Part I: Project Information

GEF ID
10995

Project Type
FSP

Type of Trust Fund
GET

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

Project Title
Integrated water resources management in the transboundary Bermejo River Basin

Countries
Regional

Agency(ies)
CAF

Other Executing Partner(s)
COBINABE

Executing Partner Type
Others

GEF Focal Area
International Waters

Sector
Mixed & Others

Taxonomy

Focal Areas, International Waters, Transboundary Diagnostic Analysis and Strategic Action Plan Preparation, Strategic Action Plan Implementation, Pollution, Freshwater, Aquifer, River Basin, Climate Change, Climate Change Adaptation, Climate information, Climate resilience, Ecosystem-based Adaptation, Influencing models, Strengthen institutional capacity and decision-making, Convene multi-stakeholder alliances, Transform policy and regulatory environments, Demonstrate innovative approache, Stakeholders, Beneficiaries, Civil Society, Non-Governmental Organization, Academia, Community Based Organization, Type of Engagement, Participation, Information Dissemination, Partnership, Consultation, Local Communities, Communications, Awareness Raising, Education, Gender Equality, Gender results areas, Participation and leadership, Access to benefits and services, Capacity Development, Access and control over natural resources, Knowledge Generation and Exchange, Gender Mainstreaming, Sex-disaggregated indicators, Gender-sensitive indicators, Women groups, Capacity, Knowledge and Research, Knowledge Generation, Innovation, Knowledge Exchange, Learning

Rio Markers

Climate Change Mitigation

No Contribution 0

Climate Change Adaptation

Significant Objective 1

Biodiversity

No Contribution 0

Land Degradation

Significant Objective 1

Submission Date

9/14/2023

Expected Implementation Start

3/29/2024

Expected Completion Date

3/29/2028

Duration

48In Months

Agency Fee($)

571,500.00

A. FOCAL/NON-FOCAL AREA ELEMENTS

Objectives/Programs	Focal Area Outcomes	Trust Fund	GEF Amount($)	Co-Fin Amount($)
IW-3-5	Enhance water security in freshwater ecosystems through advance information exchange and early warning	GET	2,250,000.00	19,906,845.00
IW-3-6	Enhance water security in freshwater ecosystems through enhanced regional and national cooperation on shared freshwater surface and groundwater basins	GET	1,800,000.00	9,317,248.00
IW-3-7	Enhance water security in freshwater ecosystems through investments in water, food, energy and environment security	GET	2,300,000.00	19,014,321.25
		Total Project Cost($)	**6,350,000.00**	**48,238,414.25**

B. Project description summary

Project Objective

To reverse present land and water degradation trends in the binational Bermejo Basin by introducing integrated water resources management approachesincluding to groundwater resources, revamping and consolidating existing transboundary cooperation mechanisms, and accelerating priority reforms andinvestments

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

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing ($)	Confirmed Co-Financing($)
Component 1: Consolidating transboundary cooperation: new approaches and tools	Technical Assistance	1.1 1. Conditions created for the full adoption of modern integrated approaches to managing transboundary water resources and balancing competing uses.	1.1.1 The 1995 ?Agreement for the Multiple Use of the Resources of the Upper Bermejo River Basin and the R?o Grande de Tarija? establishing COBINABE, expanded to include the Lower Bermejo Basin and groundwater resources, and revamped in terms of scope and mandate.	GET	1,102,619.00	10,421,562.25
			1.1.2 Creation of Bermejo Basin Geographic Information Management System.			
			1.1.3 Design and implementation of a Data-based Decision Support			

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing ($)	Confirmed Co-Financing($)
			System (DSS) and an Early Warning System.			
			1.1.4 Training modules on IWRM and operation and maintenance of monitoring networks, SGI and DSS will be developed and delivered to COBINABE, COREBE and OTNPB staff, as well as to relevant national entities.			

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing ($)	Confirmed Co-Financing($)
Component 2 Assessment and Strategic integration of groundwater resources	Technical Assistance	2.1. Enhanced climate resilience and water security in the basin through the assessment and sustainable strategic use of the groundwater resources.	2.1.1. Assessment of the groundwater resources, and definition of aquifer conceptual models.	GET	1,417,500.00	8,201,562.00
			2.1.2. Assessment of present uses and users of groundwater, and of existing governance frameworks (tenure, related legislation, etc.).			
			2.1.3 Design and pilot field testing of modern multi-purpose groundwater and erosion monitoring networks and protocols.			
			2.1.4 Training modules for			

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing ($)	Confirmed Co-Financing($)
			the strengthening the capacity of national and transboundary basin entities in conjunctive surface and groundwater management developed and delivered to the staff of COBINABE, COREBE and OTNPB, as well as to relevant national entities.			

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing ($)	Confirmed Co-Financing($)
Component 3 Accelerating priority reforms and investments	Technical Assistance	3.1 Strengthened countries? commitment to the implementation of priority reforms and investments agreed in the Strategic Action Program.	3.1.1 Updated TDA of the basin, aimed at identifying critical emerging transboundary issues, and including the consideration of future climate variability scenarios.	GET	2,267,500.00	22,847,601.00
			3.1.2 Updated SAP, identifying the priority reforms and the investments needed to address degradation trends in the basin endorsed at the ministerial level by the two countries.			
			3.1.3 Bankable projects defined for each priority investment agreed upon			

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing ($)	Confirmed Co-Financing($)
			in the SAP, based on technical-economic pre-feasibility studies including identification of financing mechanisms and possible public and private sources			

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing ($)	Confirmed Co-Financing($)
Component 4 Stakeholders engagement and awareness raising	Technical Assistance	4.1. Systematic stakeholders? engagement in project activities, improved public awareness and access to information, and involvement of the productive sector, foster the achievement of the project?s outcomes and the broader commitment to the implementation of SAP reforms and investments	4.1.1 A citizen participation and environmental education program involving all key actors in the basin, gender balanced and including indigenous communities. 4.1.2 Mechanism and procedures for the participation of civil society organizations in overseeing environmental management together with governmental Basin agencies. 4.1.3 Round table aimed at periodically engage representatives of the productive	GET	1,150,000.00	3,901,560.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing ($)	Confirmed Co-Financing($)
			sector (private enterprises, landowners and farmers), in the TDA-SAP update process.			
			4.1.4 Annual stocktaking meetings, with broad participation of stakeholders, media, academia, donors and financial institutions, for disseminating and monitoring the project progress to impacts, to coordinate with other relevant initiatives, and present the final agreed upon SAP.			
			4.1.5 Creation of project website and online communicati			

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing ($)	Confirmed Co-Financing($)
			on platform, systematized information on lessons disseminated using web-based tools and active participation to IW: LEARN activities and events (1% of the total GEF grant)			
Component 5 Monitoring and Evaluation	Technical Assistance	5.1 Effective project management, monitoring & evaluation, as per the technical, administrative, and fiduciary standards defined by CAF/GEF and the Countries (Bolivian and Argentina) legal framework, through-out project implementation	5.1.1. Annual Work Plans, Annual Progress Reports. 5.1.2. Budgeted Monitoring &Evaluation Plan, Mid-Term Evaluation Report, Terminal Evaluation report drafted, completed according to established deadlines.	GET	110,000.00	569,062.00
				Sub Total ($)	**6,047,619.00**	**45,941,347.25**

Project Management Cost (PMC)

GET	302,381.00	2,297,067.00
Sub Total($)	**302,381.00**	**2,297,067.00**
Total Project Cost($)	**6,350,000.00**	**48,238,414.25**

Please provide justification

PMC represent 5,26%

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

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
Recipient Country Government	Ministry of Environment and Sustainable Development - Argentina	Public Investment	Investment mobilized	29,000,000.00
Recipient Country Government	Ministry of Environment and Sustainable Development - Argentina	In-kind	Recurrent expenditures	2,500,000.00
Recipient Country Government	Ministry of Environment and Water - Bolivia	Public Investment	Investment mobilized	11,713,955.18
Recipient Country Government	Ministry of Environment and Water - Bolivia	In-kind	Recurrent expenditures	852,169.54
GEF Agency	CAF	Loans	Investment mobilized	3,372,289.53
Other	Organization of American States	In-kind	Recurrent expenditures	800,000.00
			Total Co-Financing($)	**48,238,414.25**

Describe how any "Investment Mobilized" was identified

1. The dollar amount shown as ?Public investment? for a total of USD 40,713,955 represents the approximate value of the components relevant for the project of the following ongoing and planned investments, selected among the ongoing or recently completed relevant investments in the countries. 2. The listed US Dolars (USD) values do not include structural solutions but only the components of planning, evaluation and non-structural solutions relevant to the Basin. They will be highly valuable sources of data, information, experiences and best practices: ? ARGENTINA - Argentina's counterpart contribution to the project is divided into public investment, which includes projects developed in the area of intervention and related to natural resources, the environment, water management, among them: Preparation of the Master Plans of rainwater and river works (Jujuy); Works for stabilization of torrents (Salta); Channeling of the San Antonio river (Salta); Productive drainage systems (Chaco); Master Plan for rain drainage and flood control (Formosa); Hydraulic and hydrodynamic study for the protection of margins Rio Bermejo (Formosa), projects will provide existing baseline information and planned courses of action, avoiding duplication of effort. The in-kind contributions correspond to: Costs incurred, including institutional management, accompaniment, monitoring and evaluation of the project, as well as operating costs or basic services necessary to carry out the activities of the GEF Project, Equipment, Venues, Office

Supplies and photocopying, Lan Internet, Rent of offices, Telephone Services, Courier, Meetings Services, Postage. Time spent on the project, % of monthly salary of civil servants in the country: Team coordination to support project: National Coordinator, Administrative, Communications and Legal Support. Technical support team for the project: Technical team made up of professional staff from the provinces that make up the Basin and professionals from the national government: Public Works, National Water Institute, National Meteorological Service, National Hydrological Network, among others, who will do technical reviews and work in conjunction with COREBE. Other: at least two vehicles available for transfers in the territory, fuel, survey and monitoring activities. ? BOLIVIA ? Bolivia's counterpart contribution to the Project is divided into public investment, which includes projects developed in the intervention area and related to natural resource, environmental, water management, among them, Integrated management plans of 26 micro-basins tributaries of the Bermejo River; Plurinational Water Resources Plan (PPRH); Implementation of surface water monitoring networks. The projects will provide existing baseline information and planned courses of action, avoiding duplication of effort. The monetization of the expenditures made, which include institutional management, accompaniment, monitoring and evaluation of the project, as well as the operating expenses or basic services necessary to carry out the activities of the GEF Project, according to the following: Time dedicated to the project, % of the monthly salary of officials and/or administrative or support personnel according to the time dedicated to the project (inspections, preparation of reports, notes, participation in activities related to the project e.g. workshops, meetings, work meetings, etc.), who will do technical reviews and work in conjunction with OTNPB. Payment of basic services (electricity, water, internet, etc.), stationery. Other expenses, rental of equipment, space for events (workshops, courses, seminars). ? CAF is committed to co-finance this project with a loan/investment mobilized for operations with transboundary impacts. The improvement of nature based solutions, NBS, water basin related to guarantee minimum variability for water supply is fund by CAF loans budgets. For example, integrated watershed plans design and implementation. Project Program Departament Munici Amound (USD) (*) Mej. Sist. Agua Potable Colonia Jose Ma. Linares (Bermejo) MI AGUA V Tarija Bermejo 1,752,335.97 (*) Mej. Sist. Agua Potable Com. Flor De Oro (Bermejo) Mi Agua IV Tarija Bermejo 1,675,706.43 (**) Const. Sist. Agua Potable Ca?ad?n Buena Vista (Bermejo) Mi Agua IV Tarija Bermejo 2,526,418.22 (***) Ampl. Sist. Agua Potable El Nueve (Bermejo) Mi Agua IV Tarija Bermejo 3,140,649.25 (***) Ampl. Sist. Agua Potable Barrios Periurbanos (Bermejo) Mi Agua IV Tarija Bermejo 2,406,382.34 (***) Ampl. Sist. Agua Potable La Florida (Bermejo) Mi Agua IV Tarija Bermejo 763,963.90 (***) Ampl. Sist. Agua Potable San Francisco (Padcaya) Mi Agua IV Tarija Padcaya 1,110,281.08 (**) Const. Sist. Agua Potable Com. Abra San Miguel (Padcaya) Mi Agua IV Tarija Padcaya 2,361,759.34 (**) Const. Sist. Agua Potable Chaguaya (Padcaya) Mi Agua IV Tarija Padcaya 2,340,972.90 (**) Const. Sistema Agua Potable Chalamarca (Padcaya) MI AGUA IV Fase II Tarija Padcaya 5,055,436.76 Total (Bs) 23,133,906.19 Total (USD) 3,372,289.53

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

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
CAF	GET	Regional	International Waters	International Waters	6,350,000	571,500	6,921,500.00
			Total Grant Resources($)		**6,350,000.00**	**571,500.00**	**6,921,500.00**

E. Non Grant Instrument

NON-GRANT INSTRUMENT at CEO Endorsement

Includes Non grant instruments? **No**

Includes reflow to GEF? **No**

F. Project Preparation Grant (PPG)

PPG Required **true**

PPG Amount ($)

200,000

PPG Agency Fee ($)

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
CAF	GET	Regional	International Waters	International Waters	200,000		**200,000.00**
				Total Project Costs($)	**200,000.00**	**0.00**	**200,000.00**

Core Indicators

Indicator 7 Shared water ecosystems under new or improved cooperative management

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Shared water Ecosystem	La Plata	La Plata		
Count	**1**	**1**	**0**	**0**

Indicator 7.1 Level of Transboundary Diagonostic Analysis and Strategic Action Program (TDA/SAP) formulation and implementation (scale of 1 to 4; see Guidance)

Shared Water Ecosystem	Rating (Expected at PIF)	Rating (Expected at CEO Endorsement)	Rating (Achieved at MTR)	Rating (Achieved at TE)
La Plata	2	1		

Indicator 7.2 Level of Regional Legal Agreements and Regional management institution(s) (RMI) to support its implementation (scale of 1 to 4; see Guidance)

Shared Water Ecosystem	Rating (Expected at PIF)	Rating (Expected at CEO Endorsement)	Rating (Achieved at MTR)	Rating (Achieved at TE)
La Plata	3	2		

Indicator 7.3 Level of National/Local reforms and active participation of Inter-Ministeral Committees (IMC; scale 1 to 4; See Guidance)

Shared Water Ecosystem	Rating (Expected at PIF)	Rating (Expected at CEO Endorsement)	Rating (Achieved at MTR)	Rating (Achieved at TE)
La Plata	1	1		

Indicator 7.4 Level of engagement in IWLEARN throgh participation and delivery of key products(scale 1 to 4; see Guidance)

Shared Water Ecosystem	Rating (Expected at PIF)	Rating (Expected at CEO Endorsement)	Rating (Achieved at MTR)	Rating (Achieved at TE)
La Plata	1	1		

Indicator 11 People benefiting from GEF-financed investments

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	665,000	65,000		
Male	665,000	65,000		
Total	1330000	130000	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

4. The project targets the consolidation of transboundary cooperation mechanisms and tools, the implementation of conjunctive surface and groundwater management, and the acceleration of strategic reforms and investments. The cumulative impacts of these interventions in the basin are expected to bring about long-term lasting benefits to all inhabitants of the basin in terms of increased water security, climate resilience, women empowerment, etc. The number of low-intensity beneficiaries hence coincides with the total number of the basin?s inhabitants (1.330 million people) of which approximately 50% are women. The figure shown in the table (130,000 people) refers to direct high intensity beneficiaries, that is local communities in the upper basin. In addition to these ?prerequisite? co-benefits, the project will likely produce ?incidental? co-benefits in terms of human health improved by the increased use of groundwater

Part II. Project Justification

1a. Project Description

a) The global environmental and/or adaptation problems, root causes and barriers that need to be addressed

5. The transboundary Bermejo River is an important tributary of the La Plata-Paran? River. The river is 1,300 km in length, forming a link between the Andes Mountain Range and the Paraguay-Parana River system - as it discharges into the Paraguay River and this, in turn, into the Parana? River - and providing an important corridor connecting the biotic factors of the Andean mountains and the Chaco Plain. Its basin covers about 123,162 km2, of which 90% is in Argentina and 10% in Bolivia, with an estimated total population of 1,330,000 inhabitants. In terms of its geomorphological characteristics, the basin is divided into the Upper Basin (occupying territory in Bolivia and Argentina) and the lower Basin (entirely within Argentina). The Upper Basin is defined by the four main tributaries of the Bermejo River: the Rio Grande de Tarija, the Upper Bermejo River (which takes its name from the city of Bermejo), the Pescado River and the San Francisco River. The lower Bermejo River Basin receives water from only one tributary - the river Bermejito ? in the Chaco province.

6. This large river basin contains urban centers and areas of differing degrees of social, agricultural, commercial and industrial development, many producing goods of national significance, and all being sustained and supported at least partly, by the waters of the Bermejo River. The river exhibits an exceptional diversity of habitats, as well as great potential for human development and sustainable use of its resources. Extensive livestock operations (cattle, sheep, goats) are widespread in the basin. Some crops (soybeans) are gaining importance in the piedmont zone of the upper basin in Argentina, and rice growing is increasing in the lower basin, with high seasonal demands on water resources. Despite this wealth of natural resources, however, the basin population suffers from low income levels, and the education, health and sanitary conditions are among the lowest anywhere in the two riparian countries, with the indigenous population being the most disadvantaged, followed by rural workers and small-scale agricultural producers.

7. A basin of the scale and complexity of the Bermejo River suffers from many environmental problems that make themselves felt in different forms and degrees of intensity. These problems are:

? Soil degradation. Intense erosion and desertification processes

? Water scarcity and availability restrictions

? Degradation of water quality

? Destruction of habitats, loss of biodiversity and deterioration of biotic resources

8. The following represent aggravating factors and the barriers that need to be removed and that the project will strive to address:

? Transboundary cooperation frameworks with limited mandate and capacity

? Lack of consideration of groundwater resources

? Lack of strategic and coordinated focus on highest priority actions to address natural and anthropogenic causes of degradation.

? Limited engagement of stakeholders and resource users in the planning and implementation of the IWRM.

1.1.1 Soil degradation, accelerated erosion and desertification processes

9. The basin is characterized by intense hydrological, geomorphological and ecological processes, and has significant potential in terms of natural resources, variety of ecosystems and biodiversity. These same active processes however, also impose severe restrictions and create environmental risks and vulnerabilities. In particular, the Upper Basin is characterized by severe erosion problems due to its natural lithostratigraphic features exacerbated by poor land use practices and deforestation. Most of the sediment loads generated in the Upper Basin are carried downstream particularly during flash floods. This natural process generates situations of water risk and vulnerability, which restrict the development of productive activities, and threaten the security of human settlements. Upon reaching the plain, the river - with its heavy sediment load - meanders without a stable and defined stream system eventually discharging into the Paraguay-Parana rivers system.

10. The symptoms and effects of soil degradation as a result of intensive processes of erosion and desertification make themselves felt in the destruction of the soil's natural productive capacity, the reduction in the quality and quantity of agricultural output, the loss of productive areas, the degradation of water quality, the loss of organic material and nutrients in the soil, as a result of the decline or loss of vegetation cover, compacting of the soil, thereby reducing its water- retention capacity and making the land more vulnerable to erosion. The movement of sediments also affects the useful life of reservoirs.

11. Erosion occurs in the western flank and the upper and lower sectors of the Quebrada de Humahuaca; the Fluvio-lacustrine plain of Valle Central de Tarija; the Sub-Andean Valleys, the banks of the Grande Tarija and Bermejo rivers; the lower course of the R?o San Francisco; El Ramal; the confluence zone of the rivers Lavay?n and Grande, La Almona; the valleys of Siancas and Perico; the piedmont of the Sierras de Tartagal and of the Sierras de Ma?z Gordo and Centinela. The location of these critical areas reflects corresponding climatic and edaphic restrictions. The occurrence of mass-movement processes is critical in the headwaters of the rivers Iruya, Pescado and Quebrada de Humahuaca**,** and the presence of rills and badlands is evidence of intensive processes of erosion in the Valle Central de Tarija. Critical erosion situations are often found along the banks of rivers, especially in the upper basin. Some 13.35% of the surface of the Large Units is affected by severe or very severe mass-movement processes. The processes of soil degradation (understood as degradation from misuse and overgrazing of pastures, shrub lands or forests where the original vegetation remains but has been altered by over-use), erosion and desertification, have affected 52.3% of the basin.

12. Desertification constitutes an indicator covering all the processes of degradation of environmental conditions in arid and semi-arid areas, among which soil erosion and vegetation destruction are especially important. The highest degrees of desertification in Argentina are found in the *peladare**s*** [barelands or denuded areas] of the Bermejo, and in the eastern Andes eco-region, in the headwaters of the rivers and in the valley of the Quebrada de Humahuaca and in the Semi-arid Chaco Eco-region, in the Subregion of the Current Overflow Channels and Washouts of the Bermejo. In Bolivia, they occur in the fluvio- lacustrine plain of the Valle Central de Tarija, where degraded areas cover more than 57% of its area. Taken together, the sectors that show significant to very severe desertification represent about 38.9 % of the total surface area of the basin, while 61.1% shows conditions of non-existing, minimal or limited. In this respect, soil degradation through the processes of erosion and desertification decreases the agricultural suitability of the basin. The intensifying migratory processes would appear to be another result of soil degradation and the consequent loss of yields, increased production costs and declining standards of living, which have produced or exacerbated socioeconomic imbalances to varying geographical scales in the basin.

Sediment loadings in the Bermejo waters are some of the highest in the world (8 kg/m?). The amount of sediment deposited along the course of the Lower Basin during floods regularly changes the course of the river, impeding rational use of water and land resources. More than 100 million tons of sediment (equal to 80% of the total) are deposited annually in the Paraguay, Parana? and La Plata Rivers.

Direct causes[1][1] determining the problem

13. Natural causes:

? The susceptibility of the geological substrata and geomorphological instability, where the characteristics of the Eastern Andes and Sub-Andean Ranges Eco-regions are particularly restrictive. Occurrences of mass-removal and landslides are common.

? The characteristics of the soil itself, where 65.75% of the Basin's land area is classified with low use aptitudes, are frequently associated with high susceptibility and fragility because of structure, composition or slope.

? The rainfall regime, and especially the tendency to torrential rains, that dominates the basin as a whole.

? The strongly sloping topography, dominant in all of the Upper Basin.

14. Anthropogenic causes:

? Unsustainable forestry and sylvo-pastoral practices. Deforestation, where the area affected by massive deforestation for agricultural purposes exceeds 26% of forest or cloudy cover. For the basin as a whole, nearly 23% show evidence of deforestation, ranging from significant to very severe.

? Unsuitable use of the land, without considering its aptitude. Poor management of farm lands and overgrazing, such that 61.4% of the Large Units into which the Basin was subdivided show situations of over-use, ranging from significant to very severe. This numbers are coincident with data for the Bolivian sector, according to which 60% of the pasture lands of the Eastern Andes show signs of overgrazing.

1.1.2 Water scarcity and availability limitations

15. Constraints on the development and use of water and natural resources for sustainable economic uses are related to natural fluctuations in the availability of water and in fluvio-morphological dynamics, associated with both seasonal and extraordinary factors, among which the general scarcity of water during dry periods, both for human consumption and for farming and livestock use, and low levels of production and economic return. This latter aspect affects farmers who must compete with other economic sectors. As well, the water shortage implies a heavy seasonal pattern to agricultural employment, coincidental with the rainy period. Annual or seasonal water shortages in various parts of the basin affect various natural and human components in different ways. This problem makes itself felt most acutely in connection with agricultural needs. Under other criteria, this water shortage affects the reserves of water for human consumption, and its availability for ecological processes such as vegetation growth and biological productivity. With respect to the

scarcity of water for human consumption, this affects a wide area of the basin, and brings in its wake problems of public health and severe limitations on development. In the arid and semi-arid Subregions of the Eastern Andes ((such as the Valle Central de Tarija and the Quebrada de Humahuaca) and the Sub Andean Eco- region, as well as the Semi-Arid Chaco Eco-region, a high percentage of the rural population has no access to safe drinking water. This deficit becomes critical during the dry season, when human living conditions decline. Limited water resources represent one of the environmental and socioeconomic factors that restrict the adoption of sustainable development practices in the lower basin. Some 31% of the basin's surface area is affected by severe or very severe conditions of water shortage during the dry season (nearly 38,000 km2).

16. The average annual flows in the rivers of the Eastern Andes and Sub Andean Eco-regions show wide fluctuations. The Bermejo River at Juntas de San Antonio, the last point in Bolivian territory, has an average annual flow of 220 m?/s, of which 92 m?/s corresponds to the Upper Bermejo and 127 m?/s to the Grande de Tarija rivers; with specific flows of 18 and 12 l/s.km? respectively. Upon leaving the Upper Basin, after Junta de San Francisco, the Bermejo river has an average annual flow of about 480 m?/s. If we look at flows during the dry season, in the most critical month (generally September), the Bermejo River at Juntas de San Antonio has an average monthly flow of 19 m?/s and at Junta de San Francisco the minimum monthly flow is about 30 m?/s.

17. The lack of comprehensive data on groundwater availability and use, prevent its integration in the assessment of the available water in the Basin, in particular in its lower section which includes an immense plain where soil and climatic conditions are favorable to the growing of a wide variety of crops, and where the fundamental limit on development is the reduced availability of water.

18. The Bermejo Basin is located in a climate transition zone. This is very evident in the Upper Basin, where in a short distance climate varies significantly, from a cold semi-arid highland climate in the west, to a humid tropical in the east. The relief is an important factor in the regional circulation of air masses. The maximum precipitations appear in the Sub-Andean region, with more than 2,200 mm per year, decreasing towards the West up to 200 mm (Eastern Cordillera region) and towards the East up to 600 mm in the center of the Semi-arid Chaco region; then increasing to 1,300 mm in the sector of the confluence with the Paraguay River, in the Chaco H?medo region. The altitudinal and longitudinal gradient, from the Upper Basin to the Northwest to the Lower Basin to the Southeast, determines a climatic heterogeneity, where there is: 1) Cold Zone: located above 2,700 meters above sea level where two climates are identified: semi-arid cold and cold sub humid, 2) Temperate Zone: between the heights of 1,500 to 2,700 meters above sea level, with arid Temperate, Semi-Arid Temperate, Subhumid Temperate, and Humid Temperate climates and 3) Warm Zone: occupies the entire eastern area of ??the basin, the Sub-Andean and the Chaco Plain identifying 4 types of climates: Warm sub humid, Warm humid, Warm very humid and Warm semi-arid.

19. It should be noted that there are important extensions of the territory of the basin under conditions of water deficit, corresponding to the Eco-regions of the Eastern Cordillera (with pockets of

aridity such as the Central Valley of Tarija and especially in the Quebrada de Humahuaca) and the Semi-arid Chaco. These constraints, determined by the natural environment, are exacerbated by the increasing seasonality and decrease of rainfall from the Eco-region of the Humid Chaco, causing longer periods of water deficit, and constraining the productive use of water. In the Upper Basin, water deficit combined with torrential rainfall and with the dynamics of an unstable relief, enhances the occurrence mass removal in all its variants (landslides, mud flows, etc.) and water erosion processes.

Climate change impacts
Climate models forecast a greater likelihood of drought in the La Plata River Basin, especially in the Gran Chaco. The net effect of the temperature changes, when viewed in light of the expected changes in rainfall, is an increased risk of extreme events, as runoff becomes more sudden or erratic. The increase in the periodicity in precipitation, coupled with the reduction in available moisture due to higher evaporation and reduced runoff, can significantly impact human economic activities dependent on rainfall and runoff. In particular, the likely reduction in mean annual runoff has the potential to reduce hydroelectric power generation and by extension, social and economic development.

Direct causes

20. Natural causes:

? Climatic limitations owing to increasing seasonal variations (from east to west), the inter annual variability and the scarcity or deficit of precipitation, which reflects on the hydrological regime.

? Flow restrictions, which become progressively more severe as one moves from the Eco- region of the Sub-Humid Chaco to the west, where during the dry season there is a generalized water shortage for both human consumption and agricultural and livestock use.

? High sediment content in the water system, which reaches concentrations exceeding 10 kg/m3. Sediment can be considered as a factor limiting the aptitude of the water resource (for human and agricultural use) and as responsible for the rising costs of maintenance and the declining useful life for infrastructure.

? High fluvio-morphological dynamics, which work through processes (such as undermining of river banks, cut off meanders, overflow or change of channels) to damage, destruction or loss of efficiency of water-capture infrastructure.

? High salt content. In the lower basin there are frequently use restrictions due to the concentration of salts in groundwater. The localized presence of arsenic and other minerals (of natural origin) in groundwater, well above quality standards, has been recorded in the Eco-region of the Semi-Arid Chaco.

? Relief limitations. In the upper basin, the valleys are narrow and slopes are steep, giving rise to torrents that carry massive deposits of course sediments. This limits the possibilities of regulating

and diverting the flow. In the lower basin, the fluvio-morphological dynamics and the weak energy afforded by the relief are factors restricting use of the resource.

21. Anthropogenic causes:

? Inadequate water infrastructure, which fails to offset or mitigate the climatic limitations discussed above, or those deriving from present or past processes of soil degradation.

? Inefficient use of water resources and low utilization of the existing potential.

? Inadequate understanding of the supply and usable potential of surface and groundwater

? Inadequate financial resources for implementing water use projects for irrigation and other uses.

? Conflicts at the water nexus: This latter aspect affects farmers who must compete for water rights with other economic sectors. The impacts include current and potential inter-jurisdictional conflicts among the different users in a region, and effects on health that are contributing to unsustainable development in the basin.

1.1.3 Degradation of water quality

22. At present, stretches of the watercourses are affected by pollution from rural activities, and this is made worse when the water passes through towns and major cities. Some stretches of the rivers show significant organic and bacterial pollution from the dumping of agricultural and industrial wastes, and from poor livestock management. The transport of organic and microbiological pollutants and other agents of sanitary significance, of urban and industrial and even agricultural origin. The trend is rising. The impacts of this problem include: direct degradation of water quality, risks to human health, damage or loss of riparian flora and fauna and fish mortality in the most critically polluted situations, loss of biological productivity in aquatic communities and shoreline. The indices of organic pollution in frontier rivers are fairly high, but they affect only short stretches, and the problem is significantly attenuated by the effect of dilution. While organic, bacterial and industrial contaminants are localized at specific points in the basin, there is a potential and growing risk if adequate prevention measures are not taken. If the situation worsens, this would affect both countries, and other basins downstream. Physical pollution, which appears during the wet season in the form of high sediment concentrations, is the most significant transboundary manifestation, since the massive transport of sediments affects water use both within the basin and beyond it, into the Paran? - R?o de la Plata system.

Direct causes

23. Anthropogenic causes:

? Degradation of soils and erosion. Poor water management has led to salinization of the soil that has reached severe proportions in the following areas: terminal overflows in Ba?ados del Quirquincho, the terminal portion of the Itiyuro alluvial fan, areas around Rivadavia and the headwaters of the R?o Guaycur?, accounting for about 7% of the basin's total surface area.

? Dumping of raw or semi-treated sewage from populated centers. Industrial pollution at some points in the basin. Pollution from improper livestock and agricultural management. Water pollution in several stretches of the river results from the dumping of urban and industrial wastes, draining of residual agricultural chemicals, leaching of salt and sediment transport. This environmental problem reaches critical proportions a) locally, through organic and bacterial pollution and salt content in the dry season (April to December), when river flows are at their lowest, and b) regionally, because of the high sediment content during the rainy season (January to March).

? Inadequate or unenforced environmental standards**.** Legislation is asymmetric, incomplete or lacking in the area of protecting shared resources (water in particular and natural resources in general), managing urban and industrial wastes (incomplete) and the environment as a whole.

? Inadequate sanitary infrastructure and of health education and awareness in the communities. A high proportion of the rural population has no access to deinking water or sanitation services.

? Inadequate information systems on water quality.

1.1.4. Habitat destruction, loss of biodiversity and deterioration of biotic resources

24. The destruction of habitat and the loss of biodiversity is an environmental problem that appears with differing degrees of intensity across broad sections of the basin. It is affecting the natural heritage of the basin, changing the composition of its fauna and flora and the structure and function of ecosystems, reducing the productive capacity of both land-based and aquatic ecosystems, and frequently diminishing the esthetic qualities of the landscape. The biological or bio-geographic corridors that appear most at risk are a) that formed by the montane rainforest, montane forest, biological corridors and other forest ecosystems of the Sub-Andean Eco-region, b) ecosystems associated with the river systems, groundwater recharge areas and other wetlands, particularly in the semi-arid Chaco Eco-region. The loss biological corridors, of habitat and connectivity for wildlife populations is changing historical distribution patterns and introducing new areas of distribution and migration. This frequently involves the movement of species (predators, pests, etc.) or vectors of health concern, which are forced out of their native habitat and impinge upon agricultural production and human settlements. This deterioration of habitat may mean the loss of productive aptitude for biotic

and natural resources, hinder the functioning of aquifer recharge areas, indirectly contributing to the displacement of the local population, as a result of diminishing prospects for socioeconomic development. The indigenous population and small- scale farmers are most vulnerable. As well, habitat deterioration in the higher zones can affect the quality of water resources in basin. The relevance of protected areas and National Parks, as territorial units with their own identified functions that seek the preservation of ecosystem habitats and are areas that guarantee the preservation of water courses, as well as the recharge of aquifers, require a special consideration within the context of integrated water management within the Bermejo basin.

