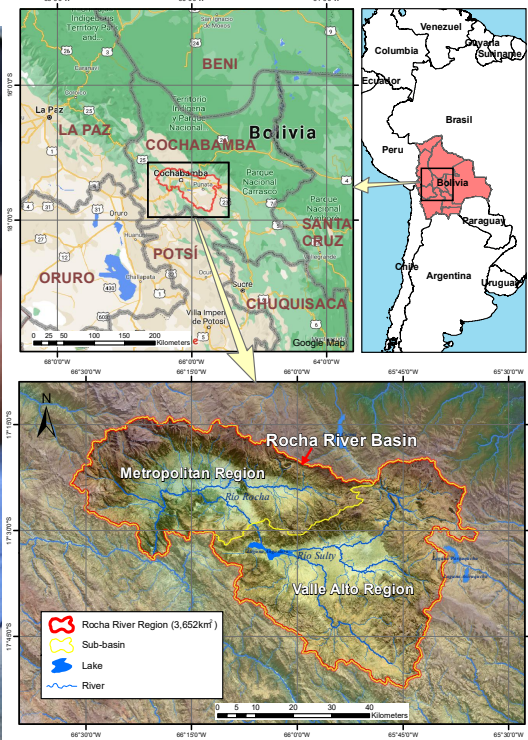


Project for Capacity Development on Practical Integrated Water Management in Cochabamba, Bolivia (GIAC2)

— Practice and Co-creation of basin water management through synergistic engagement of local stakeholders —

January 2026



1. Project Background and Problems

(1) Overview of the Target Area and Geographical/Climatic Characteristics

Cochabamba Department, located in central Bolivia, is an important region that is home to the country’s third-largest population. The Rocha River basin, the target of the Project for Capacity Development on Practical Integrated Water Management in Cochabamba, Bolivia (GIAC2) (hereinafter, the “Project”), is a large basin (approximately 3,652 sq. km) at the northern end of the Tunari mountain range, exceeding 5,000 m in altitude. Approximately 1.4 million people, about 70% of the department’s population, are concentrated in the Rocha River basin. While the climate is mild throughout the year, it is characterized by extremely dry conditions, with annual precipitation ranging from 440 to 620 mm. These limited water resources, along with continued rapid urbanization and population growth, are the fundamental factors behind the

serious water problems facing the Rocha River basin.

(2) Serious Water Resource Problems Faced

The Rocha River basin is broadly divided into the Metropolitan Region and the Valle Alto Region, each of which faces different water problems.

a. River Water Quality Pollution in the Metropolitan Region

In the Metropolitan Region, which has a large population, the development of sewage treatment facilities is insufficient. Further, household wastewater, sewage, and industrial wastewater flow directly into the river. As a result, water pollution in the Rocha River is deplorable, with an increasingly serious negative impact on public health and the ecosystem.

b. Groundwater Crisis in the Valle Alto Region

The agricultural land in the Valle Alto Region is spread out, and the region depends on groundwater for most of its drinking and irrigation water. However, in recent years,

excessive pumping has led to a significant drop in the groundwater level. Along with this, water quality there has progressively deteriorated, including salinization with geological origins. This is a vital issue threatening the sustainability of regional agriculture.

(3) Social Background and Public Mistrust in Water Administration

In the Rocha River basin, conflicts between residents and the government stemming from chronic water shortages have been repeatedly occurred throughout history. In particular, the Cochabamba Water War, a movement against the privatization of the water supply business that occurred in 1999-2000, is known as a historic incident that escalated into large-scale citizen riots. As a result of this experience, residents' trust in water administration is extremely low. Therefore, Cochabamba presents a unique challenge, as it is very difficult to reach social consensus when promoting public works projects.

(4) Achievements and Remaining Challenges of the Previous Phase (GIAC1)

To improve this situation, JICA implemented the previous phase “the Project for Capacity Development on Integrated Water Resources Management in the Department of Cochabamba” (GIAC1) from 2016 to 2023. In GIAC1, JICA supported the Autonomous Departmental Government of Cochabamba (GADC) in the establishment and operation of the Inter-institutional Platform for the Rocha River Basin (PICRR) as a forum for stakeholders to engage in dialogue and consensus-building, with the aim of promoting the implementation of the Master Plan for the Rocha River Basin (PDCRR). This established an organizational and institutional foundation for basin management. However, even after completion of GIAC1, the following challenges remained.

- **Driving the implementation of solutions:** Although the PDCRR was formulated, the implementation of projects that contribute to solving specific water issues is still insufficient.

- **Enhancing operational capabilities:** The Basin Unit of the GADC, which is the operating body of the PICRR, faces constraints with respect to human resources and budget. As a result, the capacity to maintain sustainable activities is insufficient.
- **Promoting social participation:** Diverse community organizations and water users' associations have not been sufficiently involved in the PICRR framework. Further, a consensus-building mechanism that reflects on-site needs has not been fully established.

(5) Objectives of GIAC2 and the Necessity of Practical IWRM

The Government of Bolivia, based on the National Water Resources Plan, currently prioritizes the promotion of Integrated Water Resources Management (IWRM) at the basin level. The Project aims not only to implement the IWRM process but also seeks to build a model for “Practical IWRM” that leads to solving specific problems. In order to enhance water sustainability in the Rocha River basin, it is essential for decision-making to be based on scientific evidence (data), to build consensus through the participation of appropriate stakeholders, and accumulate and share cases of success generated through specific projects (pilot activities).

