

TC Document

I. Basic Information for TC

▪ Country/Region:	BRAZIL
▪ TC Name:	Support the Implementation of the Water Resources Management Plan for the Paraguay River Hydrographic Region (PRH Paraguay)
▪ TC Number:	BR-T1448
▪ Team Leader/Members:	Munoz Castillo, Raul (INE/WSA) Team Leader; Mendez Torrico, E. Gustavo (INE/WSA) Alternate Team Leader; Denea Larissa, Trejo Carcamo (INE/WSA); Dipasquale, Irene Etelvina (INE/WSA); Eschoyez, Guillermo Antonio (LEG/SGO); Grunwaldt, Alfred Hans (CSD/CCS); Pabon Zamora, Luis Hernan (INE/WSA); Valdes Conroy, Hector (CSD/RND)
▪ Taxonomy:	Client Support
▪ Operation Supported by the TC:	.
▪ Date of TC Abstract authorization:	30 Mar 2020.
▪ Beneficiary:	Agencia Nacional de Aguas (ANA), Brazil
▪ Executing Agency and contact name:	Inter-American Development Bank
▪ Donors providing funding:	OC Strategic Development Program for Infrastructure(INF)
▪ IDB Funding Requested:	US\$450,000.00
▪ Local counterpart funding, if any:	US\$0
▪ Disbursement period (which includes Execution period):	36 months
▪ Required start date:	Sept 2020
▪ Types of consultants:	Individuals; Firms
▪ Prepared by Unit:	INE/WSA-Water & Sanitation
▪ Unit of Disbursement Responsibility:	INE-Infrastructure and Energy Sector
▪ TC included in Country Strategy (y/n):	No
▪ TC included in CPD (y/n):	No
▪ Alignment to the Update to the Institutional Strategy 2010-2020:	Economic integration; Institutional capacity and rule of law; Environmental sustainability

II. Objectives and Justification of the TC

- 2.1 The Upper Paraguay basin is highly important for water resources management for enclosing the world's greatest wetland: the Pantanal, declared National Heritage by the 1988 Brazilian Constitution, an area of international importance in 1993 by the RAMSAR Convention on Wetlands, and a Biosphere Reserve in 2000 by UNESCO. It has about 138,000 km² within Brazilian territory, and it also extends to Bolivia and Paraguay. The Pantanal region stands out for its beauty, biodiversity, and support to traditional human lifestyles. Its water cycle and dynamics are mostly represented by alternating dry and rainy periods and are environmental factors that assure its varied biodiversity and keep the ecosystem of the entire region working. The Paraguay River Basin is home to about 8 million people, 70 percent of whom reside in large urban centers. There is also a significant rural population, with agriculture and livestock serving as the region's main economic activities. Other notable activities include forestry, mining, fishing, tourism, river transport and trade. In 2015, the states within the Pantanal generated more than \$70 billion for the economies of the three nations it covers (more than double the national GDP of Bolivia or Paraguay).

