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DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

**BOLIVIA**

**CONDITIONAL CREDIT LINE FOR INVESTMENT PROJECTS (CCLIP)  
“NATIONAL WATER RESOURCES PROGRAM WITH A WATERSHED APPROACH”  
(BO-O0007)**

**FIRST INDIVIDUAL OPERATION UNDER THE CCLIP  
“NATIONAL PRESSURIZED IRRIGATION PROGRAM WITH A WATERSHED APPROACH I”  
(BO-L1226)**

**LOAN PROPOSAL**

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## CONTENTS

### PROJECT SUMMARY

I.	DESCRIPTION AND RESULTS MONITORING .....	1
A.	Background, problem addressed, and rationale .....	1
B.	Objectives, components, and cost .....	8
C.	Key results indicators .....	10
II.	FINANCING STRUCTURE AND MAIN RISKS .....	11
A.	Financing instruments .....	11
B.	Environmental and social safeguard risks.....	12
C.	Fiduciary risks .....	14
D.	Other key risks and issues .....	14
III.	IMPLEMENTATION AND MANAGEMENT PLAN .....	15
A.	Summary of implementation arrangements .....	15
B.	Summary of arrangements for monitoring results .....	18

## APPENDICES

Proposed resolution

ANNEXES	
Annex I	Development Effectiveness Matrix – Summary
Annex II	Results Matrix
Annex III	Fiduciary Agreements and Requirements
LINKS	
<b>REQUIRED</b>	
1	<a href="#">Multiyear execution plan / Annual work plan</a>
2	<a href="#">Monitoring and evaluation plan</a>
3	<a href="#">Environmental and social review summary</a>
4	<a href="#">Procurement plan</a>
<b>OPTIONAL</b>	
1.	<a href="#">Economic analysis of the project</a>
2.	<a href="#">Sector analysis – Report on the sample</a>
3.	<a href="#">Pressurized irrigation program – VRHR</a>
4.	<a href="#">Organizational strengthening and production-oriented technical assistance (OSPTA)</a>
5.	<a href="#">Program Operating Regulations</a>
6.	<a href="#">Gender diagnostic assessment</a>
7.	<a href="#">Sustainability and climate change</a>
8.	<a href="#">Environmental and social management framework</a>
9.	<a href="#">Dam additions – environmental and social analysis (ESA) and environmental and social management plan (ESMP)</a>
10.	<a href="#">Irrigation systems – ESA and ESMP</a>
11.	<a href="#">Pasopaya dam and pressurized irrigation system (Presto) – environmental and social impact assessment (ESIA) and ESMP</a>
12.	<a href="#">Sauce Pampa irrigation (Yamparaez) – ESIA and ESMP</a>
13.	<a href="#">Kupini dam (Villa Rivero) – ESIA and ESMP</a>
14.	<a href="#">Calicanto dam (Villa Rivero) – ESIA and ESMP</a>
15.	<a href="#">Uñala Jatun Era dam (Yotala) – ESIA and ESMP</a>
16.	<a href="#">Bibliographic references</a>
17.	<a href="#">Environmental and social screening filter</a>

## ABBREVIATIONS

APMT	Autoridad Plurinacional de la Madre Tierra [Mother Earth Plurinational Authority]
ATE	Autonomous territorial entity
CCLIP	Conditional credit line for investment projects
CRIAR	Programa de Apoyos Directos para la Creación de Iniciativas Agroalimentarias Rurales [program of Direct Supports for the Creation of Rural Agrifood Initiatives]
CSD	Climate Change and Sustainable Development Sector
ESA	Environmental and social analysis
ESIA	Environmental and social impact assessment
ESMP	Environmental and social management plan
ESPF	Environmental and Social Policy Framework
ICB	International competitive bidding
LCS	Least-cost selection
MDRyT	Ministry of Rural Development and Land
MMAyA	Ministry of Environment and Water
NCB	National competitive bidding
OSPTA	Organizational strengthening and production-oriented technical assistance
PDES	Plan de Desarrollo Económico y Social [Economic and Social Development Plan]
PITDS	Preinvestment technical design study
PRONAR	Programa Nacional de Riego [National Irrigation Program]
PRONAREC	Programa Nacional de Riego con Enfoque de Cuenca [National Irrigation Program with a Watershed Approach]
QCBS	Quality- and cost-based selection
RND	Environment, Rural Development and Risk Management Division
SENAHMI	Servicio Nacional de Meteorología e Hidrología [National Meteorological and Hydrological Service]
SIGEP	Sistema de Planificación Integral del Estado [State Integrated Planning System]
SISIN	Sistema de Información sobre Inversiones [Investment Information System]
SUSIRH	Sistema de Información de Seguimiento y Evaluación de Inversiones en Riego [Monitoring and Evaluation Information System for Irrigation Investments]
UCEP-MI RIEGO	Unidad de Coordinación y Ejecución del Programa “Más Inversión para Riego” [Coordination and Execution Unit for the “More Investment for Irrigation” Program]
UCP-PPCR	Unidad Coordinadora de Programas para Programas y Proyectos Climáticamente Resilientes [Program Coordinating Unit for Climate-Resilient Programs and Projects]
VRHR	Office of the Vice Minister for Water Resources and Irrigation
WRM	Water resources management

## PROJECT SUMMARY

### BOLIVIA

**CONDITIONAL CREDIT LINE FOR INVESTMENT PROJECTS (CCLIP)  
“NATIONAL WATER RESOURCES PROGRAM WITH A WATERSHED APPROACH”  
(BO-O0007)**

**FIRST INDIVIDUAL OPERATION UNDER THE CCLIP  
“NATIONAL PRESSURIZED IRRIGATION PROGRAM WITH A WATERSHED APPROACH I”  
(BO-L1226)**