2. Approach to Problem Solving

(1) Deployment of Practical IWRM Embodying the JICA Global Agenda

Among the 20 issue-based strategies published in the “JICA Global Agenda” (JGA) in 2021, JICA formulated a “Cluster Strategy” under JGA No. 19, “Sustainable Water Resources Management and Water Supply”. This defines quantitative goals and logic as “Practical Integrated Water Resources Management to Resolve Water-related Issues in the Regions”. This strategy goes beyond the simple dissemination of concepts and focuses on solving local water resource issues together with various stakeholders. Specifically, a two-layered approach is required: at the national level, institutional development; and at the local

and basin level, putting things into practice. At the local level, responsible entities are developed and mechanisms for building consensus among stakeholders are established, with the goal of resolving issues through a three-phase process; awareness raising; capacity development and planning; and the implementation of solutions. This is defined as “Practical IWRM”. The Project aims to solve various problems in the Rocha River basin by strengthening the capacities of the GADC and PICRR in each of these phases. This initiative embodies JICA’s Cluster Strategy.

(2) IWRM Framework and Project Logic

SDGs Goal 6 aims to “Ensure availability and sustainable management of water and sanitation for all”. In order to achieve this, Target 6.5 calls for the following: “By 2030, implement integrated water resource management at all levels, including through transboundary cooperation as appropriate”. Today, IWRM is recognized as a universal approach to solving water issues. According to the Global Water Partnership, IWRM is defined as “a process which promotes the co-ordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems” (GWP 2000¹). In order measure the achievement of this process, the UN organization UN-Water periodically monitors the state of affairs in each country based on the four dimensions of IWRM shown in Table 1.

Table 1: Relationship Between the Four Dimensions of IWRM and GIAC2 Outputs

Four dimensions of IWRM	Description	Relationship with GIAC2 Outputs
Enabling environment	Policies, laws, plans, and strategies that create an enabling environment for implementing IWRM.	Output 1 - 4

¹ Global Water Partnership Technical Advisory Committee, *TAC Background Papers, No. 4: Integrated Water Resources Management* (Stockholm: Global Water Partnership, 2000), p. 22, <https://www.gwp.org/globalassets/global/toolbox/publications/background->

Institutions and participation	The range and roles of political, social, economic, and administrative institutions that serve to support the implementation of IWRM.	Output 2 and 3
Management instruments	Tools and activities that enable managers and users to make rational and informed choices regarding available courses of action.	Output 1 and 3
Financing	Budgets and financing are available for water resources development and management from various sources.	Output 3 and 4

The Project aims to achieve the Project Purpose, “The capacity of the GADC and PICRR for the practice of IWRM is enhanced”. To achieve this, the Project defines four key themes as its primary outputs: hydrological monitoring, management of the consultative body (PICRR), pilot activities, and securing financial resources (Figure 1). Each Output maintains a close relationship with the four dimensions of IWRM (Table 1).

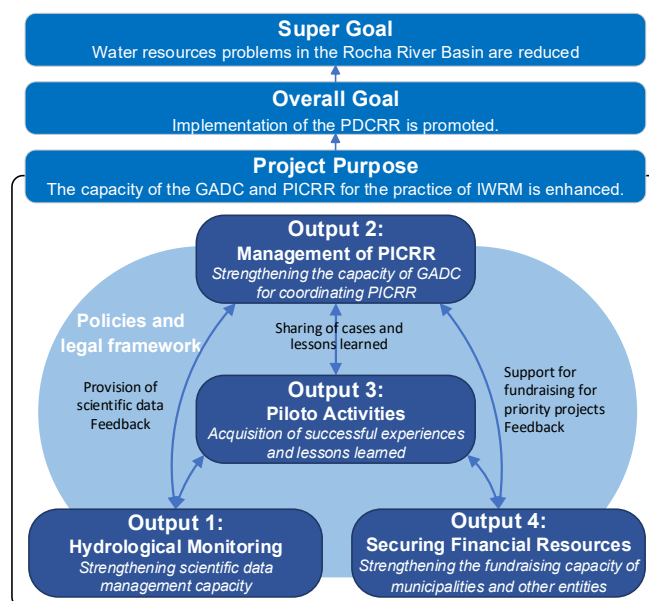


Figure 1: Relationship Between Each Output and the Project Purpose

Among the Outputs of the Project, Output 3 in particular addresses water issues related to the PDCRR’s priority projects through pilot activities. Further, while utilizing Output 3 and Output 4 in the process of building consensus

<papers/04-integrated-water-resources-management-2000-english.pdf>, accessed January 27, 2026.

among stakeholders through consultative bodies at the local level, the Project will experience success (or failure) and gain lessons learned. Moreover, results of Outputs 1, 3, and 4 will be integrated into activities of Output 2 and shared within the PICRR to repeat the process of consensus-building. This aims to create an “IWRM spiral” through which the capacities of the entity responsible (GADC) for water resources management and the consultative body (PICRR) are enhanced. In other words, the activities of each Output are the core elements of IWRM itself; in addition, their sustainable continuation over time is required, while remaining closely and concurrently interrelated.

Furthermore, in addition to the Overall Goal, the Project sets a “Super Goal”: “Water resources problems in the Rocha River Basin are reduced”. This is intended to emphasize to stakeholders that GIAC2 is an initiative leading to the resolution of water resources problems from a long-term perspective, especially for activities such as hydrological monitoring and the operation of the PICRR, where visible results are often difficult to realize in the short term.

