Environmental routes to incorporate communities in good conservation practices and nature-based businesses that promote human development in ecosystems of high environmental and social vulnerability in the Regional Corridor El Palmar - Tariquia, in the departments of Potos?, Tarija and Chuquisaca

Part I: Project Information

GEF ID
11034

Project Type
MSP

Type of Trust Fund
GET

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

Project Title
Environmental routes to incorporate communities in good conservation practices and nature-based businesses that promote human development in ecosystems of high environmental and social vulnerability in the Regional Corridor El Palmar - Tariquia, in the departments of Potos?, Tarija and Chuquisaca

Countries
Bolivia

Agency(ies)
CAF

Other Executing Partner(s)
MMAyA (Ministry of Environment and Water)

Executing Partner Type
Government

GEF Focal Area
Biodiversity

Taxonomy
Focal Areas, Biodiversity, Mainstreaming, Tourism, Agriculture and agrobiodiversity, Protected Areas and Landscapes, Terrestrial Protected Areas, Productive Landscapes, Influencing models, Strengthen institutional

capacity and decision-making, Convene multi-stakeholder alliances, Stakeholders, Indigenous Peoples, Gender Equality, Gender Mainstreaming, Beneficiaries, Capacity, Knowledge and Research, Capacity Development

Sector
AFOLU

Rio Markers
Climate Change Mitigation
Climate Change Mitigation 1

Climate Change Adaptation
Climate Change Adaptation 1

Duration
36 In Months

Agency Fee($)
167,018.00

Submission Date
4/7/2022

A. Indicative Focal/Non-Focal Area Elements

Programming Directions	Trust Fund	GEF Amount($)	Co-Fin Amount($)
BD-1-1	GET	1,067,387.00	3,675,502.00
BD-2-7	GET	788,376.00	10,892,158.00
	Total Project Cost ($)	**1,855,763.00**	**14,567,660.00**

B. Indicative Project description summary

Project Objective

Consolidate land use planning and improve territorial governance for ecological connectivity and sustainable use of biodiversity in the El Palmar-Tariqu?a regional corridor to reduce deforestation and other threats to biodiversity

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)
Component 1. Land use planning for maintenance and improvement of key elements of ecological connectivity	Technical Assistance	1.1. Environmental routes that incorporate communities in good conservation practices and nature-based businesses are established at the El Palmar - Tariqu?a Regional Corridor. Indicator 1.1.1.i # of participatory instances for interchanges between different sector and stakeholders Target: 1.1.1.i.t. At least 1 working group in each protected area of the El Palmar - Tariqu?a Regional corridor and 2 working groups of beneficiaries outside PAs (1 per sub-corridor) are established	.1.1. Socio ecological connectivity elements are identified, and landscape partnerships established, around environmental routes at the El Palmar - Tariqu?a Regional Corridor	GET	135,698.00	3,675,502.00
		Indicator 1.1.2.i. A diagnosis of livelihoods and ecosystem services is elaborated, with a view to	1.1.2. Livelihoods and ecosystem services are characterized			

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)
Component 2. Sustainable Land Management practices	Technical Assistance	2.1 Sustainable Land Management practices are promoted and implemented to strengthen biodiversity conservation and socio-ecosystemic resilience Indicators 2.1.1.i # of training activities carried out both in workshops and in the field under the ecological corridor and connectivity approach. Target: 2.1.1.i.t. At least 4 trainings (2 workshops and 2 field activities in each sub-corridor) at the El Palmar - Tariqu?a Regional Corridor and 10 trainings in protected areas within the corridor (2 in each area). Indicator: 2.1.2.i. Organizations	2.1.1. Local conditions and capacities have been generated, for the development, strengthening and scaling up of biodiversity-friendly, sustainable and resilient community production systems and practices, under the ecological corridor and connectivity approach, with gender perspective	GET	815,848.00	5,840,665.00

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)
Component 3. Strengthening territorial governance at national and subnational level with gender perspective	Technical Assistance	3.1. Multilevel and multi-stakeholder territorial governance mechanisms with gender perspective are strengthened for the construction and implementation of biodiversity-friendly measures, under an ecological connectivity approach Indicator 3.1.1.i. Local and regional management mechanisms (water, biomass, biodiversity), designed under the ecological connectivity approach, agreed and implemented for informed decision making, by EOP. Target: 3.1.1.i.t. At least three local regional management mechanisms design, agreed and implemented by EOP Indicator: 3.1.2.i.	3.1.1. Consolidated management mechanisms and inter-institutional arrangements to improve policies and decision making for the integrated management of the regional corridor under the ecological connectivity approach	GET	652,679.00	3,263,253.00

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)
Component 4. Knowledge management and project sustainability	Technical Assistance	4.1. Knowledge management processes have been generated among local stakeholders to promote and strengthen the conditions and mechanisms of territorial governance that enable the implementation of the ecological connectivity approach and measures. Indicator: 4.1.1.i. Inter-institutional platforms formed at the departmental level as an associative network for knowledge management. Target: 4.1.1.i.t. Three inter-institutional platforms formed in the first year of the project.	4.1.1. Multilevel and multi-stakeholder inter-institutional platforms are formed to strengthen the integrated management of the regional corridor, as an associative network for scalable and replicable knowledge management in decision making	GET	163,169.00	1,087,751.00
		Indicator: 4.1.2.i. Documents, communication materials and digital and social media products of systematized information on	4.1.2 Systematized information on lessons learned in the			

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)
				Sub Total ($)	**1,767,394.00**	**13,867,171.00**
Project Management Cost (PMC)						
				GET	88,369.00	700,489.00
				Sub Total($)	**88,369.00**	**700,489.00**
				Total Project Cost($)	**1,855,763.00**	**14,567,660.00**

Please provide justification

Recipient Country government (SERNAP & SISCO; USD 12.921.386,19): while the figure for SERNAP is a conservative estimate of recurrent expenditure that the SERNAP will assign to the participating PAs and related programs through its budget for Integrated, participative and sustainable management of PAs, Control, monitoring and enforcement activities, Environmental awareness and community relations, and Increased revenue from new mechanisms. SISCO refers to the payment collection system (SIStema de CObro) that SERNAP implements for PAs. The figure is a conservative estimate of new income to be generated in project PAs through their part in environmental routes and counting on the improved planning and participative management capacities supported by the project, which will reflect in increased income from tourists, agencies, and other participating actors during and beyond the project implementation (a 10-year period is considered, and 30,000 additional USD/year per PA). SISCO assigns this income to each PA, so income generated in project PAs will be reinvested in each of them. C1: SISCO (USD)1,500,000 + SERNAP 2,175,502 C2: SERNAP (USD) 4,351,004 C3: SERNAP (USD) 3,263,253 C4: SERNAP 1,087,751 PMC: SERNAP 700,489 Total for Each Funds: SISCO 1,500,000 + SERNAP 11,421,386 Total (USD)12,921,386 GEF Agency (CAF, Loan; USD 1,646,274): investment in a new phase of the Mi Riego and MiAgua Programs will be coordinated with activities in the project area to ensure that water-infrastructure investments align with the project?s fostering of sustainable livelihoods and land management. The MiAgua and MiRiego programs are active in the municipalities listed below. Teams in both these programs and this project will ensure the coordination of activities between them to guarantee that the water infrastructure investments are aligned with the fulfillment of the Project objectives. CAF maintains a shared commitment with the Bolivian Government to continue funding these programs under enhanced environmental overseeing to ensure that they contribute to sustainable development and enhanced climate resilience. Construcci?n Sistema Riego Presurizado Las Lomas (Entre Rios) - Mi Riego II ? Tarija, Entre Rios: USD 1,143,952 Construcci?n Sistema Agua Potable Aguayrenda (Villa Vaca Guzman (C. Muyupampa)) - Mi Agua IV ? Chuquisaca, Villa

Vaca Guzman: USD 273,239 Construcci?n Sistema Agua Potable La Revuelta (El Villar) ? Mi Agua V ? Chuquisaca, El Villar: USD 58,440 Construcci?n Sistema Agua Potable San Lorenzo (Mojocoya) ? Mi Agua V ? Chuquisaca, Mojocoya: USD 170,643 Total: USD 1,646,274

C. Indicative 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($)
Recipient Country Government	SERNAP	In-kind	Recurrent expenditures	11,421,386.00
Recipient Country Government	SISCO	Grant	Investment mobilized	1,500,000.00
GEF Agency	CAF	Loans	Investment mobilized	1,646,274.00
			Total Project Cost($)	**14,567,660.00**

Describe how any "Investment Mobilized" was identified

Recipient Country government (SERNAP & SISCO; USD 12.921.386,19): The figure for SERNAP is a conservative estimate of recurrent expenditure that the SERNAP will assign to the participating PAs and related programs through its budget for Integrated, participative and sustainable management of PAs, Control, monitoring and enforcement activities, Environmental awareness and community relations, and Increased revenue from new mechanisms. SISCO refers to the payment collection system (SIStema de CObro) that SERNAP implements for PAs, and the figure is a conservative estimate of new income to be generated in project PAs through their part in environmental routes and counting on the improved planning and participative management capacities supported by the project. SISCO assigns this income to each PA, so income generated in project PAs will be reinvested in each of them. SISCO SERNAP (Budget) Total (USD) C1 1.500,000 2,175,502 3,675,502 C2 4,351,004 4,194,391 C3 3,263,253 3,263,253 C4 1,087,751 1,087,751 PMC 700,489 700,489 Total 1,500,000 11,421,386 12,921,386 GEF Agency (CAF, Loan; USD 1,646,274,00): investment in a new phase of the Mi Riego and MiAgua Programs will be coordinated with activities in the project area to ensure that water-infrastructure investments align with the project?s fostering of sustainable livelihoods and land management. The MiAgua and MiRiego programs are active in the municipalities listed below. Teams in both these programs and this project will ensure the coordination of activities between them to guarantee that the water infrastructure investments are aligned with the fulfillment of the Project objectives. CAF maintains a shared commitment with the Bolivian Government to continue funding these programs under enhanced environmental overseeing to ensure that they contribute to sustainable development and enhanced climate resilience. Construcci?n Sistema Riego Presurizado Las Lomas (Entre Rios) - Mi Riego II ? TARIJA, ENTRE RIOS: USD 1,143,952 Construcci?n Sistema Agua Potable Aguayrenda (Villa Vaca Guzman (C. Muyupampa)) - Mi Agua IV ? CHUQUISACA, VILLA VACA GUZMAN: USD 273,239 Construcci?n Sistema Agua Potable La Revuelta (El Villar) ? Mi Agua V ? CHUQUISACA, EL VILLAR: USD 58,440 Construcci?n Sistema Agua Potable San Lorenzo (Mojocoya) ? Mi Agua V ? CHUQUISACA, MOJOCOYA: USD 170,643 Total: USD 1,646,274

D. Indicative 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($)
CAF	GET	Bolivia	Biodiversity	BD STAR Allocation	1,855,763	167,018	2,022,781.00
			Total GEF Resources($)		**1,855,763.00**	**167,018.00**	**2,022,781.00**

E. 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($)
CAF	GET	Bolivia	Biodiversity	BD STAR Allocation	50,000	4,500	**54,500.00**
				Total Project Costs($)	**50,000.00**	**4,500.00**	**54,500.00**

Core Indicators

Indicator 1 Terrestrial protected areas created or under improved management for conservation and sustainable use

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
697,643.00	0.00	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)
697,643.00	0.00	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)

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)	
Akula National Park Cordillera de Sama	**125689** 32866	**Select**Protected area with sustainable use of natural resources	107,164.00							
Akula National Park El Card?n	**125689** 55559267 6	**Select**Protected area with sustainable use of natural resources	19,372.00							
Akula National Park El Palmar	**125689** 303886	**Select**Protected area with sustainable use of natural resources	60,541.00							
Akula National Park I?ao	**125689** 342468	**Select**Habitat/Species Management Area	263,308.00							

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)
Akula National Park Tariqu?a	**125689** 20041	**Select**Protected area with sustainable use of natural resources	247,258.00						

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)
6500.00	0.00	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)
5,000.00			

Indicator 4.2 Area of landscapes that meets national or international third party certification that incorporates biodiversity considerations (hectares)

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)
1,500.00			

Indicator 4.4 Area of High Conservation Value Forest (HCVF) loss avoided

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

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

Title	Submitted

Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (direct)	1119994	0	0	0
Expected metric tons of CO?e (indirect)	0	0	0	0

Indicator 6.1 Carbon Sequestered or Emissions Avoided in the AFOLU (Agriculture, Forestry and Other Land Use) sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (direct)	1,119,994			
Expected metric tons of CO?e (indirect)				
Anticipated start year of accounting	2023			
Duration of accounting	20			

Indicator 6.2 Emissions Avoided Outside AFOLU (Agriculture, Forestry and Other Land Use) Sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO?e (direct)				
Expected metric tons of CO?e (indirect)				
Anticipated start year of accounting				
Duration of accounting				

Indicator 6.3 Energy Saved (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Total Target Benefit	Energy (MJ) (At PIF)	Energy (MJ) (At CEO Endorsement)	Energy (MJ) (Achieved at MTR)	Energy (MJ) (Achieved at TE)

Total Target Benefit	Energy (MJ) (At PIF)	Energy (MJ) (At CEO Endorsement)	Energy (MJ) (Achieved at MTR)	Energy (MJ) (Achieved at TE)
Target Energy Saved (MJ)				

Indicator 6.4 Increase in Installed Renewable Energy Capacity per Technology (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Technology	Capacity (MW) (Expected at PIF)	Capacity (MW) (Expected at CEO Endorsement)	Capacity (MW) (Achieved at MTR)	Capacity (MW) (Achieved at TE)

Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	2,350			
Male	2,600			
Total	4950	0	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

1. Terrestrial protected areas created or under improved management for conservation and sustainable use The value of this indicator is the sum of the areas of five protected areas located in three of Bolivia's nine departments, which include five national protected areas (El Palmar, I?ao, El Card?n, Sama and Tariqu?a). Three subnational protected areas (Pampa Tholar de las Vicu?as, Chichas and Serran?a de Crucero) are expected to also benefit from the project, but have not been METT-assessed. Improvements in protected area management due to enhanced capacities and participative management are expected to reduce deforestation by at least 10% annually compared to the baseline average. 4. Area of landscapes under improved practices (excluding protected areas) The value of this indicator corresponds to the estimated sum between the area of landscapes benefiting biodiversity in the corridor territory outside protected areas (5,000 hectares) and the area of landscapes benefiting agroforestry and grazing production systems (1,500 hectares). This territory corresponds to areas of scrub and pasture located on slopes greater than 45% and with annual precipitation greater than 700 mm, which contribute to generate landscape connectivity to improve habitat for emblematic species such as the jaguar and the Andean bear; and at the same time, to increase their coverage and biomass with multiple benefits.

The selected slope and precipitation criteria are natural conditions to improve the natural regeneration of vegetation. 6. Greenhouse gasses mitigated (AFOLU sector) The corridor has a surface area of 5,734,293 ha; between 2001 and 2020, 74,512 ha of forest were lost, which means an annual deforestation of 3,725 ha; in the protected areas, the area lost during the same period was 14,450 ha or 722 ha per year. The project seeks to implement three types of measures to change the local biomass balance: (1) reduce the loss of carbon sinks by avoiding the annual deforestation of 72 ha (10% of annual deforestation); (2) promote natural regeneration processes of vegetation and natural forests in 5,000 ha of connectivity zones of importance for the protection of water sources, biotope connectivity, and protection of streams and headwaters; and (3) promote agroforestry and agroforestry practices in 1,500 ha of pilot plots. Through these measures and with 3 years of implementation period and 20 of capitalization period, the EX-ACT tool provides an estimation of total direct avoided emissions of 1,119,994 tCO2e. Please see Annex E 11. Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment Based on the estimated population in the intervention area, the direct beneficiaries are expected to be approximately 4,950 people, of which 2,350 are women and 2,600 are men. AICHI Targets: the contribution of the project to AICHI goals and targets is as follows. Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society (BD-1-1), Target 1 (Outcome 1.2), Target 2 (Outcome 1.3) Strategic Goal B: Reduce the direct pressures on biodiversity and promote sustainable use (BD-2-7), Target 5 (Outcome 1.1), Target 7 (Outcome 2.1) Strategic Goal C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity (BD-2-7) Target 11 (Outcome 1.1, Outcome 2.1) Strategic Goal D: Enhance the benefits to all from biodiversity and ecosystem services (BD-2-7) Target 14 (Outcome 1.1, Outcome 2.1), Target 15 (Outcome 2,1, Outcome 2.2) Strategic Goal E: Enhance implementation through participatory planning, knowledge management and capacity building (BD-1-1) and (BD-2-7), Target 17 (Outcome 3.1, Outcome 3.2), Target 18 (Outcome 4.1)

Part II. Project Justification

1a. Project Description

1a. *Project Description.* Briefly describe:
1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed (systems description); 2) the baseline scenario and any associated baseline projects, 3) the proposed alternative scenario with a brief description of expected outcomes and components of the project; 4) alignment with GEF focal area and/or Impact Program strategies; 5) incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing; 6) global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF); and 7) innovation, sustainability and potential for scaling up.