- 2.2 A study by Brazil's Agricultural Research Corporation (EMBRAPA) concluded that the ecosystem services provided by this wetland have been valued at USD \$112 billion per year. Millions of people living downstream in the Rio Plata basin rely on the Pantanal's crucial natural resources and benefits, including groundwater recharge, river flow, and carbon sequestration, among others. Of great importance, the wetland's enormous water retention capacity provides natural flood control protecting millions of people living in the downstream basin, infrastructure, and agricultural areas. It also regulates water providing irrigation and drinking water year-round to cities and assisting navigation. Despite its size, rich biodiversity and economic importance, the Pantanal faces pressures that threaten to destabilize the ecosystem services that sustain the region's environment and social and economic development. These include: Unsustainable infrastructure development, Hydroelectric Development, Land use change and habitat loss, Pollution, Climate change, Wildlife loss. Many of these pressures are tackled in the larger GEF trilateral project that is currently under preparation by UNEP and the Bank. Others are being included in proposals the WSA is putting together for other funding options such as the Green Climate Fund (GCF).
- 2.3 Between 2014 and 2017, the Brazilian National Water Agency (ANA) prepared the Water Resources Plan of the Paraguayan Basin (PRH-Paraguay) based on the recommendations of the 2006 SAP developed within the GEF project implemented by the UNEP (United Nations Environment Program). The PRH-Paraguay was approved in 2018 by the Brazilian Water Resources Council. The PRH-Paraguay contains updated for continuous effective water resources management, including the PRH-Paraguay is an instrument that aims at consolidating the planning of required actions to face the challenges mentioned above by guiding and integrating policies and interventions at the Paraguay Water Resources Region (RH-Paraguay) to secure sustainable water use, as well as by harmonizing this use with the existing demands and the need for Pantanal conservation and/or protection multiple, rational, and sustainable water use management.
- 2.4 Within the basin, there are conflicts between the fishing, water transport, and power generation sectors, despite these being non-consumptive uses of water. In addition, INE/WSA jointly with UNEP is working on a new GEF project (around US\$10M) for the three riparian countries of the Pantanal with the objective of expanding the TDA and SAP for the Brazilian side of the Pantanal to the Bolivian and Paraguayan areas of the wetland, under the umbrella of the Trilateral Declaration for the Sustainable development for the Pantanal, signed in the context of the World Water Forum which took place in Brasilia in 2018. This projects intends to: establish a common mechanism for shared water governance and cooperation for the Pantanal; improving the socio-economic and physical-environmental information available and the baseline analysis for the entire transboundary system; building a shared action plan and a macro-investment portfolio for the Pantanal; and, piloting key activities from the PRH-Paraguay for the three countries (mostly related with ground water conservation, water quality and land use management). The current project (TC) will be implemented exclusively in Brazil, although it contributes to the rest of the Pantanal ecosystem. Consequently, the actions carried out will be coordinated and informed through the established trilateral mechanism within the larger GEF project implemented by the Bank and UN Environment.

- 2.5 The main objective of this TC project is to support ANA on the design of specific strategies, instruments and tools to articulate and to support the PRH-Paraguay implementation and to consolidate a detailed multisectoral investment master-plan (including water, sanitation, irrigation, tourism, land protection and conservation). Prioritized projects within the plan, to be potentially funded by the IDB (out of the scope of this TC scope) or other funding sources, will be at least at an alternative analysis level. More specifically, this TC will support ANA in four main areas key for the PRH-Paraguay implementation: (i) instruments for water resources governance and management (surface and groundwater), including water quality aspects; (ii) water use related conflict resolution (nexus approach); (iii) water resource conservation; and (iv) investment planning. This TC intends to advance on the work proposed by the GEF (Global Environmental Facility) project currently in preparation by the IADB and UNEP for the Pantanal, by fine tuning the studies needed to move forward with specific actions and interventions to be implemented to promote the sustainable development of the Pantanal and to facilitate the pre-identification of specific projects to be financed on the Brazilian side of it (70 to 80% of the system). This part of the Pantanal will positively impact the riparian region of the countries downstream (Bolivia and Paraguay) and that will advance on the consolidation of a coordinated and integrated tri-national investment portfolio for water management and sustainable land management. The promotion of green infrastructure and Natural Base Solutions and other “green” innovative finance mechanisms and instruments will be prioritized under this TC. The fact that the Pantanal is a National and World Heritage site and that the Pantanal National Park is crucial to better protect and manage the water resources for sustainability of the Pantanal, developing monitoring and alternative strategies to implement those actions addressed in the Plan - such as possible institutional frameworks, economic instruments, water conservation studies and establishment of goals and impact indicators - has become a great challenge. The estimated cost of implementing the PRH-Paraguay’s actions is estimated at R\$24 Million, and the multisectoral investment portfolio associated to its implementation, the Brazilian investments on the basin is estimated to be around US\$69 Million.
- 2.6 The TC is consistent with the IDB's Second Update to the Institutional Strategy (UIS) 2020-2023 (AB-3190-2) through the following pillars: i) Institutional capacity and rule of law, by providing potential alternatives for institutional frameworks to improve management in the RH-Paraguay; ii) Climate change and environmental sustainability, as it improves the water crisis prevention and management capacity of the world greatest wetland, the Pantanal which faces pressures that threaten to destabilize the ecosystem services that sustain the region's environment and social and economic development; and iii) Economic integration, by financing alternative economic instruments to be potentially applied when implementing PRH-Paraguay actions, which will have an impact of the Pantanal system covered by Bolivia, Paraguay and Brazil. This operation is also aligned with the IDB Group Strategy with Brazil 2019-2022 (document GN-2973), specifically the priority area of improving the business climate and narrowing gaps in sustainable infrastructure for enhanced competitiveness and the strategic objective “narrow infrastructure gaps”. It also contributes to the strategic objectives and outcomes from the INF results framework document (GN-2819-1 paragraph 3.24) related to improve quality of infrastructure projects and promote greater investment in region’s infrastructure sector and enhance performance, quality and sustainability of infrastructure services.