Details of each output	
Output 1:	Hydrological information, including water quantity and quality within the basin, is identified, accumulated, managed, and disclosed to ensure its appropriate utilization. (Hydrological monitoring)
Output 2:	The participation of relevant organizations and community organizations is promoted to solve water issues in the basin, and the PICRR is appropriately operated. (Management of PICRR)
Output 3:	Lessons learned for the sustainable and appropriate implementation of the PDCRR are obtained through the execution of pilot activities in two regions: the Metropolitan Region and the Valle Alto Region. (Implementation of pilot activities)
Output 4:	The GADC’s support capacity for fundraising is enhanced to implement the PDCRR for the benefit of the municipalities. (Securing financial resources)

(3) Project Implementation Structure

Under the Project, the Ministry of Productive Development, Rural and Water (MDPRyA) serves as the

supervising ministry at the national level, while the Secretariat of Environment and Water Resources (SDMAyRH) of the GADC acts as the implementing agency. The Director of the Secretariat serves as the Project Director, and the Chief of the Basin Unit under the same Secretariat serves as the Project Manager. Furthermore, the Joint Coordination Committee (JCC), the Project’s decision-making body, convenes approximately every six months. With the participation of the project implementation team, JICA staff, and the MDPRyA, the JCC reviews the progress of work plans and discusses and decides on important issues related to project management. On the Japanese side, the team consists of short-term experts who conduct intermittent on-site assignments, long-term experts who reside locally throughout the project period, and national staff (Figure 2).

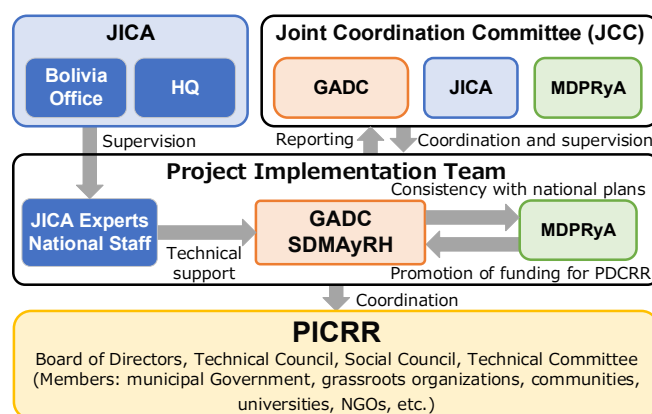


Figure 2: Project Implementation Structure

(4) Strengthening the Operation of the PICRR and Promoting the Participation of Diverse Stakeholders

With the goal of ensuring the appropriate operation of the PICRR and promoting the participation of concerned organizations and community organizations, the Project takes the following approaches.

a. “Two-Region Division” Operation Based on Regional Characteristics

Since the Rocha River basin is vast and the challenges it presents vary depending on the area, rather than handling the entire basin through a single consultative body, for

purposes of operation it is divided into two regions: the Metropolitan Region and Valle Alto Region. By focusing discussions on issues specific to each region (e.g., water pollution and hydrological risks such as floods and debris flows in the Metropolitan Region, and irrigation water shortages and groundwater depletion in the Valle Alto Region), the Project maintains among participants (representatives of municipalities and community organizations) a sense of ownership and motivation to participate.

b. Collaboration of “Three Consultative Bodies” with Distinct Roles

Depending on their objectives and the members that make them up, the PICRR consists of three consultative bodies: the Board of Directors, the Technical Council, and the Social Council. Their respective roles are organically linked.

Table 2: Three Consultative Bodies Enabling the PICRR to Function

Consultative Body	Role	Composition	Description
Board of Directors	Ensuring political commitment	Governor, Vice-Minister of MDPPrYA, mayors	Functions as a forum for political decisions and top-down decision-making, such as the establishment of a water fund and joint declarations on pollution control measures.
Technical Council	Examination of practical solutions	Technical staff from GADC and municipalities, universities, NGOs, professional associations, etc.	Shares scientific data, technical knowledge, and lessons learned, and conducts coordination and planning at the practical level.
Social Council	Securing social consensus	Irrigation unions, community organizations, social audit organizations, etc.	A forum to identify local needs and gain legitimacy and trust for projects.

c. Utilization of Technical Committees as Forums for Practice

Since the Technical Council acting by itself tends to lead to abstract discussions, Technical Committees have been established for specific themes. Moreover, committee activities serve as the driving force for the PICRR as a whole. The main committees are shown in the table below.

Table 3: Main Technical Committees Performing Practical Activities of the PICRR

Technical Committee	Main Participating Organizations	Main Activities
Hydrological Monitoring Committee	GADC, municipal government, universities, NGOs	Formulation of hydrological monitoring plans, implementation of capacity building training for data collection and analysis
Wastewater Treatment Committee	GADC, municipal government, water and sanitation utilities (EPSA), universities, NGOs	Consideration of participatory planning and procurement of financing for the introduction of decentralized wastewater treatment facilities
Hydrological Risk Committee	GADC, municipal government, universities, NGOs	Consideration of river safety zone designation and rainwater infiltration measures
Water-saving Irrigation Committee	GADC, municipal government, irrigation associations, SEDERI (Departmental Irrigation Service), NGOs, etc.	Promotion of water-saving irrigation in the Valle Alto Region, planning and monitoring of pilot activities
Environmental Education Committee	GADC, Departmental Education Bureau, NGOs, teachers	Preparation of environmental education materials and teaching guides

By creating a bottom-up flow in which the specific results and agreements obtained in these Technical Committees are reported to and approved by the higher-level Technical Council, Social Council, and Board of Directors, the PICRR is evolving from what may be called a “place for meetings only” into a “place for practice”.