Direct causes

25. Anthropogenic causes:

? Deforestation of native woodlands and uncontrolled invasion of forest lands for agricultural use. Deforestation for farming purposes has led to the clearing of large sections in Argentina, while in Bolivia's Montane Subregion (Sub-Andean Eco-region), forests on the middle and lower slopes have been destroyed by human pressure, and only a few small and scattered remnants are left. Even more alarming is the increased pace of deforestation over recent decades. The predominantly forested or cloud forest-covered area that has been clear-cut for crop planting now amounts to 7 percent of the total basin.

? Unsuitable farming practices, such as clearcutting and slash and burn, planting on slopes, etc., have intensified the damage to ecosystems with the consequent loss of species and frequent reduction of biodiversity

? Uncontrolled and indiscriminate hunting and fishing especially for commercial purposes, is placing heavy pressure on biotic resources.

? Increasing water pollution, of such a magnitude that it is affecting the biodiversity of aquatic and riparian communities, and of wetlands as a whole.

? Lack of land-use regulation, in both countries.

? Ineffective enforcement and inadequate harmonization of rules governing the protection and use of soils, water, flora and fauna.

b) The baseline scenario and associated baseline projects

26. Against this background of accelerated land degradation, back in 1995 the two countries sharing the basin?s resources, cognizant of the need for coordinated, cooperative action in order to address the critical environmental condition of the Basin, created the Binational Commission for the Development of the Upper River Basin (COBINABE) through the signing of the Agreement for the Multiple Use of the Resources of the Upper Basin of the R?o Bermejo and R?o Grande de Tarija. This Agreement is the legal instrument that gave rise to COBINABE, establishing it as a permanent legal-technical mechanism, responsible for the administration of the Upper Bermejo River and the Grande de Tarija River Basin, aimed at promoting the sustainable development of its area of influence, optimizing the use of its natural resources, generating jobs, attracting investments and ensuring the rational and equitable management of water resources. COBINABE is made up of two delegates from each member state: the first delegate is the representative of each Ministry of Foreign Relations, with the rank of Ambassador who chairs the respective delegation. The second delegates are those who occupy, respectively, the position of Executive General Director of the National Technical Office of the Pilcomayo and Bermejo Rivers of Bolivia -OTNPB- and the Chairman of the Board of the Regional Commission of the Bermejo River of the Re- public Argentina - COREBE. In addition, the Bi-national Commission was granted international legal status and autonomy of technical, administrative and financial management.

27. In its first years of operation, COBINABE's main objective was related to the construction, operation and administration of three dams, known as Las Pavas, Arrazayal and Cambar?, destined mainly for hydroelectric generation and the regulation of the Bermejo River. Due to factors fundamentally linked to obtaining financing for the three proposed and agreed upon dams, their implementation could not materialize. This was followed by a period of reflection in the search for new alternatives, in a different energy scenario for the basin region, defined by the discovery of new and abundant gas reserves in the territory of the Department of Tarija of Bolivia. Within this new context, the generation of hydroelectricity yielded its priority.

1.2.1 GEF IW involvement in the Basin

28. The fact of having a Binational Agreement that would provide a legal and institutional framework for the basin was a determining factor for the opening, two years after COBINABE?s creation, of a dialogue between the Binational Commission and the Organization of American States (OAS), the United Nations Environment Program (UNEP) and the Global Environment Facility (GEF), with the objective of broadening the strategic vision regarding the sustainability of the development of the basin. This dialogue initiated the process that would lead to the agreement on a Strategic Action Program for the Binational Bermejo River Basin (SAP Bermejo). This process was vital to reorient the approach of the Binational Commission, slowly opening up a different vision of the possible and desirable development of the Binational Basin.

29. The process was completed between 1997 and 2000 with the implementation of the GEF IW project: ?*Strategic Action Program for the binational Bermejo basin (Bermejo SAP I)*? implemented by UNEP and executed by the OAS, with USD 2.9 million of GEF IW financing. This stage produced a Transboundary Diagnostic Analysis (TDA), which allowed the identification and characterization of the main environmental problems of transboundary concern in the Basin, as well as the fundamental causes of said problems. The findings of the TDA served as a conceptual basis when drafting the SAP for the Bermejo River Binational Basin, incorporating a series of interventions aimed at addressing the major environmental problems of global significance identified by the TDA on the basis of technical analyses and participatory interactions:

? land degradation and intensive processes of erosion and desertification;

? shortages and restrictions on the use of water resources;

? degradation of water quality;
? habitat destruction, biodiversity loss and degradation of biotic resources.

30. Some of these important environmental problems relate to water resources and land management and are, at the same time, partly a consequence of unsustainable human activities associated with environmental constraints that, in turn, condition socio-economic development. The causal chain analysis unraveled the roles that certain causes played in each of the identified problems. These critical roles were defined as root causes, from which the environmental consequences stemmed. They were:

(i) a weak legal and institutional policy framework;

(ii) inadequate planning and inter/intra jurisdictional coordination;

(iii) insufficient knowledge, commitment and community involvement, and lack of public participation;

(iv) inadequate funding and support mechanisms;

(v) inadequate access to, and use of, sustainable technologies.

31. The development of the TDA supported the need to foster in society and in institutions an inter- jurisdictional view of the basin, as a starting point to ensure the integrated and sustainable management of its shared resources. The document also laid down a set of strategic action areas as a framework for decision making and, in particular, for defining the objectives and content of actions and projects that should be implemented in the Basin. These actions and projects were reflected in the Strategic Action Program (SAP).

32. A total of 136 sub-projects were identified in the SAP, for a total investment of US$ 465 million and a timeline of 20 years. Several institutional and social actors from the Basin, grouped into panels according to their expertise, participated to identify sub-projects. From this sub-project portfolio, 34 sub-projects were prioritized for execution over the short term, through consultations with water and environmental authorities from the provincial governments in Argentina and the Tarija Department in Bolivia. The selected sub-projects became part of the follow up GEF IW project: ?*Implementation of the Strategic Action Program for the Bermejo Binational Basin (Bermejo SAP II)*. This project sought to generate demonstrative impacts and develop a framework that would favor execution of the SAP in its entirety.

33. The Project Bermejo SAP II was approved in 2001. It received US$ 11.4 million in financing from the GEF, and co-financing from member countries totaling US$ 8.78 million. UNEP was designated as the implementation agency of the GEF, and the OAS was designated the regional execution agency. In addition, COBINABE formalized agreements with the Bermejo River Regional Corporation (COREBE) in Argentina and the National Technical Office of the Pilcomayo and Bermejo Rivers (OTNPB) in Tarija, which served as Secretariats of the Commission and coordinated execution of the sub-projects in their respective jurisdictions. Execution of the Project was initially scheduled for a period of 4 - 5 years, but successive extensions resulted in a duration of nearly 10 years, from 2001-2009. During this time, 29 of the 34 sub-projects were executed. These interventions, typically joint ventures between provincial governments, university extension services, and the local communities, included: (i) constructing check dams or soil erosion control structures in the upper portions of the basin; (ii) recreating terraces for sustainable agricultural development in the middle basin; (iii) restoring seasonal flooding of grasslands in the lower basin; and (iv) introducing community-based informational and educational programs to encourage re-vegetation of river corridors in the lower basin and adoption of sustainable agricultural practices. Some were not completed due to a lack of consensus with institutional counterparts, while others were left unfinished due to external factors. Of the sub-projects executed, 11 were conducted jointly by both countries, while 18 were executed nationally (9 in each country).

34. The Terminal Evaluation of the Bermejo SAP II project concluded that ?The Project was unable to generate impacts Basin-wide as per the terms established in the project document, but rather achieved a series of local benefits resulting from the actions undertaken. While the processes of sedimentation and erosion were contained at critical points, and the COBINABE was strengthened as a binational entity, the Project did not have basin-wide impacts, as per the expected objectives. The comprehensive vision of the SAP was weakened by a project execution strategy that focused on smaller sub-projects with limited regional scope and transversal application. In many cases actions tended toward a local impact. Such actions were nonetheless relevant and to the benefit of different communities and institutions. Several of these actions also contributed to the demonstrative effect of the Project, particularly within a local scope. However, these actions tended to be executed in isolation, and lacked a connection with similar initiatives, inhibiting larger scale impacts. As such, the Project actions did not constitute a coherent program. The products of the individual sub-projects did not

translate into consolidated impacts and effects to make integrated Basin management more viable. Also, of influence were the scale of the Project and of the Basin itself, heterogeneity of institutional and regulatory frameworks, the lack of mechanisms for exchange and feedback between areas and sub-projects, and the predominance of the needs of each jurisdiction over those of the Basin as a whole. The Bermejo SAP II fully upheld the immediate objective of containing soil degradation and erosion in critical areas of the Basin. This was achieved primarily through infrastructural measures, which were accompanied by non-structural measures, generally of lesser impact. The infrastructural measures implemented in the Upper Basin demonstrated strong performance, with visible and geographically specific effects on sediment transport. However, the limited information available and the difficulties in evaluating erosion processes and sedimentation throughout the Basin make it impossible to quantify the level of reduction in environmental stress and changes in the state of the environment. It is important to mention that the infrastructural measures, although effective, are temporary, and do not offer a permanent solution. These useful investments require maintenance plans and support from non-structural measures, such as appropriate agricultural and forestry practices and community awareness and participation.?

35. The TE concluded that ?beyond the success or failure of its individual sub-projects, the Evaluation Team believes that the activities implemented as part of the Bermejo SAP II have established an important precedent, contributing to the improvement of conditions so that: (i) future decisions on development policies and programs for the Basin will be better informed; (ii) there is greater involvement on the part of stakeholders; and (iii) greater consideration is given to hydrological and environmental factors in development plans and programs?.

36. After the completion of the Bermejo SAP II project, in 2010, COBINABE produced the Integrated Management Program of the Binational Basin of the Bermejo River (PROBER), which consolidates, in a long-term programmatic document, the follow up actions of the Bermejo SAP II project (for a total of over US$ 400m). PROBER appeared however to adopt the same fragmented approach of the Bermejo SAP II, and to be hence destined to encounter the same difficulties as the Bermejo SAP II, but on a much larger scale.

37. After the publication of PROBER, the activities of COBINABE suffered eight years break due to both political and socio-economic factors. In November 2017, faced by pressing needs of water for human consumption, irrigation and energy production, representatives of the two countries met, for the first time since 2009, in Tarija and decided to revive COBINABE and resume joint activities aimed at fostering the integrated and sustainable management of the shared water resources of the Bermejo Basin.

1.2.2. The main lessons and recommendations from the previous GEF IW interventions

38. In order to benefit from, and avoid the pitfalls of previous GEF IW interventions in the basin, the present project concept considers the lessons learned and the recommendations formulated after their completion. In particular, the following considerations will inform the project detailed design:

39. *Enhanced participation of COBINABE,* have been part of the project development and will be in a position to create the conditions for its effective implementation, in particular the promotion of an integrated Basin management system, and the analysis of links and gaps in the institutional/regulatory framework, identifying needs and initiatives that promote better coordination and linkage with the institutions, jurisdictions, and social actors from each country.

40. *Design of a more proactive monitoring and evaluation system*: This will require a system that monitors the development of the project from its inception, has presence on the ground, evaluates processes and impacts (and not only the delivery of outputs), offers feedback to project management, and generates lessons and knowledge of interest to a larger audience, as opposed to activity and output inventories. In order for this initiative to be viable, it is important that the monitoring and evaluation mechanisms be designed with the participation of external agencies (academic and research institutions, NGOs, etc.) with compatible interests. This will encourage dissemination of knowledge, while also facilitating the involvement of the academic community in the program.

41. *COBINABE?s institutional recognition within the Basin*: This will be aimed at consolidating its role as a center for the emerging system of integrated management. This is an opportune moment to create spaces for institutional reflection and planning, in consultation with other Basin actors. COBINABE can take advantage of this opportunity to include activities or roles that depend less on specific sub-projects and are vulnerable to the coming and going of international cooperation. COBINABE and the Technical Units must establish themselves as the focal points of the emerging system, connecting different actors and initiatives; channeling support from other sources; planning research and sustainable development initiatives; organizing forums for debate; and analyzing/disseminating environmental and water scenarios to inform political powers at national, provincial, and departmental levels.

42. *Implementation of evaluation and management tools*: these will enable the analysis of scenarios and support in decision making, such as the development of a Basin-wide rainfall/runoff hydrological model. In this context, it is also important to support the development and analysis of climate change adaptation scenarios, taking advantage of the experience from the Plata River Basin, and better evaluate the effects of certain interventions in the Basin (e.g.: change in land use, deforestation, pipelines, dams, etc.).

43. *The updated formulation of the SAP will avoid the fragmented approaches of the previous GEF project:* It will strive instead to concentrate future efforts on fewer and larger investments, associated with key reforms and effective basin wide replication mechanisms.

1.2.3. Government funded actions

44. As part of the Project Document preparation, a survey was conducted on the main structural and non-structural actions carried out in the last years in the Bermejo River basin, both in Argentinean and Bolivian territory. These interventions generate different impacts in the area of direct application while maintaining the logic of integrated water resources management in the basin.

1.2.3.1. Policies and planning

45. In Bolivia, water policies are governed by the Integral Sectoral Plan of the Ministry of Environment and Water. Basin-level planning is linked to the National Basin Plan, which marks the beginning of planning efforts through different Multi-Year Programs in IWRM. The driving factors include aligning water planning with the Patriotic Agenda 2025, the Economic and Social Development Plan, the Territorial Integral Development Plans of the Autonomous Territorial Entities, the Sectoral Integral Development Plans, as well as aligning with international commitments defined in the Sustainable Development Goals, the Sendai Framework for Disaster Risk Reduction, and Nationally Determined Contributions.

46. In Argentina, water management instruments are coordinated by the Secretariat of Infrastructure and Water Policy through the National Directorate of Water Policy and Federal Coordination. They carry out projects, policies, and programs related to water resources, aiming to promote and achieve sustainable development through strategies based on Integrated Water Resources Management in coordination and cooperation with provinces, inter-jurisdictional organizations, civil society sectors, and the general community. An inter-jurisdictional approach is taken to develop basin-level policies. The Bermejo basin has examples of comprehensive approaches such as the Guadalquivir Basin Master Plan in Bolivia and the Comprehensive Soil and Water Management Plan for the Huasamayo and Tilcara basins in Argentina.

47. In Bolivia, the Groundwater Information System[2][2] processes data generating various graphs for analysis and interpretation, thereby contributing to understanding the functioning of the aquifers in Bolivian territory. Water quality information for surface water bodies in Bolivia is concentrated in the Water Monitoring and Surveillance Systems.

48. The Bermejo basin has witnessed notable studies that clearly reflect the importance of certain elements within the basin. Biodiversity projects have been conducted to establish the baseline for flora and fauna, particularly due to the presence of strategic ecosystems. The evaluation of ichthyofauna is

also highlighted within these studies. Additionally, studies have been conducted in the upper basin on the Argentinean side to identify potential hydroelectric developments.

49. The governments of the two countries are presently investing in the following types of interventions in the Bermejo Basin:

1.2.3.2. Hydrological Monitoring and Information Systems

50. Regarding Hydrological Monitoring and Information Systems, in Argentina, the National Water Information System stores data obtained by the National Hydrological Network[3][3] and other national and provincial organizations, as well as data from automatic weather stations associated with the National Weather Radar System[4][4]. Within the framework of the National Water Plan of Argentina, a new Technical Cooperation was agreed between the Secretariat for Infrastructure and Water Policy of the Ministry of the Interior, Public Works and Housing with the Inter-American Development Bank (IDB). As part of this agreement, the implementation of the high-resolution Flood and Drought Monitor developed by the Terrestrial Hydrology Research Group of Princeton University will be supported in various basins and regions of Argentina. The Bermejo River Basin has been chosen first, for which there will be the active participation of the Bermejo River Regional Commission (COREBE).

51. The acquisition and start-up of 19 new automatic hydrometeorological stations will lead to the modernization of the COREBE Hydrological Information System, allowing the hydrometeorological monitoring of the Bermejo River basin to be expanded, which will allow the availability and supply of information in real time to more than a million inhabitants of the basin. The new equipment, that will complement the network of existing stations, will be installed in the provinces of Salta, Jujuy, Chaco, Formosa, and in the territory of the Plurinational State of Bolivia.

52. Plan for multiple uses of water resources in the upper basin of the Bermejo river. The purpose of this project is to establish a reliable information base, which allows to identify and define the location and typology of the water uses that provide benefits and generate the greatest impact in the Upper Bermejo River Basin, using remote sensing databases, digital terrain models, soil type and use, hydrometeorological, etc., in a modern platform such as geographic information systems, already available on the COREBE website.

53. In Bolivia, there is a large amount of information dispersed in different institutions such as MMAyA, SERGEOTECMIN, Departmental Governorates and Municipal Governments. However, it is

important to highlight the National Surface Water Balance; The Hydrogeological Information System of Bolivia (SIHIBO); Bolivian Groundwater Information System (SIASBO); Surface Water Balance of the Bermejo and Rio Grande Basins of Tarija (1989); the Main Groundwater Recharge Areas in the Central Valley of Tarija (2020); as well as the Water Quality Monitoring and Surveillance System SIMOVH, and other tools implemented by the MMAyA, the VRHyR, and the SENAMHI of Bolivia.

1.2.3.3. Hydraulic infrastructure

54. Hydraulic infrastructure projects have been a constant in the Bermejo River basin in recent years, with no fewer than 40 interventions carried out, funded either by each country or through international funding. These projects have aimed to improve sanitation systems, water supply for human consumption, and expand productive areas destined to manage in a controlled way the flows for irrigation and a drainage system by diverting the surpluses produced by heavy rainfall and complementary irrigation, increasing the productive efficiency of the region. The direct beneficiary area is 7,500 hectares, in which there are more than 100 producers dedicated to the production of fruit and vegetables, tobacco and sugar cane.

55. A flood defense system was implemented for the city of Embarcaci?n, against the ordinary and extraordinary floods of the Bermejo River, protecting various neighborhoods, as well as indigenous communities, and an area of small and medium rural producers with greenhouse sectors. Basically, the work consists of the construction of an embankment located on the left bank of the Bermejo River, in the sector where the river exceeds the levels of the bank and consequently overflows, spilling its waters towards the sector South West of the city of Embarcaci?n. The city of Embarcaci?n has a total population of about 20,000 inhabitants, of which at least one third is affected by the floods caused by the overflows of the Bermejo River.

1.2.3.4. Interventions in the Upper Bermejo, Bolivia

56. In the upper Bermejo basin of Bolivia, a number of initiatives ? completed, ongoing or planned ? have focused on the following themes: micro-basin integrated management plans in 26 tributaries of the Bermejo river; mitigation of the impacts of extreme events in one tributary; construction of irrigation systems; rainwater harvesting systems (Rio San Juan del Oro); assessment of the Guadalquivir aquifer; feasibility study of a protected area (Padcaya).

57. The National Technical Office of the Pilcomayo and Bermejo rivers (OTPNB) has been setting up the surface water monitoring networks of the Guadalquivir basin through the project: "Implementation of the Water Monitoring System in the Guadalquivir River Basin, department of Tarija -Bolivia", with 23 automatic monitoring stations. In addition, the office has been doing two monitoring campaigns in the dry and wet season for the Guadalquivir and Bermejo rivers. Around 25

water quality parameters were analyzed from a total of 56 water samples collected from the monitoring basins where there are 3 flow measurement equipment (2 propeller and 1 with sensor).

58. The automatic stations that are available are the following:

? 9 Meteorological Stations

? 2 Thermo-pluviometry Stations

? 4 Hydrometric Stations

? 8 Water Quality Stations

? 2 Buoys ? Water quality stations in dams.

59. The project has the capacity to expand by 100 more automatic stations.

c) The proposed alternative scenario

1.3.1 Theory of Change: From Outcomes to Impacts

60. The Theory of Change at the basis of project design builds on the assumptions that:

? if the existing transboundary cooperation mechanism COBINABE will expand its mandate, consolidate its institutional arrangements and long-term sustainability, and be provided with modern management tools;

? if the freshwater resource base of the basin is increased by fully considering groundwater;

? if the two riparian countries will join forces in the conduct of a new Transboundary Diagnostic Analysis integrating consideration of climate change, gender and indigenous people aspects, and will agree on a program of priority reforms and investments addressing the main drivers of degradation, among them poor land use practices;

? if effective stakeholders? engagement mechanisms including vulnerable communities, civil society and the productive sector are institutionalized;

? if new partnerships will be established with IFIs and the productive sector for the implementation of priority actions;

61. Then the population of the basin will benefit from improved water security, health conditions, more stable livelihoods, gender equality and enhanced resilience to climatic change and variability.

62. The chain ?activities ? outputs ? outcomes? has been conceived with the objective to remove the barriers that presently hinder corrective actions aimed at reverse soil and water degradation trends in the basin, identified as:

? The limited scope (upper basin only) and operational capacity of existing transboundary cooperation frameworks (COBINABE)

? The lack of knowledge, consideration and governance of the groundwater resources of the basin

? The lack of agreed upon strategic priority reforms and investments aimed at addressing the major causes of degradation, both natural and anthropogenic.

? The absence of systematic mechanisms for broad stakeholders? engagement at the transboundary and national levels.

63. Project design recognizes that the achievement of the long-term goal of the project and the accruing of global and local benefits, will largely depend on the continuing commitment of the countries? governments, the scientific community, major stakeholders, international development assistance community, as well as on the level of engagement of women and more vulnerable communities. Design includes in fact actions to strengthen this commitment and engagement through awareness raising, communication and conscientization activities that will foster project advancements and achievements.

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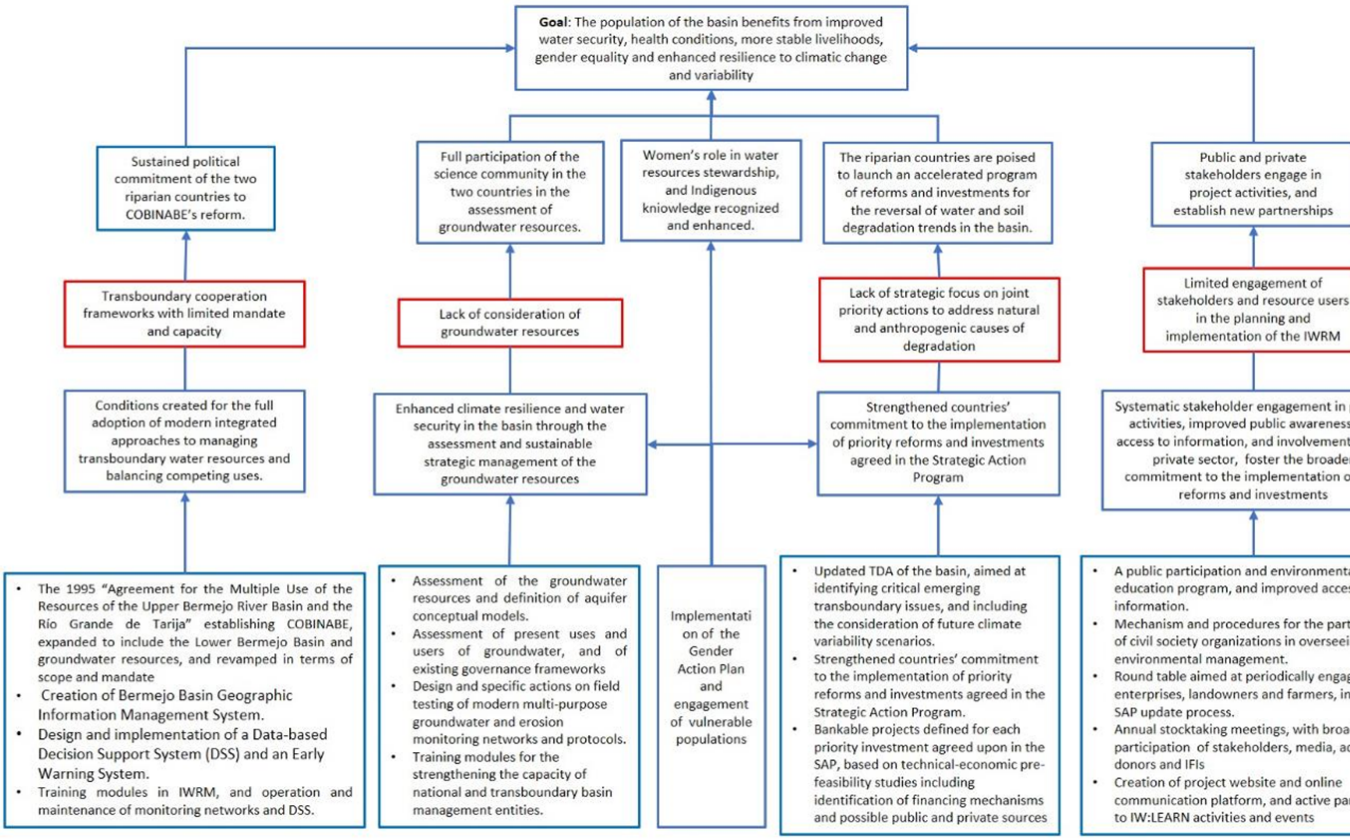
[1] **Direct Causes** are the immediate causes determining the problem and are the result of a complex system of underlying factors; they may be of natural as well as of human origin.

[2] https://datos.siarh.gob.bo/index.php?module=siasbo&smodule=geovisor

[3] https://www.argentina.gob.ar/obras-publicas/hidricas/red-hidrologica-nacional

[4] https://www.argentina.gob.ar/obras-publicas/hidricas/institucional/sinarame



Theory of Change: outline of the logic as to why and how the intervention is expected to achieve the intended change

1.3.2 Brief description of expected outcomes and components of the project

1.3.2.1. Component 1 - Transboundary cooperation: new approaches and tools (barrier 1)

OUTCOME 1. Conditions created for the full adoption of modern integrated approaches to managing transboundary water resources and balancing competing uses.	
OUTPUTS	ACTIVITIES
1.1.1 Proposal for the expansion of the 1995 ?Agreement for the Multiple Use of the Resources of the Upper Bermejo River Basin and the R?o Grande de Tarija? establishing COBINABE, to include the Lower Bermejo Basin and groundwater resources, and revamping COBINABE in terms of scope and mandate	Establishment in COBINABE of a gender balanced Binational Multidisciplinary Technical Working Team (BMTWT) with representation from key stakeholders. Tasks will include: Identification of institutional and technical capacities and attributions. Preparation an options paper for the reengineering of COBINABE?s mission, vision and structure, the expansion of its mandate to the entire Bermejo Basin, and for the enhancement of its operational technical capacity, for submission to governments for decision. Integration of groundwater into COBINABE?s responsibilities, and provide knowledge, tools, and criteria for groundwater management. Funding leverage strategy for COBINABE
1.1.2 Creation of Bermejo Basin Geographic Information Management System.	Synergies with the Geographic Information System of the State Government of Tarija will be fostered as part of the establishment of a GIS platform and satellite analysis for the Bermejo Basin hosted in COBINABE database, operating within the Bermejo Basin
1.1.3 Design and implementation of a Data-based Decision Support System (DSS) and an Early Warning System.	Under the supervision of the BMTWT: i) definition of the specifications and establishment of a DSS for the Bermejo Basin, as a planning tool harmonized with the DSS of the Plata Basin (CIC), ii) Implementation of an early warning system for floods, in areas identified as priority; iii) Implementation of a situational room with equipment, as a base for the PMU technical team; iv) Strengthen the surface and underground water monitoring network of the Binational basin.

1.1.4 Training modules on IWRM and operation and maintenance of monitoring networks, SGI and DSS.	Designs and implement specific training modules in IWRM (Integrated Water Resources Management), GIS DSS (Geographic Information System Decision Support Systems), Operation and Maintenance Systems, and Monitoring Networks for municipal/provincial technicians, and institutional staff (tailor-made). Trained technicians replicate the training modules for the civil society on IWRM, GIS, Monitoring Networks, DSS, and specific O&M for defined sub-basins. Training modules by levels of school curriculum in Integrated Water Resources Management. The beneficiaries of the training in IWRM (Integrated Water Resources Management), GIS (Geographic Information Systems), DSS (Decision Support Systems), OMS (Operation and Maintenance Systems), and Monitoring Networks will be municipal technicians in Bolivia who belong to the following departments: environment, irrigation, social development, economic and productive development, basic sanitation and drinking water, technical planning, and infrastructure. In Argentina, the counterparts will come from provinces related to technical units involved in Water Resources, Territorial Planning, Economic and Productive Development, and Hydraulic Infrastructure. It is also considered to invite departmental technicians from the corresponding units related to the specific themes of the Bermejo Transboundary Basin, and technicians designated by COREBE and OTNPB will also participate for ministerial-level coordination.

64. The Component has been designed taking into consideration the lessons learned in, and the recommendations of previous GEF interventions in the basin. It aims at expanding the mandate and reinforcing the capacity of the binational cooperation mechanism (COBINABE), in order to enable the full adoption of modern integrated approaches to managing water resources and balancing competing uses. To do so, the Component will be developed through the following activities:

65. Facilitate the countries? decision on the expansion of COBINABE?s mandate to include 1) the Lower Bermejo basin, and 2) the transboundary harmonization of the governance frameworks of the shared groundwater resources ? confined and non-confined - present at various depths in the Basin?s subsurface.

66. Foster the reform of COBINABE?s mode of operation, promoting more participatory approaches, consolidate its institutional structure introducing multi-sectoral interministerial representation, and ensure its long-term sustainability.

67. Provide COBINABE, and the countries? institutions, with new modern water and soil management tools, revamping, complementing and harmonizing existing information systems (SIG Bermejo) monitoring networks and supporting ongoing efforts to modernize the monitoring systems? hardware and protocols, decision support and early warning systems. The project will include the design and pilot field testing of modern multi-purpose monitoring networks and protocols (water quality and quantity, erosion & sediment loads, rainfall, hot spots, forest areas and others that COBINABE considers pertinent and achievable based on its new mandate and the prioritization of the updated SAP). These tools will be adopted and used by the multidisciplinary technicians of COBINABE in coordination with the technicians of COREBE and OTNPB, who collaborate with ministerial authorities to provide technical support for prioritized actions and measures to be implemented by COBINABE in the Transboundary Bermejo River Basin.

68. Prepare and implement training modules on IWRM principles and practices, and on the operation and maintenance of monitoring networks and Decision Support Systems, and their integration into the broader La Plata Basin platforms.

1.3.2.2. Component 2 - Integration of groundwater resources (barrier 2)

OUTCOME 2: Enhanced climate resilience and water security in the basin through the assessment and sustainable strategic use of the groundwater resources of the basin.	
OUTPUTS	ACTIVITIES
2.1. Assessment of the groundwater resources, and definition of aquifer conceptual models.	Consulting services to COBINABE for the characterization of aquifers, including their conceptual model, recharge and discharge zones, biophysical characterization, ecosystems dependent on groundwater, and environmental hydrogeological characterization. This should be largely, but not exclusively, based on existing information in the Bermejo Basin, integrated whenever needed by field hydrogeological and geophysical surveys, and the drilling of a limited number of exploratory wells. This information will be stored into COBINABE?s information management system.
2.2. Assessment of present uses and users of groundwater, and of existing governance frameworks (tenure, related legislation, etc.).	Consulting services to COBINABE for the characterization of water use by type, volume, frequency, rights, access, and other relevant factors, and an updated legal characterization of groundwater tenure by country, adapting possible recommendations and conclusions for future financing.
2.3 Design and pilot field testing of modern multi-purpose groundwater and erosion monitoring networks and protocols.	Consulting services to COBINABE for (i) the design and pilot field testing of groundwater and of erosion/sedimentation multi-purpose monitoring network, with one pilot network established in each country, ensuring the participation of indigenous communities and gender inclusiveness; and (ii) the definition of groundwater monitoring protocols harmonized throughout the basin. PMU will procure the automatic data collection and transmission equipment for pilot field testing.
2.4 Training modules for the strengthening the capacity of national and transboundary basin entities in conjunctive surface and groundwater management	Training modules (Diploma) developed with support of regional/international experts in conjunctive surface and groundwater management policies and practices, and implemented targeting COBINABE members, technicians, , and relevant Ministries from both countries.

69. It is the purpose of this Component is to fill the crucial gap both in terms of groundwater knowledge and in groundwater management actions, thus allowing the introduction of conjunctive surface and groundwater management options. Conjunctive use of surface and groundwater refers to the combined use and development of surface water and groundwater as a strategy for climate change adaptation, or more in general sustainable resource use. Conjunctive use strategies aim to increase the overall resilience of water

supply by utilizing both sources of water, particularly in communities and basins with limited water availability throughout the seasons. It often focuses on the advantageous role of groundwater for water storage, distribution, and treatment (through biological processes) in not only increasing water supply, but also improving water quality and distribution.

70. To achieve the expected outcome, the Component will focus on:

I. Conduct of an assessment of all groundwater resources present in the basin subsurface, including tertiary and quaternary aquifers - among them a small part of the Yrenda Toba Tariqueno Transboundary Aquifer System (SAYTT) - present at various depths in the plains of the Gran Chaco Americano, and define the aquifers? conceptual models including recharge and discharge areas, interactions with surface waters, and identification of associated ecosystems. The assessment ? based on existing information and field surveys - of the groundwater resources of the basin, will allow to integrate this invisible resource into land and water management in the basin.

II. Assessment of socio-economic aspects related to groundwater, present uses and users of groundwater, and of existing governance frameworks (tenure, related legislation, drilling standards, etc.)

III. Reinforcement of the capacity of transboundary and national basin management agencies in the protection and sustainable use of the basin aquifers and in the conjunctive management of surface and groundwater resources through as hoc training modules, and the provision of modern groundwater monitoring tools.

Groundwater in the Bermejo Basin

A) The upper basin

71. Most of the surface water resources and the main recharge of the aquifers present downstream originate in the upper basin[1]. It is characterized by mountains of considerable height with deep and narrow valleys that transition eastwards to the lower altitude pre-Andean foothills, to wide valleys and alluvial plains that present areas with high groundwater potential.