Financial Terms and Conditions					
<b>Borrower:</b>				<b>Flexible Financing Facility<sup>(a)</sup></b>	
Plurinational State of Bolivia				<b>Amortization period:</b>	25 years
<b>Executing agency:</b>				<b>Disbursement period:</b>	5 years
Ministry of Environment and Water (MMAyA), acting through its Office of the Vice Minister for Water Resources and Irrigation (VRHR)				<b>Grace period:</b>	10.7 years <sup>(b)</sup>
				<b>Interest rate:</b>	SOFR-based
<b>Source</b>	<b>CCLIP (US\$)</b>	<b>First individual operation (US\$)</b>	<b>%</b>	<b>Credit fee:</b>	(c)
				<b>Inspection and supervision fee:</b>	(c)
<b>IDB (Ordinary Capital):<sup>(d)</sup></b>	500 million	150 million	100%	<b>Weighted average life:</b>	15.24 years
<b>Total:</b>	500 million	150 million	100%	<b>Currency of approval:</b>	U.S. dollar
Project at a Glance					
<b>Objective of the CCLIP (BO-O0007):</b> Contribute to water security in the country's priority watersheds, to ensure sustainable water availability for agricultural irrigation and human consumption with a watershed and climate change approach.					
<b>Objective of the first individual operation under the CCLIP (BO-L1226):</b> Improve the food security and income of rural households. The specific objectives are: (i) to build capacity for water resource governance at the national and local levels; (ii) to increase efficiency of water use for irrigation in prioritized departments; and (iii) to increase producers' agricultural productivity and climate resilience, prioritizing women's participation.					
<b>Special contractual conditions precedent to the first disbursement of the financing:</b> (i) the Ministry of Environment and Water (MMAyA) has approved and put the program Operating Regulations into effect on the terms and conditions previously agreed upon with the Bank (paragraph 3.4); and (ii) evidence has been submitted that the key technical support team of each of the program execution units in charge of program execution have been assigned or contracted, based on the terms of reference previously agreed upon with the Bank (paragraph 3.2).					
<b>Environmental and social contractual conditions:</b> These conditions are described in Annex B of the <a href="#">Environmental and Social Review Summary (ESRS)</a> .					
<b>Exceptions to Bank policy:</b> None					

Strategic Alignment			
Challenges: <sup>(e)</sup>	SI <input checked="" type="checkbox"/>	PI <input checked="" type="checkbox"/>	EI <input type="checkbox"/>
Crosscutting themes: <sup>(f)</sup>	GE <input checked="" type="checkbox"/> and DI <input type="checkbox"/>	CC <input checked="" type="checkbox"/> and ES <input checked="" type="checkbox"/>	IC <input checked="" type="checkbox"/>

- (a) Under the terms of the Flexible Financing Facility (document FN-655-1), the borrower has the option of requesting changes to the amortization schedule, as well as currency, interest rate, commodity, and catastrophe protection conversions. The Bank will take operational and risk management considerations into account when reviewing such requests.
- (b) Under the flexible repayment options of the Flexible Financing Facility, changes to the grace period are permitted provided that they do not entail any extension of the original weighted average life or the last payment date as documented in the loan contract.
- (c) The credit fee and inspection and supervision fees will be established periodically by the Board of Executive Directors as part of its review of the Bank's lending charges in accordance with applicable policies.
- (d) In accordance with document AB-2990, the disbursement of the Bank loan proceeds will be subject to the following restrictions: (i) a maximum of 15% in the first 12 months; (ii) a maximum of 30% in the first 24 months; and (iii) a maximum of 50% in the first 36 months, counted in all instances from the date the loan operation is approved by the Bank's Board of Executive Directors (paragraph 2.2).
- (e) SI (Social Inclusion and Equality); PI (Productivity and Innovation); and EI (Economic Integration).
- (f) GE (Gender Equality) and DI (Diversity); CC (Climate Change) and ES (Environmental Sustainability); and IC (Institutional Capacity and Rule of Law).

## I. DESCRIPTION AND RESULTS MONITORING

### A. Background, problem addressed, and rationale

#### 1. General background

- 1.1 **The postpandemic economic and social context.** The COVID-19 pandemic unleashed in 2020 had a significant impact on the country. That year, GDP fell 8.0%, and the unemployment rate doubled to 8.4% with respect to the average of previous years.<sup>[1]</sup><sup>[2]</sup> In 2021 the Bolivian economy began to rebound as health measures were lifted, with GDP growth of 5.0%.<sup>[2]</sup> However, the challenges of economic and social recovery are particularly evident in rural areas, where more than 50% still live in poverty.<sup>[6]</sup> In this context, the 2021-2025 Economic and Social Development Plan (known by its Spanish-language acronym, PDES) seeks to address the challenges of rural development with a focus on water security,<sup>[3]</sup> recognizing the vital importance of access to safe water sources for productive and social development and food security.
- 1.2 To address the problem of water security, the government, acting through the Ministry of Development Planning, requested a multisector conditional credit line for investment projects (CCLIP) within the framework of the 2021-2025 Plurinational Water Resources Plan and the National Watershed Plan. Both plans and the government's request identify the need for effective integrated water resources management (WRM) to ensure water availability, quality, and resilience, particularly in two key areas: (i) water resources and agricultural irrigation, and (ii) clean drinking water and basic sanitation.<sup>[4]</sup>

#### 2. Water problems in watersheds

- 1.3 **Water security in the context of climate change.** The problems of watersheds in Latin America are reflected in heightened water stress that mainly affects agriculture, food security, and access to water for vulnerable groups.<sup>[4]</sup> Various climate models show that the effects of climate change (changes in precipitation patterns, intensity, and frequency) magnify these problems, leading to negative impacts on food production and water supply.<sup>[5]</sup> In the Andean region, runoff variation in snowmelt-dependent watersheds has become more acute in recent years.<sup>[6]</sup> The heavy dependence on water in these low rainfall areas, coupled with limited water storage capacity, jeopardizes water security.<sup>[26]</sup> Regional models show a decreasing trend in precipitation (60%), including the arid and semiarid Andean zones of the Bolivian Altiplano highlands and valleys.<sup>[4]</sup> An estimated 41% of Bolivian land runs a water deficit.<sup>[7]</sup>

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<sup>1</sup> See complete list of bibliographic references identified by the number in square brackets [#] ([optional link 7](#)).

<sup>2</sup> Unemployment was 4.83% in 2019, and 4.27% in 2018.

<sup>3</sup> Water security is defined as the capacity of a population to safeguard sustainable access to adequate quantities of acceptable quality water for sustaining livelihoods, human well-being, and socioeconomic development, for ensuring protection against water-borne pollution and water-related disasters, and for preserving ecosystems in a climate of peace and political stability. United Nations (2013).

<sup>4</sup> Basic sanitation includes the subsectors of sanitary sewers, wastewater treatment plants, integrated solid waste management, and storm drainage. Comprehensive Sector Development Plan (PSDI).