(5) Creation of Synergies Through Pilot Activities

Pilot activities are being implemented under three themes: water quality improvement (for the Metropolitan

Region), water-saving irrigation (for the Valle Alto Region), and environmental education (for the entire basin). The approach involves linking these with other activities, such as hydrological and water quality monitoring (Output 1) and securing financial resources (Output 4), while ensuring that lessons learned from successful cases at the field level are shared and disseminated throughout the entire basin via the PICRR (Output 2).

In the Project, pilot activities do not remain mere small-scale experimental projects. Rather, they function as opportunities to involve diverse stakeholders, integrate resources, and connect with institutions and policies. Specific examples and mechanisms for creating synergies through such pilot activities are outlined below.

a. Realization of Inter-institutional Collaboration Through Technical Committees

For each pilot activity, a Technical Committee composed of government agencies, NGOs and universities was established as the promoting body. By multiplying the strengths of each organization, achievements that could not be attained by GIAC2 alone are being produced.

Example 1: Water-saving irrigation (for the Valle Alto Region)

A pilot site is supported through the collaborative efforts of the various stakeholders in the Water-saving Irrigation Committee of the Valle Alto Region. Specifically, the GADC/GIAC2 handles coordination, provision of equipment and the Smallholder Horticulture Empowerment & Promotion (SHEP) approach; the “RECEM Valles” project of the Food and Agriculture Organization (FAO) provides funding and provision of equipment; the Departmental Irrigation Service, or SEDERI, offers technical guidance; the University of San Simon conducts monitoring and research; and the NGO PROINPA provides bio-inputs for soil improvement at the demonstration site. By merging the respective roles of these stakeholders, the activities exceed the mere

installation of equipment; rather, they are working to build a sustainable model that brings farming improvement and monitoring together.



Photo 1: University-GIAC2 collaboration in a pilot area where measurements are conducted of water levels and water quality in irrigation wells.

Example 2: Environmental education (for the entire basin)

Through the Environmental Education Committee, stakeholders are collaborating to create synergies by incorporating NGO resources into the official government curriculum. The Departmental Directorate of Education leads institutionalization, supported by coordination provided by the GADC/GIAC2, NGO materials, university research, and school-level implementation. These synergies ensure the effective use of existing expertise and foster a sustainable, cross-sectoral collaboration framework.

Example 3: Wastewater treatment and water quality improvement (for the Metropolitan Region)

Through the Wastewater Treatment Committee, an NGO called AGUATUYA, GIAC2, and the local government and Water and Sanitation Utilities (EPSA) are working together to revitalize the development of decentralized wastewater treatment facilities. By utilizing the PICRR network supported by GIAC2, AGUATUYA is overcoming challenges related to its site selection. Through this collaboration, plans for construction that had previously been stalled are starting to be realized.

b. Enhancing Scientific Validation Through Partnerships with Academic Institutions (Universities)

Plans are underway for students from local universities (Bolivian Private University and San Simon University) to participate in pilot activities by conducting infiltration tests and water-saving irrigation efficiency monitoring as the topics for their graduation theses. This allows costs to be kept low while collecting highly reliable data, thereby ensuring technical validity.



Photo 2: Site visit to the awareness-raising plaza in Sacaba by Environmental Education Committee members for the purpose of sharing experiences. (The awareness-raising public space in Sacaba was developed by former participants in GIAC1's training in Japan, based on examples they learned in Japan.)

In this way, pilot activities in the Project function not merely as experimental demonstrations but as an “opportunity and catalyst” that organically links people who may be grouped under such headings as “those with funds (donors/NGOs)”, “those with expertise (universities/experts)”, “those with authority (government)”, and “those on the ground (residents)”. Sustaining this collaboration could become the primary driving force for advancing IWRM in Cochabamba Department, where resources are limited.

(6) Multi-sectoral Collaboration and Utilization of Diverse Funding Sources

The Project follows a policy of strengthening collaboration across sectors beyond water; these include such sectors as education, agriculture, disaster prevention, and forestry. At the same time, the Project is actively utilizing local resources from other donors like the Inter-

American Development Bank (IDB), the FAO, the World Bank, NGOs, and universities. Furthermore, efforts are being made to build sustainable financial mechanisms through not only administrative budgets but also Corporate Social Responsibility (CSR) funding from private companies and the newly conceptualized “Water Fund”.

3. Practical Results of the Approach

(1) Initiatives for the Establishment of the “Cochabamba Water Fund” to Ensure Sustainability of Water Resource Management

a. Current Progress

Significant progress was made during the first year of the Project (January–December 2025) toward an attempt to ensure the sustainability of water resource management in the Rocha River basin, namely the establishment of the Cochabamba Water Fund. The main achievements to date are as follows.

- **Promulgation of the Departmental Ordinance for the Establishment of the “Water Funds” (No. 1212):**

On September 5, 2025, a legal framework was officially approved authorizing the public sector, private sector, and civil society to jointly establish and operate the Water Funds.

- **Formation of the Water Fund Promotion Committee (CIFAC):** The Cochabamba Metropolitan Region Water Fund Promotion Committee (CIFAC), consisting of the GADC, the municipal government, universities, power companies, the Misicuni Company, private enterprises, professional associations, water user associations, and NGOs, was launched in October 2025 to lead the establishment process.

