UNCBD, UNFCCC, UNCCD

- National Implementation Plan (NIP) under POPs

- Poverty Reduction Strategy Paper (PRSP)

- National Portfolio Formulation Exercise (NPFE) under GEFSEC

- Biennial Update Report (BUR) under UNFCCC

- Others

160. The project contributes to Panama?s commitments as a signatory to the Convention on Biological Biodiversity (CBD) of June 13, 1992, which was ratified on January 17, 1995, the United Nations Convention to Combat Desertification (UNCCD for its acronym in English) of February 22, 1995, which is ratified on April 4, 1996. Additionally, Panama is a signatory of the United Nations Framework Convention on Global Climate Change and has ratified the Paris Agreement that establishes measures and encourages the 195 states that part of the United Nations Framework Convention on Climate Change to establish commitments to reduce Greenhouse Gas (GHG) emissions through mitigation, adaptation, and resilience of ecosystems to the effects of Global Warming.

161. In this sense, Panama seeks to implement concrete actions to improve its Nationally Determined Contributions (NDC) and thus reduce greenhouse gas emissions by 45% in the next ten years and net zero emissions by 2050. The project contributes globally, considering international environmental treaties acquired by the country. These international agreements ratified by Panama include the Aichi goals and the Paris Agreement, which establishes measures and encourages the 195 states that are part of the United Nations Framework Convention on Climate Change to establish commitments to reduce Greenhouse Gas (GHG) emissions through the mitigation, adaptation, and resilience of ecosystems to the effects of Global Warming.

162. At the national level, the project is coherent with the strategies, policies and national plans for sustainable development and conservation of ecosystems and biodiversity of Panama. The proposal is aligned with the Strategic Government Plan 2019-2024 of Panama[1], which is framed in the objectives and goals that emerged from a great participatory process called national concertation and that in terms of biodiversity has among its main tasks ?Protect the biodiversity and the Panama?s natural heritage, as a priority in the country?s environmental agenda? and that it is committed to complying with the Sustainable Development Goals (SDG), which implies eradicating extreme poverty and reducing by at least half the proportion of men, women and children of all ages living in poverty in all dimensions by 2030.

163. The proposal is consistent with the National Environment Strategy of Panam?[2], which has as one of its four objectives, to ?Promote knowledge, conservation, restoration and connectivity of ecosystems, natural resources and biodiversity, in a participatory manner promoting sustainable use of ecosystem services and the equitable distribution of their benefits in local communities?.

164. The proposal is also consistent with the National Biodiversity Policy[3], which has as its general objective ?Implement the National Biodiversity Policy as the core of a national strategy to articulate the sustainability of biological diversity with the processes of economic and social development, improving the country?s competitiveness, the quality of live, the eradication of poverty, subsistence, the integration of people and sustainable development.? Supports the implementation of the National Biodiversity Strategy and its 2018 ? 2050[4] Action plan, especially in the

areas of planning, strengthening the management of protected areas, biodiversity conservation and recovery of key ecosystems and habitats for biodiversity, improvement of connectivity and reduction of threats to biodiversity.

165. The proposal is consistent with the National Ocean Policy[5], which among its strategic lines are: ?Protect the most vulnerable species and ecosystems, avoiding irreparable damage and reducing conflicts of use with the support of conservation added to community empowerment, and Recover the Biodiversity of degraded marine-coastal ecosystems with citizen support to guarantee the provision of ecosystem systems?.

166. The proposal is consistent with the National Climate Change[6] which stablishes a roadmap that aims to guide the country towards a low-carbon economy with mitigation and adaptation actions that allow sustainable economic, social and environmental growth (Component 1) that also allows compliance with the sustainable development goals (SDG) through the promotion of actions to combat the effects of global climate change as part of the climate action axis the 2030 Agenda and the Sustainable Development Goals.

167. The SDG?s that are linked to the project are based on: Goal No. 1 for the End of Poverty, Goal No. 2 on Zero Hunger, Goal No. 5 Gender Equality, Goal No. 6 on Clean Water and Sanitation, Goal No. 13 on Climate Action, Objective No. 14 Underwater Life and finally Objective No. 15 that covers the life of Terrestrial Ecosystems.

168. The table 8 shows the alignment of the project results framework (Outcome/Output) with the national priorities established in the 2019-2024 Government Strategic Plan and the United Nations Sustainable Development Goals.

169. The Project is aligned and contributes to the fulfillment of the objectives and goals of the Kunming-Montreal Global Biodiversity Framework related to the Biodiversity Vision for 2050[7]:

? **Objective A**: The project will contribute to maintaining, increasing or restoring the integrity, connectivity and resilience of all ecosystems, contributing to the increase in the surface area of natural ecosystems by 2050.

Project Contribution to Objective A: The project will contribute to maintaining and improving 188,112 ha. of landscape under improved management to benefit biodiversity. Additionally, the project will contribute to improving the effectiveness in the management of the PCAG protected areas for the benefit of biodiversity and maintaining and improving the ecosystem services that they provide to the communities with a total of 61,386 hectares of

which 40,655 are terrestrial and 20,731 are marine, and about 1,000 hectares will be reforested or restored. to contribute to the connectivity of the landscape, its integrity and increase the surface area of the PCAG ecosystems.

- **Objective B:** The project will contribute to ensuring that biodiversity is used and managed sustainably and that nature's contributions to people, including its ecosystem functions and services, are valued, maintained and enhanced.

***Project Contribution to Objective B*:** To this end, the project will help strengthen the management of 5 protected areas within the PCAG that total some 61,386 hectares and also through the implementation of the communication and knowledge management strategy and gender perspective integration plan that aims to strengthen the capacities, raise awareness and educate some 25,000 key actors of the PCAG.

- **Objective D**: The project will also contribute to ensuring that beneficiaries have adequate means of implementation, including financial resources, capacity building, scientific and technical cooperation, and access to and transfer of technology, to fully implement the Kunming-Montreal Global Biodiversity Framework.

Project Contribution to Objective D : In this sense, the project will promote and implement a financial sustainability strategy for the management of the PCAG, it will establish an inclusive and representative governance mechanism of the actors of the PCAG that facilitates its management, it will develop farm management plans to guide the production towards sustainable, climate-smart models that incorporate the use of efficient and low-cost technology that impact about 500 hectares of the landscape.

170. The Project aligns and contributes to compliance with the United Nations Convention to Combat Desertification (UNCCD)[8] in its objective of fighting desertification and mitigating the effects of drought in countries affected by severe drought or desertification, through the adoption of effective measures at all levels. In this sense, the project will promote the development and implementation of strategies that contribute to the increase in land productivity, its rehabilitation, conservation and sustainable use of land and water resources through landscape planning throughout the project area. and the farm management plans that will promote the transformation of farms with traditional productive practices to sustainable agricultural and livestock production, impacting 500 hectares. and thereby contributing to the rehabilitation and conservation of soil and water resources with the implementation of good productive practices (Nature-based adaptation).
171. Additionally, in accordance with the Strategic Framework of the United Nations Convention to Combat Desertification (CLD)[9] for the period 2018 - 20230, the project will contribute to the fulfillment of the following strategic objectives.

- **Strategic objective 1**: To improve the condition of affected ecosystems, combat desertification/land degradation, promote sustainable land management and contribute to land degradation neutrality.

Project contribution: Preparation and implementation of a sustainable use plan for the PCAG (348,474 ha.) that impacts a total of 228,767 ha. land and farm management plans to promote sustainable agriculture and livestock that integrate good soil and water conservation practices on farms and impact about 500 hectares.

- **Strategic objective 2**: To improve the living conditions of affected populations.