- 1.4 According to the Global Climate Risk Index, Bolivia ranks among the top-10 countries with the greatest exposure and vulnerability to climate disasters in Latin America and the Caribbean.[8] Extreme weather events have increased, with floods, frosts, and droughts impacting mainly vulnerable populations that depend on agriculture, and jeopardizing the water supply in the country's cities.[9] In 2016 and 2020, the government declared a national state of emergency due to water deficit. In 2016, [the drought affected 8 departments and 37 municipios](#), involving 80% of agricultural production in 7 municipios of the department of Santa Cruz, and leaving the city of La Paz without water for several weeks.[11] This revealed limitations in capabilities and instruments for efficient planning and management among the autonomous territorial entities and service providers.
- 1.5 In Latin American and Caribbean countries, water is mainly used for agricultural irrigation and domestic purposes, with extractions equivalent to 70% and 19% of the total flow extracted, respectively.[4] Furthermore, water security and food security are interrelated and constitute major challenges in highly vulnerable countries such as Bolivia.[13]
- 1.6 **Water problems from the perspective of the agriculture sector, the importance of irrigation, and the food security challenge.** This sector accounts for 13% of GDP and is the main economic activity for 77% of the country's rural population. With small farms, low productivity, and low income levels, subsistence and indigenous family farming represents 68% of the number of agricultural units.[14] An estimated 53.9% of Bolivia's rural population lives in poverty, and 33.4% in extreme poverty; the poverty rate among households earning income from agriculture exceeds 80%. [15] The water problem in the agriculture sector is manifested in the productivity associated with access to irrigation, which in turn affects the income levels and food security of producer families. Moreover, agricultural irrigation is the main water use in the watersheds, so water must be used efficiently to ensure sustainable water availability, resilience, and conservation.
- 1.7 In terms of productivity, the average yield per hectare of the country's main crops is significantly lower than in neighboring countries. For instance, cereal and tuber crop yields are 57% and 39% of the South American average. One determinant of low productivity is the level of irrigation coverage. Although the irrigated area has expanded from 226,565 hectares in 2000 to 519,319 hectares in 2020, it represents just 21% of the country's irrigable area. There is ample empirical evidence on the positive impact of irrigation on productivity, farm income, and climate resilience.[16] Ex post and impact evaluations of irrigation programs show significant improvements in productivity and income among smallholder beneficiaries.[17] However, it should be noted that gravity irrigation is the predominant technology in Bolivia, and it is estimated that pressurized irrigation methods are used by only 2.1% of farming families and in 3.1% of the irrigated area.[14] Using pressurized irrigation methods is essential for WRM and climate change adaptation in vulnerable areas, and efficiencies of 75% to 90% can be achieved.[18] Pressurized irrigation is defined as the application of pressurized irrigation methods such as sprinkler, drip, or other methods in the field, including all necessary installations for control, flow measurement, and pressure. Data from the Ministry of Environment and Water (MMAyA) show a current average efficiency of 35% for traditional irrigation systems.

- 1.8 Factors restricting the adoption of irrigation systems, especially pressurized irrigation, include liquidity constraints and access to credit and information, risk aversion, market inefficiencies, lack of timely and quality technical assistance, absence of local management organizations, and others.[3]
- 1.9 Low agricultural productivity in Bolivia is also reflected in low rural population incomes and high levels of food insecurity.[9] In 2016, the rate of chronic child malnutrition in rural areas reached 24%. [19] Evaluations of irrigation programs found an increase in the average annual income of beneficiary farming families from US\$464 to US\$1,353 per family as a consequence of irrigation investments.[20] [17]. Income improved for all families evaluated; 40% rose above the poverty line and covered their needs for food, housing, health, and education; 40% went from extreme to moderate poverty; and 20% rose above the indigence line. Low productivity and its effect on incomes affects food security. The MMAyA shows that 44% of the rural population suffers from some form of food insecurity.[36] Moreover, in the departments prioritized by the government, food insecurity is 58%. Bibliographic references [17] and [27] show that investments in irrigation diminish food insecurity by 2%, especially in women-led households.
- 1.10 **Gender gaps in water security.** From the gender perspective, water and food security are particularly critical, considering the role played by women in family farming. Facing water scarcity, women bear the responsibility for providing water to the household (64% versus 24% men; 8% girls and 4% boys).[29] Girls' school enrollment rises 15% when communities have safe water and toilets. Bolivia is among the countries with the greatest socioeconomic and gender disparities. According to the United Nations Development Programme (2015), the gender inequality index in Bolivia is 0.45, whereas the average for Latin America is 0.39. An economic study on the impact of climate disasters on women and food security in Bolivia found that women-led households suffer the greatest losses in all scenarios due to their strong presence in traditional agricultural activities.[8] This study shows that falling employment, food shortages, and rising food prices have a greater impact on women-led households.
- 1.11 As part of the MMAyA's experiences, systematic documentation of information on the gender perspective and its relationship to irrigation has identified specific actions for women's participation and direct benefit: (i) women's participation on irrigation boards and in technical assistance and support services is 27% and 30.2%, respectively; and (ii) where technical assistance services are provided directly, even though 25% of the families are headed by women, only 5.68% participate in training events ([optional link 6](#)).
- 1.12 **Water problems from the water and basic sanitation sector perspective.** By diminishing water quality, the absence of adequate water and basic sanitation services at the family level, coupled with low coverage of wastewater treatment and integrated solid waste management, impacts not only agriculture but also tourism and recreational spaces and affects the population's health and well-being. Lack of sanitation generated economic losses in 2014 in the order of US\$1.278 billion, which represents 4% of Bolivia's GDP, causing 5.35 million cases of diseases treated for lack of sanitation.[31] It also affects the ecological balance of water- and soil-dwelling species and their associated ecosystem services. In Bolivia, there are still significant gaps in water and basic sanitation access coverage between urban and rural areas,

especially with regard to wastewater treatment. According to data provided by the Office of the Vice Minister for Water and Basic Sanitation, the gap between urban and rural areas was 27% for access to safe water (95% coverage versus 68%, respectively), and 26% for sanitation (71% coverage versus 45%, respectively). Just 34.6% coverage was reported for wastewater treatment in sewer systems, which represents a health risk and major source of contamination of watercourses and soil,[28] reducing the availability of safe water for residential and productive use. Only 59.4% of the population has adequate solid waste collection.[32] Improper solid waste management leads to surface and groundwater contamination, rendering subsequent use of water resources impossible. The challenge of scaling up water and basic sanitation coverage levels in watersheds sustainably is associated with governance and management challenges that require adequate WRM.