- **Agreement on Strategic Guidelines:** At a December 2025 CIFAC meeting, the mission, vision, and four strategic pillars (Strategic Guidelines) were agreed upon: “Conservation of Water Source Areas”, “Governance and Infrastructure Strengthening”,

“Institutional Sustainability”, and “Knowledge Management and Information”.

(Mission: To contribute to the conservation of water sources and water security through strategic territorial management and governance, ensuring the well-being of the communities and population of the Rocha Basin (Metropolitan Region) and the Misicuni Basin."

Vision: The Cochabamba Metropolitan Region ensures water security for present and future generations.)

b. Integrated Institutional, Organizational, Social, and Technical Approach for Water Fund Establishment

The series of initiatives for establishing the Water Fund embodies the Practical IWRM that is the aim of the Project. The four key dimensions of IWRM — the enabling environment, institutions and participation, management instruments, and financing — are linked together, with diverse stakeholders organically uniting in the common goal of “Water Source Conservation and Water Security in the Rocha River Basin”.

b.1 Institutional Foundation: Establishing Rules Based on Consensus

The Water Fund is being built not merely as a pool of funds, but as a sustainable mechanism with legal backing. In particular, the Departmental Ordinance for the Establishment of the “Water Funds” (No. 1212) was not created unilaterally by the government; rather, prior to its enactment, a Legal Commission composed of the GADC/GIAC1, NGOs, the Water and Sanitation Regulatory Authority (AAPS), and the Association of Sanitary Engineers (ABIS) was established to jointly review the articles therein. Even after the passage of the ordinance, it is mandated that detailed regulations be formulated within 180 days. As of January 2026, consultations among stakeholders are ongoing.

b.2 Organizational Structure and Citizen Participation: Strategic Alliances Beyond Conflict

Activities toward the establishment of the Water Fund

are being implemented through a process of careful consultation and consensus building within each component of the PICRR (the Board of Directors, Technical Council, and Social Council). This very process serves as the most critical foundation for ensuring the legitimacy of introducing a new system in a basin where diverse stakeholders exist. The following sections provide details on the specific process of consensus-building that took place through the PICRR.



Photo 3: A meeting of the Metropolitan Board of Directors. The decision-making body of the PICRR, chaired by the Governor and attended by a representative of the ministry and the mayors or representatives of the seven municipalities.

Board of Directors (Establishing Political Commitment)

The greatest political agreement toward the establishment of the Water Fund was reached at the meeting of the Board of Directors of the PICRR Metropolitan Region held on July 1, 2025. At this meeting, in addition to the Governor of Cochabamba and a representative from a central government ministry (at that time the Ministry of Environment and Water), the mayors or their representatives from all seven municipalities in the Metropolitan Region (Cochabamba, Sacaba, Vinto, Colcapirhua, Tiquipaya, Quillacollo, and Sipe Sipe) were in attendance. All attendees signed the “Inter-institutional Cooperation Agreement for the Creation, Support, and Strengthening of the Water Fund in the Metropolitan Region”. Through this agreement, the status of the Water Fund was established as being not merely a departmental concept, but as a region-wide policy supported by all local governments within the basin.

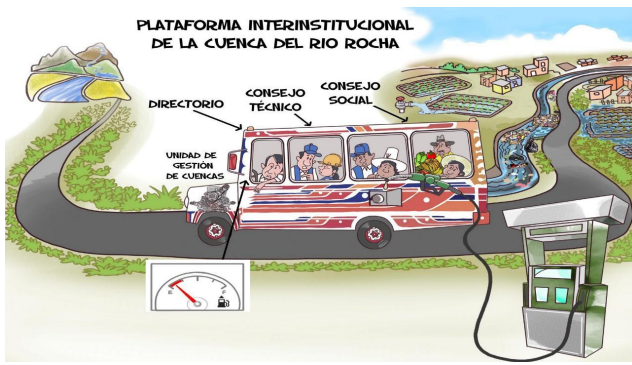


Photo 4: An illustration (created by GIAC2) likening the PICRR to a local bus, showing that it lacks the fuel (i.e. funds) needed to reach its destination of solving water problems.

Social Council (Securing Social Consensus)

Following the political agreement at the Board of Directors meeting, consensus-building at the resident level was conducted at meeting of the Social Council of the PICRR Metropolitan Region on July 17, 2025. The meeting was attended by a variety of resident representatives directly involved in water use, including irrigation associations, water committees, Social Control (community audit organizations), and Territorial Base Organizations (OTB). The participants received an explanation of the concept of the Water Fund, gained an understanding of the contribution it would make to water source conservation, and signed a “Memorandum of Understanding for the Establishment, Support, and Strengthening of the Water Fund in the Metropolitan Region”. The process of securing prior approval from social organizations that have in the past experienced the “Water War” and are sensitive to new movements regarding water was crucial for reducing the risk of conflict in the subsequent enactment of the ordinance and the operation of the Water Fund.

Technical Council (Practical Problem Analysis and Design)

Following the broad agreement reached at the meetings of the Board of Directors and the Social Council, detailed practical reviews proceeded in the Technical Council of the PICRR Metropolitan Region. On November 13, 2025, a large-scale workshop was held in the form of a joint

meeting of the Technical Council and the Social Council, bringing together more than 130 stakeholders. The participants were divided into five groups to analyze specific issues the Water Fund should address and potential funding sources. Through this process, the blueprint for the Water Fund (strategic guidelines, mission, and vision) was refined at a later stage to reflect the voices of those in the field in the basin and reflect technical expertise, rather than being a mere theoretical concept.