72. The physiography is very different as the topographic height decreases; with a general layout from west to east from the areas of the Altiplano, Eastern Cordillera, Sub-Andean Sierras, Sub-Andean Foothills and Alluvial Bajadas. This variety of environments causes this part of the basin to present a particular situation in terms of topographic gradient, geological and geomorphological characteristics, and distribution of hydrostratigraphic units.

73. In the upper basin there are mostly unconfined aquifers made up of quaternary sand and gravel, presenting some clayey horizons locally originating some confined aquifers. Several artesian wells are present in the San Francisco Valley hosted in the Sub-Andean tertiary and in Cretaceous formations underlying the quaternary formations.

74. The recharge of the aquifers is essentially pluvial and in some areas of permanent rivers there is an important contribution of fluvial origin, mainly in periods of flooding. Another source of recharge, is constituted by the return flows of the water used for irrigation, which represents important volumes. The pluvial feeding can be direct or by infiltration in the higher surrounding regions.

75. The depth of the groundwater is highly variable, being mostly a function of the topography. In some plain areas, the water is found at depths greater than 30 m and the valleys reach more than 50 m. In other areas there are drainage problems due to the shallow groundwater.

76. In general, the quality of groundwater, both for irrigation and for domestic and industrial use, is good. Salinity increases in the valleys of the central zone of the Upper Basin; in the Quebrada de Humahuaca the salinity is above average.

77. In the Upper Basin, of all the existing perforations, only 215 georeferenced perforations have been identified, in areas generally characterized by high population density, important industrial locations, or extensive irrigation.

B) The middle basin

78. This part of the basin is characterized by the presence of high mountains towards the west with deep and narrow valleys that decrease in elevation in the pre-Andean foothills, giving rise to wide valleys and alluvial plains that present zones with hydrogeological potential for the utilization of groundwater resources. Throughout the area, the rivers are abundant in the summer season when there are large precipitation events with significant erosive power, while they remain low-flow or dry for the rest of the year. The physiography changes significantly as the topographic height decreases, with a general disposition from west to east, from the Altiplano, Eastern Cordillera, Sub-Andean Ranges, Subandean Foothills, and Alluvial Slopes. This variety of environments results in a particular situation in terms of topographic gradient, geological and geomorphological characteristics, and distribution of hydrostratigraphic units compared to the Lower Basin. In the basin, there are unconfined aquifers composed of Quaternary sands and gravels, with some clayey horizons locally forming confined aquifers. Several artesian wells in the San Francisco and Lavay?n Valley demonstrate the existence of artesian aquifers, generally located at the base of the Quaternary, in the Subandean Tertiary, and in Cretaceous formations. Aquifer recharge is primarily from rainfall, and in some areas with permanent rivers, there is a significant contribution from fluvial sources, mainly during periods of high flow. Another source of recharge, in some areas, is the return flow of water used for irrigation, which represents significant volumes. Rainfall input can be direct or through infiltration in the surrounding higher regions.

79. The depth of the water table is highly variable and depends on the topography and proximity to surface watercourses. In some flat areas, the water is found at depths greater than 30 meters, while in valleys, it can reach over 50 meters. In other areas, there are drainage problems due to the shallow depth of the water table.

80. In general, the quality of groundwater is good for irrigation, domestic, and industrial use. The best water is found in the southwestern zone (La Caldera, Vaqueros, G?emes) and the northern zone (Or?n and Bermejo Triangle), while salinity increases in the valleys of the central area of the Upper Basin. In the Humahuaca Gorge, salinity levels are higher than average.

81. In this part of the basin, out of all the existing wells, 215 georeferenced wells have been identified, based on available information from the provinces of Salta, Jujuy, and private company databases. These areas with existing wells generally correspond to densely populated areas, important industrial locations, or extensive irrigation areas.

C) The lower basin

82. The Lower Bermejo River Basin is located in the extreme NE of Argentina. It has an elongated northwest-southeast shape, approximately 750 km long by 90 km wide in the middle sector.

83. It is made up of a small part of the eastern Jujuy province, eastern Salta, and the provinces of Chaco and Formosa, comprising both banks of the Bermejo river. To the west the limit is formed by the Sub-Andean mountain ranges of the Cresta del Gallo and the Centinela in the southern part; and the summits of San Antonio and Macueta in the northern part.

84. The Chaco Plain over which the Bermejo River flows, constitutes a large sedimentary basin with a complex geomorphological history, as a consequence of the multiple processes of erosion and accumulation developed in variable and alternating climate conditions since the ancient Quaternary. There are free or phreatic and confined aquifers with moderate pressure that generally reach the level of the former. The free aquifers are made up of Quaternary sand and gravel in the ejection cones of the Sub-Andean Sierras; sandy and clayey silts, throughout the Chaco plain; and medium to fine sands in the fluvial valleys, paleo courses and abandoned meanders. The recharge of the aquifers is almost exclusively due to rainfall.

85. The depth of groundwater in the plain areas is generally less than 10 m, reaching between 10 and 20 m to the north and south of the middle Bermejo. The general direction of the runoff is northwest-southeast, towards the Paraguay and Paran? rivers, approximately following the natural slope of the land. The hydraulic gradient is 3% to the west, in the Province of Salta, and drops to 0.2% in most of the provinces of Chaco and Formosa.

86. In the direction of the Paran? and Paraguay rivers, salinity is highly variable, with high salinity concentrations appearing in some sectors. In the Lower Basin, of the total number of existing perforations, 397 georeferenced perforations have been identified, registered according to the official information available from the provinces of Salta, Jujuy, Chaco and Formosa; and based on data obtained from private companies.

D) The Yrenda-Toba-Tarije?o Aquifer System (SAYTT)

87. In the context of the Framework Program for the Sustainable Management of the Water Resources[2] of the Cuenca del Plata and Relation to the Effects of Variability and Climate Change, they carried out a series of diagnostic work on groundwater and aquifer systems de la Cuenca, with the objective of contributing to the development of the Transfrontier Diagnostic Analysis (ADT) and the Strategic Action Program (PAE) is the most important freshwater reservoir in the South American Chaco region and one of the most significant in the South American continent. In total, the SAYTT covers a total area of about

352,000 km2, which represents approximately 40% of the area of the South American Chaco. Of this area, 57% is in Argentine territory, 34% in Paraguayan territory and 9% in Bolivian territory.

88. The SAYTT is made up of shallow unconfined aquifers and deep confined/semi-confined aquifers. The latter represent the most important in the Paraguayan and Argentine Chaco, since they store large volumes of good quality water, which can be used economically. They occur at various levels and at different depths, constituting interdigitated multi-layer systems that on a regional scale form a single hydrogeological system.

89. In general terms, it can be expressed that the large rivers that cross the Chaco plain (Pilcomayo, Bermejo, Juramento, Dulce, etc.) provide geoforms in which an aquifer system develops that from west to east go from free to confined. Its thickness is variable and can reach 200 meters.

90. Below these modern landforms, the Tertiary sediments have intervals producing freshwater and saltwater, the relationship of which is not yet clarified. On the Salta/Formosa interprovincial boundary (on the Argentine sector) there is a recently discovered freshwater aquifer between 325 and 385 meters deep, below a sequence of saltwater intervals. This situation is an extremely encouraging indication as an indicator of fresh water in deep aquifer layers.

91. Cross section from the Andes? foothills to the Paraguay River, showing the distribution of groundwater in the SAYTT Aquifer Systems.

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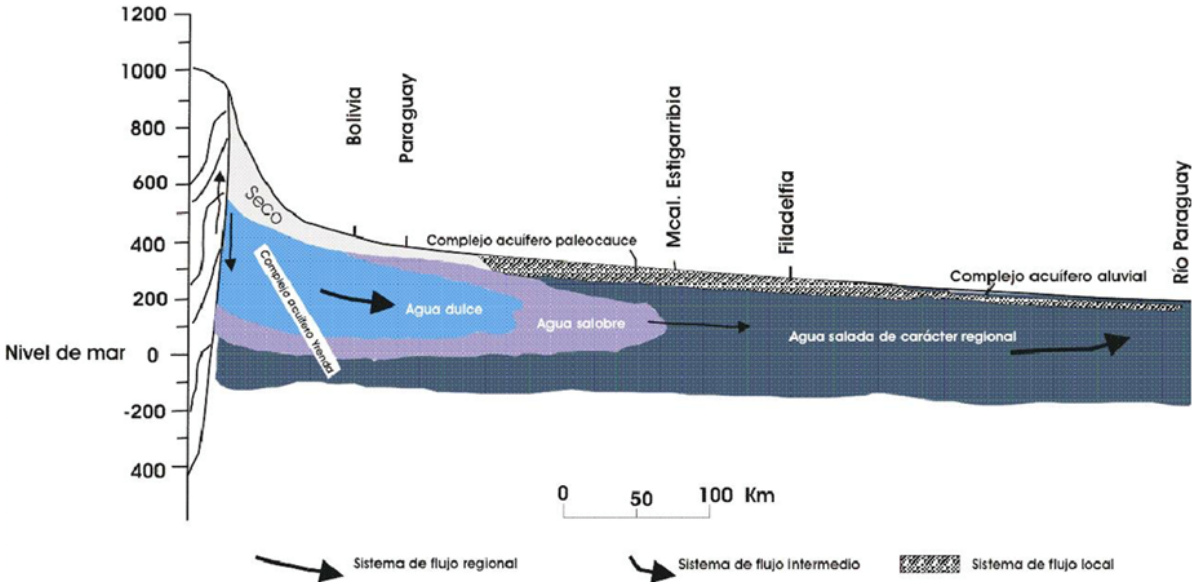
[1] Evaluation of subterranean water resources for agricultural production. COBINABE-UCAR- 2015

[2] Framework program for the sustainable management of water resources of the Cuenca del Plata, Subterranean Waters and the Cuenca del Plata December, 2016.



92. Groundwater resources have not so far been considered in any of the previous efforts to introduce sustainable water and soil management practices in the Bermejo Basin, either at the national or transboundary levels. In fact, the importance of groundwater within the context of basin management has only recently been fully recognized with the realization that *only integrated water management approaches, considering all existing water resources**[1]**: surface and groundwater, conventional and non-conventional, can lead to long-term sustainability and enhance resilience to climate variability and change*.

The three Rs: Groundwater and Climate Change Adaptation

Recharge - By adding water to the system, aquifer recharge contributes to water circulation. Recharge can come from the interception of rain and run-off water (natural recharge), from increased infiltration of natural processes by manmade interventions (managed aquifer recharge ? MAR) or can be a by-product of some other factor (i.e. inefficient irrigation or leaking pipes in water supply systems). There is a need therefore to manage natural recharge, apply artificial recharge and control incidental recharge.
Retention - Retention slows down the lateral flow of groundwater. This helps pond up groundwater and create a large wet buffer in the subsoil. Under such conditions, it is easier to retrieve and circulate water. With retention, the groundwater table is heightened. This has led to improved yields of rain-dependent agricultural areas. Some argue that in some cases it is better to control soil moisture from below than to provide surface irrigation water from above because of lower losses through evaporation and less development of salt crusts on the topsoil.
Reuse - The biggest challenge is making water revolve as much as possible. Scarcity is resolved not only by managing demand through reduction in use, but also by keeping water in active circulation. Two processes are important in managing reuse. The first is *management of (non-beneficial) evaporation*. Water that evaporates ?leaves? the system and can no longer circulate within it. The second process is *managing water quality*. The possibility for reuse depends on the quality of the water, with different functions putting different demands on the water quality.

1.3.2.3. Component 3 - Priority reforms and investments (barrier 3)

OUCOME 3.1: Strengthened countries? commitment to the implementation of priority reforms and investments agreed in the Strategic Action Program	
OUTPUTS	ACTIVITIES
3.1.1 Updated TDA of the basin, aimed at identifying critical emerging transboundary issues, and including the consideration of future climate variability scenarios.	The BMTWT, with the support and guidance of the PMU and of international experts, will conduct an update of the existing TDA, complementing it with particular focus on climate variability and climate change, linked ecosystems, corridors and protected areas, and on gender and indigenous peoples and other critical emerging transboundary issues.
3.1.2 Updated SAP, identifying the critical priority reforms and the investments needed to address degradation trends in the basin	The BMTWT, with the support of the PMU and of international experts, and in collaboration with Inter-ministerial Committees of the two countries, will facilitate countries? agreement on a new Strategic Action Program based on the findings of the updated TDA, and submit it for endorsement by relevant ministers.

endorsed at the ministerial level by the two countries	
3.1.3 Bankable projects defined for each priority investment agreed upon in the SAP, based on technical-economic pre-feasibility studies including identification of financing mechanisms and possible public and private sources.	Prefeasibility/feasibility studies of the prioritized investments identified in the PAE and search for possible sources of financing that make their implementation viable, through a financing strategy for the binational basin.

93. The Component responds to two main needs that countries have identified as critical for the future sustainability of water and related ecosystems in the basin:

I. Updating of the 1999 TDA considering: (i) newly acquired knowledge on the basin?s present environmental and socio-economic conditions, taking into consideration all aspects relevant for the integrated management of the land and water resources of the basin ; (ii) the hydro-morphological processes presently active in the basin; (iii) the quality, quantity aspects of the groundwater resources of the basin and the conjunctive surface and groundwater management

options; (iv) the likely future climatic scenarios; (v) gender roles and equality issues in water supply and management; (vi) issues related to indigenous peoples and more vulnerable communities.

II. Agree upon and accelerate the needed reforms and investments: Based on the above diagnostic, countries - with the support of the PMU and of selected experts - will agree upon a new SAP. This process will take advantage of the lessons learned, successes and failures, of the previous IW interventions in the Basin (1997-2009), and will be conducted under the leadership of COBINABE and of *ad hoc* Interministerial Committees, through the implementation of a Multi Stakeholder Dialogues that will foster regional transformational change, and will strengthen the engagement of private sector actors, from small-holder farmers to private financial institutions. The SAP will consider the whole transboundary basin, promote the adoption of integrated approaches (IWRM), and include for the first time groundwater resources, shallow and deep seated. It will be articulated into two main lines of action:

- Implementation of the legal, institutional, legislative reforms deemed necessary for creating the enabling policy and institutional environment for strengthening transboundary cooperation frameworks, the implementation of IWRM, including conjunctive surface and groundwater management, and for promoting gender equality and water security for all.

- A limited number of investments - coordinated and harmonized at the transboundary level - considered by the two countries as critical for addressing transboundary issues of concern, and reversing environmental degradation trends.

94. Among the **reforms,** the following might be considered:

Adoption by Basin transboundary and national agencies of integrated approaches, participatory processes[1], and harmonized standards in the monitoring and management of the Basin of water and soil resources.

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[1] The Basin Management Plan of the Guadalquivir river will represent a replicable model.

Basin-wide harmonized policy and legislative reforms related to protection and sustainable use of groundwater resources;
Definition and adoption of policies to enhance participation in water management of women and of indigenous people.
Enhancement of measures for the protection of freshwater ecosystems and biodiversity, including consideration of traditional knowledge and practices.

95. **Investments** could fall under the following categories:

? Monitoring, DSS and early warning systems harmonized across the two countries and integrated into the broader Plata basin monitoring efforts.

? Environmentally sustainable farming, fish farming, aquaculture, forestry and livestock husbandry practices;

? Infrastructure for erosion control and sediment management (sand dams, etc.);

? Multi-purpose hydraulic infrastructure (e.g.: the dams Las Pavas and Arrazayal on the Bermejo River, and Cambar? on the Grande de Tarija River)

? Managed aquifer recharge.

? Promotion of sustainable production activities and natural resource management in indigenous and native communities.

96. Once the highest priority investments will have been identified, technical-economic pre-feasibility / feasibility studies, including identification of financing mechanisms other than GEF and of possible public and private financing sources, will be conducted.

Bankable Projects

Feasibility/prefeasibility studies play a critical role in project financing, as they provide lenders and investors with the necessary information to assess the project's bankability. These studies enhance transparency, minimize risks, and improve decision-making, increasing the likelihood of obtaining financial support for the project. Financial institutions often rely on the findings of a bankable feasibility study to evaluate the project's potential returns, repayment capabilities, and overall financial soundness. The credibility and comprehensiveness of the study contribute to building trust and confidence among potential investors, facilitating the negotiation of favorable financing terms. Moreover, a bankable feasibility study acts as a communication tool between project sponsors and financial institutions. It enables project sponsors to effectively convey the project's value proposition, potential risks, and mitigation strategies to potential lenders and investors. The study helps align expectations, establish a shared understanding of the project's bankability, and foster collaborative partnerships. In addition to attracting investment, a bankable feasibility study also aids project sponsors in making informed decisions about project design, implementation strategies, and risk mitigation. It acts as a roadmap, guiding the project's development, and ensuring a solid foundation for success.

97. It has now become apparent that opportunities to slow or reverse the basin?s negative trends in land and water degradation while meeting poverty alleviation and ecosystem protection goals do exist. They include: 1) integrated land and water management ? including conjunctive surface and groundwater management - in smallholder systems to improve water supply and productivity and provision of environmental functions including food supply (e.g.: sand dams); 2) larger scale biophysical, social, and policy approaches for preserving landscapes that can enhance positive impacts of intensification and go beyond ?up-scaling?; 3) productive use of low quality waters to close large gaps in nutrient cycles and slow or reverse trends in land degradation and water pollution. These strategies could help

reverse land and water degradation, and intensify agricultural systems in a way that is sustainable and compatible with the needs of nature and society for environmental functions, including food production, clean water, biodiversity, carbon sequestration, and resilience to climate change.

A **sand dam** is a reinforced stone masonry wall (or a similarly robust and impermeable weir) built across a seasonal riverbed and is one of the world?s lowest-cost rainwater harvesting solutions. They are a simple, low cost and low maintenance technology that provide an improved, year-round, local water supply for domestic and farming use and are widely suited to the world?s drylands. Seasonal rains quickly fill the dam with water containing soil. The soil is made up of silt and sand. The heavier sand sinks behind the dam, whilst the lighter silt remains suspended in the water and is carried over the dam and downstream. Sand accumulates until the dam is completely full of sand up to the spillway. Water is stored within the sand, making up 25?40% of the total volume of the aquifer. The sand filters the water and the lack of open water surface reduces contamination and evaporation and prevents water borne parasites such as mosquitoes from breeding.

Managed Aquifer Recharge

98. Managed aquifer recharge[2] (MAR) can increase the value of water resources by transferring surface water in times of abundance to add to groundwater storage and thereby conserve water. This replenishes depleted groundwater and avoids evaporative losses; salinity increase and possibilities for blue green algal blooms if the water had been retained in surface reservoirs. *The surface waters used for managed aquifer recharge may include natural waters from catchments, urban stormwater, water recycled from treated sewage effluent, desalinated water from brackish aquifers, and suitably treated industrial effluents.* There is ample guidance on protecting human health and the environment for managing aquifer recharge operations. However, guidance on policies to account for MAR in water resources management is embryonic and institutional arrangements are rare (a notable exception being the Arizona Water Bank). In semi-arid areas recharge is generally in the monsoon or wet season and recovery occurs in the dry season. Aquifers that are already depleted make excellent storage targets because there can also be environmental benefits in replenishing such aquifers. However care is needed to ensure that groundwater replenishment is not at the expense of surface water ecosystems and water users downstream. It is possible to map the opportunities for managed aquifer recharge based on hydrogeological characteristics. Such maps should be used as a screening method to ascertain the prospects more generally. To assess possibilities in a particular area more detailed local information will be necessary and if information is sparse, further hydrogeological exploration may be necessary before committing to recharge projects and strategies.

1.3.2.4. Component 4 - Stakeholders engagement and awareness raising (barrier 4)

OUTCOME 4: Systematic stakeholders? engagement in project activities, improved public awareness and access to information, and involvement of the productive sector, foster the achievement of the project?s outcomes and the broader commitment to the implementation of SAP reforms and investments

OUTPUTS	ACTIVITIES
4.1.1 A citizen participation and environmental education program involving all key actors in the basin, gender balanced and including indigenous communities.	1. Establish workshops, training sessions, dialogues and exchange of experiences with gender-inclusive, intergenerational, and indigenous community participation, focusing on environmental awareness and environmental functions and the preservation of ancestral knowledge in harmony with the basin. This initiative will be carried out in coordination with COBINABE 2. Foster and facilitate the active participation of key players in the basin and indigenous communities, providing inputs for the decision-making processes related to the Bermejo Basin. To do so, the project will consider amongst others replicating experiences and models tested as part of the Interinstitutional Platform of the Guadalquivir Basin.
4.1.2 Mechanism and procedures for the participation of civil society organizations in overseeing environmental management together with governmental Basin agencies.	1. Strengthen the institutional framework of COBINABE by involving to a platform of key actors of the basin in both countries in its decision-making processes and activities. 2. Create spaces for the exchange of experiences among civil society organizations to promote the replication of implemented measures and actions. These spaces will facilitate the sharing of lessons learned, best practices, and successful approaches, fostering collaboration and knowledge transfer among different stakeholders.
4.1.3 Round table aimed at periodically engage representatives of the productive sector in the TDA-SAP update process.	The PMU will support COBINABE in the organization of periodic (at least annual) ?round tables? to involve in the TDA/SAP process representatives of the productive sector, and share knowledge and best practices related to the Bermejo Basin.
4.1.4 Annual stocktaking meetings, with broad participation of stakeholders, media, academia, donors and financial institutions, for disseminating and exchange the project progress, and its impacts, to coordinate with other relevant initiatives, and present the final agreed upon SAP.	1. The PMU and COBINABE will organize Annual Stocktaking Meetings with broad participation of stakeholders, and prepare annual communication and dissemination of updates on the execution of activities, adjustments made, and the action plan for the following year. These communications will provide transparency, accountability, and a roadmap for future actions. A major objective of the annual meetings will be the achievement of effective coordination and the facilitation of exchanges with other relevant ongoing or planned activities and projects in the basin.
4.1.5 Creation of project website and online communication platform, and active participation to IW: LEARN activities and events (1% of the total GEF grant)	It will be designed and will establish a project website that will serve as a center hub for sharing project information, documents, reports, and other topics of interest to the basin within the framework of COBINABE. It will facilitate access to information for interested parties and promote transparency in the project's activities. The website will be linked with, and populate the International Waters (IW:LEARN) platform of the Global Environment Facility (GEF), showcasing the progress made in the Bermejo Basin. The project will be represented at the biannual GEF IW Conferences.

99. Activities implemented under this Component will be aimed at disseminating newly acquired knowledge, and lessons learned, promoting systematic stakeholders? engagement and gender mainstreaming in all project activities, improve public awareness and access to information in formats suitable for socialization and dissemination, fostering broader commitment to the implementation of SAP reforms and investments, and monitoring progress to impacts. Activities will run in parallel with other components throughout the duration of the project.

100. Through these activities, the Component will (i) improve access to information and understanding of the Basin?s waters environmental functions and related hazards through gender balanced public participation and environmental education programs, with emphasis on indigenous communities; accessing on a printed and digital educational materials for dissemination such as: Brochures, training guides, manuals and booklets containing relevant information on sustainable practices, environmental conservation and management of natural resources in the Bermejo basin. (ii) enhance the role of civil society organizations and of the productive sector in environmental management of the basin; (iii) maintain awareness at the governmental and the public levels on the project progress and achievements; (iv) present to donors, development banks and other IFIs identified in the financing strategy, reforms and priority investments agreed by countries; (v) coordinate actions with other ongoing initiatives in the La Plata Basin; (vi) disseminate through the IW LEARN network the project?s achievements and lessons learned.

101. Within the framework of citizen participation and environmental education, due to the territorial extension of the four provinces in Argentina and the presence of vulnerable populations and indigenous peoples, it is estimated that the project will reach more than 2000 families trained/consulted. In Bolivian territory, the territorial extension is smaller, however, grassroots organizations and peasant and producer associations are very well structured with representation at the level of the nine municipalities of the department of Tarija and the project aims to reach at least 1500 beneficiary families with training in environmental education and citizen participation in decision-making. This means that the project in the Bermejo River Basin will have a minimum interaction with 3,500 beneficiary families.

102. The Annual Stocktaking Meetings (ASMs) are one of the milestone activities of the Component 4. They are major regional events aiming to establish synergistic interactions with relevant ongoing initiatives and stakeholders, and exchange on project progress. The ASMs will be an occasion for face-to-face knowledge exchanges, south-south and north-south learning, and promotion of the broader adoption of the project?s approaches and solutions. Project management, stakeholders and beneficiaries will have the opportunity to learn from each other, tap into respective tacit knowledge, and at the same time benefit from experiences and expertise generated by other ongoing relevant initiatives. The participation of national and regional media will raise public awareness across the Basin countries and beyond.

103. The meetings will involve: Governments of the participating countries, the implementing and executing agencies, COBINABE, the GEF Secretariat and Independent Office of Evaluation (IOE), UNCCD Convention Secretariat, as well as representatives of the productive sector and of indigenous peoples, and relevant ongoing projects and initiatives.

104. The Project will closely collaborate with the GEF International Waters Learning and Resource Exchange Network (IW:LEARN) Project to facilitate uptake of lessons learned and knowledge exchange within the GEF IW portfolio. A project website will be established following IW LEARN standards, cooperation in the following activities will be particularly addressed:

- ? Participation to the GEF International Waters Conferences (landmark biannual events of the IW portfolio).
- ? Production of Experience Notes (short case studies) produced by the project to showcase worthy results and disseminated through IW:LEARN channels. The format of Experience Notes is standard (https://iwlearn.net/documents/experience-notes).

105. Annual monitoring reports will be submitted on the co-benefits of the project and its contribution to the SDGs.

Gender perspective as a cross-cutting approach in the project strategy.

The incorporation of the gender perspective to close the gaps and increase access and control over natural resources is based on the fact that the actors participating in the workshops have identified 3 aspects where it is necessary to improve the participation of women, improve their empowerment and close the gaps with respect to men, these were in order of importance:

- The sustainable management of the watershed from which families source water for various uses, mainly for: human consumption of drinking water, food security with irrigation and a healthy river for fish habitat for fishing.
- Maintain water quality for the above uses, with respect to the potential for contamination from activities in the upper, middle and lower basin,
- The third, closely related to the Project, are the policies, plans and projects linked to IWRM in the Basin, where greater participation of women is required, due to the little incidence they have today in the multiple activities related to water.

For a sustainable change in the integrated management of the Basin led by COBINABE that considers closing the gaps described in the Project, the following actions will be included transversally in the four components so that women can have equal access to the services and benefits of the Basin, involved in the governance process of COBINABE, the information systems, the updating of the TDA/SAP, the prioritisation of investments and the management of their benefits:

a. Build capacity of men and women to enhance their cooperation on IWRM and related issues for equal access to services and benefits from the Basin,

b. Strengthen women's participation in sectors where they already participate and have an impact to increase alignment and harmonisation of outputs and outcomes in investment plans and projects,

c. To increase the participation of women in decision-making spaces in the different management mechanisms of the Basin, for which the Project will train and empower them with information, thus advancing gender equality,

d. Data, information and research will be available in the governance and access instances for women and men to understand and act on access, control and benefits between men and women to water resources in the Basin and the equal use and care.

e. Ensure that the whole process of strengthening COBINABE and its governance parts throughout the Basin includes women's participation, as well as policy and investment decisions are accountable for equal participation and benefits for men and women, by including gender-sensitive and sex-differentiated gender-sensitive indicators in the updated SAP and projects.

d) **Alignment with GEF focal area strategies**

106. The objectives and interventions of this project are consistent with the GEF Strategy on the International Waters GEF-7 programming directions, in particular with objective 3: Enhancing water security in freshwater ecosystem.

107. The project interventions are specifically most relevant to three strategic actions under this focal area, namely:

? **IW-3-5:** Enhance water security in freshwater ecosystems through advance information exchange and early warning;
? **IW-3-6:** Enhance water security in freshwater ecosystems through enhanced regional and national cooperation on shared freshwater surface and groundwater basins
? **IW-3-7:** Enhance water security in freshwater ecosystems through investments in water, food, energy and environment security

108. In addition, the project will also contribute to the GEF Biodiversity focal area through assisting with strengthening the protection and restoration of groundwater dependent ecosystems, as well as land and soil restoration. The project will strengthen the cooperative management of the Bermejo Basin freshwater resources through appropriate measures following the GEF IW methodological approach.

e) Incremental/additional cost reasoning

109. The transboundary Bermejo Basin represents an environmental and social territorial system which is rather unique both within South America and globally, in terms of (i) geography, as it spans, within less than 1000 km, from the high Andes down to the semi-arid Gran Chaco plains, (ii) active geomorphological processes which control one of the highest fluvial sediment transport in the world, and (iii) of poverty and important settlements of indigenous peoples. This area is also highly vulnerable to climate change with very limited capacities of adaptation of the populations. Water is the critical resource both as an erosion agent and as the indispensable element of environmental and social sustainability. Incremental GEF funding - which leveraged co-financing with a 1:7 ratio - is intended to be catalytic in reversing the environmental degradation trends in this transboundary basin by consolidating cooperation between the two riparian countries, taking stock of past experiences and of emerging priorities and issues of concern, and assist countries in focusing on critical and feasible remedial actions, thus creating the enabling environment for the implementation of coordinated priority reforms and investments aimed at introducing conjunctive management of surface and groundwater, control erosion and sediment transport and popularize sustainable land and water use practices among the population of the Basin. Nothing of all this will happen without the GEF intervention.

f) Global environmental benefits

110. The project is clearly in line with the achievement of the indicative targeted contributions to global environmental benefits (measured through core indicator 7 and sub-indicators): it will improve the cooperative management of a transboundary freshwater ecosystem, the Bermejo basin; will update the TDA and the SAP; will consolidate the legal agreement for transboundary cooperation; will identify key national reforms with the support of inter-ministerial committees; will actively participate to IW LEAERN activities.

111. In addition, the project aims to produce global environmental benefits that fall into the category of adaptation to climate variability and change.

These benefits will be accrued through the increased availability of good quality and climate independent freshwater that the integration of groundwater resources into the Basin water resources management and the adoption of conjunctive surface and groundwater management practices will produce.

112. The project will emphasize cross-sectoral, integrated ecosystem approaches that rely on consultative processes and provide a basis for basin-wide water and soil resources management agreements and processes.

113. The project fills a gap in present approach to water management in the region.

114. To maximize the ability of the project to produce global benefits, its design includes elements that will emphasize the benefits that increased transboundary cooperation will bring about. In particular: in the area of natural resources management, this project will promote a coordinated and integrated approach to mitigate/prevent environmental degradation from unsustainable use and mismanagement of water and soil resources.

115. The strengthened transboundary cooperation mechanism that will be set up under Component 1 (COBINABE), will promote appropriate allocations among competing uses, equitable distribution of benefits and burdens and community participation in addressing sustainability in water resources management.

116. The number of low-intensity beneficiaries hence coincides with the total number of the basin?s inhabitants, of which approximately 50% are women. Direct or high intensity beneficiaries, that is the indigenous communtities of the Upper basin, have been estimated in 130.000 people. Additionally the project will promote women empowerment and indigenous people engagement, in the areas of land and water management, governance, and policy development.

117. **Co-benefits:**

Prerequisites

Facilitating sustainable management of natural resources (water), systemic surface - groundwater approach, promoting appropriate allocations between competing uses, equitable distribution of benefits and burdens, improving water security, increasing resilience of vulnerable people, improving participation, equality and inclusion of women, youth and indigenous peoples and local communities, skills, strengthening technical and technological capacities for sustainable development, promoting improved access to water service. Create favourable conditions for regional productive development, mobilise new sources of financing.

Incidental

Strengthen urban and ecological resilience, reduce freshwater pollution, improve food security, improve human health, improve quality of life, improve education. Strengthen local productive activities - agriculture, fisheries, livestock -.

Monitoring and measurement

Monitoring and measurement of co-benefits will be carried out considering the stakeholder engagement plan and, to the extent applicable, the methodology defined by the 2023 Agenda for Sustainable Development, through its indicators: 1. No poverty, 5. Gender equality, 6. Clean water and sanitation, 12. Responsible consumption and production, 17. Partnerships to achieve the goals

Annual monitoring reports will be submitted on the co-benefits of the project and its contribution to the SDGs under components 4 and ?tem benefits of the project.

g) Innovation, sustainability and potential for scaling up

118. **Innovation:** The project will develop a Strategic Action Plan for the integrated water resources management in the transboundary Bermejo Basin. For the first time in the region, within the context of river basin management full consideration will be given to groundwater resources, aquifer management, and conjunctive surface and groundwater management options. This approach, novel to the region, will be reflected in the conduct of the update of the TDA and SAP (Component 3), and in the institutional strengthening at the transboundary, national, and provincial levels (Component 1 and 4).

119. Another innovative aspect is represented by the introduction in the SAP of technical and socio-economic prefeasibility studies of the priority investments included in the SAP, together with the tentative identification of funding sources. It is expected that this approach will accelerate the actual implementation of the SAP recommended actions.

120. **Sustainability:** The project's interventions are consistent with each country's water sectoral priorities (Interministerial Committees) with a particular emphasis on capacity building, both for institutional actors and for community and local actors. This aims to guarantee the ownership of the project's achievements and outcomes by the stakeholders. Key for the future sustainability of the Basin water resources will be (i) the success of the project in facilitating the expansion and consolidation of the mandate of COBINABE, providing it with the technical tools necessary for implementing IWRM and coping with climate change related water hazards, and (ii) The success of the technical-economic pre-feasibility / feasibility studies of major SAP investments, that will include the identification of financing mechanisms other than GEF and of possible public and private financing sources.