- 1.13 **The state of governance for water management.** The literature all identifies the importance of governance for water management.[21] Bolivia's legal framework recognizes and promotes integrated WRM in line with international principles,<sup>5</sup> including the Framework Law on Autonomous Entities and Decentralization, the "Good Life" Framework Law on Mother Earth and Comprehensive Development, the 2021-2025 Plurinational Water Resources Plan, and National Watershed Plan. This framework recognizes and prioritizes mandates to develop and strengthen watershed management units, watershed management agencies, interagency platforms, water monitoring and information systems, and preinvestment technical design studies (PITDSs) for water management in watersheds.[22] To implement this sector framework, the sector is pushing to strengthen specialized execution units. However, fragmentation at the governmental, institutional, and subnational levels is keeping water resources from being coordinated effectively.[23] Key in this regard is developing and modernizing integrated and coordinated water information systems for effective management and decision-making.[13] Weak sector governance hinders the proper allocation of water resources, which also affects investment planning.

### 3. CCLIP rationale

- 1.14 The multisector CCLIP offers a suitable programmatic instrument to provide medium- and long-term support for multisector initiatives that require integrated, synergetic actions within the geographical area of a watershed basin. This makes the CCLIP the optimal instrument for implementing the 2021-2025 Plurinational Water Resources Plan and the National Watershed Plan and contributing to strategic objectives across two key sectors/areas: (i) water resources and agricultural irrigation; and (ii) clean drinking water and basic sanitation. The CCLIP will integrate water supply and demand analysis at watershed level and facilitate the identification and implementation of complementary sector investments.
- 1.15 In water resources and agricultural irrigation, the projects under the CCLIP will seek to improve water resources management, planning, and decision-making for irrigation purposes to improve water use efficiency, productivity, and food security in

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<sup>5</sup> Integrated water resource management is defined as: "A process which promotes the coordinated 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." Technical Commission, Global Water Partnership (2000).

rural areas. Water and basic sanitation projects will seek to improve water resources management, planning, and decision-making, to expand the coverage of basic services for water, sanitary sewers, integrated solid waste management, and wastewater treatment by focusing on efficient management, reuse, protection of water sources, and water security within the watersheds. This CCLIP will make a crosscutting contribution to climate change resilience and adaptation, protection of ecosystem services, efficient water governance and management, and narrowing of gender and diversity gaps.

- 1.16 In terms of financing, the CCLIP will contribute to partially cover the needs of these plans. The investment and coverage gaps in both sectors remain significant. As regards irrigation, enactment of the Irrigation Law resulted in 2015-2025 being declared the Decade of Irrigation with a target of 1 million hectares. Similarly, in the water and basic sanitation sector, the government has set a 2025 target of 95.5% urban, and 76.7% rural, safe water coverage levels, as well as 89.4% urban, and 52.2% rural, sewer coverage levels. The CCLIP will thus contribute to the PDES targets and support the country in progressing in its international climate change commitments.<sup>6</sup>

#### **4. Context of the first operation under the CCLIP: Water resources and irrigation**

- 1.17 **Target area.** Projects were preliminarily identified in six departments of the country (Chuquisaca, Cochabamba, La Paz, Tarija, Oruro, and Potosí).[14] These are areas where producers are highly vulnerable to droughts, which are likely to worsen in future scenarios of higher temperatures and less rainfall.[38] These areas have been prioritized according to technical criteria related to water availability, productive potential, food security, and agroclimatological features. The starting point is an initial portfolio of 57 projects in different agroecological zones, including:<sup>7</sup> (i) the Altiplano highlands; (ii) upland valleys; (iii) lowland valleys; and (iv) the Chaco region. The preidentified irrigation zones are located between 1,200 meters and 3,800 meters above sea level with high variability in terms of precipitation and temperature. These areas satisfy the topographical, geological, and hydrological conditions to justify the implementation of pressurized irrigation systems that supply water for irrigation during droughts and/or summers.

- 1.18 **Characterization of production and problems.** The areas to be targeted by the first operation under the CCLIP face different production and natural resource management problems. Of the preidentified irrigation systems, 45% have some level of built-up infrastructure (e.g., intake works or makeshift dams), with low levels of water use efficiency (on average 35%). Most canals are earthen or lined but uncovered, resulting in high evapotranspiration rates. Current irrigation practices are inefficient, maximizing the irrigated area without meeting crop needs, which lowers productivity. Irrigation frequency at the appropriate times can be increased by improving water efficiency and water management. Nonirrigated areas are

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<sup>6</sup> The water sector targets set in Bolivia's Nationally Determined Contributions (NDCs) for 2030 include: 1.3 million hectares under efficient irrigation, 1.4 billion cubic meters of water storage capacity, and 12 million hectares under integrated watershed management (MMAyA, Mother Earth Plurinational Authority (APMT), 2022).

<sup>7</sup> These include the 14 in the sample.

completely dependent on the rainfall cycle, which is less predictable due to climate change effects. The predominant crops in the municipios identified for the program are maize, potatoes, peas, and beans. The irrigation program would make it possible to produce crops such as apple, tomato, potato, onion, grape, avocado, kiwi, custard apple (*chirimoya*), mango, garlic, walnut, peach, sweet potato, and citrus fruits, depending on the agroecological intervention zone.