Photo 5: The joint meeting of the Metropolitan Technical Council and Social Council (the Water Fund problem analysis workshop).

In this way, the organic functioning of the PICRR’s three elements — “political decision” at the Board of Directors meeting, “public endorsement” from the Social Council, and the “practical backing” of the Technical Council — served as the driving force leading up to the enactment of the Departmental Ordinance for the Establishment of the “Water Funds” (No. 1212) and the subsequent formation of CIFAC. These achievements were brought into concrete form in a short period of time precisely because the PICRR already existed as an established consensus-building platform.

b.3 Monitoring Tools: Science-Based Decision Making

In order to determine where and how the capital within the Water Fund should be invested, objective data (management instruments) are indispensable. In this regard, in December 2025, academic institutions such as San Simon University, Catholic University, and the Bolivian Private University came together and agreed on a direction to establish the Water Science Station (ECA) to provide scientific advice to the Water Fund and the PICRR.

Through this, it is anticipated that a governance system will be constructed in which investment decisions are made based on scientific evidence rather than political considerations. Furthermore, one of the four strategic pillars of the Water Fund agreed upon by CIFAC was “Knowledge Management and Information”, clearly stating that decision-making based on monitoring data is the foundation of the fund’s operation.

b.4 Securing Financial Resources: Building Sustainable Finance

Efforts are underway to break away from dependence on external donors and create a mechanism to circulate funds within the region. Multi-source fundraising is being considered, including not only administrative budgets but also CSR funds from private companies, the Self-Sustained Water Supply System Fund (SARH),² managed by the EPSA, and the introduction of environmental service taxes for large-scale water users (such as ENDE, the power company).

Furthermore, to ensure the transparency of the funds collected and guarantee that they are used for water source conservation, a consensus has been reached among stakeholders to set up a “trust fund” through a bank. This has paved the way for the safe management and operation of both public and private funds.

c. Future Outlook and Challenges

The primary remaining challenges for the establishment of the Water Fund are as follows.

Establishment of the Departmental Water Agency (ADA): The primary goal is the early establishment of the Departmental Water Agency (ADA), which is to serve as the technical secretariat for the Water Fund and function as a practical organization that is less susceptible to political influence.

Ensuring Transparency via Trust Fund: Building a mechanism in which a bank (trustee) manages the funds

contributed and allocates investment returns and principal to priority projects, thereby ensuring transparency and securing trust from donors and the private sector.

Securing Diverse Funding Sources: Continuing to consider the utilization of the EPSA’s SARH fund, private sector CSR funds, and the introduction of environmental service taxes for power companies involved in hydroelectric power generation.

Social Consensus (Misticuni Area): Continuing a communication strategy involving explanations and dialogues in the Quechua language to resolve concerns and lessen distrust regarding water resource use restrictions held by some residents of the Misticuni area, which is a key water source of the Metropolitan Area.

(2) Realization of Ordinance Enactment Based on Resident Proposals for Rocha River Protection

The “Departmental Ordinance for the Protection and Citizen Mobilization of the Rocha River (No. 1232)” was enacted to institutionalize the cleaning, restoration, and conservation of the Rocha River as an obligation not only of governmental administration but also of citizens and social organizations. The formulation process for this ordinance as well was not a top-down decision made by the government. Instead, it was based on proposals from residents within the Social Council and consensus-building among diverse stakeholders through the PICRR, making it an ideal example of IWRM in practice.

a. Background and Platform Involvement

During the Social Council meeting in the Metropolitan Region held in July 2025, participants (leaders of resident organizations) strongly expressed the demand that “Rocha River cleanup activities should not be sporadic but a permanent annual obligation”. A Memorandum of Understanding was signed by participants to work toward the enactment of relevant legislation. This served as the

(water and sanitation utilities) service area.

² A fund accumulated from a portion of the fees collected from users (such as private companies) who supply their own groundwater within the EPSA

direct trigger for ordinance No. 1232, just described above. Subsequently, with the GADC and GIAC taking the lead, workshops on this theme were held with relevant municipal governments and NGOs, where technical and practical adjustments and consensus-building were carried out regarding the timing of cleaning campaigns (twice a year in mid-May and the last weekend of September) and the division of roles among organizations. Against the backdrop of social demands and consensus within the PICRR, the ordinance was passed unanimously by the Departmental Assembly on December 4, 2025, following deliberations by the Departmental Assembly’s Environmental Committee and other bodies.



Photo 6: Participants in a campaign in Tiquipaya Municipality. Its aim is to promote a Departmental Ordinance that declares the cleanup, reforestation, and comprehensive protection of the Rocha River and its tributaries by citizens to be a departmental priority.

b. Promulgation Activities: Pilot Implementation and Awareness Raising

Prior to the formal enactment of the ordinance, a “Citizen Mobilization Campaign for the Cleanup of the Rocha River” was conducted on a trial basis in Tiquipaya Municipality to familiarize residents and administrative leaders with the concept of the ordinance. This event saw more than 360 participants take part, among which were representatives from the central government ministry, the GADC, staff members of the Tiquipaya Municipal Government, social organizations, schools, irrigation stakeholders, and local residents. By conducting

reforestation in addition to the cleanup, participants put into practice the ordinance’s objective of restoring the environment of the Rocha River alongside “cleanup”.