121. **Potential for scaling up:** The project outcomes have the potential to be scaled up in three ways: 1) the updated Bermejo SAP will be a component of the broader La Plata basin SAP and if

implemented, will reflect its impacts on the overall health and sustainability of the La Plata basin and its ecosystems. 2) The application of conjunctive surface and groundwater management in the Bermejo Basin, will be a first step towards its full application to the entire la Plata basin. 3)The project aims to facilitate and accelerate SAP implementation by producing prefeasibility studies and identifying potential funding sources for main investments foreseen in the SAP. This innovative feature, that will be tested for the first time in the proposed project, might be replicable in the context of the Plata Basin SAP implementation, and beyond, in other IW projects globally.

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[1] Atmospheric water, ice and snow cover, surface water, groundwater, soil water, water in the human water use chain and wastewater are all interconnected within the hydrological cycle.

[2] For more information about MAR methodology, please, consult:
http://www.zaragoza.es/contenidos/medioambiente/onu/968-eng-v4.pdf

http://www.bebuffered.com/

1b. Project Map and Coordinates

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

-21.82158572	**-64.99727757**
-23.82530965	**-65.38557338**
-26.17445026	**-58.17521887**
-23.844177	**-61.941305**
-25.571192	**-60.758285**

1c. Child Project?

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

2. Stakeholders

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

Civil Society Organizations Yes

Indigenous Peoples and Local Communities Yes

Private Sector Entities

If none of the above, please explain why:

Public participation is an integral feature of the proposed project. Civil society, governmental entities (having municipal, prefectural/provincial, federal, and international interests) and indigenous communities, have all been informed through COBINABE, had some level of direct participation in the consultation processes that led to the formulation of the PIF, and to the preparation of the Project Document. Stakeholder participation has been built into project formulation, including community-based environmental information and education campaigns, and training courses to increase the capacity of institutions, personnel, and individuals to undertake activities and adopt policies and practices consistent with TDA findings and aligned with SAP informing principles and priorities.

Governmental national and provincial Institutions will participate to the execution of the project through their representatives in the national (COREBE and OTNPB) and transboundary (COBINABE) basin management bodies. They will also be directly engaged in the Annual Stocktaking Meetings, in the negotiations of the expanded scope and mandate of COBINABE, and will interact during SAP preparation through the Inter-Ministerial Committees.
Non-governmental entities, indigenous people[1] and local communities will have a role in the preparation of the SAP update and will actively participate to activities related to outputs 4.1, 4.2 and.4.3, aimed at (i) familiarize them with environmentally sustainable development policies and practices tailored to the region physical and socio-economic context; (ii) introduce mechanisms for the systematic participation of civil society in the oversight to the basin management operations; and iii) strengthen the involvement of the productive sector, from smallholder farmers to enterprises, to basin management processes. Representatives of civil society will also be invited to participate to the annual Stocktaking Meetings
Representatives of the national and international scientific community, will have an important role in project execution, as they will form the project?s Scientific Advisory Panel (see section 6, Coordination).

[1] The project implementation will adhere to the GEF Principles and Guidelines for Engagement with Indigenous Peoples.

Please provide the Stakeholder Engagement Plan or equivalent assessment.

122. Meetings and consultations with stakeholders were held in several provinces of Argentina, including face-to-face meetings in Salta and Jujuy, and virtual sessions in Chaco and Formosa, as part of the national electoral process. In Bolivia, an important workshop was held with the participation of representatives of public and private institutions, municipalities and associations of the rural population within the scope of the project. The events revealed a high level of anticipation and motivation among participants to actively contribute to the project. See Stakeholder Participation Plan. In, Annex 6 of the Plan for Analysis, Consultation and Gender, Indigenous Peoples and Vulnerable Populations was presented, reflecting the different meetings, consultations and multi-stakeholder workshops held in the PRODOC phase with photographs and lists of participants.

N.	**Stakholders consulted in Argentina**
1	Directorate of Coordination of the Binational Commissions of the La Plata Basin (DICOR) ? Ministry of Foreign Affairs
2	COREBE
3	Undersecretary of Planning and Operational Management of Water Projects of the SECRETARIAT OF INFRASTRUCTURE AND WATER POLICY of the MINISTRY OF PUBLIC WORKS
4	Water Resources of the provinces of Jujuy, Salta, Formosa and Chaco
5	National Water Institute (INA)

6	National Institute of Agricultural Technology (INTA)
7	National Institute of Industrial Technology (INTI)
8	Ministry of Women, Gender and Diversity
9	National Meteorological Service (SMN)
10	National Institute of Indigenous Affairs (INAI)
11	Provincial Water Authority (APA)
12	Chaque?o Aboriginal Institute (IDACH)
13	Provincial Institute for Urban and Housing Development (IPDUV)
14	Undersecretary of Environment and Biodiversity.
15	Ministry of Environment and Sustainable Territorial Development
16	Undersecretary of Natural Resources, Management and Environmental Quality
17	Provincial Water Coordination Unit (UPCA)
18	Aboriginal Communities Institute (ICA)
19	Ministry of Environment and Climate Change
20	Provincial Directorate of Water Resources
21	Directorate of Strategic Planning and Environmental Projects
22	Forest management and land use management Directorate
23	Secretary of indigenous peoples
24	Secretariat for Women, Gender and Diversity
25	Secretariat of Water Resources
26	Ministry of Environment and Sustainable Development
27	Provincial Institute of Indigenous Peoples of Salta
28	Institute for Social Development and Human Promotion (INDES)
29	Organization of Nations and Indigenous Peoples of Argentina OPINOA
30	ADESAR (Association for Regional Health Development)
31	Indigenous communities of the municipality of Humahuaca- Province of Jujuy

32	Wichi ?anduty indigenous community of La Uni?n-Rivadavia Banda Sur.
	Stakholders consulted in Bolivia
1	Ministry of Foreign Affairs / VRE
2	Directorate of Transboundary International Boundaries and Waters
3	National Technical Office for the Pilcomayo and Bermejo Rivers (OTN PB)
4	Ministry of Development Planning
5	Vice Ministry of Water Resources and Irrigation (MMAyA)
6	General Directorate of Planning (MMAyA)
7	Vice Ministry of Potable Water and Sanitation (MMAyA)
8	Vice Ministry of the Environment (MMAyA)
9	SENAMHI
10	SERNAP
11	National Museum of Natural History
12	Departmental Autonomous Government of Tarija
13	Autonomous Municipal Government of Bermejo
14	Autonomous Municipal Government of Padcaya
15	Autonomous Municipal Government of Uriondo
16	Autonomous Municipal Government of Tarija
17	Autonomous Municipal Government of San Lorenzo
18	Autonomous Municipal Government of Entre R?os
19	Autonomous Municipal Government of Carapari
20	Autonomous Municipal Government of El Puente (partial)
21	Autonomous Municipal Government of Yunchar? (partial)
22	Federation of Peasants of Tarija Entre R?os, Padcaya, Uriondo and Bermejo
23	Subcentral of peasants of Tarija, Entre R?os, Padcaya, Uriondo and Bermejo
24	Community representatives from Tarija, Entre R?os, Padcaya, Uriondo and Bermejo

25	Padcaya Water Committee
26	ADRAP
27	Mujeres en Acci?n - Tarija
28	Municipal Organization of Women's Associations PADCAYA
29	ASOGAPA-Padcaya Livestock Association
30	APROLPA-Association of Milk Producers of the Arce Province
31	Union Federation of intercultural communities originating from Tarija
32	Union Federation of Intercultural Communities originating from Bermejo
33	Padcaya Agricultural Substation
34	Central Farmers San Lorenzo
35	Women's Organization, Juana Azurduy de Padilla
36	Central Farmers Province Cercado -Tarija
37	Federation of Farmers Bermejo
38	Central Farmers Uriondo

123. The purpose of the Stakeholder Engagement Plan is to ensure effective and sustainable decision-making, which takes into account the perspectives, needs and concerns of all the groups linked to the project throughout its implementation, optimizing resources and generating alliances and synergies between stakeholders, vulnerable populations and decision makers.

124. Effective stakeholder engagement promotes country ownership by forging stronger partnerships, especially with civil society, indigenous peoples, communities and the productive sector, and by leveraging the knowledge, experience and skills of individuals and interested groups.

125. The objective is to ensure stakeholder participation to improve the multi-level governance, transparency, accountability, integrity, effectiveness, and sustainability of project governance and operations, including strengthening the design and implementation of GEF-financed activities, addressing risk reduction and the social and economic needs of affected parties.

126. This Stakeholder Engagement Plan is based on the stakeholder consultation activities carried out during the preparatory phase of the project, and is in accordance with the GEF Policy on Stakeholder Engagement, the GEF Guidelines on the Implementation of the Policy on Stakeholder Engagement, and the STAP Multilateral Dialogue for Transformational Change.

127. Stakeholder engagement involves individuals, communities, and institutions from the initial planning stages to the final implementation and evaluation of the project. This was achieved through open communication, consultation, feedback and concerted decision-making from COBINABE. Public participation in the management of water resources is an integral feature of this project, and is characterized by:

? Active Participation: It will seek to involve key stakeholders in a proactive and continuous manner at all stages of the project. This ensures that their perspectives, knowledge and concerns are considered and taken into account in decision making.

? Transparency: The project seeks to promote transparency in the decision-making process, ensuring that all stakeholders have access to relevant and understandable information about the project.

? Consensus Building: Seeks to establish an environment conducive to consensus building and conflict resolution. Stakeholders may have different points of view, interests and needs, so it is important to facilitate collaboration and the search for mutually acceptable solutions.

? Sustainability: The stakeholders participation contributes to the long-term sustainability of the project. By engaging key stakeholders, risks, challenges and opportunities can be more effectively identified and addressed, and enhance sustainability of project results.

128. Stakeholder participation will be a key factor within the framework of the Project's strategic intervention, and in general, it will be promoted in formal and informal spaces through i) timely and transparent access to information on project execution; ii) involvement in the project (eg, Updating of the Transboundary Diagnostic Analysis document and the Strategic Action Plan) iii) participatory dialogue and consensus building mechanisms; iv) programming of training sessions and meetings, adapted to the schedules of men and women; v) training, meetings and workshops, as much as possible, in indigenous dialects; vi) capacity building to promote the empowerment and ownership of project participants, as well as the sustainability of project results.

129. The diverse group of stakeholders existing in both countries and the geographic location in the basin mean that there are different interests, levels of education in the sector, cultural norms and values, so different approaches must be used to communicate with different stakeholders.

130. This project will endeavor to involve the productive sector ? small and medium-sized farmers, landowners and specialized companies - in the evaluation of sustainable management practices related to forest conservation and restoration, forage management, sustainable practices for agriculture subsistence and erosion control and sediment transport. A specific mechanism for productive sector engagement within Component 4 is the "Round Table" aimed at periodically involving representatives of the productive sector (private companies, landowners and farmers), in the evaluation of groundwater, and in the process of updating the Strategic Action Plan and the Transboundary Diagnosis Analysis, which will guarantee the participation of the productive sector in the negotiations of the Strategic Action Plan and its participation in the replication of sustainable management practices and technologies.

131. To this end, the Strategic Action Plan will include considerations to provide incentives and guidelines to offset the risks associated with investments in expanding such practices. Finally, the project will strive to overcome likely resistance from the productive sector to sharing subsurface data necessary for the integration of groundwater into basin management, and which are crucial for the assessment and diagnosis of groundwater resources in the Bermejo basin.

132. The project seeks to provide a planning framework to promote and catalyze the implementation of actions identified in the Strategic Action Plan, through the articulation of specific areas of target investment that involve governmental, non-governmental and private groups that can productively interact with regional and international development banks and technical assistance agencies.

133. In the implementation of the project, the stakeholders will be convened throughout the implementation process according to the stakeholder?s engagement plan. Once the operational work plan of the project has been adjusted, the process of dissemination and consultation for the implementation of the project will start initially at the level of organisation, articulation and management of information with contact lists and management of horizontal lines of communication with COBINABE. Consultation and participation are planned to be carried out through:

- Citizen participation and environmental education programme involving all key stakeholders in the basin, with gender balance and including indigenous communities.
- Mechanisms and procedures for the participation of civil society organisations in the supervision of environmental management together with the Basin's governmental bodies.
- Mechanisms and procedures for the participation of civil society organisations in the monitoring of environmental management together with Basin government agencies.

- Annual stocktaking meetings, with broad participation of stakeholders, media, academia, donors and financial institutions, to disseminate and exchange project progress and impacts, to coordinate with other relevant initiatives and to present the final agreed SAP.

- Creation of the project website and online communication platform, and active participation in IW: LEARN activities and events.

This is part of the outputs of component 4.

STAKEHOLDERS ENGAGEMENT PLAN			
NAME	**TYPOLOGY AND DESCRIPTION**	**RELATION WITH THE BERMEJO BASIN**	**ROLE IN PROJECT EXECUTION**
ARGENTINA (national)			
Directorate of Coordination of the Binational Commissions of the La Plata Basin (DICOR) ? Ministry of Foreign Affairs	Governmental entity Water resources shared with other countries must be managed in accordance with the internationally accepted principles of equitable and reasonable use, obeying the duty of information and prior consultation, in order not to cause significant damage between the parties. The decisions supported by the Argentine Republic before other countries, both in terms of cooperation, as well as negotiations and conclusion of agreements, require prior consultation and the specific representation of the provinces that hold the domain of water. Consequently, each province involved designates a member to join the activities of the Argentine delegations in the commissions and international organizations in which the country participates.	COBINABE belongs to this directorate	Engaged in the production of Output 1.1 Expanded mandate of COBINABE
COREBE	Governmental entity Adopts the political decisions and exercises the necessary actions for the integral, rational and multiple use of the water resources of the Bermejo River Basin.	Strong presence in the basin, through water projects in the 4 provinces that make up the Argentinian part of the basin.	Fundamental actor for the execution of the project.

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Undersecretary of Planning and Operational Management of Water Projects of the SECRETARIAT OF INFRASTRUCTURE AND WATER POLICY of the MINISTRY OF PUBLIC WORKS	Governmental entity It has 3 management axes: Water Policy, Drinking water and sanitation, and water infrastructure. Prepare and execute programs and actions related to the management of shared international water resources, their basins, successive and contiguous water courses and interprovincial water regions and bodies of water in general, participating in the representation of the National State in coordination with agencies and jurisdictions involved	Coordinates and proposes the adoption of measures for the defense of watercourses and drainages and flood-prone and unhealthy areas in the Bermejo River basin. Prepare the specifications and conditions for calls for tenders and/or tenders, as well as intervene in the bidding processes, for the granting of concessions for water works or contracts, which are carried out due to the actions related to the management of the water resources in the Bermejo River basin.	Participates to the definition of the SAP, Output 3.2
Water Resources of the provinces of Jujuy, Salta, Formosa and Chaco	Provincial Governmental Entities Technical bodies in charge of preparing plans and programs regarding the implementation of policies on water resources in their territories, which contemplate their preservation, management, use and sanitation.	Provincial organizations that include the Bermejo basin in their action plans and water policies	Participate to the definition of the SAP, Output 3.2
National Water Institute (INA)	Government entity Decentralized scientific and technological organization whose	Develops and operates the hydrological	Participates to the TDA preparation, and to training activities Outputs 1.4 and 3.1

STAKEHOLDERS ENGAGEMENT PLAN			
	objective is to satisfy the requirements of study, research, development and provision of specialized services in the field of water use and preservation. It supports COREBE in all above aspects.	forecast and warning service for the La Plata Basin and coordinates the numerical and documentary information referring to water resources.	
National Institute of Agricultural Technology (INTA)	Government entity Promotes the sustainable development of the agricultural, agri-food and agro-industrial sector through research and extension. It promotes innovation and the transfer of knowledge. At the national level, it provides support local communities, and to a lesser extent to indigenous peoples.	Provision of agro-climatic forecast, generation of information from the radar network of Basin.	Involved in activities related to Output 3.1 (TDA)
National Institute of Industrial Technology (INTI)	Government entity Strengthens the productive framework by promoting innovation, increasing competitiveness and optimizing industrial processes.	Generates technologies or productive processes that allow the optimization of the use and conservation of the water resource of the basin in industrial processes	Involved in training, and fostering technological innovations in production on a large, medium and small scale. Output 3.2 (SAP)
Ministry of Women, Gender and Diversity	Government entity Promotes the rights of women and LGBTI+, against all forms of inequality and violence. It consists of 3 secretariats (Policies against gender-based violence, Equality and Diversity Policies and Advisory Cabinet) and 7 sub-secretariats	Coordinates the ministry's relations with provincial and municipal governments and civil society organizations, in matters of equality and diversity policies. Pro motes dialogue in the basin area	Involved in the implementation of the Gender Action Plan.

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		between the public and productive sectors and civil society organizations in relation to equal opportunity and rights policies with a gender perspective and inclusion and integration.	
National Meteorological Service (SMN)	Government entity Provide meteorological information and forecasts, climate forecasts and alerts based on continuous monitoring of the atmosphere and scientific knowledge, in order to protect the population, contribute to national defense, promote sustainable development and comply with its international commitments on the matter.	It has measuring equipment at 7 points within the basin (2 in Jujuy, 2 in Salta, 2 in Formosa and 1 in Chaco).	Provides forecast for agriculture, agrometeorological monitoring and monitoring of vegetation cover, soil and water within the scope of the basin. Involved in the TDA, Output 3.1
National Institute of Indigenous Affairs (INAI)	Government entity Develops and coordinates public policies to guarantee community development, the right to health and education, access to land and the preservation of indigenous cultural identities. Promotes the participation of indigenous communities in the design and management of State policies that involve them, respecting their forms of traditional organization and their values	Creates the bases for an integral and sustainable development of the indigenous communities of the basin, favoring the roots of native peoples in their territories. It has territorial technicians in the Provinces that make up the basin, with support from local governments.	It will play a fundamental role for ensuring the engagement of indigenous communities. Outputs 3.1, 3.2, 2.2, 2.4.
ARGENTINA (Chaco Province)			
Provincial Water Authority (APA)	The A.P.A. It is the only water authority in the	APA authorizes and approves public or	Its involvement in the project will

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	Province of Chaco responsible for the protection of water resources. It regulates, and execute general plans for hydraulic works, irrigation, channeling and defense.	private projects and works for different purposes (sewers, irrigation, drainage, dikes, etc.) in the province. It exercises the rights over the rivers that make up the Bermejo basin belonging to its territory.	create spaces for awareness and sensitization in relation to water management in the province of Chaco.
Chaque?o Aboriginal Institute (IDACH)	Provincial body that has among its objectives: -To process the granting of legal status to the indigenous communities that request it. -Promote the organization of each aboriginal community and of all aboriginal peoples in accordance with their culture and customs. -Promote the self-management of aboriginal communities, in accordance with the principle of self-determination. - Coordinate sectoral actions with national, provincial and municipal organizations. -Prepare and apply policies, plans and programs for the comprehensive development of indigenous communities with their active participation.	Carries out censuses of the indigenous population in Chaco territory in the Bermejo Basin. It has in its field of action the middle-lower section of the basin.	It is the fundamental actor for the engagement of indigenous communities of the Province of Chaco in project activities.
Provincial Institute for Urban and Housing Development (IPDUV)	Provincial entity that collects and systematizes information on urban and rural human settlements in the province, consisting of locating housing plans, equipment, infrastructure, and available land.	Identify urban and rural settlements without water supply within the basin in the territory of the province of Chaco.	Involved in activities of Output 3.1 TDA
Undersecretary of Environment and Biodiversity,	Represents the Ministry in the Federal Environmental Council	Collects and systematize information on urban and rural human	It has direct involvement in the project area;

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	(COFEMA) and other representative spaces linked to the environment	settlements in the basin, and assists the Ministry in strategic planning and the implementation of environmental policies of the Provincial government.	facilitates agreement to work in coordination with indigenous and Creole communities, especially in relation to technical knowledge, and Sustainable Development.
Ministry of Environment and Sustainable Territorial Development	Intervenes in everything inherent to the planning, execution and control of environmental policies, strategy, programs and projects and action plans related to climate change and environmental protection.	Monitors the fish fauna and the quality of the waters in the water system of the Bermejo River basin. Establish parameters for the regulation, management and conservation of soil as a non-renewable natural resource.	Involved in activities related to Output 3.1, TDA.
ARGENTINA (Formosa Province)			
Undersecretary of Natural Resources, Management and Environmental Quality	Intervenes in the planning, management and sustainable use of natural resources and management of environmental quality in all production chains, with land management guidelines, for the purposes of their protection, preservation and restoration.	Intervenes in the design of provincial policies within the Bermejo River basin, for the preservation of natural resources within it.	To be engaged for what concerns: Territorial Rural Development, Natural Resources, management and environmental quality (Outputs 2.1, 3.1, 3.2)
Provincial Water Coordination Unit (UPCA)	Decentralized body with the rank of Undersecretary, which depends hierarchically on the Provincial Executive Power, and functionally on the Ministry of Economy, Works and Public Services.	Strengthening and training of Creole and indigenous organizations within the framework of IWRM in the basin.	Participates in Output 1.4 activities.
Aboriginal Communities Institute (ICA)	Preserve socially and culturally the aboriginal communities, defend their heritage and traditions, and promote improvement of their economic conditions. Provides accompaniment	arry out censuses of the indigenous population in Formosa territory on the Bermejo Basin.	Fundamental actor for the work with indigenous communities in the province of Formosa

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	and advice to the indigenous communities of Formosa		
ARGENTINA (Jujuy Province)			
Ministry of Environment and Climate Change	Develop environmental policies and intervene in the design and definition of standards, models, goals, plans, programs, objectives and other actions of the environmental policy for the conservation of natural resources.	Technical support to municipalities and municipal commissions for the design and implementation of plans, programs and other actions necessary for the local management of environmental policy in the basin area for the conservation of water resources.	Involved in Output 3.2 activities (SAP)
Provincial Directorate of Water Resources	Regulate the use and use of all the waters of its domain and of the private ones. Exploit, preserve, maintain and expand existing works and use systems owned by the Provincial State.	Exercise the Police Power in all natural and artificial water channels in the Provincial territory belonging to the Bermejo River Basin, controlling intake works, defenses, use of aggregates, surveillance of banks, use of water, drainage, etc.	Involved in Output 3.2 activities (SAP)
Directorate of Strategic Planning and Environmental Projects	Its mission is to establish general lines in order to achieve objectives and goals that reflect the government plan on environmental issues.	Covers interferences with the Upper Bermejo basin	Could facilitate work in coordination with indigenous and Creole communities
Forest management and land use management Directorate	Its mission is to sustainably manage the land resource of the province of Jujuy, preserving the services and goods it sustains, and promoting sustainable management practices that tend to mitigate or adapt traditional land uses to more sustainable ways	Covers interferences with the Upper Bermejo basin	Could facilitate work with indigenous and Creole communities, especially in relation to management and conservation of soil and forests.
Secretary of indigenous peoples	Promotes, defends and makes effective the rights of indigenous peoples in the Province of Jujuy, as well as the implementation of interculturality. It	Manage and update the registry of Aboriginal Communities of Jujuy that are within the basin. Generate mechanisms, channels and processes to promote indigenous	Fundamental actor for the work with indigenous communities in the province of Jujuy.

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	provides accompaniment and advice to the indigenous communities of Jujuy.	participation and dialogue with national and international organizations	
ARGENTINA (Salta Province)			
Secretariat for Women, Gender and Diversity	Develop a multi-agency and transversal Provincial Plan to prevent, address and repair gender-based violence. Coordinate with the Ministries of the Province and with the Municipal Governments policies on gender, equality, diversity and prevention of gender-based violence	Works through the municipalities of the middle section of the basin	Involved in the implementation of the Gender and Indigenous peoples/vulnerable communities Action Plan.
Secretariat of Water Resources	Technical body in charge of preparing plans and programs regarding the implementation of policies on water resources in their territories, which contemplate their preservation, management, use and sanitation	Control the regularity of the use of water in general and the regime of permits and concessions in the provincial territory belonging to the Bermejo River basin.	To be involved in activities related to Output 3.2 (SAP)
Ministry of Environment and Sustainable Development	It aims to design and execute policies, plans, programs and projects on the environment and natural resources, as well as apply current legal provisions, in accordance with the regulations, guidelines and directives issued by the Ministry of Production and Sustainable Development.	Grants or suppress permits, concessions and authorizations for activities that require the use of natural resources that imply environmental impacts on the water resources of the basin	To be involved in activities related to Output 3.2 (SAP)
Provincial Institute of Indigenous Peoples of Salta	An autonomous and decentralized entity, it represents the indigenous communities of the province of Salta	Carries out a survey of the current indigenous settlements in the basin specifying their geographical location with the indication of the number of members. It covers the middle section of the Basin with territorial technicians in coordination with INAI	A fundamental actor for the work with indigenous communities in the province of Salta, i

STAKEHOLDERS ENGAGEMENT PLAN			
ARGENTINA CIVIL SOCIETY			
Institute for Social Development and Human Promotion (INDES)	Promote and accompany development processes of the most neglected populations in our society, with special emphasis on rural areas.	Presence in the four provinces that make up the basin.	These organizations have a long history of work in the territory, covering legal issues, land tenure, access to health, improvement of quality of life, accompaniment to indigenous and peasant organizations in the provinces that are part of the basin. They will be involved in the implementation of the Gender and Indigenous peoples/vulnerable communities Action Plan, and activities related to outputs 3.1, and 4.2.
Association for the promotion of culture and development (APCD) Las Lomitas	Promotes and strengthens the rights to cultural identity, territory and its development, education and citizenship. It accompanies the construction of new forms of leadership and organizations that have women and youth as central subjects in the transformation and strengthening of their community spaces.	Present in the province of Formosa	
Las Yungas Ecological Research Laboratory (LIEY)	Studies ecological systems with emphasis on the American subtropics. It disseminates knowledge about regional ecology and the interactions between nature and society and promotes sustainable development, the conservation of regional diversity and the environmental services of natural ecosystems.	Presence in the four provinces that make up the basin.	
SIWOK FOUNDATION	Promotes Wichi Family Farming through training, tools and support for families from Salta.	Present in the province of Salta	
Organization of Nations and Indigenous Peoples of Argentina OPINOA	OPINOA is made up of indigenous organizations with approximately 200 communities and provides support in the defense of their rights.	Presence in the provinces of Salta and Jujuy.	
ANDHES (Lawyers of the Argentine Northwest in Human Rights and Social Studies)	Contributes to social change based on the validity of human rights and the democratization of social relations, through education and defense of these rights and	Presence in the four provinces that make up the basin.	

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	advocacy in public policies.		
ADESAR (Association for Regional Health Development)	Contributes to the improvement of health and the environment by generating and supporting training and research activities aimed at the prevention and management of regional health problems	Presence in the four provinces that make up the basin.	
Foundation for Development in Justice and Peace (FUNDAPAZ)	Accompanies peasant organizations and indigenous communities, providing legal advisory services for the defense of rights and land titling. It provides training to rural men, women, and youth to strengthen participation in their organizations, self-management, and leadership.	Presence in indigenous and peasant organizations in the middle and lower basin of the Bermejo.	
Gran Chaco Foundation	Promotes the development and improvement of the environment, the towns, communities and people of the American Gran Chaco, strengthening local organizations, developing the arts and productive activities, within the framework of a social and environmental economy, valuing the diversity, with special emphasis on the promotion of young people and women in all its aspects.	Presence in the provinces of Salta, Chaco and Formosa.	
CHACO NETWORKS	Network of networks, aimed at raising the visibility of vital issues and collective actions in the Gran Chaco Americano that allow the generation of governance. This, understood as the creation and strengthening of Citizenship and incidence	International and national scope, with strong work in the South American Gran Chaco region.	

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	for actions in concerted public policies. Articulation between NGOs, Grassroots, Business Organizations and Public Organizations "State".		
ARGENTINA ACADEMIA			
National University of the Northeast (UNNE)	Promote the development of knowledge and scientific research.	It is a potential contributor of scientific knowledge for the development of civil works projects for the management of water resources in the Basin. Provides Scientific Technical support, specific to the Bermejo Basin. Prepare Scientific Technical Training Courses, with academic support for the actors participating in the Project. Strengthening of Local Capacities.	Provide Scientific Technical support, specific to the Bermejo Basin. Prepare Scientific Technical Training Courses, with academic support for the actors participating in the Project. Strengthening of Local Capacities.
National University of the Austral Chaco (UNCAUS)		It is a potential contributor of scientific knowledge for the development of information digitization projects, productive development plans and analysis of environmental effects in the Basin.	
National Technological University (UTN)		It is a potential contributor of scientific knowledge for the development of information systems projects for decision-making in the Basin.	
National University of Formosa (UNF)		It is a potential contributor of scientific knowledge for the development of civil works projects, productive development plans and analysis of environmental effects in the Basin.	

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National University of Salta (UNSA)		Promote the development of knowledge and scientific research. It is a potential contributor of scientific knowledge for the development of civil works projects and geological and environmental studies.	
National University of Jujuy (UNJU)		Promote the development of knowledge and scientific research. It is a potential contributor of scientific knowledge for the development of information system projects and geological studies in the Basin.	
BOLIVIA			
Ministry of Foreign Affairs / VRE Directorate of Transboundary International Boundaries and Waters	First Delegate to COBINABE for Bolivia, who chairs the Bolivian Delegation in the Bermejo Binational Basin.	Within the framework of the Constitutive Agreement of COBINABE, the MRE presides over the Delegation of Bolivia in any project, action and/or others that are carried out	- Chairs the delegation of Bolivia in the Project - Coordination with its counterpart in Argentina - Member of the CDP - Decision making - Supervises and provides strategic guidance to the Project - Supports multilevel dialogue of key actors to achieve binational management agreements
National Technical Office for the Pilcomayo and Bermejo Rivers (OTN PB)	Second Delegate to COBINABE for Bolivia, performs secretariat functions for the Commission	The National Technical Office of the Pilcomayo and Bermejo Rivers OTN-PB develops the following functions in the basin: Act as national technical counterpart in the international agreements signed	- Technical delegates of the Project - Coordinate technical actions of the Project - Supervision and monitoring of actions and

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		between the Government of Bolivia and the riparian countries. Formulate basic proposals for the definition of policies in the area of the Pilcomayo and Bermejo river basins. Monitor the systematic control of the water quality of the rivers of these basins. Carry out, by itself and/or by third parties, all the basic studies for the programs and projects for the use of water resources in the basins under its jurisdiction. Carry out, by itself and/or through third parties, studies for the use of the water resources of both basins and monitor their planning, execution and operation.	technical documents - Coordinate the technical actions of the Project with the sectors and local governments - Conforms the CDP - Chairs the Technical Committee of the Project at the national level
Ministry of Development Planning	Design the strategic guidelines for the formulation and implementation of the PDES, at the national, sectoral and autonomous and decentralized territorial entities; b) Coordinate the planning and management of the integral development of the Plurinational State with the ministries, autonomous and decentralized territorial entities, social, community and productive organizations, and decentralized and decentralized entities.	The Ministry of Development Planning, through the Vice-Ministry of Coordination and Coordination, constitutes the GEF Focal Point, both technical and political, therefore, in the area of the basin, ensures compliance with the strategic guidelines linked to territorial planning of the Bolivian territory.	Follow-up and Monitoring of the fulfillment of Project Objectives. - Member of the CDP Project Steering Committee
Vice Ministry of Water Resources and Irrigation (MMAyA)	Participate and coordinate within the framework of	The Vice Ministry of Water Resources and	- Provide technical information for the

	the different management mechanisms of transboundary basins (Plata, Amazonas and Endorreica) and the management of shared aquifers; Contribute to the formulation of policies and strategies for the conservation, use and use of water resources and irrigation with the different actors involved in the environmental management of hydrographic basins, respecting uses and customs, as well as coordinating and assisting the Ministry of Foreign Relations in supervising compliance with signed agreements and adopted decisions that are related to international basins and shared water resources.	Irrigation has the mission of implementing the Policy of the Plurinational Plan of Water Resources and Irrigation, through its two directorates, in this sense, it links to territorial water planning, expressed through Basin Master Plans (now Water Planning Strategies), Pedagogical Basins, Irrigation Systems and other interventions in the Bermejo basin. F	development of the Project - Participate in training on issues related to IWRM - Participate permanently in the execution of the activities of the Project - Support and accompany the issues related to its competences and attributions
General Directorate of Planning (MMAyA)	Coordinate and articulate the processes of strategic and operational planning, monitoring and evaluation with the vice ministries and entities under custody or dependency of the ministry	The MMAyA Planning Directorate, in addition to coordinating the relationship between the technical body and the first delegate, through the Special Studies Unit, supervises, manages and articulates issues related to information on groundwater, hydrological models, information systems, water balance among others.	- Provide technical information for the development of the Project - Participate in training on topics related to management - Participate permanently in the execution of the activities of the Project - Support and accompany the issues related to its competences and attributions
Vice Ministry of Potable Water and Sanitation (MMAyA)	Formulate and implement policies, plans, and standards for the development, provision, and improvement of basic sanitation services.	The VAPS implements potable water and sanitation programs and projects in the area, which serve as input for its integration, articulation and implementation in areas	- Provide technical information for the development of the Project - Participate in training on issues related to drinking