- 1.19 In parallel, effective management, the adoption of pressurized irrigation, and the sustainability of investments in irrigation systems depend on strengthened irrigation boards. The literature and lessons learned from Bank-financed programs identify these irrigator organizations as key to the effective operation and maintenance of investments made and the success of such programs.[25] In addition, scant women's participation on irrigation boards jeopardizes the success of investments in the medium and long term. Specific training for women to serve on irrigation boards enhances their effective participation.[25]
- 1.20 **Beneficiaries.** The beneficiaries are smallholder farmers (possessing between one and two hectares per producer) from campesino and indigenous communities with low and variable levels of agricultural productivity and income (US\$832/hectares to US\$2,033/hectares).[14] whose income depends essentially on agriculture. Based on lessons learned, technical assistance will be provided under the program with a gender lens in a way that promotes women's participation in irrigation governance. This operation is expected to benefit 12,508 families (paragraph 1.38). MMAyA data show that 53% of the municipios where irrigation systems are located are of Quechua ethnic origin, and 32% are of Aymara origin. The others are split between mestizo and Guarani.
- 1.21 **Intervention strategy.** The program will promote a holistic approach to the problems described above, specifically: (i) the MMAyA will be given tools to manage water resources more efficiently; (ii) technical assistance and support will be provided to producers during construction and operation of the irrigation systems; (iii) systems for on-farm high-frequency pressurized irrigation will be financed; and (iv) the quality of infrastructure designs will be enhanced with a watershed management approach. Both the project completion report for the National Irrigation Program with a Watershed Approach II (PRONAREC II) (loan BO-L1084) and the impact assessment for PRONAREC I (loan BO-L1076) show that a portion of the on-farm pressurized irrigation system needs to be financed for producers to adopt the technology. This is partly due to differing levels of risk aversion. These activities will be implemented through two execution units of the Office of the Vice Minister for Water Resources and Irrigation (VRHR): the Program Coordination Unit for Climate-Resilient Programs and Projects (UCP-PPCR) and the Coordination and Execution Unit for the "More Investment for Irrigation" Program (UCEP-MI RIEGO).<sup>8</sup>
- 1.22 **Experience and impact of the Bank's operations in the sector.** The experience of Bank-financed projects in the region demonstrates that the adoption of technologies, including irrigation expansion and adoption of pressurized irrigation,

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<sup>8</sup> Unidad Coordinadora de Programas para Programas y Proyectos Climáticamente Resilientes (UCP-PPCR); Unidad de Coordinación y Ejecución del Programa "Más Inversión para Riego" (UCEP-MI RIEGO).

- has major positive impacts on productivity and incomes. The evaluation of the CRIAR program of Direct Supports for the Creation of Rural Agrifood Initiatives in Bolivia showed that the adoption of new technologies among smallholder farmers increased productivity by 92%, net agricultural income by 36%, and food security by 20% to 30%.<sup>[27]</sup> The evaluation of the Program in Support of Subsidies for Innovation in Agricultural Technology (loan [2443/OC-DR](#)) in the Dominican Republic showed that pressurized irrigation has positive effects on productivity and crop diversification.<sup>[34]</sup> <sup>[35]</sup> Both evaluations showed that incentives through subsidies for technology adoption were effective. In the CRIAR program, incentives averaging US\$1,200 increased incomes; in the Program in Support of Subsidies for Innovation in Agricultural Technology, drip irrigation incentives averaging US\$2,340 had positive impacts on income and productivity.
- 1.23 The Bank has a long experience of financing irrigation programs in Bolivia and other countries of the region. In Bolivia, the Bank has financed a number of operations since 1996 to expand and improve community irrigation systems, including: (i) the National Irrigation Program (PRONAR) (loan [964/SF-BO](#)), which financed 158 projects adding irrigation to more than 14,000 hectares, benefiting more than 12,000 families; (ii) the National Irrigation Program with a Watershed Approach (PRONAREC) (loan [2057/BL-BO](#)), which financed 54 systems adding 9,060 hectares under irrigation and benefiting 10,691 families; (iii) PRONAREC II (loan [3060/BL-BO](#)), which financed 73 projects adding 12,604 hectares under irrigation and benefiting 14,800 families; and (iv) PRONAREC III (loan [3699/BL-BO](#), 83% disbursed), which will finance 25,000 hectares under irrigation, benefiting 21,000 families at its conclusion in 2023. The PRONAREC I program impact evaluation found that beneficiary producers made greater use of improved seeds, technology, and machinery, increasing the value of agricultural production (47%), household income (30%), and value of sales (80%) through improved connectivity to markets.<sup>[17]</sup> In addition, other studies looking at the adoption of irrigation show that the period for benefits in increased productivity takes approximately four years to develop.<sup>[34]</sup> <sup>[35]</sup>
- 1.24 **Lessons learned.** The preparation of the first operation under the CCLIP drew on lessons learned from projects financed by the Bank (paragraph 1.22) and other multilateral agencies (Development Bank of Latin America (CAF), the Bolivia WATCH Program,<sup>[37]</sup> and the World Bank). This experience demonstrates the importance of: (i) high-quality technical designs; (ii) capacity-building of specialized entities, especially in the contracting of works; (iii) effective mechanisms to support and monitor outcomes and risk management; (iv) coordination and collaboration of agencies at the different levels of government for effective WRM in watersheds; and (v) assuring the sustainability of investments through technical assistance and timely financing for producers.
- 1.25 **Synergies with other operations.** The first operation under the CCLIP complements and supports several other Bank-financed operations. This operation: (i) has been formulated using advances in diagnostic assessments and technical designs under the PRONAREC III operation (loan [3699/BL-BO](#)); (ii) complements the activities of operation [4403/BL-BO](#), which finances protection works in the prioritized watersheds; and (iii) will use tools and strategies from the Multipurpose Water Supply and Irrigation Program for the Municipios of Batallas, Pucarani, and El Alto (loan 3599/BL-BO, 77% disbursed).

- 1.26 **Coordination with other donors.** MMAyA programs aimed at improving WRM with a watershed approach are also financially supported by the World Bank and the CAF. The “Platform for Irrigated Production” has been established with the Ministry of Rural Development and Land (MDRyT), to support and assist agricultural production in irrigation systems implemented under programs run by the MMAyA. The Government of Sweden will participate in financing the operation through a guarantee under the agreement with the Bank (document GN-2989).
- 1.27 **Strategic alignment.** The CCLIP and first operation are consistent with the second Update to the Institutional Strategy 2020-2023 (document AB-3190-2), and aligned with the challenges of: (i) social inclusion and equality through its contribution to the rural poor families indicator, by improving their income; and (ii) productivity and innovation through its contribution to increased agricultural productivity. They are also aligned with the crosscutting themes of: (i) gender equality, by increasing women’s participation on irrigation committees and differentiating technical assistance; (ii) climate change and environmental sustainability, by promoting technologies to increase water use efficiency and climate change adaptation and mitigation; and (iii) institutional capacity and rule of law, by strengthening government institutions and their coordination capabilities. The operation also contributes to the Corporate Results Framework 2020-2023 (document GN-2727-12) through the indicators for: (i) farmers with improved access to agricultural services and investments; and (ii) agencies with strengthened digital technology and managerial capacity. An estimated 98% of the IDB resources are invested in support for increased climate adaptation, according to the [joint methodology of the multilateral development banks for tracking climate finance](#). The operation is aligned with the IDB Group Country Strategy with Bolivia 2022-2025 (document GN-3088) through its strategic objectives 1.1 (help to support economic reconstruction); 1.2 (help to improve the productivity of selected sectors of the economy); and 2.1 (support diversification of production in selected sectors). Lastly, the operation is consistent with the Climate Change Sector Framework Document (document GN-2835-8), by supporting the adoption of climate change adaptation and mitigation technologies and production models; the Agriculture Sector Framework Document (document GN-2709-10), by investing in irrigation infrastructure and technical assistance; the Food Security Sector Framework Document (document GN-2825-8), by contributing to improved food availability, access, and stability through access to irrigation.