Furthermore, by collaborating with representatives of the media in Cochabamba, a cooperative framework has been established to broadcast free of charge awareness-raising content about these activities and water issues, promoting public awareness to enhance the effectiveness of the ordinance.

(3) Institutionalization and Development of a Practical Model for “Community-based Environmental Education” Through Cross-sectoral Collaboration Between the Education and Water Sectors

Environmental education pilot activities that cover the entire basin go beyond the mere organization of environmental awareness-raising events. By structurally linking the education sector (the Departmental Education Bureau) and the water sector (the GADC and water-related NGOs), these activities have achieved concrete results in both “institutionalization” and “mindset change” through the development of original teaching materials and the introduction of innovative instructional methods.

a. Establishment of a Promotion System Involving the Education Sector

By involving from the outset of activities the Cochabamba Departmental Education Bureau and District Education Bureaus as core members of the Environmental Education Committee, the Project ensured that the activities were formally accepted at schools and established as official activities linked to the educational curriculum. Furthermore, participants in the activities included not only the government but also NGOs, universities (Catholic University and San Simon University), and the Language Education Group (EDELLENCO³) — which is composed of volunteer former

³ EDELLENCO (Equipo de Lenguaje Cochabamba) is an organization formed by teachers who participated in the project for “The Quality

Improvement of Primary School Education” (PROMIC, 2003-2010), which

and current teachers in Cochabamba — enabling the Technical Committee to function effectively by leveraging their respective expertise for the development of teaching materials and classroom support.

b. Development of Original Materials and Teaching Guides

In developing practical teaching materials focused on local water issues (pollution in the Rocha River), NGO expertise such as the EEPE method (Ecology Education in the Schoolyard) was incorporated into the teaching guides. Furthermore, in collaboration with EDELENCO, a “Collection of Stories” was created to convey to children the history and causes of Rocha River pollution. This work received high praise from the Director of the Departmental Education Bureau, who has promised that it will be distributed to schools throughout the department. Other initiatives in progress include the production of educational videos in partnership with Catholic University and the prototyping of board games designed to teach about water issues in the Rocha River.

c. Improvement of Classes and Mindset Change Through Lesson Study

Participatory water quality monitoring (an awareness-raising activity that incorporates water quality surveys using the five senses and visits to wastewater treatment plants), which was established during the activities of GIAC1, was implemented as part of school classes at pilot schools (in Tiquipaya Municipality and Arbieta Municipality). At that time, a “Lesson Study,” a Japanese educational method, was introduced to practice and provide verification of high-quality education. As a result, questionnaires conducted before and after the lessons confirmed a change in the students’ awareness; the percentage of students who recognized that the cause of river pollution is “domestic wastewater from our own homes” — rather than the “dumping of garbage” (littering),

was implemented by JICA in Bolivia, in order to voluntarily continue the research and improvement of teaching materials even after that project’s

which is a common misconception of citizens — increased significantly from 15.4% to 52.4%.

Furthermore, whereas the first session of this awareness-raising activity was led by the Project, the second session saw schoolteachers from the pilot schools themselves serving as facilitators, demonstrating an improvement in their own instructional abilities and motivation.



Photo 7: A teacher explaining the five-senses evaluation method during a participatory water quality monitoring class for pilot school students.

d. Future Development

Based on these achievements, workshops targeting 43 educational districts throughout Cochabamba Department are planned for 2026 to disseminate the teaching materials and expertise developed on a department-wide scale.

4. Innovations and Lessons Learned in Project Implementation

(1) Flexible Response to Political and Economic Risks (Utilization of External Organizations)

In Bolivia, there are persistent political and economic risks, such as large-scale layoffs due to severe budget shortages in government agencies, including the GADC, and personnel turnover following elections. The Project ensures continuity independent of any changes that occur in administrative structures by deeply involving external organizations, such as local NGOs and universities, rather than relying solely on government agencies.

One example is researchers and professors from major local universities serving as lecturers in technical training

completion.

for engineers from municipal governments and water utilities within the PICRR. Coming from institutions such as San Simon University, Catholic University and Bolivian Private University and covering topics such as hydrological and water quality monitoring, flow measurement, and Geographic Information Systems, (GIS), these researchers and professors lecture free of charge as part of the universities' contribution to regional communities. This initiative is carried out after discussing training needs and feasible schedules with relevant institutions, including universities, within meetings of the Hydrological Risk Committee, Hydrological Monitoring Committee, and Wastewater Treatment Committee, which serve as technical subcommittees of the PICRR, in which key basin stakeholders gather. Annual training plans are then formulated based on consensus. By treating universities not as mere “helpers” providing administrative support, but as “key players” involved from the planning stage onward, an organized system of cooperation has been established, thereby building a sustainable capacity development system in which knowledge and technology circulate and are passed on within the region — even after the departure of the Japanese experts or specific government officials.

Furthermore, in the operation of the Environmental Education Committee, which was established as a technical subcommittee of the PICRR to promote water-related environmental education for children in schools, numerous local NGOs are deeply involved as indispensable partners bridging the gap between the government administration (GADC and DDE) and the educational front lines (teachers). Specifically, in creating teaching guides for teachers, NGOs provide specialized educational methods and expertise, take the lead in facilitating workshops, and manage the quality of educational materials. Additionally, in individual activities such as video contests related to water environment improvement and the creation of educational board games,

each NGO leveraged its respective strengths to take charge of planning and management. In this way, amid limited administrative resources, the establishment of a system in which experienced NGOs support the practical operations of the Environmental Education Committee is helping to build a strong foundation for maintaining the quality of activities and ensuring that environmental education continues regardless of political changes.