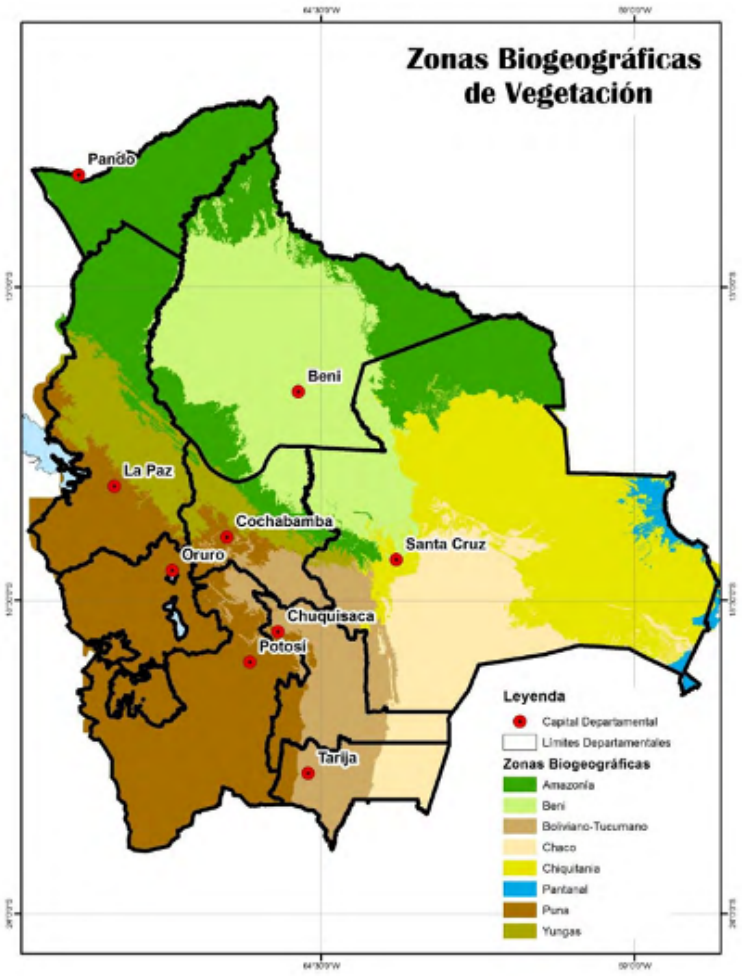
1) the global environmental problems, root causes and barriers

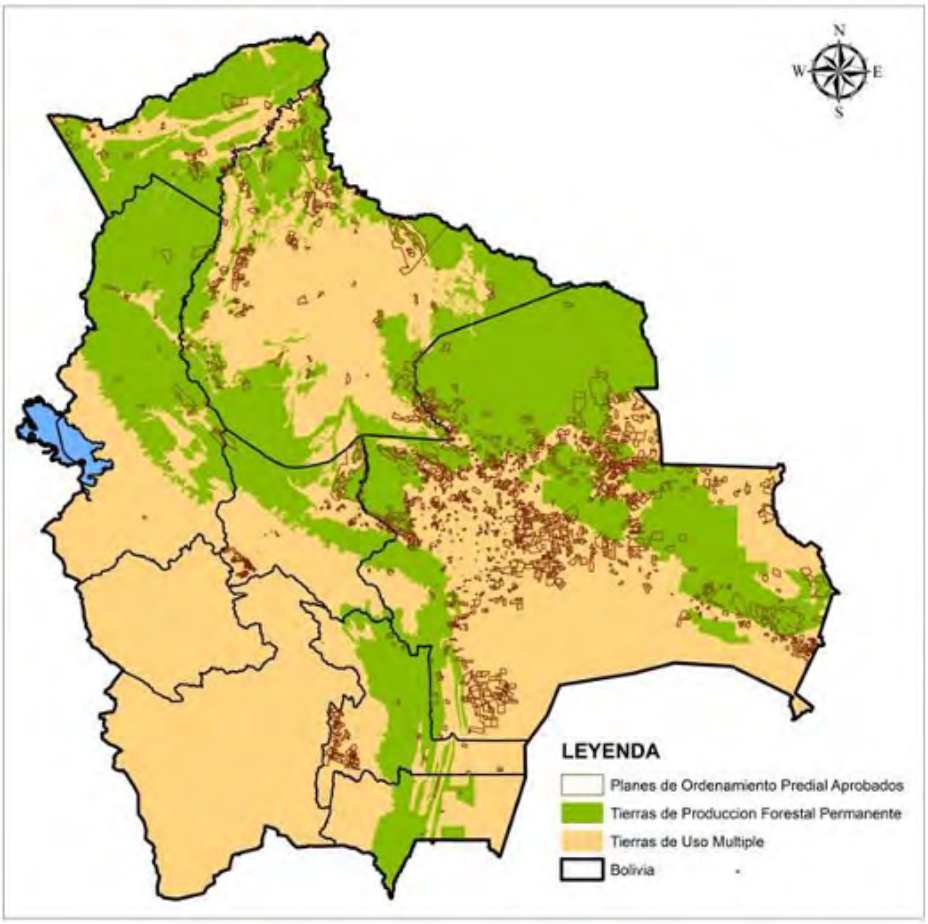
Bolivia is a tropical megadiverse country with three predominant geographic zones (Andina, Subandina y Llanos) with altitudinal and geological variations that configure varied and complex ecosystems. Bolivia occupies the sixth place in extension of tropical forests in the world, and the fifteenth in overall forest cover. Different forest formations are found in Bolivia which are classified in the following biogeographic zones: Amazon, plains (Beni), Bolivian-Tucumanian, Chiquitan?a, Pantanal, Puna, and Yungas. About 80% of the country's total forest land is located on lowlands, and the remaining 20% are forest lands scattered in the altiplano, and inter-Andean valleys where there is still primary vegetation.

The forest area has been estimated at 45 million hectares at the end of 2011 (40% of the national territory). Of this total, some 41.2 million hectares have been classified as Permanent Forestry Production Lands (TPFP in Spanish), of which 28.1 million hectares can be allocated to forest use without restrictions and 2.3 million hectares with restrictions. About 10.8 million hectare TPFPs are located within protected areas that are part of the National System of Protected Areas (SNAP), in each of which occurs a mix of traditional/non-traditional, formal/informal/illegal forestry production. Forests fulfill multiple functions and, therefore, have a strategic role not only for the continued provision of ecosystem services and the occurrence of natural processes, but also for sustainable economic development and the well-being of local populations. These functions are important both in the tropical and sub-tropical regions of the country, where forests are abundant, as well as in the highland and valley regions where forests are scarcer, and especially as connectors between them, providing ecosystem connectivity to wide-ranging, seasonal migration, and other evolutionary adaptations.
Forests provide livelihoods for a diversity of local users (indigenous peoples, agro-extractive communities, small rural producers, forest users), and are an integral part of the landscape that makes possible the social and cultural development of the populations that inhabit the forested landscape. Forests and biodiversity, finally, have important functions in mitigating climate change and contribute significantly to the adaptation/coping of endemic populations to the local effects of climate change. Protected areas have special relevance in the situation of vulnerability of biodiversity and people in the face of the impacts of land use and climate change. Approximately 200,000 inhabitants live within the

National System of Protected Areas (SNAP), of which 78% are native indigenous peoples, while the population living in the immediate environment or buffer zones outside national protected areas reaches approximately two million persons (PNCC, 2010). For all of them, the biodiversity of the areas where they live makes a significant part of their livelihood and way of life, and a deterioration in it would seriously affect their living conditions.

Biogeographic zones Forest legal regime


Zonas Biogeográficas
de Vegetación
Pando
Beni
La Paz
Cochabamba
Oruro
Santa Cruz
Chuquisaca
Potosí
Tarija
Leyenda
Capital Departamental
Límites Departamentales
Zonas Biogeográficas
Amazonía
Beni
Boliviano-Tucumano
Chaco
Chiquitania
Pantanal
Puna
Yungas



Bolivia, as a megadiverse country, has one of the highest rates of biodiversity and endemism of flora and fauna in South America. In the face of widespread deforestation and land degradation, the average level of biodiversity would be reduced to 40% of the original level, based solely on species richness as an indicator.

In this sense, Bolivia promotes the importance of recovering the holistic and integral vision of the forest maintained by the native indigenous nations, peasants, intercultural communities, and Afro-Bolivian communities, as well as the importance of developing visions and actions that support the comprehensive and sustainable management of the forest as a basis for biodiversity conservation. This is especially important given that in Bolivia, the impact of climate change is more visible and less predictable in episodes that are increasingly frequent and of greater intensity, with extreme events that translate into floods, droughts and hailstorms. The vegetation cover in Bolivia includes forests, bushes and natural grasslands in fragile ecosystems, with little-known management practices, which if endangered would generate a high risk of increase in eroded surfaces due to the expansion/contraction of the agricultural frontier. In the period 2009-2012, for which data exist, the fluctuation of the agricultural frontier meant going from 14,642,000 ha agricultural surface in 2009, to 12,565,000 ha in 2010, to 16,751,000 ha in 2013. Only within that period, more than four million hectares of land are submitted to sporadic, yet catastrophic degradation through impermanent land use change, affecting the ecosystem services provided and the productive capacity of soils at the national level.

The geographical area of the El Palmar - Tariqu?a Regional Corridor, defined as the project intervention area, occupies the central southern part of the Plurinational State of Bolivia. Biogeographically it is in the Andean region and Bolivian-Tucuman biogeographic province (Navarro and Maldonado, 2005; Navarro and Ferreira, 2008), and according to Ibish and M?rida's (2003) classification based on ecoregions, it encompasses five ecoregions of Bolivia: Bosques Secos Interandinos, Bosque Boliviano Tucumano, Prepuna, Puna Norte?a and Chaco Serrano. The regional corridor covers an area of 5,734,293 ha, of which 800,836 ha (14 %) are included in national and subnational protected areas. Within the National Protected Areas System (SNAP), these are El Palmar National Park (PN Palmar), Serran?a del I?ao National Park and IMNA (PN y ANMI I?ao), Tariqu?a National Flora and Fauna Reserve (RNFFT), and Cordillera de Sama Biological Reserve (RBCS).

Within this regional corridor, there are two sub-corridors, the first between Tarija (RNFFT) and Chuquisaca (El Palmar and PNyANMI I?ao), which are the only SNAP areas that conserve representative samples of the Bolivian Tucuman Forest, which habitats represents the southern limit of continental distribution of the Andean Bear (coincides with the UCO Central Andes 7 Andean Bear Priority Conservation Unit) and for the Jaguar in the southern part of the country. Tariqu?a is located in a strategic site in the Bolivian Tucumano, it is the core of biological and landscape connectivity to the north with the I?ao and to the south with the Barit? National Park (Argentina), with which there is an ecological corridor whose connectivity is fully provided by river corridors, while to the north it is necessary to identify the elements of habitat and landscape connectivity to ensure genetic flow, natural cycles and processes, and the provision of ecosystem services.

To the west is the second sub-corridor, in the puna and inter-Andean dry forest, made up of the Cordillera de Sama Biological Reserve, El Card?n Natural Park and subnational areas in the municipalities of Tupiza, Cotagaita and Villaz?n that have been established for the conservation of the critically endangered Andean Guanaco (*Lama guanicoe*) and Vicu?a (*Vicugna vicugna*), species widely used by local populations.

The existing studies identify at least 47 endemic species of vascular plants, mainly from the Families *Bromeliaceae*, *Cactaceae*, and *Anacardiaceae*; and at least 28 tree species within IUCN concern categories (CR, EN, VU, NT), among them *Cantua bicolor* (Kantuta), *Prunus tucumanensis* (Durasnillo), *Podocarpus parlatorei* (Pino de cerro), *Cascaronia astragalina* (Tipilla), *Erythrina falcata* (Ceibo), *Myroxylon peruiferum* (Quina colorada), *Mycianthes callicoma* (Sahuintillo), *Myrcianthes pseudomato* (Guayabillo), *Inga saltensis* (Pacay), *Cedrela lilloi* (Cedrillo), *Cinnamomum porphyrium* (Laurel amarillo, durasnillo), *Gleditsia amorphoides* (Coronillo), *Barbaceniopsis castillonii*, and *Tabebuia lapacho* (Lapacho amarillo). In the case of vertebrates, at least the mamifers *Hippocamelus antisensis* (Taruca), *Panthera onca* (Le?n), *Tapirus terrestris* (Anta), *Leopardos jacobita* (Titi), *Tremarctos ornatos* (Ucimari or Jucumari), and *Encielas Geoffrey* (Gato mont?s or Escollo), and the birds *Vultur gryphus* (C?ndor) and *Ara rubrogenys* (Kaka loro or burro loro), are in that same condition. As per invertebrates, there exist evidence of at least 13 endemic species, and at least 7 within IUCN concern categories in the families *Cicindelidae*, *Scarabeidae*, *Cerambycidae*, and *Apidae*. Similar high levels of endemism have been reported for ictiofauna and herpetofauna, with threat levels much more difficult to assess in these cases due to the scarcity of studies.

The inter-Andean and Bolivian-Tucuman dry forests are very fragile ecosystems, very vulnerable in their phenology due to climatic threats that constantly impact them. At the El Palmar - Tariqu?a Regional Corridor level, the risks increase due to the exposure to excess rainfall (which causes floods, floods, overflows, and landslides), droughts, frosts, cold and heat waves and hailstorms, and landslides, among the most recurrent ones. Another factor that affects the area's biodiversity?s vulnerability is forest fires, which, in addition to anthropogenic activities, cause episodes of degradation and loss of biodiversity and ecosystem fragmentation. The spatial distribution of biomes and species in the tropical Andes (e.g. birds, vascular plants) suggest ongoing shifts to higher elevations and a contraction of their extent, which could even lead to the extinction of many specialist species in the higher elevations (Cuesta et al. 2012; Tovar et al. 2013). Though there is a general lack of knowledge and long-term monitoring data about autoecology, dispersal and migration strategies, phenology, interspecific interactions, abundance and species distribution for much of the biodiversity in the tropical Andes (Luis Daniel Llamb? and Alexandra Garc?s, 2020), it is clear that the acceleration of degradation processes at the landscape level entails clear and present threats to the conservation of the corridor?s biodiversity.

*Knowledge and k*nowledge *gaps in biodiversity conservation and socio-ecosystemic resilience, tropical Andes*

Knowledge / Knowledge gap	**References**
Uncertainty about the impacts of land use change and climate change on the structure, ecosystem services and resilience of Andean ecosystems.	Cuesta et al. 2012; Becerra 2015; Schoolmesteer et al. 2016; Hofstede 2019.
Lack of studies and monitoring data.	Bustamante et al. 2012; Aguilar y Ram?rez 2015; Becerra 2015, 2017; Seddon et al. 2016; Mathez-Stiefel et al. 2017; Klein et al. 2017; Hofstede 2019; Avella 2019; Llamb? et al. 2019.
Reducing impacts on biodiversity and ecosystem services increases resilience (mainly through traditional conservation or ecosystem management practices).	UNEP 2015; Becerra 2015; Seddon et al. 2016; Hofstede2019.
Semi-natural systems (e.g. agroforestry systems, managed pastures) are effective in protecting ecological connectivity.	Hofstede et al. 2019, Llamb? et al. 2019.
Biodiversity conservation measures seem to increase overall resilience.	Hole et al. 2011. Becerra 2015; UNEP 2015; Hofstede 2019; Fuentes-Castillo et al. 2020.
The impact of reforestation strategies on hydrological functioning seems to be positive overall.	Bustamante et al. 2012; Mathez-Stiefel et al. 2017; Cerron et al. 2019
Priority conservation areas and gaps in conservation areas at the Andean regional scale signal at the importance of maintaining connectivity.	Hole et al. 2011; Cuesta et al. 2012; Pauli y Halloy 2020; Fuentes-Castillo et al. 2020.