Project contribution: The project promotes productive diversification as a means of adaptation to climate change and food security for the beneficiaries. The transformation and management of agricultural, livestock and fisheries production to sustainable models contributes to improving productivity, generating greater economic benefits for producers and training, education and awareness-raising actions for beneficiaries with the incorporation of the gender perspective will allow for equitable the integration of women, youth and indigenous people as beneficiaries of the project's actions.

- **Strategic objective 3**: To mitigate, adapt to, and manage the effects of drought in order to enhance resilience of vulnerable populations and ecosystems.

Project contribution: The preparation and implementation of the GCP Sustainable Use Plan will consider the effects of Climate Change and vulnerability analysis in the landscape planning process and its subsequent sustainable management through the governance platform. Sustainable productive practices consider the vulnerability of ecosystems to drought and incorporate adaptation actions to productive systems under the approaches of nature-based adaptation and climate-smart agriculture.

- **Strategic objective 4**: To generate global environmental benefits through effective implementation of the UNCCD.

Project Contribution: The project contributes to six global GEF goals (GEF Core Indicators) as can be seen in Table 7.

- **Strategic objective 5**: To mobilize substantial and additional financial and non-financial resources to support the implementation of the Convention by building effective partnerships at global and national level.

Table 8 Alignment of the project results framework with the national priorities

GEF 7 Program Framework Priorities	***United Nations Sustainable Development Goals***	**Strategic Government Plan 2019 ? 2024 of Panam? (Environmental Tasks)**	**Alignment results and Project Products**
Outcome 1.1 Landscape planning for the conservation of PCAG biodiversity and the sustainable use of natural resources substantially improved.			
I. Integrate biodiversity in all sectors, as well as in landscapes and seascapes.	SDG 5, SDG 14 y SDG 15	Task 1,	Output 1.1.1 PCAG multisectoral governance platform formally created and functioning.
I. Integrate biodiversity in all sectors, as well as in landscapes and seascapes.	SDG 5; SDG 6; SDG3; SDG 14 y SDG 15	Task 1 y Task 4	Output 1.1.2. Land and sea use plan development using a sustainable Landscape Planning (SLP) and Reef to Ridge (R2R) approach to effectively integrate conservation actions with PCAG production systems.
II. Address direct drivers to protect habitats and species.	SDG 1; SDG2; SDG 5; SDG 6, SDG 12, SDG 13, SDG 14 y SDG 15	Task 1, Task 4 y Task 14	Output 1.1.3. Farm management plans and sustainable fishing exploitation plans are developed by the project and implemented by the beneficiaries
I. Integrate biodiversity in all sectors, as well as in landscapes and seascapes.	SDG 1; SDG2; SDG 5; SDG 6, SDG 12, SDG 13, SDG 14 y SDG 15	Task 1, Task 3, Task 4 y Task 14	Output 1.1.4. PCAG financial sustainability strategy designed, and key actions implemented.
I. Integrate biodiversity in all sectors, as well as in landscapes and seascapes. II. Address direct drivers to protect habitats and species.	SDG 1; SDG2; SDG 5; SDG 6, SDG 12, SDG 13, SDG 14 y SDG 15	Task 1, Task 3, Task 4, Task 11, Task 13 y Task 14	P1.5. Lessons learned from Project implementation systematized and widely disseminated to stakeholders through the Project`s knowledge management plan.
Outcome 2.1 Key terrestrial and marine ecosystems within the PCAG are better protected and restored to ensure the conservation of biodiversity and ecosystems services.			

I. Integrate biodiversity in all sectors, as well as in landscapes and seascapes.	SDG 1; SDG2; SDG 5; SDG 6, SDG 12, SDG 13, SDG 14 y SDG 15	Task 11 y Task 13	Output 2.1.1 The Operational Plans for five prioritized PA?s are updated and harmonized with the priority actions implemented, strengthening the integrity and resilience of the PCAG landscape.
I. Integrate biodiversity in all sectors, as well as in landscapes and seascapes.	SDG 1; SDG2; SDG 5; SDG 6, SDG 12, SGD 13, SDG 14 y SDG 15	Task 11 y Task 13	Output 2.1.2 Revised and updated regulations for the development and updating of management plans and their technical guidelines
Outcome 2.2 Recovery of key connectivity areas outside the protected areas beneficial for PCAG biodiversity processes			
I. Integrate biodiversity in all sectors, as well as in landscapes and seascapes. II. Address direct drivers to protect habitats and species.	SDG 1; SDG 2; SDG 5; SDG 6, SDG 12, SDG 13, SDG 14 y SDG 15	Task 1, Task 4 y Task 14.	Output 2.2.1 Restored biological connectivity outside of protected areas in the PCAG.
I. Integrate biodiversity in all sectors, as well as in landscapes and seascapes. II. Address direct drivers to protect habitats and species.	SDG 1; SDG2; SDG 5; SDG 6, SDG 12, SDG 13, SDG 14 y SDG 15	Task 1, Task 4 y Task 14.	Output 2.2.2. Farm management and fishing exploitation plans implemented to transform traditional livestock, agriculture and fishing into sustainable production and contribute to connectivity and reduction of threats to ecosystems and their biodiversity
I. Integrate biodiversity in all sectors, as well as in landscapes and seascapes.	SDG 6, SDG 12, SDG 13, y SDG 15	Task 1, Task 4 y Task 14.	Output 2.3 A PCAG Landscape Conservation and Restoration Scheme for Conservation Agreements with private owners outside of PA?s.
Outcome 2.3: Knowledge, sensitivity, participation and capacity building of PCAG actors improved, through the implementation of the communication and knowledge management strategy, the gender perspective integration plan and the adaptive management of the project through its evaluation and monitoring.			

I. Integrate biodiversity in all sectors, as well as in landscapes and seascapes. II. Address direct drivers to protect habitats and species.	SDG 1, SDG 2, SDG 5	Task 1, Task 2	Output 2.3.1 A communication and knowledge management strategy for the Project has been developed that allows informing, sharing, disseminating, and educating actors and stakeholders on the results, lessons and experiences of the Project with integration of a gender perspective.
I. Integrate biodiversity in all sectors, as well as in landscapes and seascapes. II. Address direct drivers to protect habitats and species.	SDG 1, SDG 2, SDG 5	Task 1, Task 2	Output 2.3.2 Project implementation follows a Results-Based Management (RBM) framework, applies SMART indicators to measure progress and impact through Project Monitoring and Evaluation, employs adaptive management principles and gender mainstreaming

Notes*: Sustainable Development Goals (SDGs):* SDG 1: End poverty in all its forms everywhere, SDG 2: End hunger achieve food security and improved nutrition, and promote sustainable agriculture, SDG 5: Achieve gender equality and empower all women and girls, SDG 6: Ensure the availability of water and its sustainable management and sanitation for all, SDG 12: Ensure sustainable consumption and production patterns, SDG 13: Take urgent action to combat climate change and its effects, SDG 14: Conserve and use sustainably the oceans, seas and marine resources, SDG 15: Sustainably manage forests, fight desertification, stop land degradation, stop biodiversity loss.

Environmental Tasks, Strategic Government Plan 2019-2024 of Panama: Task 1: Protect the Biodiversity and natural heritage of Panama, as a priority in the country`s environmental agenda, Task 3. Incorporate environmental education in school programs, Task 4. Promote actions to combat Climate Change, including the enthusiastic promotion of clean energy and the protection of the country?s natural forests, Task 11. Strengthen the technical capacity of the human resources of MIAMBIENTE, Tasks 13. Preparation and updating of management plans for critical protected areas in the country and Task 14. Implement a national restoration and protection program for the ten most threatened terrestrial and marine ecosystems in the country, through alliances with communities, NGO`s, the private sector and international organizations.