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		of interest. As head of the sector, he articulates actions developed in the Mi Agua Programs in the Bermejo basin.	water and sanitation - Participate permanently in the execution of the activities of the Project - Support and accompany the issues related to its competences and attributions
Vice Ministry of the Environment (MMAyA)	Assist and coordinate with the competent entities, the formulation and implementation of regulations and policies for protected areas, biodiversity corridors and special ecosystems, within the framework of the sustainable use of natural resources, conservation and protection of the environment and promote the economic and social development of populations linked to protected areas	The VMA, through the General Directorate of Biodiversity and Protected Areas, implements the Bolivian Biodiversity Policy/Strategy. In the Bermejo basin, intact forest corridors and prioritized species are prioritized for the sector, therefore, within the framework of their powers and attributions, these sectoral priorities must be incorporated and made visible.	- Provide technical information for the development of the Project - Participate in training on issues related to biodiversity, environment - Participate permanently in the execution of the activities of the Project - Support and accompany the issues related to its competences and attributions
SENAMHI	Governing body for meteorological, hydrological and related activities; As a technical-scientific institution, it provides specialized services that contribute to the sustainable development of the Pluri-national State of Bolivia; provides hydrometeorological information to all users of the information, to environmental systems for the care of Mother Earth; At the national and international level, it participates in global atmospheric monitoring together with related	SENAMI, by becoming the governing entity of meteorological and hydrological activity, has the function of identifying actions to strengthen hydrometeorological information in the basin for its implementation and execution.	- Provide technical information for the development of the Project - Participate in training on topics related to meteorology, hydrology and related - Participate permanently in the execution of the activities of the Project - Support and accompany the issues related to its competences and attributions

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	entities; at the national level it contributes to risk management for the prevention and mitigation of disasters; member of the World Meteorological Organization (WMO) with international representation in its activity.		
SERNAP	Coordinate the operation of the National System of Protected Areas, guaranteeing the comprehensive management of protected areas of national interest, in order to conserve biological diversity in the area of its competence.	The basin has two protected areas of a national nature, the administration of which is SERNAP, so any action linked to these strategic territories must be executed and monitored by the Directorates of the protected areas and their management committee.	- Provide technical information for the development of the Project - Participate in training on issues related to protected areas of national character - Participate permanently in the execution of the activities of the Project - Support and accompany the issues related to its competences and attributions
National Museum of Natural History	The MNHN is a decentralized public institution for research, preservation and custody of Bolivia's natural and cultural heritage and environmental education, which contributes to the sustainability of the components, zones and life systems of Mother Earth through the development and management of scientific collections on fauna, flora, fossils and associated information; the generation and mobilization of scientific knowledge; the documentation, recovery and preservation of local knowledge and ancestral	By having strategic territorial spaces, which fulfill environmental functions for Bermejo and the entire aquifer system found in the area, all research that is generated and involves the generation and mobilization of scientific knowledge and the documentation, recovery and preservation of local knowledge, goes through this institution for its supervision, accompaniment and execution.	- Provide technical and scientific information for the development of the Project - Participate in training on topics related to scientific collections, natural heritage, cultural, scientific knowledge, among others - Participate permanently in the execution of the activities of the Project - Support and accompany the issues related to its competences and attributions

STAKEHOLDERS ENGAGEMENT PLAN			
	knowledge; and environmental education. For this, it is based on the principles of integrality, dialogue of knowledge, social justice and plural participation, promoting in particular greater access and participation of girls and women in science to reduce persistent inequalities		
Departmental Autonomous Government of Tarija Autonomous Municipal Government of Bermejo Autonomous Municipal Government of Padcaya Autonomous Municipal Government of Uriondo Autonomous Municipal Government of Tarija Autonomous Municipal Government of San Lorenzo Autonomous Municipal Government of Entre R?os	The GAD Tarija, has as concurrent competence the definition of water resources plans and programs, in compliance with the Policy of the Pluri-national Water Resources Plan of Bolivia. Law No. 031, of July 19, 2003, ?Andr?s Ib??ez? Autonomy and Decentralization Framework Law Its purpose is to regulate the regime of autonomy and the bases of the territorial organization of the State by assigning powers. In this sense, the allocation of powers is described in water resources, within the framework of the CPE and Law No. 031 for Autonomous Municipal Governments. The powers of the GAMs constitute concurrent powers that are: Development of hydraulic and energy projects (CPE. 299, ii, 7). Design and execute projects for the use of water resources.	Likewise, it contributes with information and execution of actions related to its powers, likewise, as head of the GAD, and others identified. The Autonomous Municipal Governments contribute to the execution and design of water resources projects in prioritized areas of their territory in accordance with the sectoral policy, articulating information, actions, needs and local counterparts	- Participate permanently in the execution of the activities of the Project through its units - Coordination of actions in the field - Support and accompany the issues related to their competences and attributions according to coordination

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Autonomous Municipal Government of Carapari	Design, execute and manage projects for the use of water resources. Execute the general policy for the conservation of soils, forest resources and forests.		
Autonomous Municipal Government of El Puente (partial)			
Autonomous Municipal Government of Yunchar? (partial)			
BOLIVIA CIVIL SOCIETY			
Federation of Peasants of Tarija Entre R?os, Padcaya, Uriondo and Bermejo	Instance natural organization that represents the set of nations and rural native indigenous peoples, of the department, has women affiliates.	It is present in Tarija with its different representations	- Participate in the different activities of the project. - Coordination for the implementation of the pilot - Coordination of local awareness actions - Ensure that the perspectives of the indigenous community are incorporated into the implementation of the project
Subcentral of peasants of Tarija, Entre R?os, Padcaya, Uriondo and Bermejo	Sub Central Campesina that brings together 10 communities where everyone unanimously decides that women are affiliated.	They are present in all municipalities, organically, affiliated with the F.S.U.C.C.T.	
Community representatives from Tarija, Entre R?os, Padcaya, Uriondo and Bermejo	Community authorities of the peasant base organizations in Tarija, in its structure are women as affiliates	They are present in all municipalities, organically, affiliated with the F.S.U.C.C.T.	
Padcaya Water Committee	Potable Water and Sanitary Sewerage Committee Padcaya is the drinking water service provider entity (EPSA) constituted with the purpose of operating and maintaining the potable water service and the sanitary sewerage service	Its presence is of municipal jurisdiction. Padcaya.	
ADRAP	Departmental Association of Irrigators and Community Drinking Water Systems of Tarija	They are found throughout the department.	

STAKEHOLDERS ENGAGEMENT PLAN				
	"Adrap - Tarija".- RAP.-104/2009.			
Mujeres en Acci?n - Tarija	Promotes the restitution of the rights of women victims of gender violence, the development of personal and labor capacities of women and men.	It has a presence in several municipalities of Tarija.		
BOLIVIA (Private Institutions, NGOs, Productive sector Associations)				
FUNDECOR	NGO whose purpose is to preserve nature and promote the sustainable use of natural resources.	With presence in Tarija.	- Exchange of information - Participate in the different activities of the project. - Participate in trainings on topics related to sustainable water resources management - Coordination for the implementation of actions	
PROMETA	It is a non-profit NGO, oriented to the conservation of the environment, in search of sustainable management of natural resources, generating development alternatives prioritizing economically disadvantaged areas.	With Presence in Tarija		
NATIVE	Nature Earth and Life. Japan International Cooperation Agency that as part of its actions is to contribute to the improvement of drinking water coverage in rural areas	Support projects in the Department of Tarija.		

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Municipal Organization of Women's Associations PADCAYA	Political-administrative body, which co-administers and carries out political control over the departmental government	Area of intervention the municipality of Padcaya	
ASOGAPA-Padcaya Livestock Association	Entity that represents and promotes the interests of the Padcaya livestock sector	Presence in Padcaya	
APROLPA-Association of Milk Producers of the Arce Province	Non-profit civil entity with legal address in the Community of Cruce de Rosillas District 2 of the Municipality of Padcaya - First Section of the Arce Province	Presence in the Arce Province	
Union Federation of intercultural communities originating from Tarija	FESCIOTAR Organization of migrant farmers from other departments and of an intercultural nature.	It is located in the Bermejo basin.	
Union Federation of Intercultural Communities originating from Bermejo	Organization of migrant farmers from other departments and of an intercultural nature.	Articulating organization of the municipality of Bermejo.	
Federation of Sugar Cane Producers	Organization made up of Bermejo sugar cane producers, being only producers of raw material such as cane.	It is located in the Municipality of Bermejo	
BOLIVIA ACADEMIA			

STAKEHOLDERS ENGAGEMENT PLAN			
UAJMS	Autonomous University Juan Misael Saracho	University located in the municipality of Tarija	- Exchange of information - Participate in the different activities of the project - Coordination in research and local awareness actions - Support in generating scientific and academic criteria
UCB	Regional Catholic University Tarija University	located in the municipality of Tarija.	
Training and Research Center for Peasant Women of Tarija	CCIMCAT It is a private, non-profit institution for the promotion of rights and comprehensive development that works with peasant women, indigenous people, popular urban women, and young people in the department of Tarija.	Its actions include the areas of the Bermejo-Tarija basin.	
TRANSBOUNDARY			
CIC PLATA	Intergovernmental Coordinating Committee of the countries of the La Plata Basin	Hydrographic basin covering the Bermejo sub-basin	Updating, integration and coordination with the various interventions in the La Plata Basin.

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

Please see the STAKEHOLDERS ENGAGEMENT PLAN
Select what role civil society will play in the project:

Consulted only; Yes

Member of Advisory Body; Contractor;

Co-financier;

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

Executor or co-executor;

Other (Please explain)

3. Gender Equality and Women's Empowerment

Provide the gender analysis or equivalent socio-economic assesment.

134. The SAP bankable investments[1] and priority reforms in water governance - including **promotion of gender equality** and indigenous people engagement- endorsed by the beneficiary countries at the ministerial level.

135. Stakeholders? participation - with emphasis **on women**, indigenous peoples, and civil society organizations ? institutionalised at the national and transboundary levels.

Results ?rea (s) ? nexus with the plan

136. The members of COBINABE will reinforce and develop their capacities in integrated watershed management to include the participation of women, indigenous peoples and vulnerable populations (GIP/VP) in the IWRM approaches developing equal opportunities in the use of land and water resources so that the benefits will reach these groups clearly and inclusively.

Examples of indicators

- - Gender and indigenous/vulnerable peoples approach included into the COBINABE expanded mandate
- - Of training events on IWRM, and of experience and knowledge exchanges among indigenous people?s technicians, with gender balanced participation
- - The SAP includes reforms and investments fostering women empowerment and sustainable productive activities and management of natural resources in indigenous and intercultural communities
- - % of women who participate in the program design and implementation processes.

- - # of gender balanced training events for leaders of indigenous communities and women organizations aimed at strengthening participation and commitment in the implementation of the SAP
- - % of women participating in the mechanism and supervision
- - The project website includes a section dedicated to GIP/VP activities and achievements

GENDER EQUALITY AND INDIGENOUS PEOPLE

137. The project will be aligned with the policies of gender equality and inclusion of indigenous peoples of the GEF, GEF, CAF. Project interventions are guided by the GEF Guidelines on Gender Equality which focus on three specific gender gaps, as detailed below:

138. (a) Unequal access to and control of natural resources: Women continue to be held back by structural restrictions and gender norms related to access to and control of land, water and other productive assets and biological resources. Even when the law guarantees women the same rights as men, many women have less control. Research shows that if women had the same access to productive resources as men, agricultural productivity in developing countries could increase by 20 to 30 percent, which in turn would reduce poverty and improve livelihoods. women's ability to support their families and manage and use natural resources sustainably.

139. (b) Unbalanced participation and decision-making in environmental planning and governance at all levels: Gender norms, women's increased time constraints and other structural constraints continue to prevent women from having the same opportunities as men in decision-making related to the management and sustainable use of natural resources. Addressing gender gaps related to participation and leadership in decision-making processes, from the local to the global level, can help make institutions and policies more representative, as well as help women to better participate in decisions that shape environmental planning, policy making and sustainability.

140. (c) Unequal access to socioeconomic benefits and services: Women, in many places, do not have the same access to income-generating opportunities, credit and technology as men. Furthermore, women often face more obstacles than men in accessing financing, training and information. Expanding the socio-economic benefits of women can significantly contribute to improving the global environment in areas such as natural resource management, reducing land degradation, renewable energy, sustainable fisheries, etc.

141. The considerations of gender and indigenous peoples/vulnerable populations in the project are cross cutting and will guarantee the gender balanced participation of women and vulnerable populations in the different components, as well as in the work group for the formulation of the SAP.

3.1 Guidelines for the Participation of Indigenous Peoples

142. 1 Project interventions are guided by the GEF Guidelines on Participation of Indigenous Peoples, detailed below:

(a) Indigenous peoples play an important role in protecting the global environment;
(b) Indigenous peoples are valuable as stakeholders, partners and rights holders and play an important role in the sustainable use, management and conservation of the global environment;
(c) There is a commitment to ensure that their projects generate the maximum possible benefit in an equitable manner, and to avoid, minimize or mitigate eventual unfavorable impacts;
(d) Affirms the full and active participation of indigenous peoples in support of the GEF mission, including participation in the development and improvement of policies and processes to ensure the environmental, social, and financial sustainability of its work;
(e) Recognizes the fact that indigenous peoples continue to face difficulties in their efforts to protect their rights, identities, cultures and knowledge systems;
(f) Recognizes the important role of indigenous women, elders and youth in conservation, traditional knowledge and natural resource management;
(g) Recognizes the fact that the United Nations Declaration on the Rights of Indigenous Peoples endorses the realization of the principles articulated therein and believes that GEF-funded projects can positively contribute to the realization of such principles, in in line with domestic legislation and/or current international obligations.

143. In line with these guidelines, the focus will be on identifying unequal access to socioeconomic benefits and services, in the management of water resources, as well as women's participation in decisions that affect their lives at all levels. The overall approach within the project will be to identify entry points and gaps for gender and indigenous/vulnerable populations sensitive issues and undertake appropriate actions that will contribute, together with other interventions supported by governments and development partners, to address these gaps.

3.2 Gender and Indigenous Peoples/Vulnerable Population Perspective for monitoring and reporting

144. A set of actions sensitive to Gender and Indigenous Peoples/Vulnerable Populations (GIP/VP) is proposed for each Component, as well as for the project in general. The establishment of baselines is a necessary action for any monitoring framework and the availability of reliable data disaggregated by sex is important in this regard. Only a third of countries globally collect such data in sectors related to water. The absence of these data prevents having a clear picture of the barriers that hinder the equal participation of women and is a major obstacle to the production of scientific evidence on gender inequality. Argentina and Bolivia do not belong to the third of the countries that collect this type of data. This project will endeavor to collect, to the extent possible, data related to the needs of its monitoring, evaluation of results and reports, to allow the achievement of its objectives related to the analysis of gender and indigenous population/vulnerable population.

3.3 Gender analysis in the Bermejo Basin

Legal and Administrative Framework for Gender Equality

145. The two beneficiary countries of the project have committed to and adopted the Convention against all forms of discrimination against women (CEDAW) and have developed national plans for its implementation:

Regulatory Framework	**Argentina**	**Bolivia**
International conventions on gender equality, eg CEDAW	x	x
Initiatives to meet EU gender equality standards	x	x
National legislation and/or action plans		
Gender equality	x	x
Domestic violence	x	x
Anti-discrimination	x	x
Administrative structures for the incorporation of the gender perspective		
Ministry responsible for gender equality	x	x
Inter-ministerial coordination on the incorporation of the gender perspective	x	x
Gender equality focal points at the national and/or local level	x	partial
Gender budget	x	x
Data disaggregated by sex	partial	x
Capacity development projects for the incorporation of the gender perspective	x	x

Table 1. Gender Equality, Legal and Administrative Framework

146. Despite the legislation and administrative structures that exist in the countries that make up the Bermejo Basin, there is still a lack of awareness and/or political and governmental support to promote gender equality and the incorporation of its approach, as well as inadequate human and financial resources and capacity building projects. In addition, legislation and sectoral strategies that are relevant to the issues addressed by the Project, such as water resources management, are, in some cases, gender-neutral.

Gender Assessment for the Bermejo River Basin

147. In the area that corresponds to the Bermejo river basin, a series of efforts with a gender approach have been carried out that have had an exponential increase in recent years. These initiatives arise as a basis for understanding public policies, which make it possible to shape social practices to achieve equal opportunities and eliminate discrimination and exclusion based on gender, sexual orientation or gender identity.

148. It is women and LGBTIQ+ people who are in the most critical situation and who are more likely to fall into poverty or extreme poverty. Access, coverage, and quality of sexual and reproductive health services are heterogeneous and unequal: there are differences depending on the health jurisdiction, the health subsystem (public, social works, and private), sexual orientation and gender identity, age, as well as for people with disabilities or indigenous people or migrants.

Political participation

149. The regulatory progress in the project area enabled the political participation of women at high levels of decision-making, but with shortcomings at local levels. There is a widespread belief in these societies that it is "better" if men earn the money and women take care of the home and children; and that women have less leadership skills than men. A strong tradition of patriarchal structures that is aligned with the conservationism of the dominant religions. The educational system and the media throughout the region further reinforce the influence of gender stereotypes.

Economic Participation and Opportunities

150. The position of women is built on their economic independence, whose indicators are based mainly on the factors of belonging to an active population, work and paid employment, among others.

151. They are the ones who dedicate a greater amount of time to domestic and care work than men. The number of children seriously affects the educational trajectory, access to the labor market, and political and social participation. They are the ones who have access to the most precarious jobs, they are strongly affected by the economic crises, as well as by contractionary policies, increasing the income gap between genders and therefore the pension and health systems.

Gender roles and social norms

152. One of the indicators of poverty and poverty risk is the unpaid work performed by women. There are no sensitive data on this aspect, but an unequal burden is observed in the "care" of the family with respect to men. They sleep less than men, have fewer hobbies than men, shop less than men, and spend less time on education-related activities. Women living in rural areas dedicate more time to rural tasks (even up to four times more than in urban areas), the long distances they must travel to supply their homes with water, food, education and medicine, further increases the poverty risks. This indicates that traditional gender roles are rather dominant within society and are strengthened when entering a relationship and especially when having children, increasing more "work" for women. Almost half of women firmly hold traditional gender roles, especially those from non-majority communities. The findings of a recent study indicate that "women themselves make a strong distinction between gender roles within the household and in society at large." During the transition to market economies, gender stereotypes persist and directly and negatively affect women's opportunities and empowerment.

Gender equality and the Covid19 pandemic

153. There are various studies by international organizations in relation to the consequences of the COVID-19 pandemic, with increasingly in-depth analysis; they are however incipient in the study area. While the pandemic crisis has affected everyone, women and girls face specific and often disproportionate health, social and economic risks due to deeply entrenched inequalities, social norms and unequal power relations. Local governments have made progress in containing populations with respect to access to food, public policies of monetary incentives that can contribute to the survival of families, but without a gender approach. Therefore, the vulnerability of women and girls increases the gap of economic and social consequences caused by the COVID-19 crisis.

3.4 Analysis of Indigenous Populations/Vulnerable Populations in the Bermejo Basin

154. The project area is heterogeneous and diverse, not only because of its geography but also due to the large number of towns present within it. This, combined with the transboundary character of the Bermejo River basin will require a comprehensive analysis of the current situation of the basin for the definition of actions oriented towards equity, providing and distributing benefits/resources in order to reduce the existing gaps.

155. The indigenous populations have become a group with increasing fragility, and their individual and collective rights are continuously violated. The intensification of territorial conflicts over land tenure and access to natural resources, the lack of basic services (water, drinking water, electricity, health, education, etc.), environmental deterioration, extreme poverty, geographic isolation (lack of roads or their poor condition) and others problems associated with cross-border crossings (drugs, human trafficking), are all reasons for constant demands for assistance to the National State through all its institutions. It is relevant to understand the differences in the social and economic roles between men and women, girls and young people with respect to IWRM in the Bermejo Basin, even more so due to the existence of indigenous communities settled throughout the basin, whose relationship with water is as diverse as their worldviews, a fundamental reason that implies a deeper and more cross-sectoral study of gender, indigenous peoples and interculturality.

Regulatory Framework	Argentina	Bolivia
International Conventions: UN, ILO	x	x
Initiatives to comply with the minimum standards of participation and consultation with Indigenous Peoples	x	x
Nacional level		
Incorporation at the constitutional leve	x	x
Participation and consultation initiatives	x	x
Ministries and/or secretariats responsible for policies for indigenous peoples	x	x
Local governments with policies for the inclusion of Indigenous Peoples	partial	partial
Inter-ministerial coordination on the incorporation of indigenous peoples into public policies	x	x

Budget for Indigenous Population/Vulnerable Population	x	x

Table 2. Indigenous Populations/Vulnerable Populations, Legal and Administrative Framework

156. The promotion of legislation for indigenous populations has advanced enormously, strengthened with international regulations through minimum standards related to Environmental and Social Safeguards. However, implementation at the local level requires special attention and dedicated budgets. It is on the ground where the important role that indigenous populations play for the conservation and sustainable development of the environment is evident, which is why the contribution of their knowledge related to the management of natural resources is of incalculable value.

Indigenous Populations and Vulnerable Populations in the Bermejo River Basin

157. In the Bermejo basin a large number of populations coexist, in particular in the Argentinian part of the basin (90%). They have diverse cultural and socioeconomic characteristics and identities, through which they relate to the territory to satisfy their nutritional, medicinal and spiritual needs, among others. Being the Bermejo Basin a vast and heterogeneous territory, the information available is very limited. In Argentina, the communities with legal status ? essential to be recognized by the national state - in the basin are 435.

Province	Department	Municipality	# villages	# communities
Salta	5	12	5	162
Jujuy	9	24	8	116
Chaco	3	10	2	68
Formosa	6	10	4	89

Table 3 Indigenous Communities registered in the Bermejo basin (Argentina)

158. Indigenous peoples deserve special attention because they are a population protected by national and international agreements, have collective rights over their territories, and are among the most vulnerable populations with unsatisfied basic needs. A common feature is their disadvantaged situation in relation to other sectors of society. The discrimination they receive in various social contexts means that they do not have the same employment opportunities or the same access as other groups to public services and/or to the protection of health, culture, religion, as well as to the administration of justice. Likewise, it has been reported that communities do not have the necessary tools and frameworks to be able to participate meaningfully in political life and in the governmental decision-making processes that involve them. In short, indigenous peoples are over-represented in the universe of poverty. These indicators imply that, in addition to having low income, they are less likely to live in adequate and safe homes and to have access to drinking water, sanitation and proper nutrition.

159. Indigenous peoples are distinct social and cultural groups that share collective ancestral ties to the land and natural resources where they live, occupy, or from which they have been displaced. The land they live on and the natural resources on which they depend are inextricably linked to their identity, culture and livelihoods, as well as their physical and spiritual well-being. They often seek to be represented by their traditional leaders and organizations, which are distinct or separate from those of the dominant society or culture. Many indigenous peoples still maintain their native languages, and others are in the process of recovering them.

160. Although national regulations and international conventions support their rights, most lack formal recognition of their lands, territories, and natural resources, are often the last to receive public investment in basic services and infrastructure, and face multiple obstacles to fully participate in the economy, gain access to justice, and be part of political processes and decision-making. This legacy of inequality and exclusion has increased the vulnerability of indigenous communities to the impacts of climate change and natural hazards, including disease outbreaks such as COVID-19. Vulnerabilities to the pandemic are exacerbated in some cases by the lack of access to national health, water and sanitation systems, the closure of markets and mobility restrictions that have greatly affected their livelihoods, food security and well-being.

161. Insecure land tenure is a factor that produces conflicts, environmental degradation and little economic and social development. This endangers cultural survival and vital knowledge systems: loss in these areas increases the risks of fragility, biodiversity loss and ecosystem degradation. This is one of the main factors that affects its governance and therefore participation in a system that constantly excludes it.

162. The communities that inhabit the Bermejo Basin continue to develop, to a large extent, their traditional ways of subsistence, such as family farming, gathering, hunting and fishing, using all available resources from the native forests. These activities depend on access to and use of local ecosystems and their state of conservation. There are very few experiences of self-managed productive ventures. The indigenous woman is traditionally dedicated to domestic activities (care for children and the elderly, preparation of food, search for firewood and water) and to traditional productive activities (collection of wild fruits and handicrafts). The artisanal production is based on the elaboration of pieces of *chaguar* (an autochthonous plant of the Chaco forest), sheep wool, palm and ceramic. Family care activities are carried out by women in a context of environmental fragility, scarce productive resources, isolation and accessibility problems as a consequence of the lack of basic infrastructure (poor road conditions, impassability at certain times of the year).

163. The long distances they must travel to supply their families with water, the unsuitable containers in which they store it (often agrochemical and/or pesticide containers) contribute to the violation of their rights, exposing them to the dangers of the forest, or to crime. For this reason, it is necessary to include the unequal relationship between the role of caring for the home between men and women, as

one of the priorities to take into account in IWRM as a way of understanding the link they have with water management, a fundamental tool for its care and conservation.

164. From the economic point of view, traditional activities such as hunting, fishing and gathering wild fruits subsist in some localities, with an incipient agriculture, continue to be maintained in the communities where remnants of native forest are preserved.

165. Water is the critical problem, which affects not only the indigenous population but also the "Creole". This, added to the dispersion of the population, the inaccessibility, the cultural particularities, and the extreme climatic conditions in a complex social context of territorial governance, contributes to the vulnerability of populations and to a delay in economic development.

166. In the Bermejo basin region, both indigenous and creole women have been the main absentees in the design and implementation of public policies that ensure improvements to which they have historically not had access. Indigenous women have suffered double discrimination because of their ethnicity and because of the strong barriers to inclusion due to their poor command of Spanish and their worldviews in what "quality of life" means. Projects that are designed and implemented in this context can, consequently, strengthen and reproduce existing inequalities, or, on the contrary, can reduce and mitigate them. This is why the present project's resources will be accessible to men and women equally. This will be achieved through project management and specific tools such as the Stakeholder Participation Plan, the Gender Action Plan and the Indigenous Peoples Plan, that ensure gender sensitivity in all activities, as well as a grievance mechanism that provides a transparent framework for beneficiaries and affected people to raise their non-conformities and request responses/solutions to them.

3.5 Action Plan for Gender and Indigenous Populations/Vulnerable Populations (GIP/VP AP)

167. The two key areas that will receive more attention to ensure the incorporation of the gender perspective during the implementation of the project are the sustainable use of water and its dependent ecosystems and the strengthening of mechanisms to support the management of water resources. Giving a relevant priority to good collaboration between men and women and facilitating equal access is a positive entry point and will be taken into account when discussing gender equality in these sectors. Gender-sensitive training and capacity building will be part of the GIP/VP AP. Areas and issues of interest to women would be economic empowerment and greater access to and control over resources and budgets. The project will mainstream gender in all components through the review of key documents produced, as well as the preparation of ToRs in which gender issues should be introduced. The project is expected to promote gender equality in the areas of management, governance and policy development. The Gender and Indigenous Peoples/Vulnerable Population (GPI/PV) Action Plan has been prepared to offer a clear vision on how the project will address land and water issues related to

gender equality and indigenous and vulnerable peoples including providing indicators and means of verification.

GENDER AND INDIGENOUS /VULNERABLE PEOPLES ACTION PLAN

The active roles of women and of indigenous and intercultural peoples are crucial for reversing the process of land and water degradation in the basin. The sustainable use of land and water in the basin has to do with incorporating a gender equality approach, advancing the participation of women and of indigenous peoples in resource management, and their empowerment in the implementation of IWRM governance frameworks. To do this, the project will develop capacities for advocacy of, and compliance with rights, such as access to land, as well as integrate consideration of GIP/VP into the management of the project cycle. There will be a relevant emphasis on working with indigenous and intercultural peoples under their vision and worldview, on the participation of women respecting their culture and the rights established in the countries and international agreements. The identification process of priority reforms and investments needed to reverse the degradation trends in the basin, will involve stakeholders from the public, private and organized civil society, and adopt the gender and indigenous peoples approach to ensure that both these important groups participate in the project?s design, implementation, monitoring and evaluation processes.

Component 1: Transboundary cooperation: new approaches and tools.
Expected Outcome: Conditions created for full adoption of modern integrated approaches to water resources management and balancing of competing uses.

The members of COBINABE will reinforce and develop their capacities in integrated watershed management to include the participation of women, indigenous peoples and vulnerable populations (GIP/VP) in the IWRM approaches developing equal opportunities in the use of land and water resources so that the benefits will reach these groups clearly and inclusively.

Indicator: by the second year of project implementation, 100% of COBINABE decisions include in a relevant way the participation and empowerment of women, indigenous peoples and vulnerable groups.

Gender and indigenous people activities	**Indicator**	**Target**	**Reporting mechanism**	**Budget** **US $**	**Schedule**	**Responsible party**

Act.1.1. Workshops to update normative knowledge for the members of COBINABE (COREBE, OTNPB, Foreign Ministries) as well as organized civil society, for the incorporation of the GIP/VP perspective in the expanded management mechanism in the Bermejo basin	# of training workshop on GIP/VP issues with the political, strategic and operational instances of COBINABE	6 (Bolivia and Argentina)	Participant registration form and workshop reports	10.000	Year 1	PMU and GIP/VP expert consultants
Act.1.2. GIP/VP support provided to countries and basin organizations during negotiations for expanding COBINABE?s mandate	Gender and indigenous/vulnerable peoples approach included into the COBINABE expanded mandate.	na	Text of the new expanded mandate of COBINABE	8000	Year 2	
Activity 1.3. Introduction of GIP/VP consideration into COBINABE?s newly established basin management tools	The newly established GIS and DSS include systematic information on based on sex-disaggregated water data, and on indigenous peoples.	na	Final report on GIS and DSS establishment.	12.000	Year 2	

Activity 1.4 Building capacity in COBINABE in sex-disaggregated water data collection and indicators in	# of training modules on sex-disaggregated data collection prepared and implemented.	6 modules implemented	Training reports, and modules posted in the project?s website.	30,000	Year 3	
Activity 1.5 Training indigenous and intercultural technicians in IWRM promoting the exchange of knowledge in the basin.	# of training events on IWRM, and of experience and knowledge exchanges among indigenous people?s technicians with gender balanced participation	20	Reports of trainings and of exchanges events.	40.000	Year 2	
Component 2: Integration of underground water resources **Expected outcome**: Improvement of climate resilience and water security in the basin through the evaluation and sustainable strategic use of groundwater resources. **Indicator:** decisions affecting women, indigenous and vulnerable groups on the management and use of groundwater resources are consulted and these groups are represented in IWRM bodies and Basin Management Bodies.						
Activity 2.1 Incorporation of the knowledge of indigenous and intercultural peoples in the evaluation of groundwater resources	# of consultations with indigenous organizations	A total of 10 events conducted in the upper and lower basin with gender balanced participation	Reports of consultations	30.000	Year 2	PMU and GIP/VP expert consultants

Activity 2.2. Inclusion in the design and operation of the groundwater monitoring networks of indigenous and intercultural peoples according to their organization and roles appropriate to their knowledge and culture	# of gender balanced participation of indigenous peoples representatives	All indigenous people organizations (see Stakeholder engagement plan) represented	Final design and protocols of the groundwater monitoring network	20.000	Year 2	
Component 3 Accelerating priority reforms and investments **Expected outcome**: Strengthened countries? commitment to the implementation of priority reforms and investments agreed in the Strategic Action Program. **Indicator**: 100% of reforms and investments are formulated and decided with the participation and representation of GIP/VP ensuring that they promote their empowerment.						
Activity 3.1. In depth gender and indigenous people?s analysis conducted as part of the updated TDA	GIP/VP Transboundary Analysis conducted by gender balanced team of GIP/VP experts, feeds into the TDA of the Basin	TDA report includes consideration of GIP/VP	Final TDA report	35.000	Year 3	PMU and GIP/VP expert consultants
Activity 3.2. Participation of GIP/VP experts in the definition of the updated Strategic Action Program	The SAP includes reforms and investments fostering women empowerment and sustainable productive activities and management of natural resources in indigenous and intercultural communities.	na	SAP document endorsed by countries at ministerial level	35.000	Year 4	

Component 4: Stakeholders engagement and awareness raising
Expected outcome: Systematic stakeholders? engagement in project activities, improved public awareness and access to information, and involvement of the productive sector, foster the achievement of the project?s outcomes and the broader commitment to the implementation of SAP reforms and investments.

Indicator: 100% of stakeholders are sensitized on GIP/PV issues and have commitments to empower them according to their role in the Project and their institutions.

Activity 4.1 Contribute to the design and implementation of the citizen participation and environmental education program involving all key actors in the basin, gender balanced and including indigenous communities.	% of women who participate in the program design and implementation processes. # of gender balanced training events for leaders of indigenous communities and women organizations aimed at strengthening participation and commitment in the implementation of the SAP	At least 30% 4	Reports and list of participants	15.000	Year 1 Year 3	PMU and GIP/VP expert consultants
Activity 4.2 Ensure that the mechanism and procedures for the participation of civil society organizations in overseeing environmental management together with governmental Basin agencies, adopts the GIP/VP approach.	% of women participating in the mechanism and supervision % of indigenous organizations that participate in supervision in their territory	At least 30% 100%	Report on the mechanism and procedures for civil society participation in the environmental management of the basin. Approved by the SC.	10.000	Year 1	

Activity 4.3 Promote the informed participation of women and indigenous and intercultural peoples in the round tables aimed at engaging the productive sector in the TDA-SAP % update.	# of trainings on TDA-SAP update topics for representatives of women, indigenous or intercultural people elected by their legitimate organizations # of representatives of indigenous peoples attending the round tables	2 At least 2 men and 2 women	Minutes of meetings	8.000	Year 3	
Activity 4.4 Ensure the informed participation of women and indigenous people in the annual Stocktaking Meetings	# of reports on progress in the application of the GIP/VP approach in project implementation, prepared by women and indigenous peoples representatives	4	Minutes of the annual Stocktaking Meetings	16.000	Years 1-4	
Activity 4.5 Make visible through IW LEARN tools the participation and contributions of women and indigenous people to the project.	The project website includes a section dedicated to GIP/VP activities and achievements	na	Project website	20.000	Years 1-4	

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

Yes

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

Improving women's participation and decision making Yes

Generating socio-economic benefits or services or women No

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

Yes

4. Private sector engagement

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

168. Community-based activities carried out during previous IW projects in the Basin resulted in the active participation of the productive sector, in terms of participation by individuals as well as by producer and user associations. The present project will take advantage of these experiences, and strive to involve small ? holder farmers, land owners, and specialized corporations in the evaluation of sustainable management practices concerning forest conservation and restoration, forage management, sustainable practices for subsistence farming, and erosion and sediment transport control. A specific output under Component 4 ?Round table aimed at periodically engage representatives of the productive sector (private enterprises, landowners and farmers), in the groundwater assessment and the TDA-SAP update process? will ensure the engagement of the productive sector in the SAP negotiations and its participation in replicating sustainable management practices and technologies. To this end, the SAP will include consideration to the provision of incentives and guidelines to offset risks associated with investments in the expansion of such practices. Finally, the project will strive to overcome the probable resistance of the productive sector to share subsurface data needed for integration of groundwater into basin management, and crucial for the assessment and diagnostic of the groundwater resources of the basin.