Knowledge / Knowledge gap	References
Effectiveness of conservation corridors, functional biodiversity refuges and strategies to retain migration or dispersal evolutionary strategies (landscape permeability) as conservation strategy (e.g. forest islands in high Andean ecosystems).	Hole et al. 2011; Cuesta et al. 2012; Baez et al. 2016.
Effectiveness of rural landscape management strategies (e.g. live fences, shade crops, etc.).	Cuesta et al. 2012.

Source: Llamb? & Garc?s, 2020

Unsustainable agricultural and livestock production practices lead to large-scale forest fires, the main causes of which are forest clearing to create new agricultural areas, to burn stubble or to renew pastures. This seriously affected the Janchicoco palm forest (*Parajubaea torallyi*), biological and biogeographical rarity of high environmental, social and economic value.

The last fire to affect Cordillera de Sama Biological Reserve, in 2017, saw more than 12 thousand hectares of forests and grasslands consumed by the fire. Forest fires in the corridor have also destroyed habitat of important species such as the Andean bear and the Jaguar. Forest fires in the municipalities of Zuda?ez, Presto, Mojocoya, Padilla, Tomina, Villa Alcal?, El Villar, Monteagudo, Huacareta, San Lorenzo and Tarija-Cercado are reducing the quality of freshwater for human consumption for local populations and the city of Tarija, which depends on the La Victoria, Erquiz and Tolomosa watersheds.

Wildlife-livestock conflict is another problem derived from unsustainable practices. Bears and jaguars are killed as a defense mechanism to protect livestock and crops, while in the western sub-corridor, wild camelids such as the Guanaco and Vicu?a are considered a threat to livestock breeding because they compete with cattle for water and food available in the native pastures.

The forests, grasslands and shrublands of the regional corridor are strategic for the ecosystem services they provide; within these provisioning, regulation, support and socio-cultural services, water production is the most important. Water is the resource on which the productive systems of the socio-cultural units of the regional corridor depend, so water deficit, in arid and semi-arid climatic zones such as much of the El Palmar - Tariqu?a Regional Corridor, and the current territorial and institutional management in the regional corridor, favour deforestation, the alteration of the water regime, changes in land use, and the expansion/contraction of agricultural land degrading valuable and fragile ecosystems.

The El Palmar - Tariqu?a Regional Corridor is inhabited by peasant and indigenous Guaran? communities, (108 communities) with 30,182 inhabitants, 15,000 men and 15,182 women, in a total of 24 municipalities. The productive activities for local economic sustenance are mostly agriculture and cattle ranching, based on obsolete production systems, poor management, little technical assistance, and lacking technological innovation and productive diversification. In the western sub-corridor, livestock breeding is the second most important economic activity. Other economic activities are developed in the regional corridor, especially those linked to the exploitation of hydrocarbons and minerals. Both I?ao NP and IMNA and the Tariqu?a Reserve are territorially affected with 90% and 55% of their territory, respectively, with oil exploration contracts and new oil areas identified (CEDIB, 2019).

According to the available, 2004 UNDP Human Development Index for Bolivian Municipalities, in the El Palmar-Tariqu?a Regional Corridor, the departments of Chuquisaca and Potos? have the lowest HDI (0.563 and 0.514, respectively). These departments account for 15% of the Bolivian population. From the point of view of their location, it is broadly observed that the departments with the lowest achievements in terms of human development are in the highlands of western Bolivia and especially in the central valleys. Similarly, according to the National Institute of Statistics (INE 2012), the departments of Chuquisaca and Potos? have higher poverty levels than the national average. The mountainous parts of the corridor offer important ecosystem services such as hydrological regulation, but also have the largest rural population and high levels of poverty (Gonzales et al., n.d. in UNDP, 2013).

Municipal Index of Sustainable Development, municipalities of the Regional Corridor El Palmar ? Tariqu?a

Department	Municipality	Municipal Sustainable Development Index	Bolivia Index Ranking (1-339)	Population 2020
Chuquisaca	Zud??ez	47,5	235	12,467
	Presto	44,1	292	14,088
	Mojocoya	46,7	262	8,421
	Padilla	54,2	96	11,067
	Tomina	47,4	245	8,727
	Villa Alcal?	48,1	218	5,196
	El Villar	47,7	232	4,644
	Monteagudo	57,5	54	27,119
	Huacareta	47,6	234	8,351
	Villa Serrano	52,4	132	11,711
	Villa Abecia	50,1	184	4,022
	Las Carreras	50,8	168	4,412
	Muyupampa	51,6	147	10,457
Potos?	Cotagaita	47,6	233	34,088
	Tupiza	59,9	29	48,591
	Villaz?n	62	21	50,004
Tarija	Tarija	70,6	3	268,387

	Padcaya	59,3	32	18,582
	Carapar?	63	18	17,279
	Uriondo	59,5	30	15,595
	Yunchar?	51,8	145	5,621
	San Lorenzo	59,5	31	25,796
	El Puente	54,3	94	11,92
	Entre R?os	55,6	73	24,107

Poverty in the southern departments of Bolivia

DEPARTMENT	TOTAL	NON POOR		POOR		
		Basic Needs Satisfied	Poverty Threshold	Moderate Poverty	Indigence	Marginality
BOLIVIA	**100,0**	**25,2**	**29,9**	**35,3**	**9,2**	**0,4**
Chuquisaca	100,0	21,9	23,5	38,2	15,6	0,7
Potos?	100,0	17,1	23,2	40,9	17,8	1,1
Tarija	100,0	27,9	37,5	31,3	3,2	0,1

Fuente: INE, 2012 - Unidad de An?lisis de Pol?ticas Sociales y Econ?micas (UDAPE)

The regional corridor, therefore, exhibits extreme poverty of rural population living in high-risk areas (Castro, M. et al, 2014), wildfires, the presence of high biodiversity and vulnerable ecosystems, an unstable climate, and the disappearance of tropical glaciers at an accelerated rate (PNCC, 2010). A decrease in productive capacity, followed by a reduction in the economically active population in rural regions, is already visible (UNDP, 2013).

Weak local governance is widespread. The role and functions of subnational governments are scarce and ineffective with respect to the conservation of valuable ecosystems and the region's emblematic species.

This socio-ecosystemic problematics can be synthetized in the following drivers of biodiversity loss:

a) Unsustainable productive practices and land use change
b) Increased socio-ecosystemic fragmentation
c) Weak land use planning and territorial governance

El Palmar-Tariquia Regional Corridor is experiencing degradation and fragmentation of ecosystems. Overexploitation or unsustainable use are intensifying, especially the loss of habitat driven by Unsustainable productive practices and land use change, causing a scenario of fragmentation in the landscape and its management. The combined effects of land use change and climate change create unprecedented pressure on biodiversity in this vulnerable ecoregion.

For this reason, there is an urgent need to consolidate land use planning, improve territorial governance, provide incentives for a change towards sustainable land use practices and value chains, and define the elements of ecological connectivity and sustainable use of biodiversity that will provide flesh and bones to a territorial integrity approach in the El Palmar-Tariqu?a regional corridor (key strategy).

Barriers:

1. Feedback loop where unsustainable land use practices lead to land use change and ecosystem and socio-ecosystemic fragmentation, decreasing primary productivity which leads back to unsustainable land use practices and land use change.

2. The current land use planning system and territorial governance are not adequate to the demands of biodiversity conservation. Territorial and institutional management in the area favors unsustainable practices especially in these ecosystems of high environmental and social vulnerability.

Overcoming these barriers implies being able to solve the main problems of the El Palmar-Tariquia corridor (environmental problems derived from unsustainable productive practices; increase social vulnerability due to the impacts of climate change and weak land use planning and territorial governance), for establish environmental routes to incorporate communities in good conservation practices and nature-based businesses that promote human development in ecosystems of high environmental and social vulnerability.

The problems and barriers identified in the El Palmar - Tariquia Regional Corridor area are related to the direct drivers of biodiversity loss, such as habitat change involving loss, degradation and fragmentation of ecosystems, overexploitation or unsustainable use, climate change and pollution. These drivers of biodiversity loss are intensifying, especially the loss and fragmentation of habitat driven by the expansion of agriculture and livestock, also causing a scenario of fragmentation in the management of the territory.

2) the baseline scenario and any associated baseline projects

Given the mega-diverse characteristics of the country, a comprehensive approach to the territory is especially relevant. In 2012 it was approved Law 300, Framework Law of Mother Earth and Integral Development for Living Well, which lays three principles: Living Well, Mother Earth and Integral Development (integral development, in the Bolivian reality, is an intermediate phase to achieve Living Well). In close connection with Law 300, in 2015 through Law No. 650, the "Patriotic Agenda" is promulgated towards the Bicentennial (2025), which is mandatory for all state bodies, universities and other public entities. In addition, in 2018, Bolivia developed a Plurinational Policy and Strategy for the Comprehensive and Sustainable Management of Biodiversity - Action Plan 2019 - 2030. These instruments provide a solid framework for action.

Protected Areas Systems continue to be the main mechanism for fighting against it at both the species and ecosystem levels. Bolivia aims to ensure the conservation of the corridor through an improved SNAP. Protected Areas are recognized in the Constitution (article 385), and the SNAP is explicitly included in the patriotic Agenda 2025. The National Development Plan 2016-2020 (PDES) and in the Integrated Development Plan of the Ministry of Environment and Water provide the political framework for the SNAP. These policies clearly state the importance given to the PAs as a key element for integrated sustainable development. The SNAP is the framework through which Bolivia will provide its significant co-financing effort to GEF financing. Internal bylaws and technical rules have already been developed to strengthen the management and sustainable financing of protected areas and to ensure the continued strengthening of the SNAP.

The project will increase the forest area under integrated sustainable management, building on the established policy framework, focusing on forests that provide critical connectivity and where agricultural expansion and forest resource extraction activities are common. A dual emphasis approach is proposed that will strengthen protected area management, consistent with granting priority to protected areas as an engine of sustainable development, along with sustainable use and sustainable management of natural resources both within and outside the protected area system. Environmental governance will be enhanced by strengthening capacities of a wide array of stakeholders?both men and women-- to reach conservation benefits that go beyond the SNAP and the lifespan of the project.

Specific policies and bylaws have been approved to guide and improve the management of biodiversity and protected areas. All SNAP sites in the corridor have developed management plans, but not all can carry out all foreseen programs and activities due to budgetary constraints and governance issues. Monitoring systems and management effectiveness methodologies are seldom implemented in the areas included in the project, and without incremental support the SNAP budget and capacities will remain limited.

Management committees are the main governance mechanism to ensure participation in the management of Bolivian protected areas, but the mechanism needs strengthening and improvement. In a wider sense, and despite of the clear policies for planning at all levels and sectors, coordination still needs improvement, especially with and within subnational levels such as the one tackled in this project. This applies both to protected areas and indigenous peoples and local communities. Involvement of knowledge providers in the capacity building processes is necessary to strengthen the capacities of local stakeholders and protected area staff.

Bolivia has approved rules and regulations to guide the management of biodiversity and protected areas. All protected areas have approved management plans, though not all PAs fully implement the planned programs and activities due to budgetary constraints and governance problems. In general, governance of the system needs to be improved, as well as monitoring systems and the adaptive management of management effectiveness. Management committees have been established, but not all operate adequately. Although there are clear territorial planning policies at different levels and in all sectors, there are still coordination problems, especially at and between sub-national levels. Shared management is underdeveloped in the SNAP.

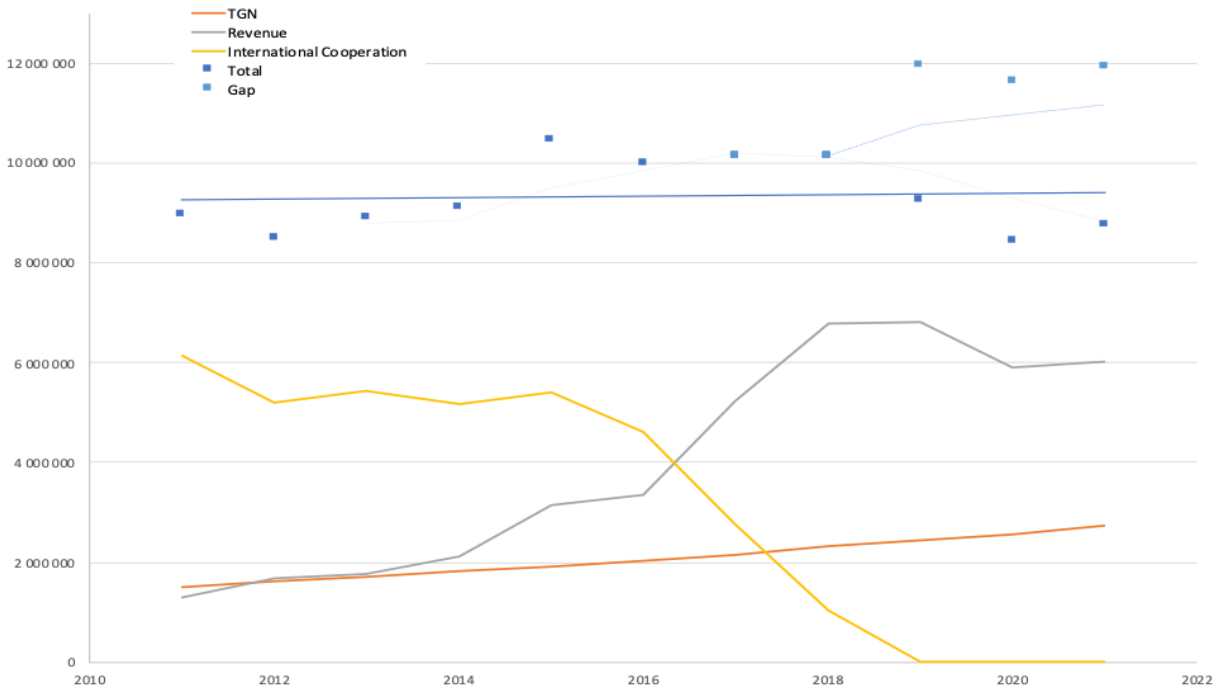
The existing drivers and pressures threat protected areas and ecosystems more widely. In a BAU scenario, the existing enabling environment is insufficient to expand sustainable agriculture practices and fully contain these threats. The legal and regulatory framework for protected areas, biodiversity conservation and sustainable land use, such as Law 777 of January 21, 2016 of the State Integral Planning System (Sistema de Planificaci?n Integral del Estado - SPIE), Law 1333 on the Environment and others, offers a strong framework to ensure a territorial approach and sustainable use, but, on the ground, the implementation of this legal framework with regards to protected areas is insufficient due to a lack of capacities, funds and personnel. The coordination of public bodies at national, sub-national and local levels is very necessary for activities involving public investment, to integrate the production of environmental services, sustainable development and poverty reduction.

The regulatory structure of the bodies responsible for the protection and conservation of biodiversity of the protected areas of the Bolivian State is organized from the Ministry of the Environment and Water (MMAYA), which is the highest regulatory and oversight body on natural resources and of the protected areas, as established by the Law 1333 of the Environment (23 March 1992), which also establishes the SNAP (later regulated through Supreme Decree 24781, 31 July 1997). Within MMAYA, delegated policy authority resides in the Deputy Ministry of Environment, Biodiversity, Climate Change and Forest Development (Viceministerio de Medio Ambiente, Biodiversidad, Cambios Clim?ticos y de Gesti?n de Desarrollo Forestal, VMA), and technical responsibility within it in the General Directorate of Biodiversity and Protected Areas (Direcci?n General de Biodiversidad y ?reas Protegidas, DGBAP).

Supreme Decree 24781 widens the concept of shared management to include NGOs, public, private, academic institutions and consortia on a non-profit basis. In its articles 47-53, it defines the Management Committee as the body through which these institutions participate in the management of the protected area.