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[1] https://observatorioplanificacion.cepal.org/es/planes/plan-estrategico-de-gobierno-2019-2024-de-panama

[2] ENA_Final_BAJA.pdf (undp.org).

[3] BIBLIOTECA VIRTUAL - MiAmbiente

[4] BIBLIOTECA VIRTUAL - MiAmbiente

[5] Pol?tica Nacional de Oc?anos | Programa De Las Naciones Unidas Para El Desarrollo (undp.org)

[6] https://www.pa.undp.org/content/panama/es/home/library/environment_energy/estrategia-nacional-de-cambio-climatico-2050.html

[7] 15/4. Kunming-Montreal Global Biodiversity Framework (miteco.gob.es)

[8] UNCCD_Convention_ENG_0_0.pdf

[9] 1718648 (unccd.int)

8. Knowledge Management

Elaborate the "Knowledge Management Approach" for the project, including a budget, key deliverables and a timeline, and explain how it will contribute to the project's overall impact.

172. Output 2.3.1 is included within the project results framework, which includes the preparation and implementation of a comprehensive communication and knowledge management strategy for the project. The communication and knowledge management actions must be visualized transversally for all the results and products of the project. The objective is to inform, share, disseminate, train, and educate stakeholders and interested parties about the results, learning and experiences of the Project with the integration of the gender perspective.

173. The implementation of the communication and knowledge management strategy should allow a better understanding of the connections between social, economic, environmental and governance processes so that project actions can be executed more efficiently and generate a greater impact. On the other hand, the communication and knowledge management actions will be key to advancing the project goals, especially in the productive processes that will imply strengthening the capacities of beneficiaries in order to incorporate new methods, techniques, and technology into their productive processes to that these generate greater social, economic, and environmental benefits.

174. The communication and knowledge management strategy also includes the development of formal and non-training environmental education actions, as well as awareness-raising actions for different stakeholders. The implementation of the strategy implies the identification of key messages, as well as tools, means and strategic alliances that contribute to the training, education, and awareness processes.

Additionally, it will be key to develop the actions that this tool identifies as keys to sharing, exchanging, and disseminating the experience, lessons learned and results that the project generates.

175. The systematization of the project results, experiences and lessons learned will be part of the development of this communication and knowledge management strategy; For this, different types of communication materials must be produced and specific events developed that allow sharing the results, experience and lessons learned with all the key stakeholders of the project and the general public.

176. Knowledge Management Work Plan: This plan contains seven key products, the first product is the Communication and Knowledge Management strategy that, together with the Gender Perspective Integration Plan, constitute the key tools to guide PCAG's environmental education plan jointly with the Ministry of the Environment and the Ministry of Education of the province of Chiriqu? and based on the determination of key messages and target audiences, guide the PCAG's awareness campaigns.

Table 9 Knowledge Management Work Plan:

Products	Budget (US$)	FY1	FY2	FY3
1. Preparation of Communication and Knowledge Management Strategy	10,000			
2. Design of the project's corporate image (logo, banner, etc.).	5,000			
3. Website design and update	10,000			
4. Implementation of the Gender Perspective Integration Plan	30,000			
5. Preparation and implementation of awareness campaign on PCAG	20,000			
6. Preparation and implementation of Environmental Education Plan on PCAG	30,000			

7. Systematization of experiences and lessons learned and their dissemination	15,000			
Total	120,000			

9. Monitoring and Evaluation

Describe the budgeted M and E plan

177. The Project will follow CAF's standard processes and procedures for monitoring, reporting and evaluations. The requirements and templates for reports will be provided by CAF and will form an integral part of the legal instrument that will be signed by the executing agency (WI) and CAF. The Project's monitoring and evaluation plan is consistent with the GEF's monitoring and evaluation policy.

178. Table 10 presents the Project Monitoring and Evaluation Plan, which includes SMART indicators and means of verification for each expected result. These indicators will be the main tools to evaluate the progress in the implementation of the Project and determine if the expected results are being achieved. An M&E plan for the Project with its associated costs is presented in Annex B.

179. During the first quarter of execution, an introductory workshop on Project implementation will be held to ensure that all stakeholders understand their roles and responsibilities with respect to monitoring and evaluation of the Project. The indicators and their means of verification can be refined in this introductory workshop. The daily monitoring of the Project is the responsibility of WI and the Project Management Team (PCU). It is the responsibility of WI to inform CAF of any delay or difficulty that arises during the implementation of the Project so that appropriate support or corrective measures can be taken in a timely manner.

180. The CDP will issue reports every 6 months on the progress of the Project and will make recommendations on the need to review any aspect of the Project Results Framework or M&E plan. The M&E supervision responsibility lies with the CAF-GEF Task Manager, who must ensure that the Project complies with CAF and GEF policies and procedures. The Task Manager will also review the quality of Project outputs, provide feedback to Project partners, and establish peer review procedures to ensure adequate quality of Project outputs, in close collaboration with WI.

181. WI will develop an initial monitoring plan that will be communicated to Project partners during the introductory workshop for feedback. The emphasis of the supervision by the Task Manager will be on the monitoring of the results, but without neglecting the financial management of the Project and the monitoring of the implementation. CAF will assess progress with respect to the delivery of the agreed global environmental benefits for the Project. Both CDP and CAF will periodically monitor the risks and assumptions of the Project. Risk assessment and rating is an integral part of the Project Implementation Review (PIR). The quality of the monitoring and evaluation of the Project will also be reviewed and scored as part of the PIR. Key financial parameters will be monitored on a quarterly basis to ensure cost-effective use of financial resources.

182. An Interim Evaluation will be carried out at the midpoint of the Project. An independent consultant will be hired to carry out this evaluation. WI will manage the mid-term evaluation (IE) process under the close supervision of CAF. The IE will address the evaluation parameters recommended by the GEF Evaluation Office and verify the information collected through the Project's monitoring and evaluation efforts, as appropriate. The CDP will participate in the mid-term evaluation and support WI in developing a management response to the evaluation recommendations, along with an implementation plan. It is the responsibility of the CAF-GEF Task Manager to determine if the agreed recommendations are being implemented.

183. An Independent Final Evaluation will be carried out during the last semester of Project implementation. CAF will manage the final evaluation process. CAF will carry out a quality review of the evaluation report and submit it together with the report to the GEF Evaluation Office no later than 6 months after completion of the evaluation.

Table 10 Monitoring and evaluation plan

Component	Outcome	Indicator	Target	Outputs	Means of Verification	Fuente	Unit of measure	Base Line	Month 6th	Month 12th	Month 18th	Milestone Month 18	Month 24th	Month 30th	Month 36th	Expected result 3 Years
1. Strengthening the governance for biodiversity conservation and sustainable use of the PCAG .	1.1 Landscape planning for PCAG biodiversity conservation and sustainable use of natural resources substantially improved.	No. of hectares of landscapes and seascapes under improved governance.	Total: 188.112 ha	1.1.1 Multi-sectorial PCAG governance platform formally created and functioning.	Articles of incorporation. Internal regulations Minutes of approval by key stakeholders	Documentary review Memories of meetings	Document	0				1				1
				1.1.2. Land and marine use plan developed using Sustainable Landscape Planning (SLSP) and Reef to Ridge (R2R) approach to	Landscape Use and Conservation Plan of the CAG discussed and agreed with Key Actors.	Technical reports Memories of meetings and workshops Minutes of approval by key stakeholders	Document	0				1				1
							Hectares under management	0				0				188.112