**B. Objectives, components, and cost**

**1. CCLIP National Water Resources Program with a Watershed Approach**

- 1.28 **Objective of the CCLIP.** The objective of the CCLIP is to contribute to water security in the country’s priority watersheds, to ensure sustainable water availability for agricultural irrigation and human consumption with a watershed and climate change approach.
- 1.29 **Eligible sectors.** The CCLIP will contribute to partially cover financing needs in two sectors: (i) water resources and agricultural irrigation; and (ii) clean drinking water and basic sanitation.<sup>9</sup> Individual lending operations should follow a logic of

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<sup>9</sup> This holistically includes sanitation interventions.

- prioritization and complementarity, implementing interventions with an integrated watershed approach in line with the VRHR's integrated WRM plans.
- 1.30 **Type, modality, and institutional arrangements.** The CCLIP will be a Multisector I type under the applicable Bank policy (document GN-2246-13) and respective Operational Guidelines (document OP-1622-3). Since both eligible sectors belong to the MMAyA, it will be the executing agency for the CCLIP and will ensure that the investments are aligned with and meet the expected objectives. The CCLIP will tentatively be comprised of four loan operations.
- 1.31 **Amount and period.** The CCLIP will be for up to US\$500 million, to be allocated for a utilization period of up to 10 years, with individual operations agreed upon in the Bank's country programming, as eligible under the CCLIP policy (document GN-2246-13) and respective Operational Guidelines (document OP-1622-3).
- 2. First individual operation under the CCLIP. Pressurized Irrigation Program with a Watershed Approach (BO-L1226)**
- 1.32 **Program objectives.** The general objectives of the first operation under the CCLIP are to improve the food security and income of rural households. Its specific objectives are: (i) to build capacity for water resource governance at the national and local levels; (ii) to increase efficiency of water use for irrigation in prioritized departments; and (iii) to increase producers' agricultural productivity and climate resilience, prioritizing women's participation.
- 1.33 **Component 1: Integrated water resource management in productive watersheds (US\$28,055,000).** This component will finance: (i) studies of water management in watersheds to guide integrated WRM and the identification and planning of multisector investments in the watershed, based on climate scenarios putting greater pressure on water; (ii) preparation of pressurized irrigation projects (preinvestment technical design studies (PITDSs) at the national level), to further advance the inclusion of climate change adaptation measures; (iii) organizational strengthening and production-oriented technical assistance (OSPTA), which includes support and technical assistance for producers, irrigation boards, communities, and producer associations with a focus on supply chains, gender, and climate change, to strengthen self-management, governance, and cooperative capacity for water use and conservation; (iv) design and implementation of a national water resources modeling and monitoring system that coordinates existing information systems and facilitates decision-making, including interagency coordination activities and WRM strengthening of key entities; (v) design of an irrigation investment monitoring and evaluation system; and (vi) supervision and quality control of the PITDSs and OSPTA. The PITDSs are expected to include at least 10% of project investment in watershed protection and conservation measures, integrating an ecosystem-based approach to adaptation. OSPTA is designed to support the beneficiaries of the irrigation systems (irrigation boards and farmers) during construction and operation for a projected period of three years (paragraph 3.5).
- 1.34 **Component 2: Investment in pressurized irrigation projects (US\$117,250,000).** This component will finance: (i) the construction, supervision, and quality control of irrigation systems at the community level, including intake, storage, regulation, distribution, and installation of on-farm high-frequency pressurized irrigation (drip,

microsprinkler, and sprinkler) with OSPTA; and (ii) complementary structural and nonstructural actions for watershed conservation and protection and water security for irrigation, such as reforestation, erosion control, riverbank protection, protection of water sources, and others. The PITDSs (paragraph 1.33) will assess the feasibility of the planned investments under this component, based on the holistic design of physical works, on-farm pressurized irrigation interventions, conservation measures within the watershed, and other factors. Eligibility criteria and operational details are described in paragraph 3.5.

- 1.35 **Administration, evaluation, and audit (US\$4,695,000).** Program administration and management, including monitoring, evaluation, and audits, will be financed under this heading.
- 1.36 **Representative sample.** Fourteen projects representative of the total planned investments have been analyzed as part of preparation of the first operation under the CCLIP. The projects include investments in storage, intake works, conveyance, high-frequency pressurized irrigation, and watershed protection. The sample includes five projects with new dams, five projects with existing dams, and four projects with direct intake works (no dams required), two of which include on-farm high-frequency irrigation systems. The criteria used to construct the sample stipulated that they should include: (i) all types of works; (ii) all agroecological zones; and (iii) projects developed under the PRONAREC III program and by the autonomous territorial entities. The 14 projects in the sample represent 34.5% of the planned amount of investments under the two program components. The review of the sample of projects identified areas requiring more emphasis on technical, economic, and environmental analysis, which led to supplemented and updated designs (see paragraph 3.5, eligibility criteria).
- 1.37 **Contribution to climate change goals.** Execution of the planned components will make the production systems of at least 12,280 drought-vulnerable smallholder farmers more resilient and strengthen the country's adaptive capacity through improved climate information systems. The program will also contribute to the water sector targets set in Bolivia's Nationally Determined Contributions (NDCs) (see footnote 6) with the increase of 1.2 million cubic meters of water storage capacity, around 13,870 hectares of agricultural areas under efficient irrigation, and 140,000 hectares under integrated watershed management with a climate change approach. The program will facilitate the adoption of climate change adaptation technologies, lengthen the growing season, and lessen soil degradation.