Furthermore, to address staffing shortages at the GADC's water quality analysis laboratory, an initiative is underway to assign interns under an agreement with San Simon University to maintain the lab's functions. This has established a win-win relationship that provides students with opportunities for practical education.

(2) Multi-sectoral Collaboration, Strategic Synergies with Other Donors, and Formation of Collective Impact

In the Project, strategic roles are divided among other donors, NGOs, private companies, universities, and other entities to complement the limited resources of the GADC and maximize the sustainability and impact of the activities. This represents the practice of a “Collective Impact” approach, where diverse players bring together their respective strengths to achieve a common goal.



Photo 8: A study tour was organized to learn about the operational structure of FONAG, an Ecuadorian water fund with 25 years of experience. FONAG is an organization established to protect and restore the water source ecosystems that supply Quito, the capital of Ecuador. Through this exchange, the GADC signed an agreement with FONAG to share experiences and has been receiving timely advice during the process of establishing the Cochabamba Water Fund.

a. Multi-layered Collaboration in the Establishment of the Water Fund

The establishment of the Water Fund is a large-scale initiative that cannot be achieved by any single organization alone. It brings together resources from a wide range of sectors, from international organizations to private enterprises. For example, the IDB plays a central role in providing technical and financial support for the establishment of the Water Fund from the perspectives of climate change adaptation and water security. It supports the fund's feasibility studies and development of a roadmap by hiring international consultants and has also covered the costs for GADC staff to visit to Ecuador's water fund, called FONAG, in so doing providing Cochabamba stakeholders with opportunities to learn from advanced cases.

In addition, the NGO Fundación Natura, which already has experience operating small-scale water funds within Bolivia (such as in Santa Cruz Department), is providing expertise on Reciprocal Water Agreements between upstream and downstream areas for the purpose of water source conservation. It has signed an agreement with the GADC and is advising on specific operational models. Furthermore, the Cochabamba Federation of Private Entities has formally joined CIFAC as a powerful driving force, with progress being made in building a sustainable mechanism that involves not only public administrative but also private funding.

In this context, GIAC provides technical support for the GADC while serving as the backbone (core support) organization that aligns these diverse entities toward a common goal. Moreover, GIAC leads political and social consensus-building through the PICRR and assists in institutional design and governance construction, such as the operation of CIFAC, the enactment of ordinances, and the ADA concept. Through these actions, GIAC is bolstering the realization of a sustainable mechanism.

b. Joint Resource Investment and Synergies in Various Workshops and Events

By having multiple organizations contribute funds and expertise, rather than events being held by GIAC2 alone, high-quality content is delivered while costs are held low for large-scale events and specialized training. For example, an international seminar titled "Circular Management of Water and Sludge for Sustainable Cities" (held in October 2025) was organized by the Wastewater Treatment Committee with the GADC, the Embassy of Sweden, AGUATUYA, the Bolivian Private University, and the Bolivian Association of Sanitary Engineering (ABIS) acting as co-hosts who provided funds and venues. This cooperation enabled an event on a scale that would have been difficult to achieve by GIAC2 alone (with over 200 participants and invitations given to lecturers from abroad), succeeded in raising broad awareness of the importance of decentralized wastewater treatment. Furthermore, in technical training for the Hydrological Risk Committee, university researchers cooperated by acting as lecturers free of charge for specialized training for topics such as river flood analysis. This allows for sustainable capacity building that utilizes academic resources within the region without needing to depend on external consultants.

In this way, by strategically incorporating the funds and expertise of other organizations as "essential elements for achieving GIAC's outputs", the Project is generating achievements and synergies that far exceed the resources of the Project alone.

(3) Vitalization of Actions Through International and Regional Exchange of Experiences

Opportunities to learn directly from the success stories of other river basins and countries have served as powerful catalysts for maintaining stakeholder motivation and driving concrete actions. Through the study tour to FONAG, the aforementioned Ecuador water fund, and by observing water source conservation activities in the

neighboring Mizque River basin, participants gained a clear understanding that there is a direct connection between protecting water sources and the stability of agricultural production and economic benefits. These exchanges have been a major factor in accelerating discussions toward the enactment of the Departmental Ordinance for the establishment of the Water Funds and the formation of the ADA in Cochabamba.



Photo 9: In order to observe examples of Reciprocal Water Agreements made between upstream and downstream areas for the purpose of water source conservation, participants including farmers from the Rocha River basin visited Saipina in the Mizque River basin. The participants listened intently to local farmers explaining how they had begun cultivating new crops now that their irrigation water supply was secured.

Furthermore, as the lead entity for the PICRR Management Unit in the Rocha River basin, the GADC has secured its participation in a Peer-to-Peer (P2P) Program supported by the European Union (EU). This will involve a 30-month joint initiative starting in 2026, in partnership with organizations from Peru (in the Quilca-Chili basin) and Argentina (in the Colorado River basin). This proposal was developed and submitted in 2025 with the support of GIAC2 and was subsequently adopted. International mutual learning and the implementation of action plans concerned with governance and financing models are expected to act as catalysts for strengthening the quality and sustainability of the established management framework.

(Project Period: January 2025 – January 2029)