Component	Outcome	Indicator	Target	Outputs	Means of Verification	Fuente	Unit of measure	Base Line	Month 6th	Month 12th	Month 18th	Milestone Month 18	Month 24th	Month 30th	Month 36th	Expected result 3 Years
				effectively integrate conservation actions with PCAG production systems.	The regulations for the constitution and/or management of Biological Corridors in Panama have been designed and agreed with Key Actors.	Documentary review Memories of meetings and workshops Minutes of approval by key stakeholders Minutes of approval by key stakeholders	Document	0				1				1
				1.1.3 Farm management plans and sustainable fishing exploitation plans	Sustainable farm management plans, approved by key stakeholders.	Technical reports Memories of meetings and workshops	Document	0				30				50
							No. of persons by sex, youth, and ethnicity	0				150				250

Component	Outcome	Indicator	Target	Outputs	Means of Verification	Fuente	Unit of measure	Base Line	Month 6th	Month 12th	Month 18th	Milestone Month 18	Month 24th	Month 30th	Month 36th	Expected result 3 Years
				are developed by the project and implemented by the beneficiaries.		Minutes of approval by key stakeholders	Ha restored or reforested on degraded land	0				300				500
					Plan for the use of fishing resources prepared and approved by Key Actors.	Technical reports Minutes of approval by key stakeholders Direct Observation	Document	0				1				1
							No. of persons by sex, youth, and ethnicity	0				100				100
							Ha impacted by the plan	0				50				50
				1.1.4 PCAG financial sustainability strategy designed, and key actions implemented.	PCAG Financial Sustainability Strategy approved with Key Actors.	Technical reports Memories of meetings and workshops	Document	0				1				0
2. Improvin	2.1 Key terrestrial	Number of	Total: 61.386	2.1.1 Operation	Updated annual	Documentary	Document	5				5				5

Component	Outcome	Indicator	Target	Outputs	Means of Verification	Fuente	Unit of measure	Base Line	Month 6th	Month 12th	Month 18th	Milestone Month 18	Month 24th	Month 30th	Month 36th	Expected result 3 Years
g the conservation of biodiversity and ecosystems within the PCAG	and marine ecosystems within the PCAG are better protected and restored to ensure conservation of biodiversity and ecosystem services.	hectares of protected areas with improved management effectiveness	ha Terrestrial: 40.655 ha Marine: 20.731 ha **Protected areas** David Mangroves: 16.702 ha Fortuna Forest Reserve: 19.500 ha Golfo de Chiriqu? Marine National Park: 14.740 ha La Barqueta Wildlife	al Plans for five prioritized PAs are updated and harmonized with priority actions implemented, strengthening the integrity and resilience of the PCAG landscape (Fortuna Forest Reserve, Chiriqu? Gulf Marine National Park, La Barqueta Wildlife Refuge, Boca Vieja Wildlife Refuge).	operating plans with a Landscape approach. METT evaluation	review Memories of meetings and workshops Direct observation METT Evaluation Reports	Impacted ha MEET Tool	Total: 61.386 ha Terrestrial: 40.655 ha Marine: 20.731 ha METT Baseline: Gulf of Chiriqu? National Marine Park:78 Wildlife Refuge Playa La Barqueta Agr?cola: 65				Total: 61.386 ha Terrestrial: 40.655 ha Marine: 20.731 ha				Total: 61.386 ha Terrestrial: 40.655 ha Marine: 20.731 ha

Component	Outcome	Indicator	Target	Outputs	Means of Verification	Fuente	Unit of measure	Base Line	Month 6th	Month 12th	Month 18th	Milestone Month 18	Month 24th	Month 30th	Month 36th	Expected result 3 Years
			Refuge: 6.704 ha Boca Vieja Wildlife Refuge: 3.740 ha					Wildlife Refuge Playa Boca Vieja: 33 Fortuna Forest Reserve: 104								
				2.1.2 Revised and updated regulations for the development and updating of management plans and their technical guidelines.	The regulations for the constitution and/or management of Biological Corridors in Panama have been designed.	Documentary review Memories of meetings and workshops	Document	0				0				1
	2.2 Recovery	Number of ha in	Total: 1.000 ha	2.2.1 Restored	Evaluation of the	Documentary	Document	0				1				2

Component	Outcome	Indicator	Target	Outputs	Means of Verification	Fuente	Unit of measure	Base Line	Month 6th	Month 12th	Month 18th	Milestone Month 18	Month 24th	Month 30th	Month 36th	Expected result 3 Years
	of key connectivity areas outside protected areas beneficial for PCAG biodiversity processes.	prioritized connectivity areas restored and/or reforested.	Agriculture: 500 ha Forest: 450 ha Mangroves: 50 ha	biological connectivity in key protected areas within PCAG.	increase in biological connectivity in key areas of the PCACC.	review Direct Observation	Ha restored or reforested agricultural land	0				250				500
							Ha restored or reforested on forest land	0				250				450
							Ha of forest restored or reforested on mangroves land	0				25				50
		Number of	500 ha	2.2.2 Conversio	Technical assistance	Documentary	Document	0				300				55

Component	Outcome	Indicator	Target	Outputs	Means of Verification	Fuente	Unit of measure	Base Line	Month 6th	Month 12th	Month 18th	Milestone Month 18	Month 24th	Month 30th	Month 36th	Expected result 3 Years
		degraded hectares converted to silvopastoral systems		n of traditional production systems to Silvopastoral Systems, Agroforestry Systems and the development of Fishing Exploitation Plans contribute to connectivity and reduction of threats within the PCAG.	for the preparation and implementation of management plans for the conversion of traditional livestock to silvopastoral systems and agroecological systems until completing at least the 500 ha. established in the goal. The interested beneficiaries must finance the implementation of their	review Direct Observation	Impacted ha	0				7500				500

Component	Outcome	Indicator	Target	Outputs	Means of Verification	Fuente	Unit of measure	Base Line	Month 6th	Month 12th	Month 18th	Milestone Month 18	Month 24th	Month 30th	Month 36th	Expected result 3 Years
					management plan with their own resources or with agricultural credits that will be considered counterpart to the project											
		Number of ha under Conservation Agreements with private owners.	Total: 1.500 ha	2.2.3 APCAG landscape conservation and restoration scheme for Conservation Agreements with private owners outside of PAs.	Conservation Agreements with Key Actors, signed.	Documentary review Direct Observation	Document	0				10				20
							Impacted ha	0				30				1.500

Component	Outcome	Indicator	Target	Outputs	Means of Verification	Fuente	Unit of measure	Base Line	Month 6th	Month 12th	Month 18th	Milestone Month 18	Month 24th	Month 30th	Month 36th	Expected result 3 Years
		Greenhouse gas emissions mitigates in the AFOLU Sector	Total: 8,576 ton CO2 eq.	Outputs 2.2.1, and 2.2.2	Analysis Report with the support of GIS tools.	Report	Ton Co2 eq.	0				4,764				8,576
	2.3 A communic	No. of CAG	25.000 people	2.3.1 A communic	PCAG Communi	Documentary	Document	0				1				1

Component	Outcome	Indicator	Target	Outputs	Means of Verification	Fuente	Unit of measure	Base Line	Month 6th	Month 12th	Month 18th	Milestone Month 18	Month 24th	Month 30th	Month 36th	Expected result 3 Years
	ation and knowledge management strategy has been developed that allows informing, sharing, disseminating, and educating stakeholders and interested parties on the results, learning and experiences of the Project with integration of the gender perspective.	residents aware of the scope and benefits that the Project will bring to the area.	informed and sensitized about the actions and results of the project through awareness campaign,	ation and knowledge management strategy for the Project has been developed that allows informing, sharing, disseminating, and educating actors and stakeholders on the results, lessons and experiences of the Project	cation Strategy approved with Key Actors PCAG Knowledge Management Strategy approved with Key Actors. Prepared communication material Communication platforms designed (Facebook, WhatsApp, Instagram) and operational.	review Memories of meetings and workshops	No. of persons by sex, youth, and ethnicity	0				10.000				25000
	A highly efficient	Number of	Total benefici	2.3.2 A capacity	Capacity building	Documentary	Document	0				1				2