169. The project seeks to provide a planning framework to promote and catalyze the implementation of actions identified in the SAP, by articulating specific target investment areas comprised of governmental, nongovernmental, and private groups that could productively interact with regional and international banking and investment agencies.

5. Risks to Achieving Project Objectives

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

RISK	PROBABILITY	RISK MITIGATION
The lack of sustained political support for enhanced cross-border cooperation hinders the consolidation of COBINABE as a joint body for managing the entire basin.	Low	The emphasis on capacity development in governance, technical management, financial management, and information aims to foster expanded leadership among key stakeholders from both countries with a high level of involvement from political and administrative institutions. Consequently, it requires ongoing political dialogue within each country and between them to garner the necessary support for implementing the planned Integrated Water Resources Management (IWRM) measures throughout the basin.
Difficulties in the economies of both countries due to the global economic crisis, post-COVID conditions, and the war in Ukraine can alter the priorities of public and private investments, further reducing the availability of funds for projects in the Bermejo Basin.	Medium	The project will strengthen COBINABE, by building their capacities to leverage international financing opportunities through the design and implementation of financial mechanisms that involve productive sector participation. This will be achieved through training and specialized advisory services on innovative financial mechanisms related to climate change, water efficiency, energy efficiency, and other relevant areas.
The lack of ownership of the comprehensive vision and integrated management of the transboundary basin by subnational governments, the productive sector, and social organizations hinders the agreement on technical, administrative, investment, and financial measures.	Medium to Low	The project will strengthen the integration of stakeholders as interested parties and co-responsible actors in decision-making processes by involving them in governance mechanisms, providing access to information, involving them in the formulation and approval of the updated PAE (Strategic Action Plan), providing training and participation in the investment project cycle, and relevantly engaging them in policies and regulations promoted by COBINABE for Integrated Water Resources Management (IWRM) in the basin.
Limited participation of financial institutions and the productive sector in the implementation process of the Strategic Action Plan (PAE).	Low	The project will provide high visibility to the process of formulating and approving the updated Strategic Action Plan (PAE) through the participation of International Financial Institutions (IFI), convention secretariats, and key private stakeholders. The implementing agency, CAF, will play a crucial role in mitigating this risk.
Limitations in the Comprehensive Participatory Analysis with public-private articulation.	Low	The project will strengthen COBINABE by providing it with tools applicable to the Bermejo Basin in an integrated manner, fostering synergies between the public and productive sectors to ensure commitments of technical and financial support.
Limited access or resistance to sharing subsurface data necessary for integrating groundwater into basin management.	Low to Medium	The project will strive to achieve effective participation from the productive sector (farmers, mining industry, etc.), which will be crucial for the assessment and diagnosis of groundwater resources in the basin.

RISK	PROBABILITY	RISK MITIGATION
In both countries, groundwater management is still in its early stages, which can pose challenges in developing integrated management with surface water considering climate change. The main risk lies in the resistance of technical teams, difficulties in obtaining data and information with high budget requirements, existing regulations, etc.	Low to Medium	The project will disseminate information and provide technical training on groundwater to officials at all levels of COBINABE and stakeholders. It will also offer guidance on regulations and policies as part of institutional strengthening efforts.
The high demand for water post-COVID-19 presents both opportunities and risks to the sustainability of water services, particularly for drinking water and irrigation. On one hand, it provides an opportunity to address the increased need for water services. On the other hand, it poses a risk due to prolonged frozen tariffs and the slow recovery of income for the population affected by COVID-19.	Low to Medium	The project will strengthen sustainable management capacities of various water operators and service providers through specialized training and advisory support.
The vulnerability of both ecosystems and the population to the impacts of climate change.	Medium to High	The project reduces the vulnerability of both ecosystems and the population to the impacts of climate change by strengthening their adaptive capacities. The measures supported by the project would only shift from preventive to mitigate in a scenario of accelerated change or extreme Enso events, but it is unlikely to significantly affect its financial, environmental, and social performance and GEB production during the design period. The specific analysis of climate risk provides two main recommendations for the broader project. Firstly, it reinforces the project's overall approach of providing focused attention, positively discriminated, to the most vulnerable members of its target populations. Indigenous peoples and/or women, along with other excluded members of local communities (children, elderly, physically disabled, LGTB+), should have increased opportunities to participate in project activities and access the benefits. By doing so, the project will ensure that resilience is optimized. Similarly, the project must ensure that all of its procedures, structures, activities, and deliverables are integrated within a culture of risk prevention and reduction, supporting its beneficiaries and stakeholders in the broad and deep creation of social capacities, both public and private, for emergency response at all levels.

RISK	PROBABILITY	RISK MITIGATION
Limited transfer of knowledge and local capacities.	Low	The project should focus on building specific local technical capacities in the Integrated Management of surface and groundwater resources in the Bermejo Basin through knowledge transfer at various levels of actors and stakeholders

170. Conclusive remarks: the overall risk rating of the project can be considered Low to Medium. Main threats may derive (i) from the novelty for the basin inhabitants of groundwater research and data collection, and (ii) from climatic extremes that might occur during project implementation. In both cases the project?s mitigation measures were designed in order to minimize the potential negative impacts.

171. The project reduces the vulnerability of both ecosystems and the population to the impacts of climate change by strengthening their adaptive capacities. The measures supported by the project would only shift from preventive to mitigate in a scenario of accelerated change or extreme Enso events, but it is unlikely to significantly affect its financial, environmental, and social performance and GEB production during the implementation period.

172. The specific analysis of climate risk provides two main recommendations for the broader project. Firstly, it reinforces the project's overall approach of providing focused attention, positively discriminated, to the most vulnerable members of its target populations. Indigenous peoples and/or women, along with other excluded members of local communities (children, elderly, physically disabled, LGTB+), should have increased opportunities to participate in project activities and access the benefits. By doing so, the project will ensure that resilience is optimized. Similarly, the project must ensure that all of its procedures, structures, activities, and deliverables are integrated within a culture of risk prevention and reduction, supporting its beneficiaries and stakeholders in the broad and deep creation of social capacities, both public and private, for emergency response at all levels.

6. Institutional Arrangement and Coordination

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

173. The proposed project will be implemented by CAF, and executed by a fiduciary Executing Agency that, in partnership with COBINABE, will be responsible for the execution of all project activities. CAF, as implementing agency, will support the executing agency and other executing partners and supervise the implementation. COBINABE will be fully involved in the implementation of this project and will lead a number of key related activities. Day to Day project coordination and execution will be responsibility of the Project Management Unit, with the support of COBINABE, of the National Coordination Committees, of the Project Technical Committee, and of the entities in charge of water in each country.

174. The overall supervision of project activities will be the responsibility of the Project Steering Committee (PSC), composed of COBINABE and the Implementing and Executing Agencies. The PSC is the highest decision-making body, responsible for the correct implementation of the activities agreed upon in the project.

COBINABE - In 1995 the two countries sharing the basin, cognizant of the need for coordinated, cooperative action in order to address the critical environmental condition of the Basin, created the Binational Commission for the Development of the Upper River Basin (COBINABE) through the signing of the Agreement for the Multiple Use of the Resources of the Upper Basin of the R?o Bermejo and R?o Grande de Tarija. This Agreement is the legal instrument that gave rise to COBINABE, establishing it as a permanent legal-technical mechanism, responsible for the administration of the Upper Bermejo River and the Grande de Tarija River Basin, aimed at promoting the sustainable development of its area of influence, optimizing the use of its natural resources, generating jobs, attracting investments and ensuring the rational and equitable management of water resources.

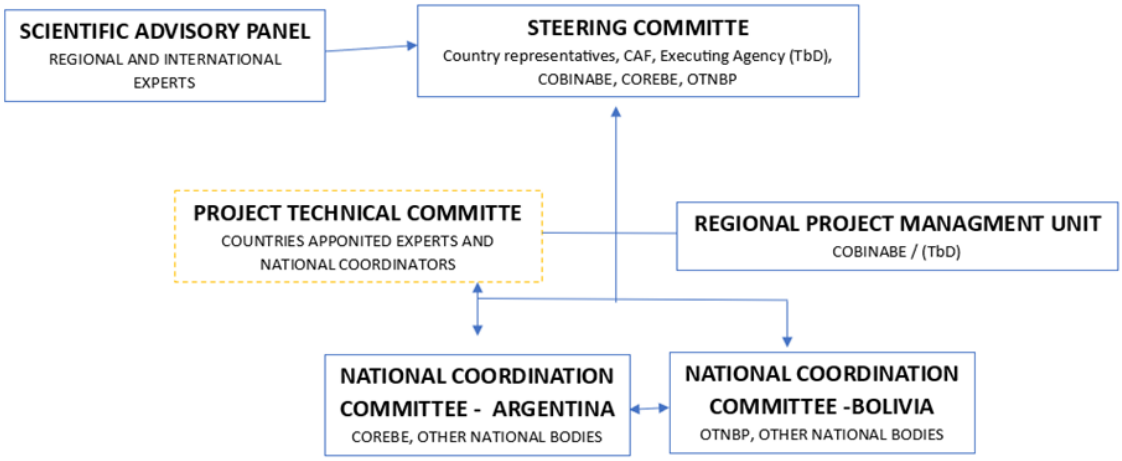
COREBE ? The regional Commission of the Bermejo River is an interjurisdictional body, created in 1981 by Federal Agreement signed by the National Government of the Republic of Argentina and the Provinces of Jujuy, Chaco, Formosa, Salta, Santa Fe and Santiago del Estero with the purpose of adopting political decisions and exercising the necessary actions for the use integral, rational and multiple of the water resources of the Bermejo River Basin.

OTNPB - The National Technical Office of the Pilcomayo and Bermejo Rivers established by the Government of Bolivia, the following strategic objectives: Contribute to developing and implementing improvements in the levels of management and sustainable use of the various natural resources in the area of influence of the Pilcomayo and Bermejo river basins; Contribute to implement and validate infrastructure and technologies for monitoring, measurement, follow-up and evaluation of climatic, environmental, water, soil, and agrometeorological factors. Contribute to strengthen and promote the management, operation and transnational relationship of social, productive, institutional, and life systems of the area of influence of the Pilcomayo and Bermejo river basins.

EXECUTING AGENCY? The project's execution will be carried out by a fiduciary executing agency in conjunction with COBINABE, acting as co-executing entity and project beneficiary.

CAF ? The Development Bank for Latin America is the GEF Agency selected by the countries for the implementation of the project.

The project organisational structure is shown in Figure below.



Implementing Agency ? CAF

175. CAF is accountable to the GEF for the implementation of this project. This includes oversight of project execution to ensure that the project is being carried out in accordance with agreed standards and provisions. CAF is responsible for delivering GEF project cycle management services comprising project approval and start-up, project supervision and oversight, and project completion and evaluation. CAF is also responsible for the Project Assurance role of the Project Board/Steering Committee.

Executing Agency (COBINABE - TBD)

176. The Executing Agency ? fiduciary - is the entity to which CAF has entrusted the implementation of CAF assistance specified in this project document along with the assumption of full responsibility and accountability for the effective use of CAF resources and the delivery of outputs, as set forth in this document. Together with COBINABE - technical executing agency - , it will have the responsibility to secure the establishment and supervision of the Project Management Unit (PMU), project planning, coordination, management, monitoring, evaluation and reporting. This includes providing all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary.

177. In this regard, CAF with the support of COBINABE, in the sense of achieving the best project outcomes through an efficient and agile execution process adapted to the region's capacities and requirements, ha initiated a fiduciary agency selection process by inviting various competent organizations in the field. The selection will be based on a list of eligibility criteria that meet CAF's fiduciary standards, experience in implementing GEF projects, and COBINABE's operational execution requirements. The selection process will be completed prior to the project inception meeting, and the selected agency will be communicated to the GEF.

The Steering Committee (PSC).

178. The Project Steering Committee is responsible for taking corrective action as needed to ensure the project achieves the desired results. In order to ensure CAF?s ultimate accountability, PSC decisions should be made in accordance with standards that shall ensure management for development results, best value money, fairness, integrity, transparency and effective international competition. It will be responsible for making decisions regarding the overall management of the project, supporting and approving contracts, annual operational plans and budgets, as well as technical and financial reports. Also, the PSC, is needed, will elaborate regulations or operational guides for the good implementation of the project.

177. In case consensus cannot be reached within the PSC, the CAF Representative (or designate) will mediate to find consensus and, if this cannot be found, will take the final decision to ensure project implementation is not unduly delayed. The PSC will be constituted by the delegates of COBINABE and the Agencies. The PMU will serve as the secretariat of the PSCP.

180. The composition of the PSC must include the following roles:

a. Project Executive: an individual who represents CAF ownership of the project and co-chairs the Project Board.b. Beneficiary Representative(s): Individuals or groups representing the interests of those who will ultimately benefit from the project. Their primary function within the board is to ensure the realization of project results from the perspective of project beneficiaries. The Beneficiary representative (s) will be identified during the inception phase of the project.

c. Executing Agency (tbd) and co-executing Partner (COBINABE): Individuals or groups representing the interests of the parties concerned that provide technical expertise for the project.
d. Observers: The Intergovernmental Coordination Committee of the Plata Basin countries (CIC) will be invited to participate to the SC meetings as a means to ensure the integration of the project within the broader Plata Basin context.

181. Project Assurance: CAF performs the quality assurance role and supports the Project Board and Project Management Unit by carrying out objective and independent project oversight and monitoring functions. This role ensures appropriate project management milestones are managed and completed. The Project Board cannot delegate any of its quality assurance responsibilities to the Project Manager.

182. National Governments? representatives on the Project Board are responsible for making by consensus management decisions when guidance is required to the project, including recommendation for CAF approval of project plans, revisions and budget. The Chair of the PSC will be agreed on a meeting-to-meeting basis and will rotate between the two basin countries, and CAF will co-chair the meetings.

183. A face ? to ? face meetings of the PSC will be held at least annually and hosted by COBINABE. Virtual meetings will also be oraganized upon request of the countries and/or the PMU.

The Regional Project Management Unit (PMU)

184. Led by the Project Manager, the PMU will include an information and computer systems technician, two technical officers (one from each country) and a communication officer. The PMU will be hosted within COBINABE, in one of the beneficiary countries and facilities available should assure the functioning of the Unit. During the project?s inception first Steering Committee Meeting, the received proposals will be reviewed, and the location of the PMU will be decided. The PMU will carry out the project?s day to day execution, including maintaining communication among all parties involved in the project. The Project Manager will be responsible for ensuring that all monitoring and evaluation activities are carried out in accordance with the M&E plan.

185. **The Project Manager** will operate under the supervision of the Executing Agency (tbd, COBINABE) and will supervise project activities on a day-to-day basis, with the support of the PMU staff. The Project Manager?s prime responsibility will be to ensure that the project produces the results specified in the project document, to the required standard of quality and within the specified constraints of time and cost. The project manager will prepare the reports to be presented to the the PSC. The Project Manager will secure close coordination with the NCs and PTC, with national authorities? offices, national and regional consultants engaged in project activities, as well as with relevant ongoing projects and initiatives. Project Manager function will end when the final project terminal evaluation report and corresponding management response, and other documentation required by the GEF and CAF, has been completed and submitted to CAF (including operational closure of the project). The Project Manager will be internationally recruited by the Executing Agency jointly with CAF/GEF.

186. The project manager will have a team of professionals with the following characteristics and functions:

- **Information and computer systems technician.** Technical professional with a profile in computer and information systems supports the project manager, trained to comprehensively manage the information systems applied to the project. He/she is responsible for monitoring the operational and legal standards of the information system and data processing. Issues monthly and annual technical status and contingency reports .

- **Technical officers (one per country**). Professionals with IWRM and watershed profile who perform technical functions with the National Coordinators (Officers under the Ministries) to ensure that decisions are implemented on the ground with sub-national public and private actors, with stakeholders, extend the guidance agreed in the countries to consultants contracted by outputs, perform field supervision, collect data for monitoring and prepare technical reports in the field. Coordinate specific technical work with country technical assistants to facilitate stakeholder consultation events to validate inputs and agreements at TDA/SAP and investment level.
- **Gender and Indigenous Peoples Officer**. Gender and indigenous peoples professional responsible for the implementation of the gender, indigenous peoples and vulnerable groups plan. Ensures that the GEF's gender policy is included in the component outputs, that the information system includes sex-differentiated data, that the TDA / SAP incorporates a gender and indigenous approach and that both groups have been

consulted. It monitors the gender aspects of the strategy and prepares exchange events and promotes participation in the Basin's governance instances.

- **Communications Officer**. Its function is to design the overall communication strategy of the project for its aims and objectives expected from the multiple stakeholders. As well as managing and advising on its implementation with the participation and coordination of COBINABE, CAF, stakeholders, the project team and any subcontractors. Its responsibility will be to:

a. the project communicates effectively to the multiple stakeholders directly and indirectly involved about its objectives, results, processes, achievements, learning, etc. Maintaining interest and commitment to the right expectations according to the international and national scope.
b. the project team efficiently and effectively applies the global communication strategy in each component without losing sight of the project as a whole and of the various target groups involved, under a single communication line with COBINABE.
c. The project is positioned in the national and international context, making its results and lessons learned visible with appropriate communication material for the relevant audiences properly selected.
d. Organize events and meetings within the framework of the project and develop knowledge management activities.
e. Organize and operate the IW: LEARN.
f. Collaborate with the registration and systematization of key documentation to be generated by the project. Outputs, reports, reports, etc.

National Coordination Committees (NCs)

187. At the national level, the project's activities, actions, interventions, or other tasks will be coordinated by the NCs, that will have Technical Assistance (TAs) established in each country. National Coordinators will be high-ranking officials designated by national authorities.

188. The NCs will be supported by the Project Technical Committee (PTC). The PTC will promote and facilitate binational cooperation and coordination throughout the project execution, and will be composed by the National Coordinators and by technical experts nominated by each country, and expanded as needed[1]. The PTC will provide technical oversight, evaluate technical reports, and generate solution recommendations to be elevated to the Project Steering Committee (PSC). The PTC will convene every three months, either in person or virtually, at a minimum.

189. A similar arrangement was adopted very successfully within the framework of the Medium Sized ?bridging? La Plata Basin Project project recently completed.

National Project Coordinators

190. The main responsibility of the National Coordinators is to ensure the required levels of quality within the constraints of time and cost, while adhering to established standards and procedures. The National Coordinators will be responsible for:

a) Making decisions and overseeing the execution of national project activities.
b) Requesting payments in accordance with the annual operational plans.
c) Conducting relevant contracting and procurement.
d) Facilitating intergovernmental coordination.
e) Transferring project information to national counterparts and other stakeholders.
f) Providing overall supervision and support to national consultants carrying out project activities.
With the support of the PTC, they will also provide specific thematic inputs to the Project Management Unit (PMU) as needed, such as communications, thematic specialists, governance, etc., as determined.

Scientific Advisory Panel:

191. It is formed by regional and international scientists in disciplines relevant for the project. Members will be appointed by the Steering Committee in its first meeting upon proposal of the Executing Agency. It will provide the strategic advice and expertise that the project needs to reach its goals, wise counsel and insights regarding issues that the project may be facing. It will be up to the project Board to decide whether or not to act upon it. The advisory panel will not have governance responsibilities. That means members have no voting rights and cannot make financial decisions.

6.2 Coordination with other relevant GEF-financed projects and other initiatives

192. The mechanism for coordinating with other ongoing relevant initiatives and projects will be the Annual Stocktaking Meeting (output 4.4).

193. In addition to the governments led activities described at ?tem c, two GEF IW projects are of particular importance for the project being proposed. Both relate to the wider La Plata Basin of which the Bermejo Basin is part. The project being proposed in fact, addresses one of the priority issues of transboundary concern identified in the La Plata basin SAP (excessive sediment loads).

1) Sustainable management of the water resources of the La Plata basin with respect to the effects of climate variability and change (UNEP/OAS/CIC, completed).

194. The overall objective of this TDA-SAP project was to assist the governments of Argentina, Bolivia, Brazil, Paraguay and Uruguay, within the framework of the CIC as the agreed intergovernmental organization set forth for this purpose in the Treaty of the la Plata Basin, in managing the shared water resources of the la Plata Basin in an integrated manner, focusing on environmentally sustainable economic and social development, as well as adaptation planning and assessment, in view of the effects of climate

variability and change on the hydrology of the Basin. As outcome of the Project, the governments of Argentina, Bolivia, Brazil, Paraguay and Uruguay were poised to better coordinate actions and investments in the la Plata Basin to achieve sustainable utilization of its water resources, and to initiate the process of adapting to climate variability and change, mitigating its negative impacts, and capitalizing on the opportunities that such variability and change may provide. One of the main transboundary issues of concern identified in the TDA was the growing sediment loads that the Parana River discharges into the Plata estuary. The main source of these sediments was identified in the Bermejo River, and the SAP includes as a priority action the mitigation of this accelerated erosion process.

2) Preparing the ground for the implementation of the La Plata Basin Strategic Action Program (CAF/OAS ongoing)

195. The project is intended to set the scene for the implementation of the priority national and regional actions identified in the Strategic Action Program (SAP), agreed upon by the countries sharing the La Plata Basin and aimed at improving water security, climate resilience and ecosystem health; it will do so by fostering the consolidation of regional cooperation, the alignment of national and regional priorities, and by promoting integration across sectors and funding sources.

3) Component 2 of the project is focused on groundwater resources of the Basin. As such it will benefit from exchanges with two GEF funded projects presently ongoing dealing with two major aquifer systems: the Amazon aquifer system, and the Guarani Aquifer system. These projects ? albeit dealing with groundwater physically unrelated to the project area ? might provide useful insights and approaches.

4) Relevant GEF funded initiatives in IW and other focal areas ongoing or soon to start implementation.

Title	Objectives	Country	IA/EA	GEF grant	Status
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.	To scale up the integral and sustainable management of biodiversity and forests (ISMBF) as a strategy for sustainable forest management (SFM) and sustainable land management (SLM) to support integral territorial planning and the strengthening the life systems in fragile ecosystems of the dry forests in the Bolivian Chaco.	Bolivia	FAO/ Ministry of Environment and Water	$3.5m	CEO endorsement pending

Program to sustainably manage and restore land and biodiversity in the Guadalquivir Basin	To develop and implement an inclusive territorial planning and governance strategy as a model for the conservation, restoration and sustainable management of land, water, biodiversity and integrated production systems to achieve Land Degradation Neutrality (LDN) in the Guadalquivir River Basin	Bolivia	FAO, Ministry of Environment	$1.5	Project approved for implementation
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	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	Bolivia	CAF	$1.8	Concept approved

Transboundary cooperation for the conservation, sustainable development and integrated management of the Pantanal - Upper Paraguay River Basin	To promote water security through strengthening transboundary water governance, sustainable development, balancing multiple-use and promoting integrated management of the Pantanal-Upper Paraguay River Basin for the social and economic well-being of the population and for the conservation of the freshwater ecosystem, its services, its biodiversity and connectivity.	Paraguay, Brazil	IADB, UNEP, WWF-US	8,1	Project approved

3) Relevant GEF funded initiatives in IW and other focal areas recently completed, or soon to start implementation.

196. Several GEF projects address issues relevant for the proposed project, in particular the impacts of climate change and deforestation on land degradation and biodiversity in the Gran Chaco plains (including the lower Bermejo basin) and in the ?vertical? ecosystems of the Andean Cordillera.

Title	Objectives	Country	IA/EA	GEF grant	Status
Conservation and Sustainable Use of Biodiversity and Land in the Andean Vertical Ecosystems	Promote the conservation of agro-biodiversity and sustainable land and water management to restore the productive capacity and sustainability of Andean vertical ecosystems sustaining habitats of native plants and endangered species and the food security of the *Ayllus* (indigenous Andean territorial organizations) population.	Bolivia	IADB/ Ministry of Rural Development and Environment	$6m	Completed (2015)

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.	To scale up the integral and sustainable management of biodiversity and forests (ISMBF) as a strategy for sustainable forest management (SFM) and sustainable land management (SLM) to support integral territorial planning and the strengthening the life systems in fragile ecosystems of the dry forests in the Bolivian Chaco.	Bolivia	FAO/ Ministry of Environment and Water	$3.5m	CEO endorsement pending
Sustainable Forest Management in the Transboundary Gran Chaco Americano Ecosystem	To reverse land degradation trends in the Gran Chaco through supporting sustainable land management in the productive landscape	Argentina, Bolivia, Paraguay	UNEP, UNDP/OAS	$6.8m	Completed (2017)
Program to sustainably manage and restore land and biodiversity in the Guadalquivir Basin	To develop and implement an inclusive territorial planning and governance strategy as a model for the conservation, restoration and sustainable management of land, water, biodiversity and integrated production systems to achieve Land Degradation Neutrality (LDN) in the Guadalquivir River Basin	Bolivia	FAO, Ministry of Environment	$1.5	Project approved for implementation

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	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	Bolivia	CAF	$1.8	Concept approved
Transboundary cooperation for the conservation, sustainable development and integrated management of the Pantanal - Upper Paraguay River Basin	To promote water security through strengthening transboundary water governance, sustainable development, balancing multiple-use and promoting integrated management of the Pantanal-Upper Paraguay River Basin for the social and economic well-being of the population and for the conservation of the freshwater ecosystem, its services, its biodiversity and connectivity.	Paraguay, Brazil	IADB, UNEP, WWF-US	8,1	Project approved

4) Non-GEF initiatives

196. An initiative funded by the Inter-American Development Bank stands out in the framework of Water Resources Management in the Binational Bermejo River Basin. The initiative has a budget of USD 150,000 and will be implemented over a period of 2 years (2023-2025). Its objective is to improve water resources management through technology transfer using the HydroBID model suite. The information generated by the models will also be used to promote the development of a geographic information system and support for binational decision-making.

[1] Since these delegates are nominated and/or appointed, they do not incur financial expenses for the project

7. Consistency with National Priorities

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

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

197. The proposed project is aligned with, and supports the relevant legislation and strategic documents of the Bermejo riparian counties and responds to the priorities indicated therein. It will also foster (i) compliance with the UN Convention on the Protection and use of Transboundary Watercourses and International Lakes and (iii) the achievement of relevant SDG targets.

Argentina

198. The complexity of water resource management is not solely focused on the multiplicity of its use and function. A central issue is the coordination among different actors, especially in the context of Argentina. Governance, which demands coordination with all its implications, requires not only coordination among different actors such as provinces and the nation but also within these actors. Secretariats and ministries must find appropriate tools for consensus-based work that surpasses task overlap and resource wastage while promoting synergy, complementarity, and collaborative work.

199. The Bermejo Basin project will promote the integration of different actors in the basin regarding consensual planning in water resource management. In relation to the framework set by the National Government's policy, one of whose priorities is to address the needs of vulnerable sectors without neglecting the requirements for balanced development of production and ecosystem preservation, this project serves as a guiding tool for public policy in the basin regarding both short and long-term structural and non-structural interventions.

200. Each component of the project is linked to the country's development objectives, which are also aligned with the Sustainable Development Goals (SDGs) 2030. In this sense, the real connection between SDG 6, public policy objectives, and the current project lies, for example, in the integration of groundwater resources through the development of knowledge for water supply for human consumption and productive development.

201. In line with transboundary cooperation, the national water policy acknowledges the unequal development of provinces in institutional matters, particularly regarding the different authorities responsible for enforcing water regulations within their areas of jurisdiction. Therefore, the transboundary harmonization of governance frameworks for shared, confined, and unconfined groundwater resources at various depths within the basin's

subsurface, as well as the updating and transboundary harmonization of governance frameworks for surface water resources, are objectives of the project in line with the development of national policies.

202. Finally, within the framework of the national water policy objectives, which revolve around the comprehensive intervention of the water resource under the main lines of action for flood and drought prevention or water stress, water for irrigation, water for human consumption and sanitation, and preservation of aquatic ecosystems under governance involving all state or productive sectors, the present project aims to strengthen the achievement of these objectives, thereby achieving the targets established by Argentina within the framework of the SDGs 2030.

Federal Water Plan 2017: Policy Axes

? Potable water and sanitation: expand the provision of potable water and sanitation services, including potable water and sewage treatment plants.
? Adaptation to climatic extremes: increase the protection levels of the population, especially the most vulnerable (women, children, the elderly, indigenous peoples, the poor and the indigent) against floods, droughts and other threats through infrastructure, warning systems, and contingency plans.
? Water for production: provide water for primary, secondary (agroindustry), and tertiary productive activities, especially tourism services. Irrigation for agriculture and afforestation stand out among the primary activities.
? Multipurpose use and biomass: achieve the yield and generation of matter and energy from biomass.
? Preservation of water resources: use and preservation of water by the associated actors.
? Strengthening of capacities of the actors associated with the use of water.
? Innovation: optimizing the innovation available to the country to achieve practical solutions.
? Participation: achieving the participation and responsibility of the various actors associated with the use of water.

Bolivia

203. The Plurinational Plan for Water Resources 2021 -2025, is a comprehensive and long-term strategy aimed at the sustainable management of water resources in Bolivia. This plan seeks to ensure equitable and secure access to water, promote the conservation and protection of aquatic ecosystems, and encourage efficient and responsible use of water resources.

204. The plan establishes guidelines and measures for integrated water resources management, including the identification and protection of water sources, the development of infrastructure for water supply and sanitation, the implementation of water conservation and efficiency measures, and the promotion of public participation and stakeholder involvement in decision-making processes.

205. The Plurinational Plan for Water Resources recognizes the importance of water as a fundamental resource for life, development, and the preservation of ecosystems. It seeks to address the challenges and complexities associated with water resources management in Bolivia, including issues of water scarcity, water quality degradation, and the impacts of climate change.

206. The plan emphasizes the need for coordination and collaboration among different sectors and levels of government, as well as the participation of local communities and indigenous peoples in water resources

management. It also aims to strengthen institutional capacities, improve data collection and monitoring systems, and promote research and innovation in the field of water resources.

207. Overall, the Plurinational Plan for Water Resources represents Bolivia's commitment to sustainable water management and the realization of the human right to water. It serves as a roadmap for achieving water security, environmental sustainability, and social development in the country.

208. The Political Constitution of the Plurinational State of Bolivia (CPE) establishes access to water as a fundamental human right for life. It is the duty of the State to protect and guarantee the priority use of water for life by managing, regulating, protecting, and planning the appropriate and sustainable use and access to water resources (rivers, glaciers, lakes, and lagoons), which are considered strategic resources. The State must respect the uses and customs of communities regarding the rights, management, and sustainable use of water. It should develop plans for the use, conservation, management, and sustainable use of hydrographic basins for irrigation in order to guarantee agricultural production and food security. It must also safeguard border and transboundary waters for the conservation of the water wealth that allows for the integration of peoples. The following themes are highlighted:

209. Scope and themes of the CPE regarding water resources, basins, and irrigation

THEMES	REGULATORY SCOPE
Water for life	The State will promote the use and access to water. It will recognize, respect, and protect the uses and customs of communities for the sustainable management of water.
Water resources	Water resources in all their states, surface and underground, are finite, vulnerable, strategic resources, and fulfill a social, cultural, and environmental function. The State will regulate the management and sustainable use of water resources and basins, respecting the uses and customs of communities.
Hydrographic basins	The State will develop plans for the use, conservation, management, and sustainable utilization of hydrographic basins. The water resources of rivers, lakes, and lagoons that form the hydrographic basins are considered strategic for the development and sovereignty of Bolivia due to their potential and variety of natural resources they contain. The State will avoid actions in the headwaters and intermediate zones of rivers that cause damage to ecosystems or reduce their flow; it will preserve the natural state and ensure the development and well-being of the population.
Transboundary waters	Any international treaty that the State signs regarding water resources will guarantee the sovereignty of the country and prioritize the interests of the State, safeguarding border waters and the conservation of water wealth.
Irrigation	The State and autonomous and decentralized territorial entities will promote irrigation systems in order to guarantee agricultural production. The State will regulate the management and sustainable use of water resources and the basin for irrigation, food security, and basic services, respecting the uses and customs of communities. The State has the obligation to guarantee food security through healthy, adequate, and sufficient nutrition for the entire population.

210. The institutional framework of the water resources and irrigation sector is composed of sectoral and territorial bodies with varying degrees of competencies, but ultimately led by the Ministry of Environment and Water (MMAyA) as the lead entity in the sector, supported by its three deputy ministries with specific themes.