### C. Key results indicators

- 1.38 **Expected results.** The expected impacts of the program are: (i) greater food security, as measured by the Food and Agriculture Organization's Food Security Index, with a 25% increase; and (ii) a 36% increase in net farm income of family farmers. It is expected to benefit 12,508 producer families with 57 pressurized irrigation systems, adding an additional 13,871 hectares under irrigation. The expected impacts, outcomes, and outputs are detailed in Annex II.
- 1.39 **Economic viability.** The ex ante cost-benefit analysis was performed using a 15-year time horizon and a 12% discount rate. The costs included the loan investments, as well as additional recurring costs relating to production, operation, and maintenance of the irrigation systems at the community and farm level. The

differential benefits quantified corresponded to increased income from higher value-added, higher sales, and higher production. The results of the analysis, using efficiency prices and assuming an adoption rate of 50% for traditional irrigation and 25% for pressurized irrigation, confirm that the program is economically viable, with a net present value of US\$5,384,583 and an internal rate of return of 13.5%.

## II. FINANCING STRUCTURE AND MAIN RISKS

### A. Financing instruments

- 2.1 The first individual operation under the conditional credit line for investment projects (CCLIP) will be financed by an investment loan under the multiple works modality. The total cost of the program is US\$150 million. The choice of the multiple works instrument is justified because the works to be financed are physically similar but independent of each other, and their feasibility does not depend on the execution of a particular number of projects. The Bank will finance the entire program with Ordinary Capital resources, as shown in Table 1 below.

Table 1. Program estimated costs (US\$)<sup>10</sup>

Components	IDB	Total	%
1. Component 1: Integrated water resource management in productive watersheds	28,055,000	28,055,000	18.70%
1.1 Preinvestment technical design studies (PITDSs)	12,860,000	12,860,000	8.57%
1.2 Monitoring for integrated watershed management	3,585,000	3,585,000	2.39%
1.3 Organizational strengthening and production-oriented technical assistance (OSPTA)	11,610,000	11,610,000	7.74%
2. Component 2: Investment in pressurized irrigation projects	117,250,000	117,250,000	78.17%
2.1 Investments in community irrigation systems	103,738,000	103,738,000	69.16%
2.2 Investments in pressurized irrigation systems	13,512,000	13,512,000	9.01%
3 Administration, evaluation, and audit	4,695,000	4,695,000	3.13%
3.1 Program administration – UCP-PPCR	1,915,000	1,915,000	1.28%
3.2 Investment administration – UCEP-MI RIEGO	2,030,000	2,030,000	1.35%
3.3 Audit and evaluation	750,000	750,000	0.50%
<b>Total</b>	<b>150,000,000</b>	<b>150,000,000</b>	<b>100.00%</b>

- 2.2 **Disbursement schedule.** Pursuant to document AB-2990, the disbursement of the Bank loan proceeds will be subject to the following restrictions: (i) a maximum of 15% in the first 12 months; (ii) a maximum of 30% in the first 24 months; and (iii) a maximum of 50% in the first 36 months, counted in all instances from the date the

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<sup>10</sup> Disaggregated component costs are estimates by main activity group.

loan operation is approved by the Bank's Board of Executive Directors. These restrictions may not apply if the requirements established in the relevant Bank policy have been met, provided that the borrower has been notified in writing. The disbursement period will be five years, based on prior experience on similar works in the country. The deadline to start project works will be up to three years, running from the entry into force of the loan contract. This deadline was based on the design schedule of the works and the average construction time under the PRONAREC III program.

**Table 2. Disbursements by year (US\$ million)**

Source	Year 1	Year 2	Year 3	Year 4	Year 5	Total
IDB	7.1	25.6	41.6	45.0	30.70	150.00
%	4.71%	17.07%	27.73%	29.98%	20.51%	100%

- 2.3 **CCLIP eligibility criteria.** The CCLIP meets the applicable eligibility requirements for a Multisector Modality I CCLIP under policy document GN-2246-13 and its Operational Guidelines (document OP-1622-3), given that: (i) the CCLIP's objectives are within the following priorities defined in the IDB Group Country Strategy with Bolivia 2022-2025 (document GN-3088): (a) help to support economic reconstruction; (b) help to improve the productivity of selected sectors of the economy; (c) support diversification of production in selected sectors; (d) help to boost universal access to quality basic and social services; (e) improve gender and diversity conditions; (f) help to build institutional capacities; and (g) foster environmental sustainability, climate change adaptation, and implementation of the nationally determined contributions; and (ii) the executing agency (MMAyA) has the authority to execute and monitor the general operational program of all sectors included in the credit line.
- 2.4 **Objective of the first individual operation under the CCLIP.** This first individual operation meets the eligibility conditions set in the CCLIP Policy and Operational Guidelines: (i) the institutional capacity assessment of the executing agency has been performed; (ii) the operation's objective contributes to the achievement of the CCLIP's multisector objectives, by promoting water security through the efficient use of water for irrigation, while enhancing rural food security in Bolivia; and (iii) the operation falls within the eligible sector defined under the CCLIP.

## B. Environmental and social safeguard risks

- 2.5 The program is classified as Category "B" under the Bank's Environmental and Social Policy Framework (ESPF) because the construction and operation of dams and irrigation systems are expected to generate adverse impacts that are moderate, localized, and short-term in nature. All the projects in the sample are in rural farming areas that are developed, degraded, and low in biodiversity value, no impacts on critical habitats, degradation of natural habitats, loss of biodiversity, impact on ecosystem services, or significant cumulative socioenvironmental impacts are foreseen. The environmental and social management plans (ESMPs) of the projects in the sample identify measures to ensure the maintenance of the watershed's environmental flow, avoid the loss of terrestrial and aquatic habitats, and prevent