SERNAP is created and regulated in the Supreme Decree 25158 (4 September 1998), which establishes it as a National Service with its own structure and functional dependency of the Deputy Ministry of Environment, Biodiversity, Climate Change and Forest Development. SERNAP is thereby entitled to budgetary allowances, internal and external cooperation and financing and revenue from service provision and other via specific regulation as its sources of funding. The Service?s annual budget for the last decade is shown in Figure 1 and represents a remarkable achievement in PA financial sustainability. In terms of the SNAP, however, the picture is one of a reactive structure, that barely compensates for the fading cooperation income while consistently, maybe by design, making it difficult for any non-SERNAP actor to become part of the SNAP.

SERNAP, funding categories 2011-2019 (& est. through to 2021), current USD



SERNAP assigns funding to the participating PAs and related programs through its budget for Integrated, participative and sustainable management of PAs, Control, monitoring and enforcement activities, Environmental awareness and community relations, and Increased revenue from new mechanisms. SISCO is the payment collection system (*SIStema de CObro* in Spanish) that SERNAP implements for PAs. SISCO assigns its income to each PA, so income generated in project PAs will be reinvested in each of them. Nonetheless, as a result of staggering inefficiencies in the administration of income that are present throughout SERNAP?s sources of funding, the five involved national protected areas have unstable and uneven sources of funding. This problem is already being tackled at the system level by SERNAP, which works in a financial sustainability strategy.

SERNAP also works in a decentralisation strategy in the framework of its Master Plan (2012), which establishes a strategic framework and general and specific objectives within a 10-year framework that has been proven compatible with subnational protected areas (MMAyA, 2012). Within this framework, SERNAP seeks to enhance the mechanisms, capacities, management and sustainable funding of national and subnational protected areas, with a view to promote the sustainable management of the represented ecosystems. This approach will boost the existing, currently undervalued protected areas and opportunities for the management and integrated conservation of landscapes.

Although sustainable agricultural practices are promoted by government agencies, the local enabling environment is still not adequate to scale up those practices and requires incremental support to get up to speed. During the last decade, women's organizations in Bolivia have joined the discussion and political participation at the different levels of the government. Evidently, gender inequalities have old roots, and their elimination is a long-term task. It is notorious that the region presents a frontier-like

gender balance (overall women-men proportion is around 48-52%), so the baseline is very low and intervention in this field will have to adjust to this starting point.

Projects supporting multi-stakeholder territorial governance mechanisms with gender perspective include the Bioculture and Climate Change Project (2012-2023, Investment: 1,620,330 USD). With the financing of the Swiss Cooperation in Bolivia, the project in its first phase contributed to the formulation of Law 300: Framework Law of Mother Earth and Integral Development to Live Well and to prepare with the Plurinational Authority of Mother Earth (APMT) the notion of Life Systems as an integral and systemic territorial planning model in face of climate change. In a second stage (2015-2020) fostered institutional capacities for climate resilience through the implementation of climate resilience plans. Currently in its last phase (2020-2023), it seeks to ?Consolidate the sustainability and scaling of policies (subnational and national) of integral development in harmony with Mother Earth and the multi-actor territorial management model, in communities vulnerable to climate change in Bolivia?. Lessons learnt from this project will contribute to establish and strengthen coordination mechanisms of communities with entities at the national and subnational levels. The specific communities within project area are: Presto (Chuquisaca), Torco Torco, Aramasi, Joya, Charal, Loman, Chajra, Mayu, Yunchar? (Tarija), Copacabana, Arenales, Mu?ayo, Vicu?ayo, Pujzara, Viscarra, Pasajes, Chorcoya, Avil?s, Quebrada, Honda, San Luis de Palqui, Churquis, Villaz?n (Potos?),Tinku Santa Rosa de los Cangrejos, San Antonio de Rota, Larkas, Salitre, Huanacuni Altos, Hornos y Yanallpa.

CAF (Loan, USD 1,646,274) invests in a new phase of the Mi Riego and MiAgua Programs, which will be coordinated with activities in the project area to ensure that water-infrastructure investments align with the project?s fostering of sustainable livelihoods and land management. The MiAgua and MiRiego programs are active in the Chuquisaca and Tarija departments. Teams in both these programs and this project will ensure the coordination of activities between them to guarantee that the water infrastructure investments are aligned with the fulfillment of the Project objectives. CAF maintains a shared commitment with the Bolivian Government to continue funding these programs under enhanced environmental overseeing to ensure that they contribute to sustainable development and enhanced climate resilience.

The Reciprocal Agreements for Water (from 2003) were initiated by the Natura Bolivia Foundation. These support communities to protect their natural water sources through the conservation of their forests. It works in more than 60 municipalities in the departments of Tarija, Chuquisaca and Santa Cruz, covering 485,159 hectares. Exchange of experiences and lessons learnt focus on permanent, reciprocal agreements for the protection of forests deemed important for water, and their effectiveness with respect to the conservation of forests and biodiversity. Communities within the project area that have undergone these permanent agreements at the time of writing are: Carapar? (Tarija), Sausalito, Agua Blanca, Acheral, Santa Rosa, Cortaderal, Huacareta (Chuquisaca), Yairimbia, Yaire, Campo Largo, ?acamiri y Huasai.

The strong pressure on fauna and flora led to the promulgation of Supreme Decree No. 22641 of General and Indefinite Prohibition in 1990 for the capture of wild animals and the collection of wild plants and their derived products. In 1999, through Supreme Decree No. 25458, the Indefinite General

Ban was ratified, allowing the sustainable use of some species based on sustainable use plans, studies and inventories that determine the feasibility of their use and the permissible quotas. In 2017, the Plurinational State of Bolivia issued Supreme Decree No. 3048, which aims to establish administrative procedures for the protection of wild fauna and flora within the framework of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Although sustainable use is permitted under a management plan and/or studies, and the national and international trade of products and by-products from legal use are regulated by Supreme Decree No. 3048, any activity of possession, storage, transportation of animal and plant species, or their derivatives without authorization or that are declared closed or reserved, is considered an environmental crime, according to Article 111 of the Environment Law No. 1333.

Official data shows species frequently registered in illegal traffic: talking parrot (*Amazona aestiva*), catitas (*Brotogerys* sp.) and macaws (*Ara* sp.) among the birds; regarding mammals, the whistling monkey (*Sapajus apella*), howler monkey (*Alouatta* sp.) and badger (*Nasua nasua*); Some species of deer (*Mazama* sp., *Blastocerus dichotomus*), armadillos (*Dasypus novemcinctus*, *Pryodontes maximus*), tapir (*Tapirus terrestris*) and jochis (*Dasyprocta* sp.) are illegally traded for bushmeat. In the case of flora, the unregulated extraction of orchids, ferns and bromeliads for ornamental purposes, as well as cacti for making furniture, is reported.

The control of the sale and illegal use of wild fauna and flora, including wood, is carried out locally through joint operations between governments, municipalities and POFOMA. The MMAyA has signed inter-institutional agreements with the Ministry of Government and the Ministry of Defense, to strengthen inter-institutional cooperation.

In 2015-2016, a package of "Regulatory Measures and Immediate Actions in favor of the Forestry Sector" was enacted, through which it is expected to order and harmonize the vocation of soils and productive processes, and consequently promote sustainable management of forests, in which, as a priority, the rights of access, as well as the benefits of exploitation, reach those social groups that live from and within forests.

In this context, through the policy and regulations for the Comprehensive and Sustainable Management of Forests, six key aspects are articulated: i) the principles of comprehensive development in harmony with Mother Earth, ii) the use and sustainable exploitation, iii) the conservation of environmental functions for ecological resilience, iv) diversification of sustainable production systems and generation of added value, v) territorial governance and democratization of rights in the forest and vi) inter-scientific dialogue of knowledge and wisdom.

This forest management approach not only recognizes the importance and relationship that these have for the Nations and Peoples of Indigenous Peoples, Peasants, Afro-descendants and Intercultural Communities (NPIOC), for which the State has also been working on the development of capacities to determine management models and the granting of inclusive rights.

The demand for non-timber forest products in national and international markets has increased considerably in recent years. From the Ministry of Environment and Water, programs are being

developed for the use and transformation of non-timber forest resources and processes for the transformation of agricultural products, agroforestry production systems and the replacement of the use of fire in agricultural systems. In 2013, Law No. 459 was enacted by which "The following people are constituted as service providers of Bolivian ancestral traditional medicine: Ancestral traditional doctors and physicians, Spiritual Guides of the Nations and Peasant and Afro-Bolivian Native Indigenous Peoples, Midwives and traditional midwives, traditional Naturists?, formally recognizing the collective rights of access to resources, the revaluation and systematic defense of the knowledge, knowledge and practices of traditional medicine and intercultural health, in addition to strengthening the processes of co-production knowledge and interscientific dialogue.

In the same line of participative conservation of local biodiversity, the Program for the Conservation and Sustainable Use of the Vicu?a (*Vicugna vicugna*) demonstrates the wisdom of articulating organizational structures at the local level and strengthen their technical and administrative capacities. The use of the fiber of this camelid is part of Art. 4 of D.S. 0385, as a technical management instrument that respects the state of the vicu?a populations.

The biological diversity associated with agriculture, or agrobiodiversity, coincides with biogeographic zones with high diversity and endemism such as the Puna, the Yungas and the Bolivian forest - Tucumano (INIAF - Fundaci?n PROINPA 2015, Bellon et al. 2015), which prominently make part of this project. At least 152 species of crop wild relatives with some degree of threat, all of them prioritized for their value as a source of genetic resources for food and other priority uses (VMABCC-BIOVERSITY 2009), have been identified. Quinoa (*Chenopodium quinoa*), ca?ahua (*C. pallidicaule*), amaranth (*Amaranthus caudatus*), potato (*Solanum tuberosum*) or oca (*Oxalis tuberosum*), are basic foods with good nutritional content (proteins of high quality and its good micronutrient profile) and a rich association with the Andean culture. The MMAyA, through the Vice Ministry of the Environment, Biodiversity, Climate Change and Forest Management and Development, in coordination with the MDRyT and other entities, develop projects that recover interscientific knowledge about local species and lay the foundations for their strengthening and/or reincorporation in production processes and agri-food systems.

3) Alternative scenario, objective and description of results and products by project components

The alternative scenario aims to build local conditions and capacities for biodiversity conservation and socio-ecosystemic resilience through the consolidation of an integrated landscape management of the El Palmar-Tariquia Regional Corridor, with a focus on ecological connectivity and based on strengthened governance mechanisms compatible with the Open Standards for Conservation (OS)[1] and the concept of Nature-based Solutions[2] (NBS). These frameworks recognize and adopt indigenous, local and traditional knowledge and governance systems, and can be implemented within the framework of the country's international commitments.

The project?s Theory of Change overcomes the current barriers and achieves its goal while generating triple-loop learning to provide sustainability and self-amplifying potential to the intervention. The identified barriers, one at the micro level, where a feedback loop traps the farmer between unsustainable practices and the ensuing degradation, and the other at the macro level, where weak

governance mechanisms also contribute to the loop of increased fragmentation and unsustainable practices, are tackled through the key strategy of simultaneously consolidating information and knowledge, providing incentives for enough demonstrations of improved practices to take space in the landscape, and supporting the establishment of concrete agreements that provide grounds for further alliances and collaborations to form, thus reinforcing multilevel and multi-stakeholder territorial governance mechanisms. The four Components developing this strategy tackle land use planning information and the consensus-building basis, incentivizing key sustainable practices, landscape governance, and the sustainability of project outcomes after its demise.

The alternative scenario will be achieved through the following components and outcomes:

Component 1
Land use planning for maintenance and improvement of key elements of ecological connectivity (Barrier 2)

Component 1 Objective
Consolidation of connectivity and integrated management of the territory of the regional corridor that help the understanding and maintenance of ecosystem functions and local livelihoods.

The component contributes to the development of a model that can align connectivity criteria (Outcome 1.1) with land use planning (1.3) on a regional scale in the area of intervention, as a key element for the conservation of biodiversity and ecosystem services, to generate consensus and landscape management policies within the framework of the diversity of contexts and actors, mainly local, and integrate the understanding of this value (Outcome 1.2) in decision-making and in planning and management instruments, under the principle of sustainability, incorporating communities in the development of good conservation practices and nature-based businesses that promote socio-ecosystemic resilience in areas of high vulnerability.

Outcome 1.1. Environmental routes that incorporate communities in good conservation practices and nature-based businesses, are established at the El Palmar - Tariqu?a Regional Corridor.

It is expected to achieve this outcome through the identification (with participatory methodologies) of the elements that guarantee socio ecological connectivity between the different conservation nuclei or protected areas. Once these elements are identified, and based on it, a diagnosis of livelihoods and environmental functions will be prepared. Working groups, with equal opportunities for women and men, will be established through this process.

Output 1.1.1. Socio ecological connectivity elements are identified, and landscape partnerships established, around environmental routes at the El Palmar - Tariqu?a Regional Corridor.

Output 1.1.2. Livelihoods and ecosystem services are characterized in a diagnostic study covering the whole corridor, to strengthen the implementation of good conservation practices compatible with the Open Standards and Nature-based Solutions approaches.

Outcome 1.2. Information is generated for improve local understanding between water balance relationships, ecosystem-level carbon balance and the effects of drought, deforestation and forest fires under climate change scenarios and biodiversity loss.

The relationship between forest, water and biomass production in different landscape units with systemic impacts will be characterized. For this, an online platform of the Environmental routes of the El Palmar - Tariqu?a Regional Corridor with strategic territorial information for all the project beneficiaries, will be designed and implemented. The platform, centered on the proposed Routes, will serve as an anchor for local consensus-building over the technical diagnosis information.

Output 1.2.1. The relationship between forest and water in different landscape units is characterized in an information and monitoring system with thematic maps and information layers available to all stakeholders.

Outcome 1.3. Environmental routes, with special focus on high conservation values, are integrated in decision-making and land use planning and management tools.

With all the information gathered, the elements of socio ecological connectivity identified and the relations between them characterized, it will be possible to establish the environmental routes and to give them administrative support incorporating them to management and land use planning instruments.

1.3.1 Management and land use planning Instruments include environmental routes. At least 1 instrument design for the El Palmar - Tariqu?a Regional Corridor and 1 management tool updated in each protected area that incorporates environmental routes.

Component 2

Sustainable Land Management practices (Barrier 1)

Component 2 Objective

Generate and strengthen local conditions, capacities, and knowledge for the development of productive systems and practices for sustainable and resilient land management.

Bolivia is a country with a limited agricultural vocation due to the edaphic and ecological limitations in its various regions, being a country with greater aptitude for the provision of other ecosystem services. The country's food security has been threatened in recent years, mainly by the recurrence of extreme weather events such as severe droughts and floods that have directly affected the production of basic inputs such as tubers, wheat, corn, legumes, meat and milk. The increase in demand and the reduction in supply have caused a progressive increase in the prices of basic products, directly affecting family economies and nutritional levels. The processes of expansion of the agricultural frontier and deterioration of environmental quality have increased rapidly in the last thirty years. Meanwhile, long-term projections are full of uncertainties, while visions of development contain few environmental precautions. Deforestation in various departments and regions has come to impact highly fragile ecosystems in humid mountain regions, endangering basin headwaters. In addition, productive

activities for local economic sustenance are based on obsolete production systems, poor management, and little technical assistance, thus lacking frugal innovation and productive diversification. These poor agricultural and livestock production practices lead to increasing vulnerability of high value ecosystems and local communities.

That is why Sustainable Land Management (SLM) practices became so important. The implementation of the component under recognized standards such as the Open Standards for Conservation and Nature-based Solutions (NBS) will generate local conditions and capacities with a gender focus, in a framework of equal opportunities for women and men, to support and promote actions for the protection, restoration and sustainable management of the corridor's ecosystems, to safeguard biodiversity, increase socio-ecosystemic resilience, and improve human well-being. In this sense, broad nature-based entrepreneurship (individual farmers, the local private sector and not-for-profit organizations) will be supported in the planning, delivery and management or stewardship of nature-based value chains using nature directly or indirectly as a core element of their offering.