Component	Outcome	Indicator	Target	Outputs	Means of Verification	Fuente	Unit of measure	Base Line	Month 6th	Month 12th	Month 18th	Milestone Month 18	Month 24th	Month 30th	Month 36th	Expected result 3 Years
	and effective project management system has been developed.	project beneficiaries trained in sustainable and climate-resilient production techniques with a landscape approach.	aries trained: 1.000 Women: 40% (400) Youth: 40% (400) Ethnicity: 10% (100)	building strategy in sustainable and climate resilient production with an inclusive approach, developed and implemented.	plan for sustainable and climate resilient production with an inclusive approach Systematization of lessons learned Prepared educational material. Workshops, field trips, exchanges of experiences	review Memories of meetings and workshops	No. of persons by sex, youth, and ethnicity	0				Total: 500 Women: 40% (200) Youth: 40% (200) Ethnicity: 10% (100)				Total: 1.000 Women: 40% (400), Men (600) Youth: 40% (400) Ethnicity: 10% (100)

Component	Outcome	Indicator	Target	Outputs	Means of Verification	Fuente	Unit of measure	Base Line	Month 6th	Month 12th	Month 18th	Milestone Month 18	Month 24th	Month 30th	Month 36th	Expected result 3 Years
		Number of reports delivered	5 Progress Reports 10 Monitoring Reports 2 Evaluation 2 Audit	2.3.3 Project implementation follows a Results-Based Management (RBM) framework, applies SMART indicators to measure progress and impact through Project Monitoring and Evaluation, and employs management principles.	Progress Reports (Biannual) Monitoring Reports (Quarterly) Evaluation Reports (Mid Term & Final) Audits (Annual)	Documentary review	Document					2 Progress Reports 6 Monitoring Reports 1 Evaluation (Mid Term) 1 Audit				5 Progress Reports 10 Monitoring Reports 2 Evaluation (Final) 2 Audit
		Physical and financial execution rate	Above 80%			Documentary review	Percentage	0%				80%				80%

1. Tablet 11 presents the budget monitoring and evaluation plan that contains the most important evaluation and monitoring milestones during the development of the project.

Table 11. BUDGETED MONITORING AND EVALUATION PLAN

M&E Activity	Responsible	Estimated Budget (US$) (Without Staff Time)	Term
Introductory workshop (two day) to produce: Annual Work Plan; Baseline Project, Discuss the Project Operating Manual; Discuss Roles, Responsibilities and Decision-Making Structures; Review and discuss the Action Plan for the integration of the Gender perspective; and discuss the presentation of Financial Reports and Project Progress Reports (PIR).	? CAF ? WI ? PCU: Project Coordination Unit. ? Consultant who will help with workshop facilitation	Indicative Cost: Included in the overall project budget	Before the end of the second month of the project
Communication strategy and knowledge management with integration of a gender perspective.	? WI ? PCU: Project Coordination Unit.	Indicative Cost: Included in the overall project budget	Before the end of the first quarter of the project
Design and Release of the Project Website	? WI ? PCU: Project Coordination Unit.	Indicative Cost: Included in the overall project budget	Before the end of the first quarter of the project

Review, update and validation of the long-term M&E plan	? CAF ? WI ? PCU: Project Coordination Unit. ? Consultant who will help with workshop facilitation	Indicative Cost: Included in the overall project budget	Before the end of the first quarter of the project
Meetings of the Project Steering Committee and the Technical Project Coordination Committee (with formally prepared minutes and resolutions)	? CAF ? WI ? PCU: Project Coordination Unit.	Indicative Cost: Included in the overall project budget	At least 2 meetings per year of the Steering Committee (Total 6 meetings) and three meetings per year of the Technical Coordination Committee (Total 9 meetings).
Quarterly Financial Reports and Statements of Expenses	? WI ? PCU: Project Coordination Unit.	Indicative Cost: PMC cost	At least every 6 months and must be delivered within 30 days after the end of each semester.
Publication of Project Progress Reports and other informative materials	? WI ? PCU: Project Coordination Unit.	Indicative Cost: PMC cost	Every semester (biannually)

External Interim Review	? CAF ? WI ? PCU: Project Coordination Unit. ? International Consultants (1) National Consultants (2)	Indicative cost: (Professional fees and logistics costs of the consultant) (To be covered by CAF: $22,500)	Within 90 days after completing the mid-term of the Project
External Final Evaluation	? CAF ? WI ? PCU: Project Coordination Unit. ? International Consultants (1) National Consultants (2)	Indicative cost: $ 22,500 (Professional fees and logistics costs of the consultant)	After the project is finished
Final report	? WI ? PCU: Project Coordination Unit. ? Consultants	Indicative Cost: Included in the overall project budget	At least one month before the end of the Project.
Audits	? WI ? PCU: develops ToRs that will be examined by CAF. Audit firm will be hired by UCR, if there is no objection from CAF	Indicative costs: $25,000	At least annually. CAF reserves the right to request a partial or complete audit at any time.

Monitoring visits to Project sites	? CAF ? WI ? PCU: Project Coordination Unit.	Indicative Cost: Included in the overall project budget	at least annually
TOTAL INDICATIVE COST WITHOUT CAF STAFF TRAVELS		**50,000.00**	

10. Benefits

Describe the socioeconomic benefits to be delivered by the project at the national and local levels, as appropriate. How do these benefits translate in supporting the achievement of global environment benefits (GEF Trust Fund) or adaptation benefits (LDCF/SCCF)?

185. The beneficiaries and stakeholders of the project are identified through a map of actors that have been enriched and complemented through the consultation processes. Beneficiaries and stakeholders that could have a more relevant and direct impact on the activities and results of the Project have been identified and prioritized, as well as those who will be direct beneficiaries of the project.

186. The direct beneficiaries are those who have a more direct and strong link with the project activities such as the landscape planning process, the development of the governance scheme and the financial sustainability tool in the case of Component 1 where institutional actors participate (MiAMBIENTE , MIDA, MEDUCA, MIVI, ANATI, MEF, etc.), civil society organizations (NGOs, Universities, OBC, JAAR) and other actors.

187. For Component 2, actors related to the management of protected areas (MiAMBIENTE) are included, in addition to the beneficiaries of their environmental goods and services, such as Community-Based Organizations (CBOs), Producer and Community Associations; in addition to beneficiaries of ecosystem services such as hydroelectric plants (ENEL Power Green), among others. In addition, those actors directly related to productive activities in livestock, agriculture and fisheries are included, including government institutions that provide support services or technical extension to producers, research and access to agricultural credit (MIDA, ARAP, IDIAAP, BNP, BDA, ANAGAN) and the beneficiaries that constitute producer associations, community-based organizations (CBOs), and interested individual producers. This component also includes actions for the recovery and/or reforestation of degraded forest and mangrove areas and the conservation of forests

outside protected areas, for which reason it involves the participation of institutional stakeholders such as the Ministry of the Environment, who will provide seedlings and/or mobilization of resources for reforestation or enrichment actions and the beneficiaries include producers, CBOs, producer associations and the Rural Aqueduct Administrative Boards (JAAR) that will be beneficiaries of these reforestation and/or enrichment actions of forests and mangroves through the maintenance and improvement of their ecosystem services.

188. The Table 6, presents the results of an interested part mapping, carried out to determine its current relevance or importance based on the fulfillment of the objectives and results of the project, and the potential impact they may have during and after the implementation of the project.