III. Description of activities/components and budget

- 3.1 Component I: Institutional frameworks assessment (US\$40,000).** To conduct a diagnostic study of current frameworks and to provide potential alternatives for institutional frameworks to improve management in the RH-Paraguay, including the analysis of its technical, economic, and operational sustainability. Some of the proposed Instruments to be assessed and tailored for the PHR-Paraguay implementation are: in depth water resources and basin (watershed level) action plans; water rights allocation tools; polluted water discharge permitting systems; monitoring, control and enforcement mechanisms, water bodies characterization and classification; data and information systems for water resource management; environmental protection tools for water management (as ecological flows or regimens or strategic EIA process for Water Resources Management plans); socialization and public consultation processes for water resources planning, among others.
- 3.2 Component II: Studies on economic instruments (US\$90,000).** This activity is focused on conducting a study on alternative economic instruments to be potentially applied when implementing PRH-Paraguay actions. It seeks its sustainability and includes the evaluation of more adequate methodologies for payments for environmental services to be implemented in the region. Some of the proposed instruments to be assessed and tailored to the implementation of the PRH-Paraguay are the establishment of State-Based Water Funds, Water Markets or Green/Resilience Bonds. This activity will fund the studies and analysis needed for structuring of pilot economic (and finance) instruments selected, establishing criteria and guidelines for their design, considering their institutional, socio-economic, governance and technical
- 3.3 Component III: Proposed projects for protecting and revitalizing permanent protected areas (US\$100,000).** To conduct technical studies to refine the criteria for determining the areas to be revitalized and to propose water resources conservation projects for the identified areas within the RH-Paraguay. Finer resolution assessments based on existing technical studies or simulation models (i.e. water resources modeling) developed by ANA or any other institution in the context of the PRH-Paraguay design will be carried-out to improve current analytical capabilities to be able to prioritize specific areas (hot-spot analysis) and to zoom-in in such areas for the refinement and design of respective specific water conservation and revitalization projects.
- 3.4 Component IV: Water Quality Management Standards Design (US\$100,000).** Design and proposal of suited water quality standards for river stretches in the RH-Paraguay in order to achieve the required water availability and quality levels compatible with their prevailing identified uses. The stretches within the scope will be selected by the development of the required technical assessment (including the use or improvements of existing water quality modeling tools) and in consultation with local water management agencies. This evaluation must consider the results of the PRH-Paraguay's diagnostic and prognostic analyses, the impact assessment results of building hydropower plants in the RH-Paraguay (with focus on sediment loadings), and any additional information that may become available by field and/or desk based survey. In addition to the technical assessments, and to ensure of the viability of the implementation of the proposed standards; this component will include public consultations, technical meetings and workshops to ensure the participation of the

communities within the areas to be studied. The study must propose goals to alternative water quality standards to achieve or maintain intended levels, as well as a program to implement the selected option. This component will fund the technical and institutional inputs for resolution to be sent to the respective Water Resources Council, according to their jurisdiction, must be drafted. The study must comply with the provisions laid down in CNRH Resolution no. 91/2008; CONAMA Resolution no. 357/2005; and PRH-Paraguay Goals B.5.1 and B.5.3.

- 3.5 **Component V: Workshop(s) to dissemination knowledge and generate policy dialogue (US\$30,000).** In parallel to the proposed studies, workshops with relevant stakeholders in the basin will be held, aiming at sharing the obtained results and validating and refining the obtained information. An IDB technical note with findings and lessons learns from this project execution will be produced for knowledge sharing across LAC.
- 3.6 **Component VI: Multisectoral investment portfolio design (US\$90,000).** To conduct technical studies for the identification and prioritization at alternative analysis level of specific water resources related investments within the Alto Paraguay River Basin. This will be proposed from a Nexus approach prioritizing investments that will improve the resilience of the Pantanal area to climate change impacts and that will be presented as an climate adaptation plan that could be presented to different funding sources and donors (including the IADB and other IFIs as the GCF).