It is expected to achieve the outcomes with: the design and implementation of training activities for the development, strengthening and scaling up of sustainable and resilient community production systems and practices, the identification and legal, administrative, institutional and communicational strengthening of public and private associations, the implementation of SLM practices, and finally, with the identification, characterization and classification of Natured-based organizations for the selection of different measures according to the sector, for being implemented in El Palmar-Tariquia regional corridor.

Outcome 2.1. Sustainable Land Management practices are promoted and implemented to strengthen biodiversity conservation and socio-ecosystemic resilience

2.1.1. Local conditions and capacities have been generated, for the development, strengthening and scaling up of biodiversity-friendly, sustainable and resilient community production systems and practices, under the ecological corridor and connectivity approach, with gender perspective

2.1.2. Local public-private partnerships for the development and improvement of biodiversity-friendly, sustainable production processes and value chains under the ecological corridor and connectivity approach, compatible with the Open Standards and Nature-based Solutions (NBS) approaches, are identified and consolidated

The expected targets within this Outcome are:

- at least 4 trainings (2 workshops and 2 in the field in each sub corridor) at the El Palmar - Tariqu?a Regional Corridor and 10 trainings in or nearby protected areas within the corridor (2 for each PA)
- a database elaborated with all the associations and organizations identified
- at least 1 association and/or organization supported at the El Palmar - Tariqu?a Regional Corridor and 1 association and/or organization supported in each protected area, that promote and apply resilient sustainable land management practices, linked to sustainable value and supply chains, and articulated between local and private partners

The next three Outputs measure different dimensions of the same landscape-level changes, to be supported under this Component.

2.1.3. Sustainable Land Management practices are developed

2.1.4. Local producers are strengthened to adopt biodiversity-friendly, sustainable and resilient productive practices, with a gender focus, improving their income

2.1.5. Strengthened local producers adopt sustainable and resilient productive practices, with gender perspective

Most of the Component?s budget is allocated to provide incentives to farmers and forest dwellers (be they be incentivized individually or collectively) to undergo the transition to sustainable practices. The concrete incentives to be provided, be they economic or not, will take the most suitable form in each case. The process for the selection of beneficiaries will consider knowledge from Component 1, Output 2.1.2, and Output 2.2.2, and will target the following:

- at least 600 families improve their capacities and conditions for sustainable and resilient productivity
- at least 72 ha avoided deforestation
- promoted vegetation and native forests regeneration processes in at least 5,000 ha of connectivity zones of importance for the protection of water sources
- at least 1,500 ha of plots with agroforestry and agrosilvopastoral practices

(Example measures: A) Ecological & landscape restoration, Ecosystem conservation and management, Biodiversity conservation, Reforestation, B) Agroforestry Beekeeping, Plant and soil improvement, Regenerative farming, C) NBS for health & wellbeing, Agritourism, Eco-tourism and nature-based tourism, Forestry tourism and D) Research & innovation projects, Smart solutions for NBS, Environmental monitoring).

Outcome 2.2. Nature-based livelihoods in different production process and value chains of the El Palmar-Tariquia regional corridor are promoted

2.2.1. Natured-based organizations are identified, characterized and classified by direct or indirect use of nature for economic, environmental and social benefits

2.2.2. Based on standardized criteria, different measures according to the sector are selected in a participatory manner and implemented in El Palmar-Tariquia regional corridor

The expected targets under this Outcome are:

- a database with identified NBS organizations

- a document with the criteria and indicators selected and established for characterized and classified it
- at least two measures selected and implemented per sector.

Component 3

Strengthening territorial governance at national and subnational level with gender perspective (Barrier 2)

Component 3 Objective

Strengthen local territorial governance mechanisms and instruments at a multilevel and multi-stakeholder scale (subnational and local) with a gender perspective to consolidate the built consensus and to provide demonstrative measures for biodiversity conservation and socio-ecosystemic resilience.

The main challenge in strengthening the good governance mechanisms proposed in the component is to consolidate a shared management model that reinforces biodiversity conservation, promoting ecological connectivity in the El Palmar - Tariqu?a Regional Corridor. These multilevel and multi-stakeholder good governance mechanisms with a gender focus and analysis will contribute to reducing inequality gaps, opportunities and active participation, and will contribute to the improvement and harmonization of public policies between the different levels of government operating in the intervention area, and with local stakeholders and their interests, to promote efficient informed decision making and effective governance at the landscape scale, allowing for the participatory construction and implementation of biodiversity conservation and socio-ecosystemic resilience measures.

Outcome 3.1. Multilevel and multi-stakeholder territorial governance mechanisms with gender perspective are strengthened for the construction and implementation of biodiversity-friendly measures, under an ecological connectivity approach

3.1.1. Consolidated management mechanisms and inter-institutional arrangements to improve policies and decision making for the integrated management of the regional corridor under the ecological connectivity approach

3.1.2. Map of actors and identification of roles in the management of the regional corridor, protected areas, and areas of influence, with a gender focus and analysis, is elaborated

Targets are: at least three local regional management mechanisms designed, agreed and implemented until end of project, and a stakeholder map elaborated in the first semester of project implementation. It is expected to achieve these outcomes through gathering information for the identification of the territory key actors, allowing for the exercise of leadership in the implementation of good governance measures.

Outcome 3.2. Good local governance mechanisms for informed decision making, with a gender approach and analysis, are promoted for the implementation of ecological connectivity measures

3.2.1. Trained local actors, with a gender perspective, exercise leadership in the implementation of ecological connectivity measures

At least 5,000 beneficiaries are trained to promote and strengthen good governance mechanisms.

Component 4
Knowledge management and project sustainability (Barrier 2)

Component 4 Objective
To monitor and evaluate the project in all its phases as a fundamental tool to follow up on results, and measure its evolution in accordance with the expected progress, thus allowing to identify scalable and replicable actions and results, the contributions to global environmental benefits, and the systematization of lessons learned.

The monitoring and evaluation plan of the project results and indicators will include the analysis of the GEF Safeguard criteria applicable to the project, the impact of the gender approach and equal opportunities for women and men. Continuous and consistent monitoring will enable the management committee to make appropriate and timely decisions to optimize effective and efficient project implementation. Monitoring of these indicators throughout the life of the project will be necessary to evaluate whether the systemic results and impacts are being successfully achieved, for the alternative scenario to develop and the production of global environment benefits.

Outcome 4.1. Knowledge management processes have been generated among local stakeholders to promote and strengthen the conditions and mechanisms of territorial governance that enable the implementation of the ecological connectivity approach and measures

Outcome 4.2. The project is supported by a M&E system based on measurable and verifiable outcomes and adaptive management principles

It is expected to achieve these outcomes with the conformation of a multilevel and multi-stakeholder inter-institutional platform, systematized information on lessons learned and knowledge management in the development of the project components, with gender and equal opportunities analysis, socialized with stakeholders and disseminated through digital media, and the establishment of a technical committee for local coordination, monitoring and evaluation of the project.

4.1.1. Multilevel and multi-stakeholder inter-institutional platform is conformed to strengthen the integrated management of the regional corridor, as an associative network for scalable and replicable knowledge management in decision making

4.1.2 Systematized information on lessons learned in the development of the project components, with gender and equal opportunities analysis, socialized with stakeholders and disseminated through digital media

4.2.1 M&E strategy developed with relevant stakeholders, clearly defining expected outcomes, the expected times of implementation, and confirmation through objectively verifiable indicators and means of verification. Mid-Term Review and Final Evaluation conducted to inform and guide project implementation

The targets for this Component expected within project implementation are: three inter-institutional platforms formed in the first year of the project, a document of systematized information on lessons learned.

d) Alignment with GEF focal area and/or Impact Program strategies

Within the framework of the priorities established in the GEF 7 strategy, the project is aligned with the Biodiversity Focal Area objectives:

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

The project seeks to reduce the vulnerability of species, ecosystems, and ecosystem services through an integrated approach to supported multi-stakeholder and multi-level governance. This will be achieved by integrating local, regional, and national stakeholders in good governance mechanisms for informed and strategic decision making, policy definition, and management planning. It also seeks to integrate local productive social organizations, in the management of the El Palmar-Tariqu?a Regional Corridor, and to promote and consolidate partnerships to strengthen sustainable value chains.

The objectives, results, outputs and activities of the project are aligned with the objectives of the GEF-7 Biodiversity Focal Area.

Component 1: Consolidation of connectivity and integrated management of the territory of the regional corridor that help the understanding and maintenance of ecosystem functions and local livelihoods.

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

Component 2: Generate and strengthen local conditions, capacities, and knowledge for the development of productive systems and practices for sustainable and resilient land management.

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.

Component 3: Strengthen local territorial governance mechanisms and instruments at a multilevel and multi-stakeholder scale (subnational and local) with a gender perspective to consolidate the built

consensus and to provide demonstrative measures for biodiversity conservation and socio-ecosystemic resilience.

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

Component 4: To monitor and evaluate the project in all its phases as a fundamental tool to follow up on results, and measure its evolution in accordance with the expected progress, thus allowing to identify scalable and replicable actions and results, the contributions to global environmental benefits, and the systematization of lessons learned.

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

e) Incremental/additional costs and expected contributions from baseline, GEFTF, LDCF, SCCF and co-financing

Without the implementation of the project, degradation and fragmentation of ecosystems, overexploitation or unsustainable use will continue intensifying, especially the loss of habitat driven by the expansion of agriculture and livestock, also causing a scenario of fragmentation in the management of the territory in the face of the effects of climate change. The combined effects of land use change and climate change will enhance biodiversity loss in El Palmar-Tariquia regional corridor, affecting the consolidation of carbon sinks, the maintenance of the water regime, and therefore a decrease in the productive conditions that exacerbate the poverty of local populations.

To make a deep and sustainable change in this BAU scenario, it is necessary to overcome the barriers of unsustainable land use practices and land use change, and inadequate land use planning and territorial governance. For this, it is proposed to consolidate land use planning, improve territorial governance, and define the elements of ecological connectivity and sustainable use of biodiversity, as strategies of the territorial integrity approach to achieve socio-ecosystemic resilience. All of this will allow to reach the goal of the present project of establishing environmental routes to incorporate communities in good conservation practices and nature-based businesses that promote human development in ecosystems of high environmental and social vulnerability in the Regional Corridor El Palmar-Tariquia, in the departments of Potos?, Tarija and Chuquisaca-Bolivia.

The implementation of the present project will contribute to 1) the conservation and sustainable management of vulnerable biodiversity through increased connectivity at the landscape scale, and 2) an improvement in highly vulnerable ecosystems? and peasant and indigenous people communities' socio-ecosystemic resilience.

Biodiversity conservation and sustainable management are going to be achieved working on three of the five main drivers of biodiversity loss: habitat change, overexploitation or unsustainable use and climate change with mainstreaming biodiversity across sectors, and addressing direct drivers to protect habitats and species. For this, it is important to work with land use planning for maintenance and

improve the key elements of ecological connectivity (Component 1) and with Sustainable Land Management practices (Component 2). To consolidate this, socio ecological connectivity elements must be identified and characterized for establishing environmental routes (Outcome 1.1), information for improved local understanding between water balance relationships, ecosystem-level biomass balance, the effects of drought, deforestation and forest fires under climate change scenarios and biodiversity loss must be generated (Outcome 1.2), and environmental routes (the link between ecological connectivity and people?s interests) must be integrated in decision making and land use planning and management tools (Outcome 1.3).

Sustainable Land Management practices (Component 2) will be promoted and implemented to strengthen socio-ecosystemic resilience with special emphasis on equal opportunities for women and men (Outcome 2.1). Simultaneously, strengthening territorial governance and land use planning at national and subnational level with gender perspective will be worked out (Component 3), for consolidating ecosystems integrity. It is necessary to strengthen multilevel and multi-stakeholder territorial governance mechanisms for the construction and implementation of socio-ecosystemic resilience measures, under an ecological connectivity approach (Outcome 3.1) and to reinforce knowledge management processes among local stakeholders (Outcome 3.2).

Finally, it is important to guarantee the sustainability over time of the results achieved by the project, which is going to be feasible through knowledge management and project sustainability actions (Component 4) that include: the conformation of a multilevel and multi-stakeholder inter-institutional platform, systematized information on lessons learned and knowledge management in the development of the project components, with gender and equal opportunities analysis, socialized with stakeholders and disseminated through digital media and the establishment of a technical committee for local coordination, monitoring and evaluation of the project.

In this context, the GEF funding is very important to provide a boost that complements already-existing public investments (co-financing) in protected area management, land use planning and natural resources management and watershed management (MMAyA), as well as investments in rural infrastructure (CAF) and agricultural development by MDRyT and ETAs, and to tilt landscape dynamics towards sustainability, including increased resilience of ecosystems and people's livelihoods, increased resilience of water resources, landscape connectivity and the enhancement of the conservation status of threatened species.

f) Global environmental benefits (GEFTF) and/or adaptation benefits (LDCF / SCCF)

The overall environmental benefits of the project are produced both within and outside Protected Areas. The project seeks to implement three types of measures to increase ecological connectivity and socio-ecological resilience, and change the local carbon and water balance: 1) reduce the loss of forests by avoiding the annual deforestation of 72 ha (10% of annual deforestation); 2) promote natural regeneration processes of vegetation and natural forests in 5,000 ha of connectivity zones of importance for the protection of water sources, ecological connectivity, and protection of streams and headwaters; and 3) promote agroforestry and agroforestry practices in 1,500 ha of plots that increase standing biomass and the overall health of soils and vegetation.

Within PAs, the project will support 697,643 ha of Terrestrial Protected Areas under improved management effectiveness. In the regional context of the Tucuman-Bolivian forest, mountain forests with high altitudinal gradient and natural and man-made vulnerabilities, that houses globally relevant biodiversity, the implementation of the project will generate greater adaptability of this biodiversity, especially emblematic species such as the jaguar and the Andean bear. These connectivity measures include agroforestry and agrosilvopastoral practices in some 1,500 ha and 5,000 ha of supported ecological restoration, distributed in different landscape units that regenerate the Andean Forest in degraded areas, as well as the avoidance of deforestation in 72 ha of forest within the protected areas.

The mentioned activities will be realized through regeneration enrichment, diminishment of cattle pressure to fit carrying capacity, and similar close-to-nature interventions as feasible within the Open Standards for Conservation and Nature-based Solutions frameworks. Component 2 includes support to the full set of preparatory activities (such as the prioritisation of sites and measures, training, and organizational strengthening), and the budgetary capacity (GEF financing and cofinancing) to undertake this successfully. At the plot level, agroforestry[1] provides increased shade (moisture and cooling), and diversity with respect to conventional agriculture. At the landscape level, it provides enhancements to ecological connectivity and soil quality, and contributes to reducing deforestation. The combination of these contributions benefits biodiversity, specially in semiarid and vulnerable conditions such as the ones prevalent in a large part of the project area.

These measures will, complementarily, provide livelihood improvements for at least 600 families and the enhanced sink of at least 1,119,994 tCO_2eq in 20 years from project inception.

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[1] https://www.fao.org/forestry/agroforestry/80338/en/, last seen 06-05-2022..

g) Innovation, sustainability and scaling-up potential

Innovation

The project seeks to develop landscape management capacities around the idea of environmental routes that integrate territories through ecological connectivity and eco-touristic activities in El Palmar ? Tariqu?a regional corridor in Bolivia, which has high value ecosystems with important socio-ecosystemic vulnerabilities. This connectivity is provided to protected territories under formal schemes (areas within the SNAP), and also other areas of great importance for the overall resilience of the system that are not under formal conservation schemes and where it is required to favor more sustainable practices working with the communities. This approach better complements biodiversity conservation objectives within and outside protected areas, and the result is more synergistic than if both were addressed separately.

Scaling-up potential

Lessons learned from this project will feed back into the implementation of the Mother Earth Framework Law (Law No. 300) with important effects in terms of biodiversity conservation within and outside Protected Areas. Bolivia, as a country that prioritises its forested nature, requires effective intervention models such as the one to be generated with the project, that contribute to the fulfillment of national objectives from local impact interventions. The country?s biodiversity conservation objectives would be supported if the country is able to provide its forest-dependent inhabitants approaches such as this to be learnt-from and replicated.