189. Table 13 contains the participation of the private sector in the Project, according to the type of actor, its location in the landscape and its relationship with the project outputs.

Table 13 Private sector engagement in the Project

Private Sector	Actor type.	Location PCAG	Participation in the project	Project Output
Batipa Field Station and Livestock Batipa.	Co-financier. Beneficiary	Lower part of the landscape	Model farm that can serve to exchange experiences with traditional ranchers since it implements Silvopastoral Systems: electric fences, livestock rotation, management of trees in pastures, livestock aqueduct, among other good practices. As a beneficiary, you could be supported with technical assistance for preparing a farm management plan and introducing other good sustainable livestock practices.	Output: 2.2.2

Enel Green Power	Co-financier Beneficiary	Upper and middle part of the landscape.	Identified as co-financier of the Project. It could report an important counterpart related to the management of the Fortuna Forest Reserve, although it did not formalize a letter of commitment to the estimate of its counterpart before the Ministry of Environment. Company in charge of the Management of the Fortuna Forest Reserve under the supervision of MiAmbiente. Key partner to participate in component 1: Governance platform, sustainable landscape management plan and the PCAG financial sustainability strategy. For component 2, your participation is key to: updating and harmonizing the operational plan of the Fortuna Forest Reserve with the integrity of the PCAG.	Output 1.1.1 Output 1.1.2 Output 1.1.4 Output 2.1.1
Competitiveness Center of the Western Region of Panama	Strategic partner	The whole landscape	Strategic partner that could contribute to mobilizing support for the establishment and implementation of the governance platform and financial sustainability strategy of the PCAG. It could facilitate the integration and coordinated work of the project with other initiatives such as the Coffee route.	Output 1.1.1 Output 1.1.4 Output 2.2.2
CELSIA	Strategic partner	Outside the landscape	Company that generates hydro-solar energy. Develop environmental compensation actions. Resources could be channeled with the support of MiAMBIENTE to strengthen restoration and reforestation actions to improve connectivity in the PCAG.	Output 2.2.1
Baru Port	Strategic partner	Outside the landscape	Company that promotes the establishment of a large port in the Gulf of Chiriqu?. Support reforestation processes and other conservation actions. Resources could be channeled with the support of MiAMBIENTE to strengthen restoration and reforestation actions to improve connectivity in the PCAG.	Output 2.2.1
AES	Strategic partner	Outside the landscape	Company that generates hydro-solar energy. Develop environmental compensation actions. Resources could be channeled with the support of MiAMBIENTE to strengthen restoration and reforestation actions to improve connectivity in the PCAG.	Output 2.2.1

Livestock farmers	Beneficiary	The whole landscape	Key actor for various project actions such as the preparation and implementation of farm management plans and to transform traditional livestock farms into Silvopastoral Systems. Additionally, they are key actors for landscape restoration processes to improve connectivity and for the establishment of forest conservation agreements within their properties.	Output 1.1.3 Output 2.2.1 Output 2.2.2 Output 2.2.3
Farmers	Beneficiary	The whole landscape	Key actor for various project actions such as the development and implementation of farm management plans and the transformation of traditional agricultural production (slash and burn) to sustainable agroecological models. In addition, they are key actors for landscape restoration processes that help improve connectivity and for the establishment of forest conservation agreements within their properties.	Output 1.1.3 Output 2.2.1 Output 2.2.2 Output 2.2.3
Fishing Cooperatives	Beneficiary	Seascape in coastal area	Key actors for the preparation and implementation of sustainable fisheries management plans and landscape restoration processes in mangrove areas.	Output 1.1.3 Output 2.2.1 Output 2.2.2

190. The communication and knowledge management strategy of the Project (product scheduled at the beginning of the project - output 2.3.1) will establish the key activities to be developed, identify the stakeholders involved, the means of communication that should be used for calls and presentation or dissemination of results and key moments (programming) for these consultations and participation processes to be developed in accordance with the Project Document. The budget allocated to the development and implementation of the communication and knowledge management plan is US$ 120,000.00 during the execution of the project.

11. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

Overall Project/Program Risk Classification*

PIF	CEO Endorsement/Approval	MTR	TE
Low	Low		

Measures to address identified risks and impacts

Elaborate on the types and risk classifications/ratings of any identified environmental and social risks and impacts (considering the GEF ESS Minimum Standards) and any measures undertaken as well as planned management measures to address these risks during implementation.

Environmental and Social (Including Safeguards)

193. The execution of the Project activities will be carried out in accordance with the Manual of Environmental and Social Safeguards for CAF / GEF Projects, Version 1 of May 2015. The Project is classified as Category B, in accordance with the Manual of Guidelines and Procedures on Environmental and Social Safeguards for CAF / GEF Projects (Section V.I.2 Annex I). The Project interventions are not expected to cause significant adverse environmental impacts; instead, in many cases the prevailing environmental and social conditions in the intervention areas will improve, including greater resilience to face extreme events, impacts of climate variability and climate change. Minor, specific and very limited environmental impacts on the site, natural habitats and forests can be expected from some field interventions, but most will be temporary and will seek to improve ecosystem conditions (reforestation, enrichment, restoration). and productive systems (conversion of cattle farms to Silvopastoral Systems, installation of comprehensive orchards).

194. Annex 5 contains the report that contains the Results of the Phase of the Free and Informed Consent Process (FPIC) as part of the process of preparing the project proposal ?Living in harmony with nature: Connecting biodiversity with natural systems.? productive in the Gualaca Altitudinal Corridor Landscape.

Supporting Documents

Upload available ESS supporting documents.

Title	Module	Submitted
Annex E Project Map(s) and Coordinates	CEO Endorsement ESS	
ESCC Risk Preliminar Assessment PCAG	CEO Endorsement ESS	
ESCC Risk Preliminar Assessment PCAG	Project PIF ESS	

ANNEX A: PROJECT RESULTS FRAMEWORK (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

Project Objective: Improve the management of the Altitudinal Gualaca Corridor and Landscape to benefit biodiversity conservation and foster sustainable use of natural resources with a landscape approach.								
Basic GEF-7	**Global Objective**	**Sub-indicator GEF-7**	**Baseline of the Project**	**Intermediate Objective**	**Final Objective**	**Means of Verification**	**Responsibility**	**Supposed**
Terrestrial protected areas established or under improved management for conservation and sustainable use (Hectares)	200 million hectares	1.2 Terrestrial protected areas under improved effective management (Hectares)	0	22,479	40,655	Management effectiveness results	WI ? UCP Ministry of Environment Enel Fortuna	Priority is given to strengthening the Fortuna Forest Reserve with the support of ENEL Fortuna and the Playa la Barqueta Agr?cola Wildlife Refuge with the support of the Ministry of Environment.
	8 million hectares	2.1 Marine protected areas under improved management effectiveness (Hectares)	0	3,725	20,731	Management effectiveness results	WI ? UCP Ministry of Environment	Including the marine part of the Playa la Barqueta Agr?cola Wildlife Refuge

Project Objective: Improve the management of the Altitudinal Gualaca Corridor and Landscape to benefit biodiversity conservation and foster sustainable use of natural resources with a landscape approach.								
Basic GEF-7	**Global Objective**	**Sub-indicator GEF-7**	**Baseline of the Project**	**Intermediate Objective**	**Final Objective**	**Means of Verification**	**Responsibility**	**Supposed**
Area of land restored (Hectares)	6 million hectares	3.1 Area of degraded agricultural land restored	0	200	500	Evaluation of the increase in biological connectivity in key areas of the PCAG. Maps.	WI ? UCP MiAMBIENTE, MIDA, ARAP	Compensation resources are available to support reforestation and recovery actions.
		3.2 Area of forest and forest land restored	0	200	450	Evaluation of the increase in biological connectivity in key areas of the PCAG. Mapas.	WI ? UCP Ministry of Environment	Compensation resources are available to support reforestation and recovery actions.
		3.4 Area of wetlands (including estuaries, mangroves) restored	0	20	50	Evaluation of the increase in biological connectivity in key areas of the PCAG. Maps.	WI ? UCP Ministry of Environment	Compensation resources are available to support reforestation and recovery actions.