211. Powers of the Ministry of Environment and Water:

? Formulating, implementing, evaluating, and overseeing policies and plans for drinking water and basic sanitation, irrigation, integrated watershed management, and forest rehabilitation of watersheds and degraded areas, as well as sustainable use of water in all its forms, whether surface or groundwater, fossil water, glaciers, wetlands, minerals, medicinal waters.
? Controlling, supervising, directing, and strengthening the decentralized and autonomous institutional framework for planning and regulation of the water resources and environment sector.
? Coordinating with territorial organizations in the development and implementation of national, departmental, regional, municipal, and indigenous-origin peasant plans related to the general regime of water resources and their services, the environment, and biodiversity, as well as implementing policies and strategies within its competence.
? Coordinate with the Ministries of Foreign Affairs and Planning for Development, in line with the strategy to defend sovereignty and national security regarding international and transboundary waters, as well as the negotiation of treaties, agreements, conventions, decisions, and other international instruments related to the international agenda of environment, climate change, and water.
? Design policies and norms to implement Environmental Impact and Quality Control Systems, applicable at the national level and in decentralized and autonomous entities. Preside binational, national, mixed, intersectoral, and multilateral commissions, in coordination with the Ministry of Foreign Affairs, related to technical issues of water resources, biodiversity, environment, and climate change.
? Formulate and regulate regulatory policies, as well as oversight, supervision, and control of activities related to the management and utilization of natural resources regarding the environment, biodiversity, drinking water, basic sanitation, irrigation, and water resources.

212. The Plurinational Climate Change Policy, in line with the National Climate Change Plans, will promote the resilience of productive systems and livelihoods, increase adaptive capacity, decrease vulnerability of different social, economic, and environmental sectors with climate justice, gender focus, and intergenerational equity.

213. In order to strengthen multi-level and multisectoral water management, Bolivia commits to have strategic basins, sub-basins, and micro-basins with adequate and resilient management, enabling efficient, equitable, and inclusive use of water resources for multiple purposes, with a focus on the well-being of people and the balance of Mother Earth.

214. In addition, there is a commitment to make water resource utilization systems more resilient, both in terms of ensuring equitable and secure access to improved drinking water, sanitation services at urban and rural levels, as well as protecting and restoring water sources and surface and underground recharge areas. This includes improving water recovery, treatment, and storage systems, including multipurpose systems and water harvesting techniques for human consumption and irrigation.

8. Knowledge Management

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

215. Knowledge management and learning will be essential for the achievement of the project goal of consolidating institutional capacities and introducing best practices in water and soil management. The proposed project design has been based on lessons learned and the experiences gained through the implementation of the previous SAP implementation project, as outlined, in the section: ?The main lessons and recommendations from the previous GEF IW interventions?.

216. During its implementation the project will continue to facilitate, through Component 4 activities, exchanges with all relevant ongoing initiatives and projects, GEF and non GEF (see section on: ?Coordination with other relevant GEF-financed projects and other initiatives?), and will disseminate results and experiences being gained as the project progresses, through various means of communication, in particular through the Annual Stocktaking Meetings, to which a large number of stakeholders will be invited to participate, and through its contributions to IW LEARN activities and events.

217. In addition to the above, The KM Approach proposed for the present project will revolve around the creation of the Bermejo Basin Information Management System (output 1.3)- hosted by COBINABE - a process to capture, assess, document and share, in a user-friendly manner, information, lessons, best practices, and expertise generated during implementation. Some KM lessons from previous project are: a) *Collaboration and Cooperation*: critical for successful management and sustainable development in Transboundary basin. b) *Integrated Water Resource Management (IWRM)*: Implementing IWRM principles helps balance the competing demands on water resources while considering social, economic, and environmental aspects. c) *Information Sharing and Communication:* Open and transparent communication, along with the sharing of relevant data and information. Establishing mechanisms for timely sharing of hydrological, meteorological, and environmental data can contribute to informed decision-making. d) *Legal and Institutional Frameworks:* Clearly defined legal and institutional between countries for effective governance. Agreements and institutions that address water allocation, usage, and dispute resolution. e) *Community Engagement:* Involving local communities and stakeholders in decision-making processes fosters a sense of ownership and ensures that the perspectives of those directly affected are considered. f) *Adaptation to Climate Change:* Climate change poses challenges to water availability and quality. Developing adaptive strategies is essential to address the impacts of climate change. g) *Ecosystem Protection:* Recognizing the importance of maintaining healthy ecosystems within the basin. Sustainable development should consider the ecological integrity of the basin and the services it provides.

218. The Bermejo information system will be an integrated information management system that will make significant contributions to coordination, feedback, and monitoring processes. The Bermejo information system will have the potential to contribute to these processes in the following ways: (i) circulating information as part of an internal system of monitoring and evaluation; (ii) creating pages for different program strategic areas, in order to connect users based on common interests; (iii) organization of electronic forums on topics of relevance to the Basin; (iv) guaranteeing the dissemination of zoning plans, water studies, management plans, natural resources mapping, and other products to a wider range of users; (v) facilitating consultations, transfer of experiences, and other methods of online collaboration between sub-projects, implementers, research institutions, and other participants.

219. Timeline Propouse of implementing knowledge management and communication activities/products

			Population beneficiary		year			
Component 4. Stakeholders engagement and awareness raising	**Budget in US$**	**Budget item**	**Man**	**Women**	**1**	**2**	**3**	**4**
4.1 A citizen participation and environmental education program involving all key actors in the basin, gender balanced and including indigenous communities.	80000	10.3	3500 aprox	1400 aprox	700	1400	1400	1400
4.2 Mechanism and procedures for the participation of civil society organizations in overseeing environmental management together with governmental Basin agencies.	60000	10.1	360 aprox	240 aprox		1	1	1
4.3 Round table aimed at periodically engage representatives of the productive sector (private enterprises, landowners and farmers), in the TDA-SAP update process	60000	10.5	180 aprox	72 aprox	3	3	3	3
4.4 Annual stocktaking meetings, with broad participation of stakeholders, media, academia, donors and financial institutions, for disseminating and monitoring the project progress to impacts, to coordinate with other relevant initiatives, and present the final agreed upon SAP.	60000	10.4	60 aprox	24 aprox	1	1	1	1
4.5 Creation of project web site and online communication platform, and active participation to IW: LEARN activities and events	63504	14.7					X	
Group training workshops COBINABE								
Training COBINABE in strategic and operational management, organizational development, institutionality and legal aspects	20000	8.1	12 aprox	8 aprox		X		
Training to COBINABE in GIS information system, Data-based Decision Support System (DSS) and an Early Warning System	20000	8.2	12 aprox	8 aprox		X		
Integral Management of Water Resources	10000	8.3	12 aprox	8 aprox			X	
Groundwater resources governance and management for the strengthening	10000	8.4	12 aprox	8 aprox			X	
Water resources governance	10000	8.5	12 aprox	8 aprox			X	
Other relevant and relevant topics	24000	8.6	12 aprox	8 aprox	X	X	X	

9. Monitoring and Evaluation

Describe the budgeted M and E plan

220. Project results, corresponding indicators and mid-term and end-of-project target will be monitored annually and evaluated periodically during project implementation to ensure that the project achieves the expected results. Baseline data for some indicators that are not yet available will be collected during the first year of project implementation. The Monitoring Plan below details the roles, responsibilities, and frequency of monitoring project results. Project-level monitoring and evaluation will be undertaken in compliance with CAF requirements. CAF will work with the relevant project stakeholders to ensure CAF M&E requirements are met in a timely fashion and to high quality standards.

221. The costed M&E plan included below, will guide the GEF-specific M&E activities to be undertaken by this project.

Oversight and monitoring responsibilities

Project Manager:
222. The Project Manager is responsible for day-to-day project management and regular monitoring of project results and risks, including social and environmental risks. The Project Manager will ensure that all project staff maintain a high level of transparency, responsibility and accountability in M&E and reporting of project results. The Project Manager will inform the Project Steering Committee and the CAF-GEF of any delays or difficulties as they arise during implementation so that appropriate support and corrective measures can be adopted.

223. The Project Manager will develop annual work plans, including annual output targets to support the efficient implementation of the project. The Project Manager will ensure that the standard CAF and GEF M&E requirements are fulfilled to the highest quality. This includes, but is not limited to, ensuring the results framework indicators are monitored annually in time for evidence-based reporting in the GEF PIR, and that the monitoring of risks and the various plans/strategies developed to support project implementation (e.g.: gender strategy, knowledge management strategy etc.) occur on a regular basis.

Project Board / Project Steering Committee (SC):
224. The SC will take corrective action as needed to ensure the project achieves the desired results. The PSC will hold project reviews to assess the performance of the project and appraise the Annual Work Plan for the following year. In the project?s final year, the PSC will hold an end-of-project review to capture lessons learned and discuss opportunities for scaling up and to highlight project results and lessons learned with relevant audiences. This final review meeting will also discuss the findings outlined in the project terminal evaluation report and the management response.

Project Executing Partner (tbd, COBINABE):
225. The Executing Partner is responsible for providing all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary and appropriate. The Executing Partner will set annual targets, ensures they are on track and report them on regular basis in line with the M&E requirements for the project. The Executing Partner will regularly provide and retain all M&E records for this project for up to seven years after project operational closure in order to support ex-post evaluations undertaken by the CAF Independent Evaluation Office and/or the GEF IEO.

Additional GEF monitoring and reporting requirements.
226. Inception Workshop and Report: A project inception workshop will be held within 2 months from the First disbursement date, with the aim to:

1. Familiarize key stakeholders with the detailed project strategy and discuss any changes that may have taken place in the overall context since the project idea was initially conceptualized that may influence its strategy and implementation.
2. Discuss the roles and responsibilities in the project, including reporting lines, stakeholder engagement strategies and conflict resolution mechanisms.
3. Review the results framework and monitoring plan.
4. Discuss reporting, monitoring and evaluation roles and responsibilities and finalize the M&E budget; identify national/regional institutions to be involved in project-level M&E; discuss the role of the GEF OFP and other stakeholders in project-level M&E.
5. Update and review responsibilities for monitoring project strategies, and other safeguard requirements; project grievance mechanisms; gender strategy; knowledge management strategy, and other relevant management strategies.
6. Review financial reporting procedures and budget monitoring and other mandatory requirements and agree on the arrangements for the annual audit.
7. Plan and schedule SC meetings and finalize the first-year annual work plan.

227. The Project Manager will prepare the inception report no later than one month after the inception workshop. The initiation report will be approved by the Project Steering Committee CDP.

GEF Project Implementation Report (PIR):

228. The Project Manager, Implementing Partner and the CAF-GEF will provide objective input to the annual GEF PIR covering the reporting period July (previous year) to June (current year) for each year of project implementation. The Project Manager will ensure that the indicators included in the project results framework are monitored annually in advance of the PIR submission deadline so that progress can be reported in the PIR. Any environmental and social risks and related management plans will be monitored regularly, and progress will be reported in the PIR. The PIR submitted to the GEF will be shared with the SC as appropriate. The quality rating of the previous year?s PIR will be used to inform the preparation of the subsequent PIR.

Lessons learned and knowledge generation:

229. Results from the project will be disseminated within and beyond the project intervention area through existing information sharing networks and forums. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to the project. The project will identify, analyse and share lessons learned that might be beneficial to the design and implementation of similar projects and disseminate these lessons widely. There will be continuous information exchange between this project and other projects of similar focus in the same country, region and globally.

GEF Core Indicators:

230. The GEF Core indicators will be used to monitor global environmental benefits and will be updated for reporting to the GEF prior to MTR and TE. Note that the project team is responsible for updating the indicator status. The updated monitoring data should be shared with MTR/TE consultants prior to required evaluation missions, so these can be used for subsequent ground truthing.

Independent Mid-term Review (MTR):

231. An independent mid-term review process will begin after the second PIR has been submitted to the GEF, and the MTR report will be submitted to the GEF in the same year as the 3rd PIR. The MTR findings and responses outlined in the management response will be incorporated as recommendations for enhanced implementation during the final half of the project?s duration. The terms of reference, the review process and the MTR report will follow the standard templates and guidance prepared by the CAF IEO for GEF-financed projects.

232. The evaluation will be ?independent, impartial and rigorous?. The consultants that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Equally, the evaluators should not be in a position where there may be the possibility of future contracts regarding the project under review. The GEF Operational Focal Points and other stakeholders will be actively involved and consulted during the evaluation process.

233. The final MTR report will be publicly available in English, will be cleared by CAF-GEF, and approved by the SC. A management response to MTR recommendations will be posted within six weeks of the MTR report?s completion.

Terminal Evaluation (TE):

234. An independent terminal evaluation (TE) will take place upon completion of all major project outputs and activities. The terminal evaluation process will begin six months before operational closure of the project allowing the evaluation mission to proceed while the project team is still in place, yet ensuring the project is close enough to completion for the evaluation team to reach conclusions on key aspects such as project sustainability. The Project Manager will remain on contract until the TE report and management response have

been finalized. The terms of reference, the evaluation process and the final TE report will follow the standard templates and guidance prepared by the CAF IEO for GEF-financed projects. The evaluation will be ?independent, impartial and rigorous?. The consultants that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated.

235. The GEF Operational Focal Points and other stakeholders will be actively involved and consulted during the terminal evaluation process.

236. The final TE report will be cleared by the CAF-GEF and will be approved by the SC.

Final Report:
237. The project?s terminal PIR along with the terminal evaluation (TE) report and corresponding management response will serve as the final project report package. The final project report package shall be discussed with the SC during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up.

Agreement on intellectual property rights and use of logo on the project?s deliverables and disclosure of information**:**
238. To accord proper acknowledgement to the GEF for providing grant funding, the GEF logo will appear together with the CAF logo on all promotional materials, other written materials like publications developed by the project, and project hardware. Any citation on publications regarding projects funded by the GEF will also accord proper acknowledgement to the GEF.

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[1] *Excluding project team staff time and CAF staff time and travel expenses.*

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[1] *Excluding project team staff time and CAF staff time and travel expenses.*

10. Benefits

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

239. The project is in line with achieving specific indicative contributions to global environmental benefits (measured through core indicator 7 and sub-indicators): it will improve the cooperative management of a transboundary freshwater ecosystem, the Bermejo Basin; update the TDA and SAP; consolidate the legal agreement for transboundary cooperation; identify key national reforms with the support of inter-ministerial committees; actively participate in IW LEARN activities. In addition, the project aims to produce global environmental benefits that fall into three categories:

(i) Increased cooperation in the management of transboundary surface and groundwater resources in the basin;
(ii) Improved sustainable use of ecosystem services provided by the basin's ecosystems, with a focus on adaptation to climate variability and change;
(iii) Improved water security for local populations.

240. The project will emphasize cross-sectoral and integrated ecosystem approaches that are based on consultative processes and provide a basis for basin-wide water and land resources management agreements and processes.

241. The project fills a gap in the current approach to water management in the region by promoting the integration of groundwater, including transboundary groundwater, into water management practices and policies.

242. To maximize the project's ability to produce global benefits, its design includes elements that will emphasize the benefits of joint surface and groundwater management and increased transboundary cooperation. In particular: in the area of natural resource management, this project will promote a coordinated and integrated approach to mitigate and prevent environmental degradation resulting from unsustainable use and mismanagement of water and land resources.

243. The strengthened transboundary cooperation mechanism to be established under Component 1 (COBINABE) will promote appropriate allocations among competing uses, equitable sharing of benefits and burdens, and community participation in addressing sustainability in water resources management. The project will also promote women's empowerment and indigenous peoples' participation in the areas of land and water management, governance and policy development.

244.Annual monitoring reports will be submitted on the co-benefits of the project and its contribution to the SDGs.

11. Environmental and Social Safeguard (ESS) Risks

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

Overall Project/Program Risk Classification*

PIF	CEO Endorsement/Approval	MTR	TE
Low	Low		

Measures to address identified risks and impacts

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

PROJECT CONCEPT PRELIMINARY QUESTIONAIRE	
PART I: GENERAL INFORMATION	
Interested Organization Name: CAF	**Project Location: ARGENTINA, BOLIVIA**

Projected amount of required project funding ($ /USD): **TOTAL: 6.350.000 GEF: 6.350.000 OTHER(S) (Specify) _____**	
Project Sector or Similar: Environment	**Brief project description: The project objective is** to reverse present land and water degradation trends in the binational Bermejo Basin by introducing integrated water resources management approaches including to groundwater resources, revamping and consolidating existing transboundary cooperation mechanisms, and accelerating priority reforms and investments.
GEF focal Area((s): International waters	**Project Duration (months):48**

Focal Area Strategy Framework (other Program strategies)		
Objectives / Programs (Focal areas, Others)	**GEF Project Financing (USD)**	**Co- Financing (USD)**
Enhance water security in freshwater ecosystems	2,250,000	18,820,000
Enhanced regional and national cooperation on shared freshwater	1,800,000	8,880,000
Investments in water, food, energy and environment security	2,300,000	18,000,000

Project Description Summary (Please include available information) To reverse present land and water degradation trends in the binational Bermejo Basin by introducing integrated water resources management approachesincluding to groundwater resources, revamping and consolidating existing transboundary cooperation mechanisms, and accelerating priority reforms andinvestments

Project Component	**Project Outcomes**	**Project Outputs**	**GEF Project Financing (USD)**	**Co-Financing (USD)**

Component 1: Consolida transboundary cooperat new approaches and tool	1.1 Conditions created for the full adoption of modern integrated approaches to managing transboundary water resources and balancing competing uses.	1.1 The 1995 ?Agreement for the Multiple Use of the Resources of the Upper Bermejo River Basin and the R?o Grande de Tarija? establishing COBINABE, considered to expanded to include the Lower Bermejo Basin and groundwater resources, and revamped in terms of scope and mandate. 1.2 Creation of Bermejo Basin Geographic Information Management System. 1.3 Design and implementation of a Data-based Decision Support System (DSS) and an Early Warning System. 1.4 Training modules on IWRM and operation and maintenance of monitoring networks, SGI and DSS.	1,067,500	9,892,500

Component 2 Assessment and Strategic integration of groundwater resources	2.1 Enhanced climate resilience and water security in the basin through the assessment and sustainable strategic use of the groundwater resources.	2.1.1. Assessment of the groundwater resources, and definition of aquifer conceptual models. 2.1.2. Assessment of present uses and users of groundwater, and of existing governance frameworks (tenure, related legislation, etc.). 2.1.3. Design and pilot field testing of modern multi-purpose groundwater and erosion monitoring networks and protocols. 2.1.4.Training modules for the strengthening the capacity of national and transboundary basin entities in conjunctive surface and groundwater management	1,417,500	7,672,500

Component 3 Accelerating priority reforms and investments	3.1.Strengthened countries? commitment to the implementation of priority reforms and investments agreed in the Strategic Action Program	3.1.1. Updated TDA of the basin, aimed at identifying critical emerging transboundary issues, and including the consideration of future climate variability scenarios. 3.1.2. Updated SAP, identifying the priority reforms and the investments needed to address degradation trends in the basin endorsed at the ministerial level by the two countries. 3.1.3. Bankable projects defined for each priority investment agreed upon in the SAP, based on technical-economic pre-feasibility studies including identification of financing mechanisms and possible public and private sources	2,267,500	22,322,500

Component 4 Stakeholders engagement and awareness raising	4.1. Systematic stakeholders? engagement in project activities, improved public awareness and access to information, and involvement of the productive sector, foster the achievement of the project?s outcomes and the broader commitment to the implementation of SAP reforms and investments	4.1.1. A citizen participation and environmental education program involving all key actors in the basin, gender balanced and including indigenous communities. 4.1.2. Mechanism and procedures for the participation of civil society organizations in overseeing environmental management together with governmental Basin agencies. 4.1.3. Round table aimed at periodically engage representatives of the productive sector (private enterprises, landowners and farmers), in the TDA-SAP update process. 4.1.4. Annual stocktaking meetings, with broad participation of stakeholders, media, academia, donors and financial institutions, for disseminating and monitoring the project progress to impacts, to coordinate with other relevant initiatives, and present the final agreed upon SAP. 4.1.5. Creation of project website and online communication platform, and active	1,150,000	3,372,500

		participation to IW: LEARN activities and events (1% of the total GEF grant)		
Component 5 Monitoring and Evaluation	5.1 Effective project management, monitoring & evaluation, as per the technical, administrative, and fiduciary standards defined by CAF/GEF and the Countries (Bolivian and Argentina) legal framework, through-out project implementation 5.2 Systematisation of lessons learned, experiences and results, on a continuous basis through-out project implementation	5.1.1. Annual Work Plans, Annual Progress Reports, Budgeted Monitoring &Evaluation Plan, Mid-Term Evaluation Report, Terminal Evaluation report drafted, and GEF Tracking Tools completed according to established deadlines. 5.2.1. Systematized information on lessons from the eleven project sites continuously disseminated using web-based tools (among others), targeting lessons with replication potential in remaining to the Bermejo Basin	130,000	40,000
Project cost (No project Management included)			6,032,500	43,300,000

Indicative Sources of Co-financing (Please include available information, comprised type of co-financing: **grants, loans, equity, guarantees, in-kind, unknown)**

Source of co-financing	Name of co-financer	Type of co-financing)	Amount (USD)
Recipient Country Government-Argentina	Ministry of Environment and Sustainable Development	Public investment	29,000,000
Recipient Country Government - Argentina	Ministry of Environment and Sustainable Development	In kind	2,500,000
Recipient Country Government - Bolivia	Ministry of Environment and Water	Public Investment	10,000,000
Recipient Country Government - Bolivia	Ministry of Environment and Water	In kind	2,500,000
GEF Agency	CAF	In Kind	1,700,000
Total co-financing			45,700,000

Potential Environmental Impacts	
Air emissions ? Vehicles and equipment ? Heating /air conditioning equipment ? Others (describe)	**Waste water** ? Domestic waste water ? Water treatment unit ? Others (describe) ____

Solid waste	**Hazardous Chemical substances / Combustibles / Pesticides**
? Solid waste produced ? Types of solid waste __ ? Hazardous waste ____ ? Waste disposal (where, how)___	? Storage within the facilities ? Protective measures against spills ? Leaks / spills traces ? Spill containment / cleanup equipment ? Heating /air conditioning equipment ? Chemical substances and combustibles management training _____ ? Pesticide use and Management
Resource consumption	**Environmental nuisances**
? Materials used _____ ? Renewable natural resources use ? Tools and equipment use ? Water source _____	? Dust ? Noise ? Odors ? Vapors / fumes ? Noise ? Traffic jams and obstructions

? Energy source_____	

Other Environmental Issues

? Impacts on health, and forest quality and natural habitats in general (rivers, lakes, aquifers, paramo, ocean/marine ecosystems, mangroves, wetlands, biodiversity, among others),
Please specify on which one(s) _____

? Impacts on health protected areas (parks, reservoirs, etc.)

Please specify on which one(s) _____

? Impacts on other singular / sensible / high value (scientific, landscape, traditional, others) / places, Please specify on which one(s) _

Interactions with the Community

? With a person in charge of answering community questions

? With Community complaints management procedure

? Safety personal use

Social Issues

? Land acquisition required

? Resettlement of local communities is required

? Impacts on local livelihoods

? Impacts on Indigenous Peoples

? Neighbors or community complaints

? Cultural Resources to be affected or close to project location.

? Dams involved in Project

? Pesticides to be used

Land property condition, Please specify (public property, private property, community property, others)

Questionnaire answer date:
Questionnaire answer responsible officer:
Additional comments:

CAF Environmental and Social Officer / National expert Preliminary concept related to project site conditions and potential project impacts	
Questionnaire answer date:	**Additional technical review required (to be answered by CAF):** ? Yes ? No
Questionnaire answer responsible officer (name, position):	
Environmental considerations and recommendations	
The project aim is to enhance environmental sustainability in the Basin	
Community considerations and recommendations	

Local communities will play a significant role in project execution, and will benefit from project results

Other social considerations and recommendations
NA
Additional comments:
NA

PART II: ENVIRONMENTAL AND SOCIAL SAFEGUARDS TRIGGERING				
Q	**Question**	**Yes**	**No**	**Comment**
	ENVIRONMENTAL AND SOCIAL ASSESSMENT (ESA)			
	Safeguard always applicable (at least preliminary environmental and social assessment)			

1	Considering the following variables of the project, is there a possibility that the project will generate environmental and social side, multiple and complex impacts? If the answer is no, please briefly justify. (a) The potential environmental and social impacts that the project may have on its area of direct influence and, when required, indirect, cumulative and similar impacts; (b) The impacts on physical physical, biotic, social, economic, cultural resources, and health and safety of people; (c) Global environmental problems; (d) The alternatives to improve the selection, location, planning, design and execution of the project, including the "without project" as well as capital and recurrent costs and the comparison of the	x		The project will generate beneficial impacts on the environment and on livelihoods of local communities by increasing water security and climate resilience.

	environmental benefits and costs of the project; (e) The design of measures to prevent, mitigate and / or compensate the identified impacts, including the use of positive impacts and other opportunities that may be identified by both the project itself and by the communities affected by the project. (Probable category A)			
2	Considering the project variables described above in Question 1, is there a possibility that the project will generate environmental and social impacts that although they are not classified as moderate, adverse, multiple and complex, they can be significant? If the answer is no, please briefly justify. (Probable category B)			
3	Considering the project variables described above in Question 1, is there a possibility that the project will generate low environmental and social impacts that can be prevented, mitigated or compensated on the basis of best environmental practices and engineering, along with measures environmental management widely known and accessible? If yes, please briefly justify. (Probable category C)		x	This is a technical assistance project aimed at consolidating transboundary cooperation
4	Can the project be included in any of the following groups? (I) projects related to excavation, demolition, earthwork, flood or other significant environmental changes; (Ii) projects located on a site with physical cultural resources, or in their area, and recognized by the proponent. (Iii) projects specifically designed to support the management or conservation of physical cultural resources. If yes, please document the relevant requirements of national legislation, your procedures to identify, mitigate and monitor impacts on physical cultural resources, and a procedure for handling chance findings). (Probable category A or B)		x	

5	Is there a possibility that the project will generate potential or significant conversion or degradation of critical forest or other natural habitats? (Probable category A)		x	

6	Is there a possibility that the project violates environmental legal framework in force in the country, and / or applicable international agreements or conventions? (Probable unacceptable project)		x	
7	Does the organization, in its activities and projects, extend to its contractors and third parties its Policy Commitments and Programs in Environmental and Social Management, and Health and Safety?	x		
	Environmental and Social Assessment (ESA) Practices			
8	Does the organization carry out a process of Social and Environmental Assessment that considers holistically the potential social and environmental impacts of its activities and projects (including labor, health and safety)?	x		
9	Does the ESA identifies individuals or groups as vulnerable or disadvantaged, and are proposed and implemented for them differentiated measures?	x		
	Environmental and Social Management Plan (ESMP) and Action Plans			
10	For its activities and projects, does the organization establish and implement a plan / program of measures and mitigation and performance improvement that addresses the environmental and social impacts and consider the major findings of the ESA and the result of the consultation with affected communities?	x		
11	Does the ESMP defines the desired outcomes as measurable events (performance indicators, targets or acceptance criteria), with estimation of resources and responsibilities for implementation?	x		
12	Has the organization allocated sufficient resources to implement the ESMP?	x		
13	Has the organization planned and implemented the action plans necessary to comply with regulations and applicable Performance Standards?	x		
	Participation and involvement of stakeholders			

14	Has the organization properly identified all the relevant stakeholders for their activities?	x		
15	Have these stakeholders played a part in planning their activities or services?	x		
16	Does the organization have a community engagement process for the benefited / affected communities?	x		
17	Does such process guarantee free, prior and informed participation to communities?	x		
18	Has the organization implemented a complaints			

	mechanism for addressing and responding to communities?	x		
	External Communications and Grievance Mechanisms			
19	Has the company implemented procedures for external communications?	x		
20	Has the company established a complaints mechanism to receive and facilitate resolution of the concerns of the communities on environmental and social performance of their activities?	x		
	Continuous report to affected communities			
21	Does the company provide periodic reports to the communities that describes its activities that involve 1. risk or impact running or developing communities; and 2. the consultation or complaints mechanism?	x		
Q	**Question**	**Yes**	**No**	**Comment**
	NATURAL HABITATS AND FORESTS			
	Safeguard triggering conditions			
1	Do the design and development of the project include the conservation or sustainable use of natural habitats or the maintenance of the ecological functions of natural habitats?	x		
2	Do the design and development of the project include the rehabilitation/reforestation of degraded natural habitats?	x		
3	Do the activities and development of the project may eventually cause impacts on the health and quality of forest and natural habitats in general (rivers, lakes, aquifers, moors, ocean / marine ecosystems, mangroves, wetlands, biodiversity, etc.)?		x	

4	Do the activities and development of the project may affect the rights and welfare of people depending on forests or interacting with them?		x	
5	Do the activities and development of the project may generate changes in management, protection and use of natural or planted forests, whether they are public, private or community property?	x		
6	Is there any possibility that access to information and knowledge about project impacts on natural habitats prevent that such information and knowledge become complete or conclusive? (UNFEASIBLE PROJECT)		x	
7	Does the project include forest plantations or any other			

	activity that involves a significant degree of conversion or degradation of critical habitats or critical wooded areas? (UNFEASIBLE PROJECT)		x	
8	Does the project include forest plantations or any other activity that involves a significant degree of conversion or degradation of critical habitats or critical forest areas or forests and natural habitats that are not critical, and it is foreseen to implement an alternatives study? (CONDITIONALLY FEASIBLE PROJECT)		x	
9	Does the organization have implemented Procedures or Guidelines for the Management of Environmental and Social impacts related to natural habitats or forest?		x	
10	Have the organization designated responsible officers (employees or consultants) for the Environmental and Social Management of its activities and projects related to natural habitats or forests? Describe briefly		x	
Q	**Question**	**Yes**	**No**	**Comment**
	INVOLUNTARY RESETTLEMET			
	Safeguard triggering conditions			
1	Considering the activities that: i) Are directly or indirectly related to the project; (ii) are required to achieve the objectives of the evaluation; and (iii) are conducted or planned to be held concurrently with the project; During the project development, any of the following cases of involuntary taking of lands is foreseen? (i) displacement or loss of shelter (ii) loss of assets or access to those assets (iii) loss of income sources or means of livelihood, whether the person concerned is forced to move elsewhere or not. (iv) Loss of social networks in the local environment that may be sources of consumer goods for exchange by non-financial mechanisms (such as barter, gifts exchange and other) or loss of safety networks?		x	

2	Considering the activities that: i) Are directly or indirectly related to the project; (ii) are required to achieve the objectives of the evaluation; and (iii) are conducted or planned to be held concurrently with the project; During the project development, involuntary		x	

	restriction of access to parks and protected areas legally established is foreseen?			
3	Does the environmental assessment of the project envisage the development of alternatives analysis, and that analysis includes the verification of the measures to prevent and minimize, to the extent possible, involuntary resettlement? (MANDATOR Y CONDITION IN CASE OF SAFEGUARD APPLICABILIYY)		x	
	Other Ones			
4	Does the organization have implemented Guidelines or Procedures for the Management of Environmental and Social impacts related to involuntary resettlement?		x	
5	Have the organization designated responsible officers (employees or consultants) for the Environmental and Social Management of its activities and projects related to involuntary resettlement? Describe briefly	x		The project management unit
6	Can displacement be avoided?	NA		
7	Will displacement be physical?	NA		
8	Will Land rights or land use rights be acquired through expropriation or other compulsory procedures in accordance with the legal system of the host country?		x	
9	Will Land rights or land use rights be acquired through negotiated settlements with property owners or those with legal rights to the land if failure to reach settlement would have resulted in expropriation or other compulsory procedures?		x	
10	Will displacement be economic?		x	
11	Will the project situations where involuntary restrictions on land use and access to natural resources cause a community or groups within a community to lose access to resource usage where they have traditional or recognizable usage rights?		x	

12	Will certain project situations requiring evictions of people occupying land without formal, traditional, or recognizable usage rights?		x	
13	Because of the project, there will be restriction on access to land or use of other resources including communal property and natural resources such as marine and aquatic resources, timber and non-timber forest products, freshwater, medicinal plants, hunting and gathering grounds and grazing and cropping areas?		x	
14	**Is the Involuntary Resettlement Safeguard triggered?**		x	

Q	Question	Yes	No	Comment
	INDIGENOUS PEOPLES			
	Safeguard triggering conditions			
1	Is it anticipated that there is presence of indigenous peoples in the area of project development or in its area of influence?	x		
2	Are there indigenous peoples with community links to the project area, whether it is the project development area or its area of influence?	x		
3	Does the planned project involve the physical relocation of Indigenous Peoples or restriction of access of Indigenous Peoples to parks and protected areas legally established? (CONDITION THAT TRIGGERS THE INVOLUNTARY RESETTLEMENT SAFEGUARD, IN ADDITION TO THAT OF INDIGENOUS PUEBOS).		x	
	Other ones			
4	Does the organization have implemented Guidelines or Procedures for the Management of Environmental and Social Impacts relating to indigenous peoples?	x		
5	Has the organization designated responsible officers (employees or consultants) for the Environmental and Social Management of its activities and projects related to indigenous peoples? Describe briefly		x	
Q	**Question**	**Yes**	**No**	**Comment**
	PEST MANAGEMENT			
	Safeguard triggering conditions			
1	Does the project include potential aspects of control and management of pests or vectors, which may affect agriculture or public health?			NA
	Other ones			

2	Does the organization have implemented Guidelines or Procedures for the Management of Environmental and social impacts related to managing pests or vectors?			NA
3	Has the organization designated responsible officers (employees or consultants) for the Environmental and Social Management of its activities and projects related to pest or vectors management? Describe briefly			NA
Q	**Question**	**Yes**	**No**	**Comment**
	PHYSICAL CULTURAL RESOURCES			
	Safeguard triggering conditions			
1	Is it anticipated that project includes major activities excavations, demolition, earthworks, floods or other			NA

	alterations to the landscape?			
2	Is it anticipated that project is located in a place where there are physical cultural resources recognized by the competent authorities or where they are expected to be found?			NA
3	Is it anticipated that the project is aimed at supporting the management of Physical Cultural Resources?			NA
	Other ones			
4	Does the organization have implemented Guidelines or Procedures for the Management of Environmental and social impacts on physical cultural resources?			NA
5	Has the organization designated responsible officers (employees or consultants) for the Environmental and Social Management of its activities and projects related to Physical Cultural Resources? Describe briefly.			NA
Q	**Question**	**Yes**	**No**	**Comment**
	SAFETY OF DAMS			
	Safeguard triggering conditions			
1	Is it anticipated that the project involves the construction of a new (s) dam (s) or the rehabilitation or performance of a (n) existing dam (s)?			NA
2	Is it anticipated that the project involves the rehabilitation or performance of (an) existing dam (s). NOTE: THIS INCLUDES THE USE OF WATER FROM AN (S) DAM (S).			NA
3	Is it anticipated that the project includes power plants or water supply systems that benefits directly from a reservoir controlled by an existing dam or construction?			NA
4	It is anticipated that the project includes diversion dams or hydraulic structures downstream from an existing dam or a dam under construction that due to failure of a dam upstream could cause extensive damage to or failure of the new structure that is part of the project?			NA

5	Do you anticipate that the project includes works or irrigation activities or water supply that depends on the storage capacity and performance of an existing dam or a dam under construction, and that any dam failure will cause project failure?			NA
6	Is it anticipated that the project includes increasing the capacity of an existing dam or changes in the characteristics of materials, whereas a failure of the existing dam could cause extensive damage or deterioration of facilities that are part of the project?			NA

	Other ones			
7	Does the organization have implemented Guidelines or Procedures for the Management of Environmental and Social impacts related to dam safety?			NA
8	Has the organization designated responsible officers (employees or consultants) for the Environmental and Social Management of its activities and projects related to dam safety? Describe briefly.			NA
Q	**Question**	**Yes**	**No**	**Comment**
	GENDER MAINSTREAMING			
	Safeguard always applicable			
1	Has there been any assessment or analysis of gender in relation to the possible roles, benefits, impacts and risks that can generate the project for women and men of different ages, ethnicities, state and social structure?	X		
2	Does the organization have implemented Guidelines or Procedures for the Management of Environmental and social impacts related to mainstreaming gender issues?	X		
3	Has the organization designated responsible officers (employees or consultants) for the Environmental and Social Management of its activities and projects related to mainstreaming gender issues? Describe briefly.	X		Project Management Unit

Supporting Documents

Upload available ESS supporting documents.