Sustainability

The project will have a medium-term intervention (36 months), a period in which it is expected to establish the necessary conditions and local capacities that will allow the understanding, appropriation, and gradual implementation of measures, for the construction of a solid scenario that guarantees the conformation of the regional corridor with integrated management, in addition to the continuity of the socio-ecosystemic resilience approach.

A relevant contribution to the sustainability of the project results will be achieved with the concurrence and institutional co-responsibility between local and regional public entities through the inclusion of the criteria and guidelines for territorial management of the intervention area in the Territorial Plans for Integral Development within the framework of national planning and public investment policies; this effort may be complemented with the leverage of other funds.

With the implementation of the project, people and their organizations and political representatives not only will adopt better practices, but also will establish institutional arrangements and good local governance mechanisms that allow them to better manage the territory. This means to have spaces that fulfill the function of protecting water sources, and therefore ensure availability for different human activities and reduce their present and future vulnerability through the better management and protection of natural spaces that, due to their scenic beauty, fulfill recreational functions and generate income for the communities.

Within this framework, the potential and capacity for replication and scalability of the approach developed by the project can be expanded and appropriated in other regions by national and subnational entities.

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[1] https://conservationstandards.org, last seen 05-06-2022

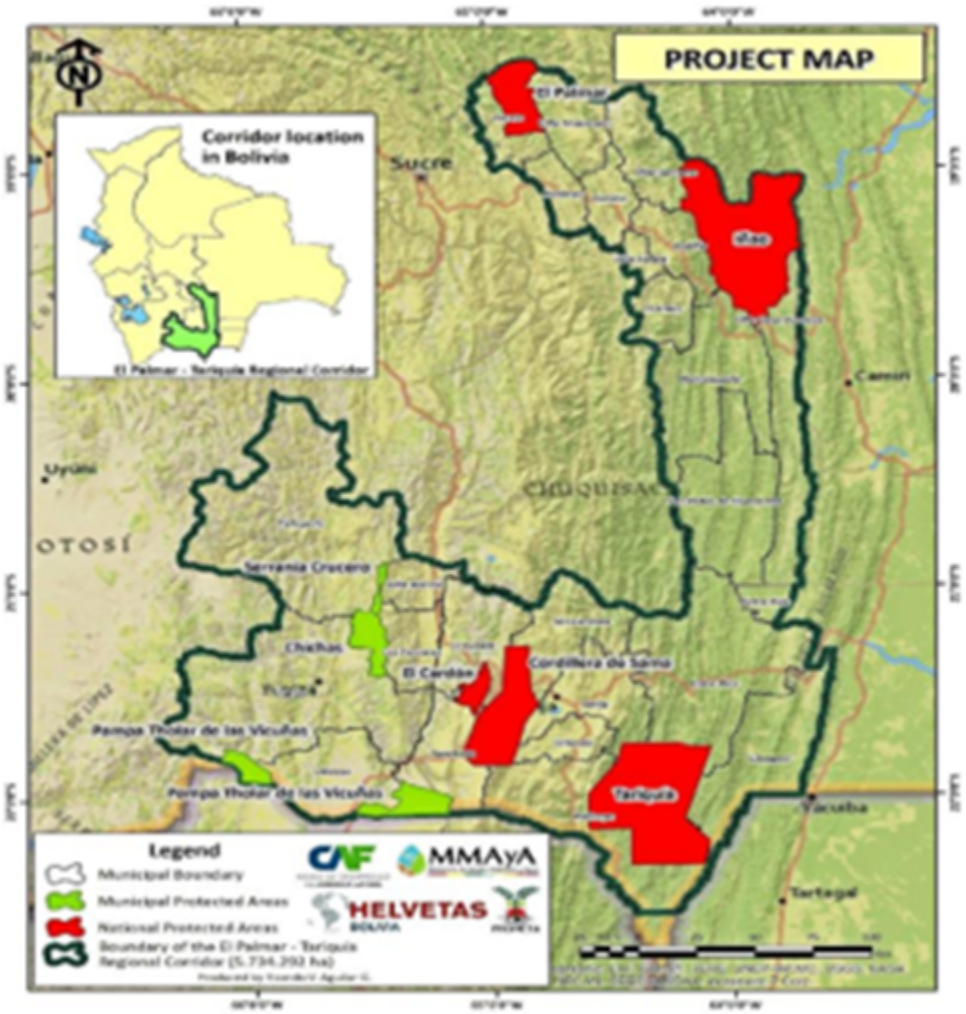
[2] https://www.iucn.org/commissions/commission-ecosystem-management/our-work/nature-based-solutions, last seen 05-06-2022

1b. Project Map and Coordinates

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

ISO-3166 alpha2	ISO-3166 alpha3	ISO-3166 numeric	fips	Country	Capital	Area in km?	Population	Continent
BO	BOL	068	BL	Bolivia	Sucre	1,098,580	11,353,142	SA

Protected Area	WDPA ID	Coordinates
Palmar	303886	
I?ao	342468	
Cordillera de Sama	32866	
El Card?n	555592676	
Tariqu?a	20041	
Crucero		-20.81724 -65.66087
Chichas		-21.44884 -65.72742
Pampa Tholar de las Vicu?as		-22.08791 -65.59919



2. Stakeholders

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

Indigenous Peoples and Local Communities Yes

Civil Society Organizations Yes

Private Sector Entities

If none of the above, please explain why:

Biodiversity and climate change management needs to strengthen alliances to develop actions that contribute to the monitoring, reporting and verification of the planned processes, under the Ecosystem-based Adaptation approach for the generation of conditions for adaptation and mitigation of climate change.

In the first phase of project construction, consultations, background and lessons learned have been taken into account, related to key issues, mainly in the area of intervention, both from civil society organizations working on the project's themes, as well as initiatives developed by international cooperation, such as:

? Legal and regulatory framework related to climate change, management of protected areas in Bolivia.
? Advances in the fulfillment of international commitments regarding climate change and biodiversity and global policies.
? National policy priorities related to development planning, environment, climate change, biodiversity and forests.
? Levels of local management from the Autonomous Territorial Entities (subnational governments).
? International Cooperation strategic projects.
? Lessons learned regarding the implementation of governance mechanisms with local communities, gender analysis, productive enterprises, etc.

At this stage, the following stakeholders have been formally approached:
Departmental Government of Tarija
Municipal Government of Tarija
Municipal Government of Sucre
Municipal Government of Potos?
Management Committee of the Cordillera de Sama Biological Reserve
PRO-RURAL
Foundation for the Development of the National System of Protected Areas - FUNDESNAP

The area of action involves a diversity of stakeholders, including local and indigenous communities, grassroots organizations, and productive associations, which participate directly and indirectly in the management of the territory and in many cases in its local governance. Apart from informal participation of leaders and other key individuals belonging to these groups, these agents maintain frequent one-on-one interaction with the key stakeholders listed above, so their interests and

expectations have been brought to this stage by those key actors. Their participation is to be formalized during the design stage.

The key stakeholders will be able to contribute to good governance, informed decision making and integrated management of the regional corridor, in order to guarantee transparency and accountability, knowledge management, based on respect for knowledge, uses and customs; gender approach and analysis, among other aspects. A full list of approachable stakeholders are presented in the table below, which considers both the national and subnational levels.

Throughout the process of preparation and implementation of the project, work will be coordinated with the following institutions and organizations:

	Stakeholder	Role in the project	Participation in Project Preparation	Means of participation
1	Ministry of Development Planning	GEF Political Focal Point	Provides compliance targets at the national level	Strategic participation
2	Ministry of Environment and Water	GEF Technical Focal Point	Provides sectoral targets	Executor strategic participation
3	SERNAP	AP governing body	SNAP operating entity Entidad operadora del SNAP	Technical consultations and validation of AP methodological processes
4	National Meteorology and Hydrology Service - SENAMHI	Strategic partner	Inputs for monitoring climate variability in southern de Bolivia	consulting and information development entity
5	Autonomous departmental and municipal governments of Tarija, Potos? and Chuquisaca	Strategic partner	Coordination and complementarity of actions.	Subnational entities with differentiated competencies in the project intervention area.
6	National and subnational Protected Areas Management Committee.	Strategic partner	Provides information and lessons learned for governance mechanisms	Support in the implementation of governance mechanisms.
7	Local communities of native people and peasants	Beneficiaries and direct actors	Beneficiary communities	Implementation of the measures developed by the project.

8	Non-Governmental Organizations	Strategic partner	Contribute information and capitalization of lessons learned and best practices.	Coordination of complementary activities.
9	Public and private universities	Strategic partner	Generators of scientific information.	Provide real evidence as a result of local and scientific research processes.
10	Private sector. SMEs.	Strategic partner	Generators of information for Natured based solutions implementation	Participate in public-private strategic alliances that promote the implementation of mitigation measures and, simultaneously, the generation of employment, technological innovation and the strengthening of local production chains

In addition, provide indicative information on how stakeholders, including civil society and indigenous peoples, will be engaged in the project preparation, and their respective roles and means of engagement

The Project Steering Committee will ensure that the project maintains a subsidiary and incremental role with respect to existing and new institutional arrangements in each protected area, in the Tariquia - El Palmar Regional Corridor as a whole, and in the SNAP. To this end, the Committee will participate in planning coordination mechanisms defined at the national, subnational or local level to facilitate new co-financing and ensure that the project meets its objectives with maximum uptake and sustainability. All stakeholders will have the opportunity to review and comment on proposed project activities and provide specific inputs to the project process. Stakeholder involvement may include the provision of co-funding, participation of technical staff in workshops, training and tool development, facilitation of local project events and processes, as well as sources of data and technical expertise relevant to the technical components of the project, and knowledge management through institutionalization of project results and lessons learned to enable scaling up, replication and sustainability. At the regional level, stakeholder engagement will focus on facilitating regional project processes in the project countries and identifying opportunities for resource optimization, joint investments for project implementation, coordination and collaboration in the production of technical outputs.

3. Gender Equality and Women's Empowerment

Briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis).

The project adopts a combined approach in the struggle for gender equality and social equity. This approach is expressed in:

- Gender discrimination is an integral part of social inequity. Where large social inequalities exist, these are often borne to a greater extent by women.
- In order to understand gender relations, it is necessary to situate oneself in the social context and to specify power relations, as well as to establish the way in which different cultural beliefs and practices impact on women and men, reinforcing inequalities, according to class, race, ethnicity, religion, age, among others.

The use of the word "equality" means equal opportunities and equal rights, and as such has gained widespread use. It is recognized that "equality" does not necessarily imply treating women and men in exactly the same way. We speak of social equity, because it implies fairness or social justice aimed at correcting existing social disadvantages in a proactive manner.

Criteria to be adopted with respect to gender equality

Gender is a socially constructed definition of roles, behaviors and power relations between women and men, which should not be confused with sex (the biological characteristics of women and men).
Gender equality is based on the recognition that women and men have the same rights, and should also have the same opportunities and responsibilities to perform actions and strengthen their potential. This implies a change in power relations within households, workplaces, communities and society in general.

Gender equality does not always mean striving for equal numbers of men and women in all activities, or treating men and women in the same way. Men and women have different needs and priorities, face different constraints, have different aspirations and contribute to development in different ways. It is important to recognize, respect and work with both female and male perceptions. Gender relations are linked to power based on differences, such as ethnicity, age and education, and need to be addressed in a holistic and context-specific manner.

Criteria for social equity in the project

Social equity encompasses the defense of human rights and the fight against social injustice; it seeks to reduce or eliminate inequalities that prevent poor and disadvantaged individuals and groups from playing an active role in their personal, community and social development.
Inequalities can be expressed in terms of health, education and skills; in social practices that discriminate against particular ethnic groups, races or religions, women or people of different sexual orientation (including those of "third gender"); and in forms of community organization and political systems that are dominated by elites and leave little or no room for the voice of others.

Social equity seeks to support socially marginalized people, to promote secure access to natural, financial and other resources. Social equity seeks to promote workforce diversity, uphold human rights and foster intercultural communication.

Regulatory framework for gender in Bolivia

Bolivia's current legal framework for the empowerment of women and against all forms of discrimination, including indigenous citizens, is based on the following laws:

- Law No. 045 of October 2010, on the Fight against Racism and all Forms of Discrimination. It establishes mechanisms and procedures for the prevention and punishment of acts of racism and discrimination within the framework of the Constitution and human rights worldwide.
- Law No. 243 of May 2012, Against Harassment and Political Violence against Women. This law covers both women candidates and elected and appointed authorities, who are victims of harassment and violence by reason of their position.
- Law No. 348 of March 2013, Comprehensive Law to Guarantee Women a Life Free of Violence. Condemns violence against women, including damage to their patrimony, economy, source of work or another sphere.

In 2019, the "Ana Mar?a Romero" Women's Care and Depatriarchalization Service was created by Supreme Decree No. 3774 of January 16, 2019. The Service is a decentralized public institution in charge of monitoring, following up and evaluating compliance with public policies in favor of the effective exercise of women's rights, and promoting the eradication of all types of violence and forms of discrimination against women.

Project actions on gender equality

The most difficult challenges with gender inequality are linked in most cases to the marginalization or undervaluation of women's capacity for general knowledge and daily life compared to men. Mainly in rural areas, women's participation and intervention is reduced and limited, not only as representatives of the family in the grassroots organization, but also in feeling comfortable and free to express their opinion and position on any issue in the spaces of debate and consensus in their communities, and that this opinion is taken into account.

Within this framework, work will be based on a gender analysis in the project cycle that incorporates: identification of roles, definition of opportunities and differentiated needs (women-men) and participation in decision-making spaces. The actions defined will be reflected in the project's operational plans and in the monitoring and evaluation plan, to measure progress in mainstreaming the gender equality approach and in the processes that promote the transformation of structures of inequality, based on the indicators.

The concrete activities that will incorporate a gender, intercultural, intergenerational and inclusiveness analysis and approach, to be carried out by the project, considering the proposed components, are identified below:

Component 2

Output 2.1.1 Local conditions and capacities have been generated, for the development, strengthening and scaling up of sustainable and resilient community production systems and practices, under the ecological corridor and connectivity approach, which contribute to climate change adaptation and mitigation with gender perspective.

Output 2.1.4. Local producers are strengthened to adopt sustainable and resilient productive practices, with a gender focus to improve productivity.

Output 2.1.5 Strengthened local producers adopt sustainable and resilient productive practices, with gender perspective.

Component 3

Output 3.1.2 Map of actors and identification of roles in the management of the regional corridor, protected areas and areas of influence, with a gender and climate change focus and analysis is elaborated.

Output 3.2.1 Trained local actors, with gender equality, exercise leadership in the implementation of climate change adaptation and mitigation measures.

Component 4

Output 4.1.2 Document of systematized information on lessons learned and knowledge management in the development of the project components, with gender and equal opportunities analysis, socialized with stakeholders and disseminated through digital media.

Output 4.2.1 Project monitoring and evaluation plan that allows for efficient and effective implementation of the components with a gender approach and analysis, validated and approved.

Below are two tables with information on the population ratio in the intervention municipalities:

Population disaggregated by municipalities that make up the El Palmar - Tariqu?a Regional Corridor

NRO	DEPARTAMENTO	PROVINCIA	MUNICIPIO	SUPERFICIE (HA)	Población Total	% Mujeres	Pueblo originar
1	Potosi	Modesto Omiste	Villazon	246.903	44.906	52%	Quechua: ayl Talina, Estar Fanari, Sinc
2	Potosi	Sur Chichas	Tupiza	620.416	44.814	52%	
3	Potosi	Nor Chichas	Cotagaita	643.486	31.801	51%	
4	Chuquisaca	Sur Cinti	Las Carreras	99.458	4.088	48%	
5	Chuquisaca	Sur Cinti	Villa Abecia	70.731	3.514	49%	
6	Chuquisaca	Hernando Siles	San Pablo de Huacareta	296.188	8.349	47%	
7	Chuquisaca	Hernando Siles	Monteagudo	338.648	24.303	49%	Gua
8	Chuquisaca	Tomina	El Villar	89.550	4.465	48%	Quec
9	Chuquisaca	Tomina	Villa Alcala	31.277	4.902	49%	
10	Chuquisaca	Tomina	Tomina	82.692	8.494	49%	
11	Chuquisaca	Zudañez	Zudanez	70.106	11.362	49%	Quec
12	Chuquisaca	Zudañez	Presto	132.926	12.385	49%	Quech
13	Chuquisaca	Zudañez	Villa Mojocoya	124.732	8.068	51%	
14	Chuquisaca	Luis Calvo	Villa Vaca Guzman	379.282	9.720	47%	Gua
15	Chuquisaca	Tomina	Padilla	161.966	10.383	49%	
16	Chuquisaca	Belisario Boeto	Villa Serrano	171.314	11.161	49%	
17	Tarija	Aviléz	Uriondo	80.156	14.781	50%	
18	Tarija	Aviléz	Yunchará	183.404	5.490	50%	
19	Tarija	Arce	Padcaya	443.113	18.681	49%	
20	Tarija	Cercado	Tarija	213.210	205.375	52%	
21	Tarija	Méndez	San Lorenzo	196.939	23.863	51%	
22	Tarija	Méndez	El Puente	205.668	11.354	50%	
23	Tarija	Burnet O'Connor	Entre Rios	539.492	21.991	47%	Gua
24	Tarija	Gran Chaco	Caraparí	312.637	15.366	42%	Gua
	El "polígono de intervención"			5.734.294	559.616	52%	

This table shows the population of the 24 municipalities covered by the regional corridor in the area of intervention proposed in the project. It shows that 52% of the population is female. Eight municipalities clearly show the existence and recognition of indigenous peoples in their territory.