Project Objective: Improve the management of the Altitudinal Gualaca Corridor and Landscape to benefit biodiversity conservation and foster sustainable use of natural resources with a landscape approach.								
Basic GEF-7	**Global Objective**	**Sub-indicator GEF-7**	**Baseline of the Project**	**Intermediate Objective**	**Final Objective**	**Means of Verification**	**Responsibility**	**Supposed**
Area of landscapes under improved practices (excluding protected areas) (Hectares)	320 million hectares	4.1 Area of landscapes under improved management to benefit biodiversity	0	188,112	188,112	PCAG Management Plan and the regulations for the constitution and/or management of Biological Corridors in Panama have been designed and agreed with Key Actors.	WI ? UCP MiAMBIENTE, MIDA, ARAP	The PCAG Governance platform is formally established. The PCAG Plan is implemented with the support of this governance platform.
Mitigated Greenhouse Gas Emissions	1500 Millo metric Tons of CO_3 eq	6.1 Greenhouse Gas Emissions Mitigated (metric tons of CO2e) AFO LU sector	0	4,764	8,576	Evaluation report on tons of CO2 equivalent mitigated by the project	WI ? UCP MiAMBIENTE	Planned reforestation and landscape restoration projections are met

Project Objective: Improve the management of the Altitudinal Gualaca Corridor and Landscape to benefit biodiversity conservation and foster sustainable use of natural resources with a landscape approach.								
Basic GEF-7	**Global Objective**	**Sub-indicator GEF-7**	**Baseline of the Project**	**Intermediate Objective**	**Final Objective**	**Means of Verification**	**Responsibility**	**Supposed**
Number of direct beneficiaries disaggregated by gender as co-benefits of GEF investment			0	Famele: 16,586 Male: 17,764 Total 34,350	Famele: 33,173 Male: 35,528 Total 67,701	Reports, attendance lists	WI ? UCP MiAMBIENTE, MIDA, ARAP	Beneficiaries of sustainable production actions and beneficiaries of training, education and environmental awareness actions are included.

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

Considering the current COVID 19 crisis, it could be very relevant to assess whether this project could provide opportunities to contribute somehow to the recovery and/or increase resilience of the affected stakeholders and particularly the most vulnerable.

In consultation with beneficiaries, the sustainable production activities and productive diversification proposed by the project could contribute to improving the productive systems of the beneficiaries and have better social (food security) and economic benefits (greater profitability and diversification of their income) as part of the economic recovery actions of vulnerable groups post-COVID 19.

The government of Panama has agreed to increase in USD2.0 million the co-financing from MiAmbiente. Co-financing will be further revised during the PPG phase.

During the PPG phase, the government of Panama identified increased matching contributions from MiAmbiente. In total, US$6.5 million in co-financing resources, of which US$2.5 million correspond to periodic expenses, mostly related to the management of protected areas, and US$4.0 million to investment mobilized, mostly to compensation resources to support restoration activities. reforestation of degraded areas to improve connectivity and strengthen the management of PCAG protected areas.

Only 500 ha will be restored. There is no target for further restoration of forest areas.

In the new project results framework for Output 2.2.1. Restored biological connectivity outside protected areas in the PCAG, the number of hectares restored has been increased to 1,000 ha.

This includes the reforestation or restoration of 500 ha of degraded agricultural land, 450 450 ha of degraded forest and land forest and 50 ha of degraded mangroves. On page 48 of the PRODOC you can review Output 2.2.1 in greater detail. Restored biological connectivity in key outside protected areas within PCAG.

The specific details for the use of conservation agreements in the Gualaca corridor will be developed during the PPG.

Conservation agreements with private owners will be aimed at strengthening private forest conservation schemes within the PCAG priority area that strategically contribute to the connectivity strategy of this landscape. On page 50 of the PRODOC you can review Output 2.2.3 A PCAG landscape conservation and restoration scheme for Conservation Agreements with private owners outside of PAs in greater detail.

During the preparation phase of the Project Document (PPG), prior informed consultation processes must be developed that includes representatives and traditional indigenous authorities as a small part of the N?gb? Bugl? Comarca is within the proposed Sustainable Landscape of the Gualaca Altitudinal Corridor. Additionally, during the PPG phase, compliance with the environmental and social safeguards protocols established by the CAF will be complied with.

A public consultation process for key actors and stakeholders was developed, which included traditional authorities from the N?gb? Bugl? Comarca. Additionally, as part of the consultation process with interested parties and the Prior Informed Consultation process, a visit was made to the communities of Zapotal, presenting the project to the indigenous participants, taking a tour of the community, and identifying with them the potential benefits that they could receive voluntarily and without commitments from the project. For more details, review the documents Report of the Consultation Workshop for stakeholders of the project and Report of the consultation processes with stakeholders.

ANNEX C: Status of Utilization of Project Preparation Grant (PPG). (Provide detailed funding amount of the PPG activities financing status in the table below:

ANNEX C: Status of Utilization of Project Preparation Grant (PPG). (Provide detailed funding amount of the PPG activities financing status in the table below: PPG Grant Approved at PIF: USD 50,000			
Project Preparation Activities Implemented	GETF/LDCF/SCCF Amount ($)		
	Budgeted Amount	Amount Spent Todate	Amount Committed
Activities related to project design, including participation and consultation, technical design, implementation arrangements and other.	50,000	40,000	10,000
Total	50,000	40,000	10,000

Main developed producers:
1. Proposal document (PPG)
2. Consultation with key actors and Report of the Workshop.
3. Consultation with interested parties and Consultation Report.
4. Socioeconomic Analysis of the Gender Gap in the PCAG.
5. PCAG Gender Action Plan.
6. PCAG Maps
7. Results of the Phase of the Free and Informed Consent Process (FPIC) in the elaboration of the project proposal "Living in harmony with nature: Connecting biodiversity with the productive systems in the Landscape of the Gualaca Altitudinal Corridor,
8. Terms of Reference Project Coordinator.

ANNEX D: Project Map(s) and Coordinates

Please attach the geographical location of the project area, if possible.

The PCAG is located between UTM 286929,16 W; 1063844,17 N, and between UTM 427481,70 W; 427481,70 N (WGS84, Zone 17 North), The map below shows the project area as defined above.
Due to technical difficulties the attachment with the image will be included in Annex D

GEO LOCATION INFORMATION

The Location Name, Latitude and Longitude are required fields insofar as an Agency chooses to enter a project location under the set format. The Geo Name ID is required in instances where the location is not exact, such as in the case of a city, as opposed to the exact site of a physical infrastructure. The Location & Activity Description fields are optional. Project longitude and latitude must follow the Decimal Degrees WGS84 format and Agencies

are encouraged to use at least four decimal points for greater accuracy. Users may add as many locations as appropriate. Web mapping applications such as OpenStreetMap or GeoNames use this format. Consider using a conversion tool as needed, such as:https://coordinates-converter.com Please see the Geocoding User Guide by clicking here

Location Name	Latitude	Longitude	Geo Name ID	Location & Activity Description

ANNEX E: Project Budget Table

Please attach a project budget table.