Title	Module	Submitted
SEP 13	**CEO Endorsement ESS**	
ES risk preliminar assessment Bermejo Basin Project	**Project PIF ESS**	

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

ANNEX A: RESULTS FRAMEWORK

Project Development Objective: To reverse present land and water degradation trends in the binational Bermejo Basin by introducing integrated water resources management approaches including groundwater resources, revamping and consolidating existing transboundary cooperation mechanisms, and accelerating priority reforms and investments.

The Results are: At the project level					
Project Outcome Indicators					
Component	**Outcome**	**Indicator**	**Baseline**	**End of Project Target**	**Means of verification**
1. Consolidating transboundary cooperation: new approaches and tools	Conditions created for the full adoption of modern integrated approaches to managing water resources and balancing competing uses.	1 Official act proving Countries? agreement on consideration of expanding COBINABE?s mandate and strengthening its operational capacities, thus meeting the project?s Core Indicator 7.2 target.	The 1995 Agreement establishing COBINABE is limited to the Upper Bermejo River Basin and the R?o Grande de Tarija, and does not include consideration of groundwater. COBINABE?s technical role has not so far been developed nor utilized.	Document describing the mandate of COBINABE considered to expanded to include the lower Bermejo basin and the groundwater resources of the basin, and its new functions and technical roles, is approved by the countries? representatives in the SC, and submitted to Governments for adoption.	Letter of submission of the document to the countries? governments

OUTPUTS

1.1 Proposal for the expansion of the 1995 ?Agreement for the Multiple Use of the Resources of the Upper Bermejo River Basin and the R?o Grande de Tarija? establishing COBINABE, to include the Lower Bermejo Basin and groundwater resources, and revamping COBINABE in terms of scope and mandate.

1.2 Creation of Bermejo Basin Geographic Information Management System.

1.3 Design and implementation of a Data-based Decision Support System (DSS) and an Early Warning System.

1.4 Training modules on IWRM and operation and maintenance of monitoring networks, SGI and DSS.

2. Assessment and strategic integration of groundwater resources	Enhanced climate resilience and water security in the basin through the assessment and sustainable strategic use of the groundwater resources.	2. The water reserves base of the basin expanded in light of the assessment of the full potential of the aquifers in the basin subsurface and of their present state. The direct beneficiaries of this Component have been estimated in 130.000 indigenous people in the Upper Basin (CI 11 target)	The lack of systematic knowledge on the groundwater resources of the basin, and of harmonized monitoring protocols and governance principles, prevent the sustainable and strategic utilization of groundwater.	The groundwater assessment findings and recommendations are integrated into the Transboundary Diagnostic Analysis and Strategic Action Program updates.	Groundwater assessment report approved by the project Steering Committee.

OUTPUTS

2.1 Assessment of the groundwater resources, and definition of their conceptual models.

2.2 Assessment of present uses and users of groundwater, and of existing governance frameworks (tenure, related legislation, etc.).

2.3 Design and pilot field testing of modern multi-purpose groundwater and erosion monitoring networks and protocols.

2.4 Training modules on groundwater governance and management for the strengthening the capacity of national and transboundary basin management entities. Eight (8)

3. Accelerating priority reforms and investments	Strengthened countries? commitment to the implementation of priority reforms and of the investments agreed in the Strategic Action Program.	3. The SAP bankable investments[1] and priority reforms in water governance - including promotion of gender equality and indigenous people engagement- endorsed by the beneficiary countries at the ministerial level. (core indicators 7.1 , 7.2 and 7.3)	Previous fragmented attempts to address issues of transboundary concern, such as accelerated erosion and water scarcity, failed to generate basin-wide impacts.	The updated SAP endorsed at the ministerial level by the two countries sharing the basin	SAP endorsement letters signed at the ministerial level.

OUTPUTS

3.1 Updated TDA of the basin, aimed at identifying critical emerging transboundary issues, and including the consideration of future climate variability scenarios.

3.2 Updated SAP, identifying the priority reforms and the investments needed to address degradation trends in the basin endorsed at the ministerial level by the two countries.

3.3 Bankable projects defined for each priority investment agreed upon in the SAP, based on technical-economic pre-feasibility studies including identification of financing mechanisms and of possible public and private funding sources. Eight (8)

4. Stakeholders engagement and awareness raising	Systematic stakeholder engagement in project activities, improved access to information and public awareness and, and involvement of the productive sector, foster the achievement of the project?s objectives and a broader commitment to the implementation of SAP reforms and investments.	4. Stakeholders participation - with emphasis on women, indigenous peoples, and civil society organizations ? institutionalized at the national and transboundary levels. 5. The dialogue with the productive sector, from smallholder farmers to specialized corporations - effectively tested in the TDA/SAP process - institutionalized. 6. The project performance monitored	The two basin countries recognize in general terms the need for broad stakeholder involvement, including the productive sector, in water resources management, and the importance of the role played by women and by the indigenous communities. There is a lack however of concrete experiences in the context of basin management in the project?s region.	4. The SAP contains reforms that will ensure gender balance and the participation of indigenous peoples, in national and transboundary (COBINABE) basin management frameworks. 5. The institutionalization of the productive sector engagement is part of the SAP priority reforms.	The SAP endorsed by countries at ministerial level. Same as above

		and disseminated. 7. The project contributions to IW LEARN activities. (core indicator 7.4)		6. At the final Stocktaking Meeting the project management presents a comprehensive assessment of the project?s achievements and lessons learned. 7. The project meets its commitments to share experiences and participate to IW LEARN events.	Final Stocktaking Meeting Report IW Learn website and publications

OUTPUTS

4.1 A citizen participation and environmental education program involving all key actors in the basin, gender balanced and including indigenous communities.

4.2 Mechanism and procedures for the participation of civil society organizations in overseeing environmental management together with governmental Basin agencies.

4.3 Round table aimed at periodically engage representatives of the productive sector (private enterprises, landowners and farmers), in the TDA-SAP update process. Twelve (12)

4.4 Annual stocktaking meetings, with broad participation of stakeholders, media, academia, donors and financial institutions, for disseminating and monitoring the project progress to impacts, to coordinate with other relevant initiatives, and present the final agreed upon SAP.

4.5 Creation of project web site and online communication platform, and active participation to IW: LEARN activities and events. Six (6)

5. Monitoring and evaluation	Effective project management, monitoring & evaluation, as per the technical, administrative, and fiduciary standards defined by CAF/GEF and the Countries (Bolivian and Argentina) legal framework through-out project implementation	8. Terminal Evaluation M&E rating 4 or above	NA	NA	TE report

[1] The investment risk-return profile meets investors' criteria and can secure financing to implement the project.

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

STAP	RESPONSE
The problem analysis could better differentiate between environmental problems of land use change and root causes. The barriers identified are mainly focused on lack of understanding, monitoring and poor cross-border cooperation; yet, addressing these factors alone seems unlikely to address the root causes.	In Section 1.1, from page 11 to 19, an extensive description of environmental problems and an analysis of causes, discriminating natural and anthropogenic, has been added.
The PIF includes a remarkably direct accounting of prior project shortcomings in the basin, including problems of coherence among sub-projects and failure to achieve ?basin-wide impacts, as per the expected objectives.? This is welcome, but it also flags the need to better articulate how this investment will avoid those pitfalls.	The project design clearly aims to address key aspects so far neglected: the strengthening of COBINABE, and the integration of groundwater resources as part of IWRM and of COBINABE?s mandate. In the SAP definition process, while keeping into consideration the lessons learned through the pilot demonstrations of the previous GEF project, the main focus will be on identifying the highest priority actions ? both reforms and investments ? that will have basin-wide impacts (see description of Component 3, page 35).
The theory of change seems to miss the linkage tha explains how the TDA/SAP will 1) address the mair drivers of degradation related to poor land use practices and 2) attract ?bankable projects.? Incentives for investment in sediment control, improved land use, etc are not clear; presumably the TDA will help to elucidate	The Theory of Change at the basis of the project design has been revisited, to better highlight how the TDA/SAP process may overcome the lack of a basin-wide strategy for remedial actions. The project objective is to identify ?bankable projects?, assess their feasibility, and attrac likely sources of financing.
The PIF fails to explain how a revised cooperative framework will lead to ?bankable projects? and what will be the financial or other incentives for companies / organizations to invest in infrastructure, land restoration, or other identified measures	A strong cooperative framework will be indispensable to reach agreement between the two countries on key actions (policy and legislative reforms, and bankable investments) that will have basin-wide impacts and overcome upstream-downstream issues. The TDA will be instrumental in defining strategies and priorities for action.
The KM approach lacks any articulation of how the information and lessons may have a chance of influencing the behavior of key actors at scale.	The whole Component 4 as well as parts of Component 1, are dedicated to provide to future basin managers with the tools to acquire the needed knowledge on the basin ecosystem functioning and on its groundwater resources, and the mechanisms to disseminate it broadly and effectively to all stakeholders
GEF SECRETARIAT	RESPONSE
Please consider adding a Component 5 on M&E to Table B. This will ensure that Table B and the budget table in the CEO Endorsement document can be harmonized.	Done
GEF SECRETARIAT ? October 2023 -	**RESPONSE**
a) Germany acknowledges the effort in data acquisition to define conceptual groundwater models and to identify recharge and discharge areas of	CAF appreciates Germany?s support for the groundwater component of the project. On the specifics of groundwater mathematical modelling, it has to be

aquifers. Such data generally serves as baseline data for numerical groundwater models that allow predictive modelling of different groundwater scenarios. To make further use of this data, Germany suggests preparing steps to create a numerical groundwater model, by building further partnerships.	clarified that translating an aquifer ?conceptual model? into a ?numerical model? (that is ?a combination of a large number of mathematical equations that depends upon computers to find an approximate solution to the underlying physical problem?) would be feasible at a basin level only where exhaustive quantitative physical and chemical information is available if not for all at least for some of the aquifers present in the basin?s subsurface, which is clearly not the case of the Bermejo Basin, being the project the first attempt to assess the groundwater potential of the basin. More in depth evaluations of the Basin aquifers might be part of the SAP, should the countries so decide.
b) Given the transboundary nature of the project and the different activities proposed, it is suggested to identify executing partners early on, so that they can participate in the PPG phase. *Please explain whether this was done and how executing partners participated in the PPG phase	During the PPG phase, COBINABE, in its role as technical executing agency, participated throughout the process and led the internal participation in each country through the technical representations to COREBE and OTNPB. It carried out the revisions of the CEO Endorsement and formally approved the first version uploaded on the GEF portal. The fiduciary agency will be convened as soon as the CEO Endorsement is received through an open and transparent call. The formal selection process has been expressly requested by the beneficiaries, however, and as is public knowledge, this decision has had to be accommodated to the processes of change of government in one of the countries. The planning period for their recruitment will be a maximum of 90 days from the call for applications to the signing of the agreement.
(c) The project includes only actions at the regional level and thus considers the total of the population as beneficiaries. Germany suggests identifying how project activities will address specific population groups like most vulnerable population in terms of poverty and climate change vulnerability. More specific gender indicators are also suggested.	Please see comment above I) Paragraph 101. Within the framework of citizen participation and environmental education, due to the territorial extension of the four provinces in Argentina and the presence of vulnerable populations and indigenous peoples, it is estimated that the project will reach more than 2000 families trained/consulted. In Bolivian territory, the territorial extension is smaller, however, grassroots organizations and peasant and producer associations are very well structured with representation at the level of the nine municipalities of the department of Tarija and the project aims to reach at least 130000 beneficiary families with training in environmental education and citizen participation in decision-making. This means that the project in the Bermejo River Basin will have a minimum interaction with 3,500 beneficiary families. ii)Direct project beneficiaries (high intensity) as defined in the GEF8 guidelines for IW projects, are limited to the rural and indigenous communities in the upper reaches of the Basin. The number of people involved has been estimated in 130000, half of which women. CAF has preferred to provide also an estimate of the low intensity beneficiaries, defined by the guidelines as ?People living within a river basin subject to a water resources management plan?, whose number would be 1,330,000 people. Iii) Included in point 3.5. Gender Plan indicators

	linked by project component. Appendix 6 of Analysis, Consultation and Gender Plan, Indigenous Peoples and Vulnerable Populations.
(d) The global environmental problem identified is accelerated erosion. Germany suggests specifying the specific project interventions that will address this problem. Links to land restoration global benefits (such as carbon capture) could also be added.	The problem of erosion, largely due to the geologic nature of the basin upper reaches, will be addressed under Component 2 (monitoring, output 2.1.3), and component 3 (Sand dams, output 3.1.2).
e) While the proposal mentions Bolivia?s Multiannual Program for Integrated Management of Water Resources and Integrated Management of Watersheds, 2017-2020, it doesn?t describe the governance mechanisms, civil society platforms and planning tools that it has established for strategic basins? notably for the Guadalquivir sub-basin, which can serve as a basis/model for the project?s interventions.	The following text was added of section 1.3.2.4 output 4.1.1: To do so, the project will consider amongst others replicating experiences and models tested as part of the Interinstitutional Platform of the Guadalquivir Basin.
f) Germany considers that the Basin Management Plan of the Guadalquivir River is a key input for the new SAP	The following footnote was added at paragraph 94: The Basin Management Plan of the Guadalquivir River will represent a replicable model.
(g) For component 1, Germany suggests that synergies with the new Geographic Information System of the State Government of Tarija should be considered.	The following text was added at section 1.3.2.4 output 4.1.1: To do so, the project will consider amongst others replicating experiences and models tested as part of the Interinstitutional Platform of the Guadalquivir Basin
(h) Component 3 mentions legal, institutional, and legislative reforms. Germany suggests specifying the process of formulation, harmonization, and approval of the reforms in both countries. Also, adding an item to the Risks table where mitigation measures are given in case there are difficulties during the reform process.	The project aims at gathering the countries? commitment to introduce those legal, legislative and policy reforms found through the TDA ? SAP process as necessary to reverse degradation trends and improve water security in the basin. The reform process itself is not part of the project.
(i) For component 4 (and PPG), Germany suggests taking as a model the Interinstitutional Platform of the Guadalquivir Basin, as well as the technical and social councils that have been established in the context of the Basin Management Plan of the Guadalquivir River. The model could also be adapted to the specific situation of the other Bermejo sub-basins.	The following text was added at section 1.3.2.4 output 4.1.1: To do so, the project will consider amongst others replicating experiences and models tested as part of the Interinstitutional Platform of the Guadalquivir Basin
STAP Comments ? October 2023 -	**RESPONSE**
(a) The stated project objective is To reverse present land and water degradation trends in the binational Bermejo Basin by introducing integrated water resources management approaches including to groundwater resources, revamping and consolidating existing transboundary cooperation mechanisms, and accelerating priority reforms and investments.? The major problem described is poor land use practices upstream, including deforestation, which leads to erosion and high sediment loadings (exacerbated by flash flooding made more common by climate change). The main barriers to positive change are identified as lack of understanding, cooperation, and monitoring. This makes sense; however, poor living	Component 3. Please see paragraph 94 and 95. The Project Document responds to Germany?s recommendation in component 3 - reforms and investments-, where suggestions as to what might help reversing degradation trends of water and land in the Bermejo Basin are briefly described. The TDA will provide a science-based update of the situation regarding accelerated erosion patterns due to the geologic nature of the Upper Basin exacerbated by land use practices, and the SAP will indicate which are the remedial actions that countries are willing to undertake at the national and transboundary levels. This could be linked to the overall benefits in soil restoration, sustainable development,

conditions are later listed as a major environmental problem? whereas this might be better placed in the category of root cause? where there is no discussion of why there are poor living conditions that may be contributing to environmental damage (or is environmental damage partly responsible for poor living conditions?) Acknowledging these issues is important to frame the relevance of proposed monitoring, capacity building and national level cooperation.	among others, that the identified measures could generate.
b) Planned activities can be summarized as 1) updating the prior transboundary framework with new data plus training and tools; 2) assessment of groundwater resources, including training and tools; 3) defining bankable projects following update of TDA/SAP; 4) multistakeholder engagement. These combined activities have the potential to support the overall objective through a revised framework, data, tools, etc. but none of the proposed components appear to tackle the main problem of destructive land use patterns upstream which are the primary culprits behind erosion and poor water quality. If the assumption is that this will be encapsulated within the updated TDA/SAP, then it would be helpful to make this explicit	
c) The project has the potential to support adaptation to climate change; however, insufficient evidence is provided. STAP recommends using the decision tree for adaptation rationale to ensure that the project will encompass adaptation benefits. https://www.stapgef.org/resources/advisory-documents/decision-tree-daptationrationale	Section f: Global Environmental Benefits: The project aims to produce global environmental benefits that fall into the category of adaptation to climate variability and change. These benefits will be accrued through the increased availability of good quality and climate independent freshwater that the integration of groundwater resources into the Basin water resources management and the adoption of conjunctive surface and groundwater management practices will produce.
d) Regarding Global Environmental Benefits: Information provided makes this difficult to assess particularly with regards to climate change adaptation. The PIF states that the strengthened transboundary cooperation mechanism will promote appropriate allocations among competing uses, equitable distribution of benefits and burdens and community participation? gender equity?? which is welcome though it is not entirely clear what the mechanisms and/or incentives are that will accomplish this beyond the future framework. Finally, the PIF indicates that 1,330,000 people (split evenly between female and male) will benefit from the project. This assumes that everyone in the basin will benefit from? increased water security 4 and climate resilience? which seems optimistic without more detailed explanation.	Please see text modified at section f: Global Environmental Benefits. Direct project beneficiaries (high intensity) as defined in the GEF8 guidelines for IW projects, would be limited to the staff of COBINABE (COREBE and OTNPB). CAF has preferred to provide an estimate of the low intensity beneficiaries, defined by the guidelines as ?People living within a river basin subject to a water resources management plan?. The text has been modified to explain the rationale of the choice (paragraph 4).
(e) The global environmental problem is said to be? accelerated erosion? but that seems more like a	Paragraph 94 and 95. The Project Document responds to Germany?s recommendation in component 3 - reforms

consequence of poor land use practices, which are listed as root causes. But what are the reasons behind poor land use and deforestation? The logic could be strengthened for improved clarity.	and investments-, where suggestions as to what might help reversing degradation trends of water and land in the Bermejo Basin are briefly described. The TDA will provide a science-based update of the situation regarding accelerated erosion patterns due to the geologic nature of the Upper Basin exacerbated by land use practices, and the SAP will indicate which are the remedial actions that countries are willing to undertake at the national and transboundary levels. This could be linked to the overall benefits in soil restoration, sustainable development, among others, that the identified measures could generate.
(f) The barriers are mainly focused on lack of understanding, monitoring and poor cross border cooperation, which do not encompass whatever barriers may exist to mitigating the poor land use activities responsible for increased sedimentation.	In Section 1.1, from paragraph 9 to 25, an extensive description of environmental problems and an analysis of causes, discriminating natural and anthropogenic, has been added.
(g) The theory of change seems to miss the linkage that explains how the TDA/SAP will 1) address the main drivers of degradation related to poor land use practices; and 2) attract bankable projects.? Instead, much of the focus is on the data management, capacity building, tools, etc. ? all of which are helpful but the connection to these core issues is not explicit. Incentives for investment in sediment control, improved land use, etc. are not clear; presumably the TDA will help to elucidate.	Point 1.3.1 The chain ?activities ? outputs ? outcomes? has been conceived with the objective to remove the barriers that presently hinder corrective actions aimed at reverse soil and water degradation trends in the basin, identified as: The limited scope (upper basin only) and operational capacity of existing transboundary cooperation frameworks (COBINABE) The lack of knowledge, consideration and governance of the groundwater resources of the basin The lack of agreed upon strategic priority reforms and investments aimed at addressing the major causes of degradation, both natural and anthropogenic. The absence of systematic mechanisms for broad stakeholders? engagement at the transboundary and national levels
(h) The entire project has as a goal to increase resilience to climate change ? assuming this means resilience of the people living in the basin. Not enough climate data is provided to helpfully explain how climate change is expected to impact the area and how the project objectives may be 7 affected. However, one of the aims of the revised TDA is to incorporate climate change data, which will presumably help to address this question.	One of the main purposes of updating the TDA is in fact to assess the impacts of climate change under future scenarios.
i) Is the project innovative? No, the innovation statement is unconvincing. The proposed project follows a typical TDA/SAP process. The PIF fails to explain how a revised cooperative framework will lead to bankable projects? and what will be the financial or other incentives for companies/organizations to invest in infrastructure, land restoration, or other identified measures.	As clearly explained in point 1 Project Description, section g) the project is innovative in as much as it adopts approaches novel to the region (e.g.: conjunctive surface and groundwater management), and includes the conduct of feasibility/pre-feasibility studies of priority investments - including the identification of financial mechanisms for their implementation - which will allow for the first time to i structure bankable projects as part of a GEF IW SAP. Without a strengthened transboundary

	cooperative framework (COBINABE) nothing of this would happen.
(j) Is there a clearly-articulated vision of how the innovation will be scaled-up, for example, over time, across geographies, among institutional actors? No. There is reference to scaling but the evidence and pathway is not convincing, especially given past project shortcomings.	Please note that the relevant text is consistent with the one in the approved PIF. The present project is part of the CdP SAP implementation since it addresses one of the major issues of transboundary concern of the CdP: excess sediment loads interfering with river navigation, and impacting the Rio de La Plata ecosystems. Note also that, should the project be successful, it might trigger the broader adoption of the Inclusion of fully prepared bankable projects in SAPs. It could also provide relevant information for monitoring the watershed in its.
(k) The main stakeholders in developing the TDA/SAP are national institutions. However, the project also includes academia (to form the Science Panel) and several NGOs that include farmers and others who may be impacted and presumably are also essential to the solution. A useful STAP reference for multi-stakeholder dialogue can be found here. This could be helpful to reference with attention to engaging private sector actors in particular. https://www.stapgef.org/resources/advisory-documents/multi-stakeholderdialogue-transformational-change	Paragraph 93.II, item 1.3.2.3 Through the implementation of a Multi Stakeholder Dialogues that will foster regional transformational change, and will strengthen the engagement of private sector actors, from small-holder farmers to private financial institutions
(l) Information on gender is focused primarily on national policies and not directly related to this project. It is assumed that half of the beneficiaries will be female; however, this rationale is not well supported.	The complete gender analysis document? appendix 6 - supports that in addition to existing policies, there are gender gaps to be addressed in order to focus the gender plan from the perspective of a project aimed at strengthening COBINABE.
(m) Regarding adequate mechanism to feed the lessons learned from earlier projects into this project, and to share lessons learned from it into future projects. It would be helpful to have further detail on how past mistakes can be avoided.	Item 1.2.2 describes the lessons learned from previous that have informed project design. It is part of the functions of the Project Steering Committee to implement review actions and/or adjustments during the implementation of the project. Resources such as regional round tables will be available for exchange with other regional actors, e.g. CIC Plata, participation of specialists, scientific panel. Under the item Monitoring and evaluation - Lessons learned and knowledge generation - there will be a continuous exchange of information between this project and other projects of similar focus in the same country, region and worldwide.

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

245. The costs incurred during the PPG phase include expenses for the preparation and execution of workshops, travel of the consultant team and facilitation of stakeholder participation, in particular of indigenous community members.

246. The assistance of a leading consultancy team was contracted for the development of the project in order to deepen and enrich the assumptions, theory of change and strategic rationale of the project. As well as specialists in gender, indigenous peoples and water resources management with knowledge and experience in each of the countries, the team's work has included the study of the current situation of the Bermejo Basin and the future perspectives for the management of the Basin in the framework of global and regional demands. See PRODOC 1.4. Stakeholders, and Annex 6. Public Consultation Process and Stakeholder Participation Plan, with Special Attention to Indigenous Peoples.

247. Stakeholder consultation and participation in the project design was highlighted as a condition for project approval in the FIP authorization, so workshops were coordinated in the project intervention area, in both countries, among them:

- Municipality of Purmamarca, Jujuy, Argentina.
- Municipality of Humahuaca, Jujuy, Argentina.
- Municipality of Rivadavia, Salta, Argentina.
- Municipality of Tarija, Bolivia.

248. Two face-to-face technical meetings were also held with the technical and political teams of COBINABE, specifically for the analysis and exchange of information on the project, one in La Paz, Bolivia and the other in Buenos Aires, Argentina.

249. The funds committed correspond to the continuous assistance of the consultant team for the final adjustment of the project until its approval and eventual travel expenses, meetings, translations, among others. To date, November 2023, the total disbursement amounts to USD74,750, while there is a standing commitment of USD40,250, for a total of USD115,000 budgeted.

PPG Grant Approved at PIF: 200,000.00			
Project Preparation Activities Implemented	***GETF/LDCF/SCCF Amount ($)***		
	Budgeted Amount	***Amount Spent Todate***	***Amount Committed***
Consultancies and contracts to develop program and/or project options			
Additional baseline/mapping information	20,000	10,000	10,000
Consulting services outsourcing to elaborate key technical components of CEO Endorsement	115,000	74,750	40,250
Free prior and informed consent and related consultations			
Local stakeholders participations and Consultations	35,000	30,000	5,000

Translations of project documents for public consultations	15,000	10,000	5,000
Travel expenses	15,000	10,000	5,000
Total	200,000	134,750	65,250

ANNEX D: Project Map(s) and Coordinates

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

Coordenadas - Mapa r?o Bermejo

-21.82158572	**-64.99727757**
-23.82530965	**-65.38557338**
-26.17445026	**-58.17521887**
-23.844177	**-61.941305**
-25.571192	**-60.758285**

GEO LOCATION INFORMATION

The Location Name, Latitude and Longitude are required fields insofar as an Agency chooses to enter a project location under the set format. The Geo Name ID is required in instances where the location is not exact, such as in the case of a city, as opposed to the exact site of a physical infrastructure. These IDs are available on the GeoNames? geographical database containing millions of placenames and allowing to freely record new ones. The Location & Activity Description fields are optional. Project longitude and

latitude must follow the Decimal Degrees WGS84 format and Agencies are encouraged to use at least four decimal points for greater accuracy. Users may add as many locations as appropriate. Web mapping applications such as OpenStreetMap or GeoNames use this format. Consider using a conversion tool as needed, such as:https://coordinates-converter.com Please see the Geocoding User Guide by clicking here.

Location Name	Latitude	Longitude	Geo Name ID	Location & Activity Description
Bermejo Rivre Basin	-21.8218572	-64.99727757		
Bermejo Rivre Basin	-23.82530965	-65.38557338		
Bermejo Rivre Basin	-26.17445026	-58.17521887		
Bermejo Rivre Basin	-23.844177	-61.941305		
Bermejo River	-25.571192	-60.758285		

ANNEX E: Project Budget Table

Please attach a project budget table.

BUDGET
Project title: Integrated water resources management in the transboundary Bermejo River Basin
48 Meses / Argentina - Bolivia

BUDGET IN $US

	Expenditure Category	Unit	Quantity	Unitary Coasts	TOTAL	Component 1	Component 2	Component 3	Component 4	Component 5	PMC	Responsable Entities
1	**Project staff**				704,400	116,100	116,100	116,100	116,100	-	240,000	COBINABE, Fiduciari, CAF
1.1.	Project Manager	M/M	48	5,000	240,000						240,000	COBINABE, Fiduciari, CAF
1.2.	Information and computer systems technician	M/M	24	2,600	62,400	15,600	15,600	15,600	15,600			COBINABE, Fiduciari, CAF
1.3.	Argentinen Technical Officer	M/M	48	2,500	120,000	30,000	30,000	30,000	30,000			COBINABE, Fiduciari, CAF
1.4.	Bolivian Technical Officer	M/M	48	2,500	120,000	30,000	30,000	30,000	30,000			COBINABE, Fiduciari, CAF
1.5.	Indigenous Peoples and Gender Officer	M/M	36	2,500	90,000	22,500	22,500	22,500	22,500			**COBINABE, Fiduciari, CA**
1.6.	Communications Officer	M/M	36	2,000	72,000	18,000	18,000	18,000	18,000			COBINABE, Fiduciari, CAF
2	**Consultants**				839,000	276,000	241,000	161,000	161,000			COBINABE, Fiduciari, CAF
2.1.	**International / Regional Consultants: Data Base and GIS, DSS and Early Warning System, Groundwater resources and conceptual models**	M/M	27	5,000	135,000	75,000	60,000					COBINABE, Fiduciari, CAF
2.2.	**National consultans / Argentina o Bolivia in aspects: legal and intitucional, social an economics, environmental, climate change, IWRM.**	M/M	120	2,500	300,000	100,000	80,000	60,000	60,000			COBINABE, Fiduciari, CAF
2.3.	**National Focal Point / Asistentes Tecnicos COBINABE: Argentina and Bolivia all components**	M/M	96	1,500	144,000	36,000	36,000	36,000	36,000			COBINABE, Fiduciari, CAF
2.4.	**Travel on official business**				260,000	65,000	65,000	65,000	65,000			COBINABE, Fiduciari, CAF
2.4.1.	Travel/Missions National and International	Lump sum	4	20,000	80,000	20,000	20,000	20,000	20,000			**COBINABE, Fiduciari, CA**
2.4.2.	Travel/Missions in field	Lump sum	4	45,000	180,000	45,000	45,000	45,000	45,000			**COBINABE, Fiduciari, CA**
SUBCONTRACT COMPONENT												COBINABE, Fiduciari, CAF
3.	**Design and accompaniment to the reengineering of COBINABE**	Lump su	1	260,000	260,000	260,000						COBINABE, Fiduciari, CAF
4.	**Design and implementation of information and decision tools**	Lump su	1	320,000	320,000	170,000	150,000					COBINABE, Fiduciari, CAF
4.1.	Design e Implemetation GIS	Lump su	1	110,000	110,000	60,000	50,000					**COBINABE, Fiduciari, CA**
4.2.	Implementation DSS	Lump su	1	210,000	210,000	110,000	100,000					COBINABE, Fiduciari, CAF
5.	**Design and pilot field testing of modern multi-purpose groundwater and erosion monitoring networks and protocols. Geophysical Studies and Monitoring Networks Cuenca (C2.3.)**	Lump su	1	600,000	600,000		600,000					**COBINABE, Fiduciari, CA**
6.	**Accelerating priority reforms and investments / C3**	**Lump sum**	1		**1,700,000**			**1,700,000**				COBINABE, Fiduciari, CAF
6.1.	Updated TDA (C3.1.)	Lump sum	1	400,000	400,000			400,000				COBINABE, Fiduciari, CAF
6.2.	Updated SAP (C3.2.)	Lump sum	1	600,000	600,000			600,000				**COBINABE, Fiduciari, CA**
6.3.	Project portfolio prioritized in the SAP at the pre-investment level and financing mechanisms (C3.3.	Lump sum	1	700,000	700,000			700,000				COBINABE, Fiduciari, CAF
7.	**Subcontracts cross-cutting themes**	**Lump sum**	1		385,000				385,000			COBINABE, Fiduciari, CAF
7.1.	Subcontracts for local activities, in particular on gender, indigenous peoples and vulnerable groups	Lump sum	1	285,000	285,000				285,000			**COBINABE, Fiduciari, CA**
7.2.	Subcontracts with interested parties, institutions of local and regional articulation on private, productive issues, etc.	Lump sum	1	100,000	100,000				100,000			**COBINABE, Fiduciari, CA**
CAPACITY BUILDING/WORKSHOPS/MEETINGS COMPONENT												COBINABE, Fiduciari, CAF
8.	**Group training workshops COBINABE in tems: planing and organizational developmet, GIS and DSS, IWRM, Groundwater resources, water gobernance, and**	Training events	22	4,506	99,132	99,132						COBINABE, Fiduciari, CAF

ANNEX F: (For NGI only) Termsheet

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

NA

ANNEX G: (For NGI only) Reflows

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

NA

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

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

NA