Disaggregated population in the protected areas that make up the El Palmar - Tariqu?a Regional the El Palmar - Tariqu?a Regional Corridor

Area Protegida	Departamento	Provincia	Municipio	Superficie del área protegida	Comunidad	Pueblo originario representado en el área prrtegida	M	H	Total
Reserva Biológica Cordillera de Sama	Tarija	Cercado	Cercado	108.500	BELLA VISTA	Comunidades campesinas	344	320	664
					PINOS NORTE		175	198	373
					PINOS SUR		185	185	370
					GUERRA HUAYCO		741	755	1.496
					SAN ANDRES		796	797	1.593
					SAN PEDRO DE SOLA		149	160	309
					LAZARETO		389	406	795
					CALDERILLAS		81	75	156
					CALDERILLA CHICA		18	27	45
		Arce	Padcaya		CAMACHO		344	294	638
					LA HUERTA		448	409	857
		Avilés	Uriondo		ANTIGAL		112	118	230
					MISCAS CALDERA		267	259	526
		Avilés	Yunchará		COPACABANA		148	136	284
					MUÑAYOJ		70	68	138
					PASAJES		37	39	76
					PUJZARA		128	98	226
					VICUÑAYOJ		34	24	58
					VIZCARRA		80	63	143
					ARENALES		76	64	140
					CHORCOYA AVILEZ		144	139	283
		Méndez	San Lorenzo		ERQUIS CEIBAL		79	79	158
					TUCUMILLAS		105	91	196
					CHOROMA		48	50	98
					COCHAS		16	20	36
					FALDA LA QUEÑUA		49	41	90
					MARQUIRI		53	42	95
					TRES MORROS		31	29	60
					COLORADOS NORTE		86	83	169
					TRANCAS		106	78	184
					RINCON DE LA VITORIA		117	99	216
Parque Nacional y Área Natural de Manejo Integrado Serranía del Iñao	Chuquisaca	Luis Calvo	Villa Vaca Guzman	263.090	Ity, Nueva Esperanza, Bella Vista Aguayrenda, Overa Alta, Overa Ñancahuazú, Iripití y Las Frías; Camotal, Tapera, Ticucha, Entierrillos, Cumandayti, Montegrande e Itapochi; Taperillas, Ch'uya yacu y Timboy pampa	Comunidades campesinas, Pueblo Guaraní, Interculturales	2.011	2.080	4.091
		Hernando Siles	Monteagudo		Cumarindo, Azero Norte, Aguadillas, Los Pinos, Alto Divisadero y El Zapallar.		703	785	1.488
		Tomina	Padilla		San Isidro del Valle, Pincal, Llantoj, Chaural, Corey e Ibicuiti; Naranjal, Las casas, Pedernal, Pilipilito y Khaska orqo		1.079	1.131	2.210
		Belisario Sal	Villa Serran		Potreros, Pozos, Temporal grande, Alto Seco, Pampas del Tigre, Qhoyo Orqo y Cieneguillas		617	664	1.281

Reserva Nacional de Flora y Fauna Tariquía	**Tarija**	**Arce**	Padcaya	246.870	Acherales	Comunidades campesinas, Pueblo Guaraní, Quechua e Interculturales	48	106	154
					San José		119	96	215
					Puesto Rueda		96	115	211
					Pampa Grande		205	244	449
					San Pedro		56	129	185
					Chillahuatas		52	57	109
					Volcán Blanco		100	178	278
					Motoví		125	129	254
					Cambari				
					Acheralitos				
					La planchada				
					El Cajón				
		O'connor	Entre Ríos		Los Campo				
					Lagunillas				
					La misión				
					Chiquiaca Norte, Centro y Sur		362	412	774
					Chiquiaca Centro				
					Chiquiaca Sud				
					Loma Alta		104	126	230
					Chajllas				
					Santa Clara		88	95	183
					Salinas		138	135	273
					La veta		80	67	147
		Gran Chaco	Gran Chaco		Pampa Redonda		108	110	218
		Cercado	Cercado		Tipas		9	4	13
Área Natural de Manejo Integrado El Palmar	**Chuquisaca**	**Zudañez**	Presto	59.484	Armasi	PuebloYampara (Quechua)	240	280	520
					Chajra Mayu		83	120	203
					El Palmar		165	186	351
					Joya Charal		139	133	272
					Loman		175	182	357
					Molani		296	263	559
					Rodeo El Palmar		408	430	838
					Torco Torco		106	138	244
					Trancas Horno		116	124	240
Santuario de Vida Silvestre y Área Natural de Manejo Integrado Cordillera	Potosí	Nor Chichas	Cotagaita	8.052	La Tranca		39	39	78
					Villa Concepción	Ayllu Fanari : Quechua	181	197	378
Santuario de Vida Silvestre y Área Natural de Manejo Integrado Cordillera de los Chichas - Mocharí	Potosí	Sud Chichas	Tupiza	36.362	PEÑA AMARILLA	Comunidades campesinas	145	141	286
					MOCHARA MAYO		41	34	75
					PAPA CHACRA		54	56	110
					MOCHARA B EL TAMBO		99	98	197
					SALA HUAYCO		67	55	122
					HUERTA HUAYCO		62	62	124
Area Natural de Manejo Integrado Pampa Tholar de las Vicuñas	Potosí	Modesto Omiste	Villazón	58.480	Sarcari	Ayllu Sincima: Quechuas	57	38	95
					Homos		94	95	189
					Huanacuni		25	21	46
					Salitre		71	73	144
					San Antonio		19	12	31
					santa rosa de los cangrejos				-
					Tinkuya		143	127	270
					Yanalpa		144	118	262
					Larkas		30	23	53
TOTALES				**780.838**			**14.555**	**14.954**	**29.509**
							49,32%	**50,68%**	

This table shows the population and surface area of the proposed protected areas in the El Palmar - Tariquia corridor. This table shows the large size of the proposed protected areas, although it represents very little in terms of population in relation to the data in Table 1. The percentage of women is 51%, consistent with the 52% female population shown in Table 1.

For more details see Document Gender Equality Approach.

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;

improving women's participation and decision-making; and/or

generating socio-economic benefits or services for women. Yes

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

Yes

4. Private sector engagement

Will there be private sector engagement in the project?

Yes

Please briefly explain the rationale behind your answer.

The project's actions will promote the participation of the private sector, identified as the local grassroots community organizations that are beneficiaries of the project; local producer organizations, associated with the economic activities developed in the areas of the regional corridor, with which actions will be implemented to strengthen their sustainable productive capacity under the Nature-based Solutions model, through capacity building and value chains. The non-governmental organizations (NGOs) that operate in the corridor area are strategic entities since they have key information that will contribute to the project, experience and lessons learned regarding knowledge management, analysis and gender equality, so their contribution to the facilitation of local processes will help in achieving the project's objectives. The private business sector will play an important role in the development of value and supply chains to strengthen local sustainable production processes as market drivers under criteria of sustainability, equity and resilience.

To strengthen and mobilize the role of the private sector, a multilevel and multisectoral interinstitutional platform will be created to strengthen the integrated management of the regional corridor, as an associative network for scalable and replicable knowledge management, allowing the participation of private sector entities such as NGOs, academia, local organized civil society, producer associations and other local groups, for continuous interaction and joint and co-responsible construction of measures for climate change adaptation and mitigation; making it feasible to achieve the Theory of Change proposed in the project.

5. Risks to Achieving Project Objectives

Indicate risks, including climate change, potential social and environmental risks that might prevent the Project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the Project design (table format acceptable)

Potential risks	Likelihood	Impact	Mitigation measures provided
Conflicts and socio-political instability in the country hinder and delay the implementation of local policies, programs and projects	**MEDIUM**	**MEDIUM**	The proposal to work under a multilevel and multi-stakeholder approach in a cross-cutting manner in all project components will reduce the incidence of national social conflicts at the local level, particularly in the project's actions. The project (component 2 and 3) will activate governance, relationship, coordination, trust-building and local ownership mechanisms that will allow for smooth and efficient execution. Monitoring and evaluation (component 4) will reinforce the conditions to mitigate external risks, the continuous systematization of lessons learned and knowledge management will be instruments that contribute to the construction of corrective measures and strategic and timely decision making in the face of emerging risks.
Reduced local technical capacity for integrated territorial management, both in the autonomous territorial entities (ETAs) and local organizations, renders project efforts insufficient	**MEDIUM**	**MEDIUM**	Knowledge management with local multilevel and multi-stakeholder actors will be developed as a continuous process in the four project components, which will generate capacities for adaptation, mitigation and local resilience. Knowledge and capacities on climate change, governance, territorial planning and regional corridor management will be strengthened.

Conflicts between local beneficiaries arising from access, use and exploitation of natural resources, specifically water and forests.	**MEDIUM**	**LOW**	With the strengthening of knowledge and capacities in governance mechanisms, sustainable practices and continuous monitoring (components 2, 3 and 4), conditions of agreement will be established to reduce the degree of conflicts, making adaptation measures also become instruments for improving local relations and organization in the use and management of these natural resources.
The impacts of climate change and extreme weather conditions during the project implementation reach a tipping point in which the ecosystems represented in the corridor are not able to maintain environmental functions, livelihoods and the conditions of the local population.	**LOW**	**MEDIUM**	The proposal to characterize and consolidate ecological corridors with greater connectivity of landscape units that fulfill ecosystemic and environmental functions will generate greater adaptability and resilience of biodiversity to climate change. The construction and implementation of adaptation and mitigation measures through the strengthening of governance mechanisms (components 1,2,3) has as its main challenge the consolidation of an integrated management model that reinforces ecosystem-based adaptation. The implementation of a Nature Based Solutions approach will make it possible to generate local conditions and capacities with a gender focus to strengthen actions for the protection, restoration, maintenance and sustainable management of the corridor's ecosystems, in order to safeguard biodiversity and provide mitigation benefits and increase their resilience and capacity to address local socioeconomic challenges.
Gender inequality in decision-making, active participation in productivity and opportunities to generate knowledge.	**MEDIUM**	**LOW**	The project will work under a gender equality and social inclusion approach, in a cross-cutting manner in all its components, developing that will not only ensure the full participation of women in the governance mechanisms, but will translate into ownership and empowerment with respect to decision making, sustainable productive practices, knowledge management and with special emphasis on their role in the conditions to achieve adaptation, mitigation and eco-social resilience. The project will contribute to compliance with the criteria established in the GEF's gender, equity and social inclusion safeguards.

The COVID-19 pandemic has had effects on health, local economy, and educational level in the project area, with the most vulnerable population disproportionately affected by these. The project actions are intended to contribute to reactivate the local economy through sustainable practices that foster a green recovery and increased socio-ecological resilience. Both the participation and governance mechanisms that the project applies during its design phase, and during its implementation, provde opportunities to facilitate the implementation of local measures to face the pandemic and recovery in a more sustainable, nature-based way.

To mitigate the risk of contagion and spread of COVID-19, biosecurity measures will be implemented in project actions that could pose a risk. These measures will contribute to the establishment of means for the provision of food, health care, and production inputs to participants, as well as means for virtual participation when physical meetings are not feasible.

As most social activities have been hampered or stopped by the pandemic, the project provides an opportunity for a ?reset? of social relations. It is in this scenario that the multi-stakeholder dialogues and platforms are expected to provide significant improvements in the socio-economic dynamics of the territory.

The project provides the framework for a more sustainable way of decision-making to take place in the territory, starting with but not limited to matters related to natural resources. Institutional coordination triggered by the project may well extend to other areas such as public health and economic planning, in which vulnerable populations will equally benefit. The tools developed by the project, providing distributed access to data and information related to ecological connectivity and land-use planning, will serve as template for decisions in other fields where the same local actors participate. In this sense, it is important to consider that subnational governments (in this case, regional and municipal governments participating in the project) see their territorial deployment strengthened due to the reduction of air travel, which provides opportunities for stronger local governance.

The project is posed to be seen as an important source of knowledge and innovation during the recovery, as it promotes sustainable land uses that limit deforestation and human-wildlife contact, promotes the mainstreaming of biodiversity-related concerns across sectors, increases the resilience in local supply chains and economic systems, secures supply chains using nature-based approaches and water, food, energy and ecosystems, i.e. nexus thinking, enhances food security considering biodiversity and land use approaches, and promotes local, bio-based business development which improve socio-ecological resilience

6. Coordination

Outline the institutional structure of the project including monitoring and evaluation coordination at the project level. Describe possible coordination with other relevant GEF-financed projects and other initiatives.

The Ministry of Environment and Water (MMAyA) will be responsible at the highest level for ensuring project implementation and management, including continuous monitoring of project interventions, achievement of project results and effective use of GEF resources.

CAF as the implementing agency will ensure that its fiduciary standards are applied throughout project administration, that the project implementation is developed within its ESS standards, and that external evaluation is conducted.

A Project Steering Committee (PSC) will be created to supervise and support the smooth development of the project from the national level. It will consider gender considerations and other aspects of representation. Its members will be at least:

? A representative of MMAYA-VMA, who chairs the Committee.
? A representative of SERNAP
? A representative of CAF
? Territorial representatives from the departments of Tarija, Chuquisaca and Potos? (at least one from each department)
? Representatives of the beneficiaries and other stakeholders, to be established during project design, in uneven number

Of the members of the PSC, at least two must be women. The MMAYA convenes and chairs the meetings, which will take place at least twice a year, to review progress reports, approve work plans and make recommendations. The PSC procedures will be established in a Project Operations Manual, which will be approved at the first PSC meeting; this committee, or its sub-committees if established, will meet at least on a quarterly basis during the life of the project, and as many times as needed.

The institutional implementation structure of the project has three levels of action. A supervisory and monitoring level (Project Steering Committee - PSC), and an executing unit (PEU) composed of a Project Coordinator, technical staff and external consulting services (legal entities or individuals).

The PSC will ensure that the project maintains a subsidiary and incremental role with respect to existing and new institutional arrangements in protected areas and in the El Palmar - Tariquia regional corridor. To this end, the PSC will participate in planning coordination mechanisms defined at the national, subnational or local level to facilitate new co-financing and ensure that the project meets its objectives with maximum uptake and sustainability. At least, the project will coordinate its activities with the following GEF projects:

Project	ID	Focal Area/s	Type	Agency	GEF Grant	Cofinancing
Seventh Operational Phase of the GEF Small Grants Programme in Bolivia	10751	BD	Medium-size Project	UNDP	1,959,132	3,700,000
Programme to sustainably manage and restore land and biodiversity in the Guadalquivir Basin	10627	LD	Medium-size Project	FAO	1,555,012	21,202,414
Strengthening the integral and sustainable management of biodiversity and forests by indigenous peoples and local communities in fragile ecosystems of the dry forests of the Bolivia Chaco	10393	BD, LD	Full-size Project	FAO	3,502,968	22,571,046

Amazon sustainable landscape approach in the Plurinational System of Protected Areas and Strategic Ecosystems of Bolivia	10295	BD	Full-size Project	CAF	10,056,189	38,371,258

All activities related to financial management will follow the Financial Procedures Agreement (inclusive of all annexes) between the Development Bank of Latin America (CAF) and the International Bank for Reconstruction and Development (IBRD) as Trustee of the Global Environmental Facility Trust Fund (GEFTF), signed on September 28th, 2015. This agreement contains provisions for project operations to meet and exceed all internationally accepted financial and fiduciary management standards, to be evidenced in annual, final independent audits, and other periodic audits of the project accounts, as may be necessary. Relevant staff involved in the day-to-day management of project resources will be trained in financial management policies consistent with the provisions of the above-mentioned agreement, during and after the Project?s Inception.