Expenditure Category	Detailed Description	Component (USD)							Total (USD)	Responsible Entity (Executing Entity receiving funds from the GEF Agency)[1]	
		Component 1	Component 2			Sub-Total	M&E (3%)	PMC (10%)			
		Outcome 1.1	Outcome 2.1	Outcome 2.2	Outcome 2.3						
Works		**0**	**150,000**	**150,000**	**0**	**300,000**	**0**	**0**	**300,000**	Wetlands International	**16.8%**
	Soil restoration, fence repair, construction of nurseries and other productive infrastructure	0	150,000	150,000	0	300,000	0	0	300,000	Wetlands International	
Goods		**300,000**	**75,000**	**175,000**	**0**	**550,000**	**0**	**0**	**550,000**	Wetlands International	**30.8%**
	Equipment and restoration material	0	75,000	75,000	0	150,000	0	0	150,000	Wetlands International	
	Equipment and material for farm improvement	0	0	100,000	0	100,000	0	0	100,000	Wetlands International	
	Equipment and material to strengthen PA Operational Plans	300,000	0	0	0	300,000	0	0	300,000	Wetlands International	
Vehicles		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	Wetlands International	**0.0%**
Grants/ Sub-grants		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	Wetlands International	**0.0%**
Revolving funds/ Seed funds / Equity		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	Wetlands International	**0.0%**

Sub-contract to executing partner/ entity		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	Wetlands International	**0.0%**
Contractual Services ? Individual		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	Wetlands International	**0.0%**
Contractual Services ? Company		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	Wetlands International	**0.0%**
International Consultants		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	Wetlands International	**0.0%**
Local Consultants		**67,500**	**77,500**	**187,500**	**37,500**	**370,000**	**50,000**	**0**	**420,000**	Wetlands International	**23.5%**
	Specialist in Protected Areas	0	20,000	0	0	20,000	0	0	20,000	Wetlands International	1.1%
	Sustainable Finance Specialist	20,000	0	0	0	20,000	0	0	20,000	Wetlands International	1.1%
	Legal Specialist	20,000	0	0	0	20,000	0	0	20,000	Wetlands International	1.1%
	Reforestation Restoration Specialist	0	30,000	30,000	0	60,000	0	0	60,000	Wetlands International	3.4%
	Agricultural Production Specialist	0	0	60,000	0	60,000	0	0	60,000	Wetlands International	3.4%
	Sustainable Fisheries Specialist	0	0	60,000	0	60,000	0	0	60,000	Wetlands International	3.4%
	Communication Specialist	10,000	10,000	10,000	10,000	40,000	0	0	40,000	Wetlands International	2.2%
	Social & Gender Specialist	10,000	10,000	10,000	10,000	40,000	0	0	40,000	Wetlands International	2.2%
	M&E Specialist	7,500	7,500	7,500	7,500	30,000	0	0	30,000	Wetlands International	
	Field Assistance	0	0	10,000	10,000	20,000	0	0	20,000	Wetlands International	

	Mid term / Final Evaluation						25,000	0	25,000	Wetlands International	
	Auditor					0	25,000	0	25,000	Wetlands International	1.4%
Salary and benefits / Staff costs		**0**	**0**	**0**	**0**	**0**	**0**	**162,000**	**162,000**	Wetlands International	**9.1%**
	Project Manager	0	0	0	0	0	0	108,000	108,000	Wetlands International	6.1%
	Administrative Coordinator	0	0	0	0	0	0	54,000	54,000	Wetlands International	3.0%
Trainings, Workshops, Meetings		**25,000**	**30,500**	**33,500**	**55,000**	**144,000**	**0**	**0**	**144,000**	Wetlands International	**8.1%**
	Workshops	10,000	10,000	10,000	20,000	50,000	0	0	50,000	Wetlands International	2.8%
	Trainings	5,000	8,500	8,500	20,000	42,000	0	0	42,000	Wetlands International	2.4%
	Meeting	10,000	12,000	15,000	15,000	52,000	0	0	52,000	Wetlands International	2.9%
Travel		**15,000**	**15,000**	**15,000**	**15,000**	**60,000**	**0**	**0**	**60,000**	Wetlands International	**3.4%**
	Follow-up trips	15,000	15,000	15,000	15,000	60,000	0	0	60,000	Wetlands International	3.4%
Office Supplies		**0**	**0**	**0**	**0**	**0**	**0**	**14,500**	**14,500**	Wetlands International	**0.8%**
	Office equipment and supplies	0	0	0	0	0	0	14,500	14,500	Wetlands International	0.8%
Other Operating Costs		**31,500**	**31,500**	**31,500**	**39,862**	**134,362**	**0**	**0**	**134,362**	Wetlands International	**7.5%**
	Office rent	10,000	10,000	10,000	10,000	40,000	0	0	40,000	Wetlands International	2.2%
	Car rentals / fuel	15,000	15,000	15,000	15,000	60,000	0	0	60,000	Wetlands International	3.4%
	Basic services	1,500	1,500	1,500	1,500	6,000	0	0	6,000	Wetlands International	0.3%

	Conmunication and Visibility material	5,000	5,000	5,000	13,362	28,362	0	0	28,362	Wetlands International	
Grand Total		**439,000**	**379,500**	**592,500**	**147,362**	**1,558,362**	**50,000**	**176,500**	**1,784,862**		**100.0%**
		24.6%	**21.3%**	**33.2%**	**8.3%**	**87.3%**	**2.8%**	**9.9%**	**100.0%**		
[1] In exceptional cases where GEF Agency receives funds for execution, Terms of Reference for specific activities are reviewed by GEF Secretariat									1,784,862		
									0		
Component (USD eq.)	**Component 1**	**Outcome 1.1**	**439,000**	24.6%							
	Component 2	**Outcome 2.1**	**379,500**	21.3%		1,119,362					
		Outcome 2.2	**592,500**	33.2%							
		Outcome 2.3	**147,362**	8.3%							
	Sub-Total		**1,558,362**	87.3%							
	M&E		**50,000**	2.8%							
	PMC		**176,500**	9.9%							
	Total (USD)		**1,784,862**	100.0%							

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ANNEX F: (For NGI only) Termsheet

Instructions. Please submit an finalized termsheet in this section. The NGI Program Call for Proposals provided a template in Annex A of the Call for Proposals that can be used by the Agency. Agencies can use their own termsheets but must add sections on Currency Risk, Co-financing Ratio and Financial Additionality as defined in the template provided in Annex A of the Call for proposals. Termsheets submitted at CEO endorsement stage should include final terms and conditions of the financing.

Does not apply

ANNEX G: (For NGI only) Reflows

Instructions. Please submit a reflows table as provided in Annex B of the NGI Program Call for Proposals and the Trustee excel sheet for reflows (as provided by the Secretariat or the Trustee) in the Document Section of the CEO endorsement. The Agencys is required to quantify any expected financial return/gains/interests earned on non-grant instruments that will be transferred to the GEF Trust Fund as noted in the Guidelines on the Project and Program Cycle Policy. Partner Agencies will be

required to comply with the reflows procedures established in their respective Financial Procedures Agreement with the GEF Trustee. Agencies are welcomed to provide assumptions that explain expected financial reflow schedules.

Does not apply

ANNEX H: (For NGI only) Agency Capacity to generate reflows

Instructions. The GEF Agency submitting the CEO endorsement request is required to respond to any questions raised as part of the PIF review process that required clarifications on the Agency Capacity to manage reflows. This Annex seeks to demonstrate Agencies? capacity and eligibility to administer NGI resources as established in the Guidelines on the Project and Program Cycle Policy, GEF/C.52/Inf.06/Rev.01, June 9, 2017 (Annex 5).

Does not apply