IV. Budget

- 4.1 The indicative budget is US\$ 450,000, financed with resources from the Ordinary Capital Strategic Development Program for Infrastructure (INF). The funds will be used to finance the hiring of firms and / or individual consultants against the presentation of verifiable products, as well as the costs of mobilization expenses related to the performance of their duties. Details of costs are presented below:

Indicative Budget (US\$)

Component	Activity/Component	IDB INF Funding	Counterpart Funding	Total Funding
Component 1	Institutional frameworks assessment (Technical Report/s)	US\$40,000.00	US\$0.00	US\$40,000.00
Component 2	Studies on economic instruments. (Technical Report/s)	US\$90,000.00	US\$0.00	US\$ 90,000.00
Component 3	Proposed projects for protecting and revitalizing permanent protected areas. (Technical Report/s)	US\$100,000.00	US\$0.00	US\$100,000.00
Component 4	Water Quality Management Standards (Report)	US\$100,000.00	US\$0.00	US\$100,000.00
Component 5	Workshop(s) to dissemination knowledge and generate policy dialogue. (Workshops and Technical Note)	US\$30,000.00	US\$0.00	US\$30,000.00
Component 6	Multisectoral investment portfolio design (Report)	US\$90,000.00	US\$0.00	US\$90,000.00
	Total	US\$450,000.00	US\$0.00	US\$450,000.00

V. Executing agency and execution structure

- 5.1 The Bank will carry out the selection and hiring of the consulting services necessary for this TC in accordance with applicable Bank procedures and policies. INE/WSA will be responsible for implementing and monitoring the project. The activities to be carried out under this operation have been included in the Procurement Plan (Annex) and will be carried out in accordance with the Bank's established procurement methods, namely: (a) Hiring of individual consultants, as established in AM standards. -650; (b) Hiring of consulting firms for services of an intellectual nature according to GN-2765-4 and its associated operational guides (OP-1155-4) and (c) Hiring of logistics services and other services other than consulting, according to the policy GN-2303-28.
- 5.2 This TC is classified as Client Support; considering IDB's experiences and knowledge in various areas in the Pantanal including the implementation of a GEF project (RG-T3461) and other related activities in transboundary waters, its ability to work closely with the governments, and following the client's request, the Bank will be responsible for the execution of this TC. No formal evaluation will be undertaken, but an end-of project report will be prepared by the team. This report will summarize the execution, the results obtained, as well as the lessons learned for future projects of this nature.

VI. Project Risks and Issues

- 6.1 Institutional frameworks: this TC intends to support the implementation for the PRH-Paraguay which needs the engagement with institutions from different sectors at Federal at State Level. To mitigate this risk, ANA will be closely working with the IDB Team for this project execution and leading the institutional engagement and dialogue. Moreover, ANA has leading this engagement during the last few years for the PRH development and it is under its institutional mandate under Brazilian law. Sustainability: This knowledge generated by the activities of this TC will be systematized and will create a methodology to support replicability in the region. Internal Coordination Risk: To mitigate this risk, the team leader will coordinate with VPS, VPC and other IDBG areas, as necessary. In addition, a multisectoral Team for this TC will be created including members from INE/WSA, CSD/RND, CSD/CCS and VPS/ESG will be set up for this TC with team members from both HQ and COF Brazil.
- 6.2 Due to the COVID-19 crisis, the project could face delays in the execution; nevertheless, we will coordinate with the respective offices and departments to take all the necessary measures prescribed by the Bank. Additionally, we will discuss measures to adopt with the national and sub-national governments.

VII. Environmental and Social Strategy

- 7.1 There are no environmental and social risks. The TC will rank in category C by ESG.

Required Annexes:

[Request from the Client_80625.pdf](#)

[Results Matrix_76957.pdf](#)

[Terms of Reference_85496.pdf](#)

[Procurement Plan_72769.pdf](#)