All activities related to procurement will follow the Procurement Policies of CAF as defined in the Procurement and Contracting of Goods, Services and Works Manual, published on March 17th, 2015 by the Directorate of Physical Infrastructure, Logistics, and Administration, Version MN/DIOFLA 038 of February 2016. These policies contain provisions for operations to meet and exceed all internationally accepted financial and fiduciary management standards, to be evidenced in annual and final independent audits of the project?s procurement and disbursement processes. PMU and Executing Agency Staff that are involved in the day-to-day management of project resources will be trained in CAF?s procurement policies as described above and in procurement planning during and after the Project?s Inception.

Finally, there will be space for accountability towards the management committees of protected areas, the beneficiary population, and representatives of the private sector organizations involved in the project's activities, in which the PSC will render accounts and report on the actions developed by the project, in order to receive feedback to be taken into account in the planning and execution of the project. It will have a periodicity of at least one meeting per year.

7. Consistency with National Priorities

Is the Project consistent with the National Strategies and plans or reports and assesments under relevant conventions?

Yes

If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc

The Plurinational State of Bolivia has approved specific policies and statutes to guide and improve the management of biodiversity and protected areas. All sites in the National System of Protected Areas have developed management plans, but not all are able to carry out all the programs and activities planned due to budgetary restrictions and governance problems.

Governance mechanisms to ensure participation in the management of Bolivia's protected areas need to be strengthened and improved. In a broader sense, and despite clear planning policies at all levels and

sectors, coordination still needs to be improved, especially with and within sub-national levels such as the proposed one.
Consistency with national priorities allows us to identify mainly the National Protected Areas Service-SERNAP, which in the framework of its 2012 Master Plan, establishes a strategic framework and general and specific objectives within a ten-year period that has proven to be compatible with subnational protected areas.

In this sense, SERNAP seeks to strengthen the mechanisms, capacities, management and sustainable financing of national and subnational protected areas and strategic ecosystems, in this case those represented within the Tucum?n-Bolivian Forest.

Within the framework of international commitments, the following are the main ones:

o National Biodiversity Communications and AICHI Goal 5. The project contributes to the adoption of a landscape approach that provides enhanced opportunities for the conservation of wide-ranging and seasonal migratory species, which are relevant evolutionary strategies in the diverse,variable ecosystems addressed by the project. In concrete terms, Bolivia focuses its biodiversity strategy on extending the benefits of protected areas to the landscapes around them, which is furthered by the project approach.
o Contribution to SDGs 5, 13 and 15. The Project contributes to the conservation of vulnerable ecosystems and nature-dependent livelihoods, in which women have a disproportionate participation, specially in terms of vulnerability. It complementarily provides a significant enhancement of carbon sinks in ecosystems.

Specifically, the project is relevant in terms of its contribution to the fulfillment of the PDES strategic guidelines:

- Within the framework of the Economic and Social Development Plan (PDES) Strategic Axis 8 on "Sustainable and balanced environment in harmony with Mother Earth" and the policy guidelines that are defined, the project "Environmental routes to incorporate communities in good conservation practices and nature-based businesses that promote human development in ecosystems and areas of high environmental vulnerability (droughts, deforestation, The project is linked through its guidelines on sustainable and balanced environment in harmony with Mother Earth, which promote the strengthening and comprehensive and sustainable management of forests as a strategic resource, allowing the promotion and development of actions for mitigation, adaptation and monitoring of climate change, with effective response measures to its impacts and balance with Mother Earth.

- In this sense, the balance of life systems that translate into ecological corridors or environmental routes, promotes healthy and protected environments in their connection with protected areas as part of natural heritages of vital importance for the country, since they allow strengthening the conservation, protection and sustainable use of biodiversity, through the establishment of management instruments that integrate the maintenance of environmental functions and life systems, focused on emblematic species and key landscapes.

- It is important to reiterate that the actions proposed in the project are in line with the PDES guidelines aimed at: 1) promote living systems with a healthy, protected and balanced environment in

harmony with Mother Earth, 2) promote the system of protected areas..., as part of the country's natural heritage.

- The PDES and the project agree on the need to strengthen the conservation, protection, use and sustainable use of biodiversity, with integrated management measures that generate effective management.

From the perspective of the country's climate agenda, the project considers the integration of two fundamental processes:

Contribute with compliance results in national goals, within the framework of the Joint Climate Adaptation and Mitigation Mechanism policy, which allows us to implement actions in accordance with the ecological and productive vocations of life zones, climate change trends, and the presence of indigenous peoples and populations and their complementarity through integral development in harmony and balance with Mother Earth.

Contribute with results of compliance with international goals in the framework of the Nationally Determined Contribution (NDC) of the Plurinational State of Bolivia, which emphasizes the role of protected areas and contemplates actions for the adequate management of protected areas and forest areas, with conservation priority, aspects that the project addresses and strengthens in its implementation, The NDCs related to forests aim at sustainable management, rational use of forest resources and the strengthening of capacities and means to increase the resilience of communities to climate change, which will reduce anthropogenic pressure on forests, with results in both adaptation and mitigation.

8. Knowledge Management

Outline the knowledge management approach for the Project, including, if any, plans for the Project to learn from other relevant Projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

1) how existing lessons informed the project concept and plan

The project addresses problems that are, at the same time, widespread and difficult to perceive, prime among them ecological connectivity. As such, the project poses great importance in the sharing of knowledge and the provision of dialogue opportunities between stakeholders that, although living in the same territory and sharing problematics associated with it, have had little exchange of ideas between them and frequently even do not know of each other?s existence. This lack of integration has been put forward by different actors, especially the more vulnerable ones, for years, and it is with this project that they will see this need fulfilled.

Stakeholders have agreed on the importance of involving different actors, and the importance of:
- A coordinated work to contribute to the actions of collaboration in the processes in a significant and synergistic way.
- Manage available resources with viable, consistent and sustainable proposals to contribute to the integral management of the corridor, under a close-to-nature approach.

- The integration of common factors at the landscape level that influence local development.

2) plans to learn from ongoing relevant projects and initiatives

Output 4.1.1 provides a formal platform for knowledge sharing and exchange that will extend beyond the participating actors, giving visibility to the efforts being conducted in the project and providing the space to formalize interactions with like-minded initiatives. In particular, CAF will promote that an active exchange of knowledge and experiences occurs between GEF projects implemented by the three active agencies in the field and country (see Coordination above).

3) proposed tools and methods for knowledge exchange, learning and collaboration, and 4) proposed knowledge outputs to be produced and shared with stakeholders

The project, through the four components, proposes three levels for knowledge management (knowledge outputs are also identified):

1. The proposal will combine the local knowledge of the populations with the use of new multimedia technologies (Output 1.2.1). An information system with thematic maps and information layers for the prioritization of landscape units and hydrological, biomass and biodiversity management in the regional corridor, inclusive of a system for measuring and monitoring critical variables will be developed and shared, so that the processes of capacity building is strengthened and socially relevant, and the territories achieve the appropriation of knowledge through dialogue, participation and social concertation and in this way they can externalize and share the experiences of the project, based on the governance mechanisms that have been consolidated.

Peer learning among the participating communities to replicate the knowledge and experience among the communities directly involved in the project (600 families) and the communities where there is no direct intervention. This work will focus on the exchange of productive practices, but will also work on sharing experiences on community land use regulations that include the protection of water sources, and important spaces for connectivity such as riverbanks, streams, viewpoints, and others.

2. The project will contribute to the relevant bases of regional territorial planning at the level of ecological corridor and connectivity approach as the unit to implement measures for adaptation and mitigation to climate change, in improving sustainable and resilient local productivity, based on livelihoods, and strengthening women's participation as a priority.

Peer learning among the municipalities, protected areas, and other actors participating in the project will be sustained through permanent platforms (Output 4.1.1) to replicate the experiences, but also the applied normative instruments and their operability and success.

3. The territory of the regional corridor El Palmar - Tariqu?a, has a wealth of flora and fauna representative of the country, with a diversity of cultures among the population living in the territory, so the identification and recovery of local knowledge and good practices (Output 4.1.2) will allow

capacity building, good governance and informed decision making, planning at landscape and watershed scale at different territorial levels, as a substantial part of knowledge management.

5) plans for strategic communications

A strategic communication plan will be prepared for the carrying out of Output 4.1.2. Communication actions will be developed with project participants to strengthen the inter-institutional relationship with the actors involved, based on the following actions:

1. Interact around the same concepts, messages and communication guidelines.
2. Identify strategic allies, spaces and audiences to establish relationships and timely communication.
3. Develop media tools and products for communication and relationship building.
4. Definition of a mechanism for the active participation of stakeholders in the stages of the project, according to the theme and their role in the different stages of the project.

9. 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
Medium/Moderate			

Measures to address identified risks and impacts

Provide preliminary information on the types and levels of risk classifications/ratings of any identified environmental and social risks and potential impacts associated with the project (considering the GEF ESS Minimum Standards) and describe measures to address these risks during the project design.

The previous categorization was given by the spatial dimension of the project, as well as by the geographical extent, the nature of the land and the conservation activities directly linked to the consolidation of ecological connectivity that will be implemented in connection with the protected

areas linked to the project. CAF believes that the explorations will be aimed at establishing businesses based on nature to improve environmental and climatic quality, to have a positive impact on the physical, biological and social environment.

However, the CAF risk analysis team recommends the activation of safeguard CAF S06 ? Ethnic groups and cultural diversity and safeguard CAF S03 ? Preservation of Biodiversity. CAF will make every effort to ensure that the indigenous peoples approach integrates Free Prior Informed Consent (FPIC) mechanisms, the basic principles of self-determination, and respect for indigenous knowledge, cultures, and traditional practices that contribute to sustainable and equitable development, as well as linking directly with protected areas and natural habitats.

During the PPG stage, it will be relevant to explore ways, through formal FPIC processes, to take into account the different worldviews of indigenous peoples and rural communities, among other actors in the territory, to maximize the local effectiveness of activities. of the project, including the delivery of benefits to these actors.

The project aims to reduce the vulnerability of both ecosystems and the local population to the expected impacts of climate change at this threshold and contributes to building adaptive capacities. The measures supported by the project are based on gradual interventions and the development of good governance with local stakeholders to improve conditions and understanding of climate phenomena in order to incorporate climate change management into local development planning.

The specific analysis of climate risk offers two main recommendations for the project in general. First, it provides guidance on priority sectors for intervention, in terms of climate and vulnerable populations such as farmers, indigenous peoples, and women.
In this way, the project will ensure that resilience is optimized. Similarly, the project must ensure that each and every one of its procedures, structures, activities and results are integrated into a culture of prevention and risk reduction, and that it supports its beneficiaries and stakeholders in building broad and deep social capacities, both public and private, for disaster response at all levels from a prospective and non-reactive vision.

Supporting Documents

Upload available ESS supporting documents.

Title	Submitted
Annex D-ESSCC-Preliminar Risk Assessment-Bolivia Routes	

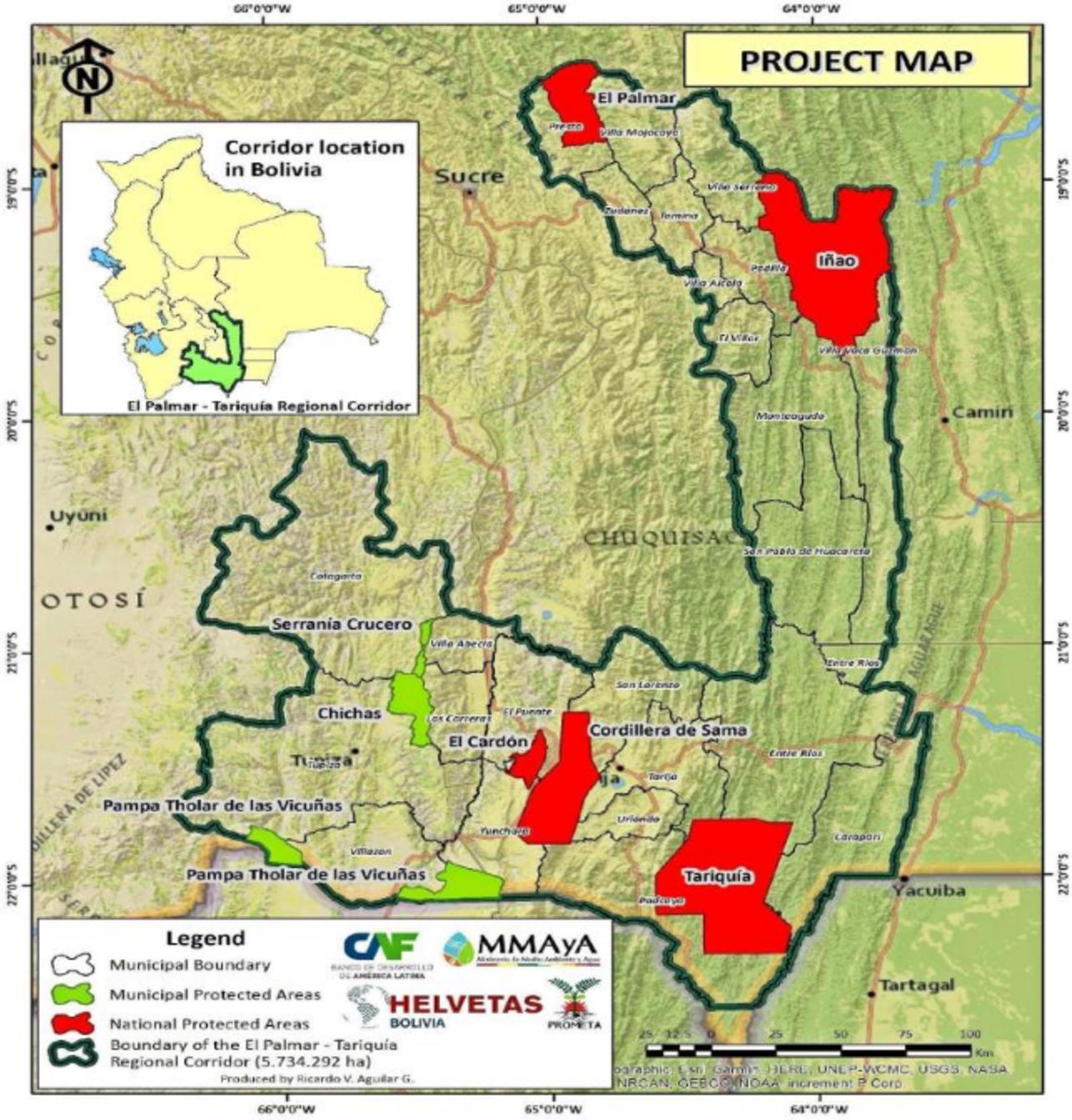
Part III: Approval/Endorsement By GEF Operational Focal Point(S) And GEF Agency(ies)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the Operational Focal Point endorsement letter with this template).

Name	Position	Ministry	Date
Carlos David Guachalla Terrazas	GEF Operational Focal Point	Ministry of Planning and Coordination	5/11/2022

ANNEX A: Project Map and Geographic Coordinates

Please provide geo-referenced information and map where the project intervention takes place



ISO-3166 alpha2	ISO-3166 alpha3	ISO-3166 numeric	fips	Country	Capital	Area in km?	Population	Continent

BO	BOL	068	BL	Bolivia	Sucre	1,098,580	11,353,142	SA

Protected Area	WDPA ID	Coordinates
Palmar	303886	
I?ao	342468	
Cordillera de Sama	32866	
El Card?n	555592676	
Tariqu?a	20041	
Crucero		-20.81724 -65.66087
Chichas		-21.44884 -65.72742
Pampa Tholar de las Vicu?as		-22.08791 -65.59919