- ecosystem degradation due to pesticide and agrochemical misuse. The projects do not require involuntary resettlement of population, since all works are on land owned by the project applicant communities and ceded by them to the municipio. No impacts on the rights of other communities upstream and downstream of the dams or impacts on cultural heritage have been identified.
- 2.6 The program interventions are exposed to threats with a high hazard for flood and drought, moderate hazard for landslide and frost, and low hazard for earthquake and volcanic eruption. The criticality of the infrastructure is classified as high as a result of the new dams with a height exceeding 15 meters, although no reservoir exceeds 1.05 million cubic meters. Therefore, the disaster and climate change risk rating assigned is high. The sample's environmental and social impact assessments (ESIAs) and ESMPs include simplified disaster risk assessments and the respective disaster risk management plans, which are to be completed prior to the start of works, based on the findings of the qualitative disaster risk assessments to be done during final design pursuant to the environmental and social action plan. The environmental and social management framework includes guidelines for dam safety.
- 2.7 The environmental and social risk rating is high due to the need to strengthen the socioenvironmental management capacities of the two program execution units and of the communities responsible for operation of the dams. To mitigate the first risk, the two units will be staffed with environmental and social specialists at the central and regional levels and will develop and implement the instruments and procedures established in the program's environmental and social management system. To mitigate the second risk, each project involving dams will develop a program to transfer dam projects to communities for operation.
- 2.8 As required for a multiple works operation under the ESPF, the following have been prepared: an ESIA and ESMP for each of the five projects in the sample that involve the construction of a new dam; a joint environmental and social analysis (ESA) and ESMP for the five projects in the sample that involve an existing dam; a joint ESA-ESMP for the four projects in the sample that do not involve dams but direct intake; an environmental and social management framework for the projects outside the sample; and the program's environmental and social management system. The operation will not finance projects or activities that may generate Category "A"-like environmental and social impacts as defined in the Bank's ESPF, may require involuntary resettlement of population, or may generate adverse impacts on indigenous communities other than the project applicants without their consent.
- 2.9 All the projects in the sample were put to consultation during the design of the interventions, and the related minutes are available and signed by the entire community. As some of the projects have undergone technical adjustments to the original designs, and new socioenvironmental studies have been prepared, new meaningful consultations were conducted in October 2022 for 8 projects in the sample, with a total participation of 927 people (372 women and 555 men). In all consultations, participants expressed their unanimous support for the project, as well as their dissatisfaction with the time passed since they submitted the application to the Ministry of Environment and Water (MMAyA). None of the environmental, social, or security aspects of the projects were questioned, and participant interventions focused mainly on requesting that the works start as soon as possible. The draft

versions of the program's socioenvironmental studies were published on the Bank's website on 1 July 2022, their updated versions were published on 29 September, and the final versions, including consultation outcomes and reports, were published on 7 November, following Bank rules.

**C. Fiduciary risks**

- 2.10 A medium risk has been identified in relation to sufficient qualified personnel for the program's fiduciary management at both units. The main mitigating actions include: (i) ensuring medium- and long-term contracts for personnel, to ensure their stability; (ii) matching team size to demand; (iii) receiving training and support from the Bank; and (iv) detailing in the program Operating Regulations the flow of responsibilities; definition of administrative, legal, and operational requirements; systems; and internal control procedures. Strengthening both units also requires developing formal procedures and management tools and making use of specialized technical assistance during operation.

**D. Other key risks and issues**

- 2.11 Other risks identified as important are as follows: (i) potential changes in authorities could modify the MMAyA's investment priorities (medium risk); (ii) agreements with autonomous territorial entities (ATEs) may not be signed in a timely manner (high risk); and (iii) community transfer processes, including training required for maintenance, may not be implemented in a timely manner (medium-high risk). Mitigating measures include ongoing technical dialogue with the government authorities and technical teams and early implementation of the VRHR's project management and monitoring tools. Coordination difficulties between central government agencies and the ATEs have also been identified as a potential risk for execution of the operation. Component 1, the technical assistance activities, and the resources of technical-cooperation operation ATN/OC-19406-BO have been designed to mitigate the identified risks.
- 2.12 During preparation of the operation, the institutional capacity of the two VRHR execution units was assessed using the Institutional Capacity Assessment Platform (ICAP) methodology. According to the assessment, both generally possess technical, planning, programming, and fiduciary process competencies. The consolidated findings of the capacity analyses of the two execution units show a medium degree of development and risk. The main actions to mitigate the medium risk include: (i) training on the Bank's financial management policies in the areas of accounting and internal control; (ii) training on the Bank's procurement policies; and (iii) the contracting/appointment of trained, qualified personnel with fiduciary job descriptions (in financial management and procurement) exclusively for the execution units.
- 2.13 **Sustainability of investments.** The PITDSs have been updated to include ESAs that facilitate consultation with irrigation boards and ATEs. Implementing OSPTA for a longer period of time than other projects will help the irrigation boards to support the construction and supervision firms, ensuring proper acceptance and operation of the infrastructure and equipment. OSPTA and the agreements with the ATEs will guarantee dam maintenance and operation, to maintain the design flows. They also include provisions for the sustainability of the investments (see paragraph 3.3).

- 2.14 **Milestones for processing the second sequential irrigation operation under the CCLIP.** In accordance with the CCLIP preparation policy, milestones were agreed upon with the executing agency for approval of the second sequential operation of sector 1: Water resources and irrigation. These milestones are as follows: (i) operation BO-L1226 has completed an evaluation report with satisfactory progress; and (ii) at least 30% of the Component 2 resources of the first operation have been disbursed or contracted.

### III. IMPLEMENTATION AND MANAGEMENT PLAN

#### A. Summary of implementation arrangements

- 3.1 The borrower will be the Plurinational State of Bolivia. The executing agency will be the Ministry of Environment and Water (MMAyA), acting through its Office of the Vice Minister for Water Resources and Irrigation (VRHR), which will provide strategic guidance, ensure effective coordination between the actors involved, and supervise program execution. The VRHR will execute the program through two deconcentrated units: the Program Coordination Unit for Climate Resilient Programs and Projects (UCP-PPCR) and the Coordination and Execution Unit for the “More Investment for Irrigation” Program (UCEP-MI RIEGO). This arrangement is in line with the MMAyA’s institutional strategy to harmonize investments in the sector with the plan for investments from various sources of external financing. Both deconcentrated units have administrative, financial, and technical independence in performance of their functions. The UCP-PPCR will execute Component 1, identifying and evaluating projects, managing technical assistance, and supporting irrigators. It will also execute the Component 1 administration and program audit and evaluation costs, and will be responsible for program planning and delivery to the Bank of six-monthly program status reports, audit reports, and monitoring and evaluation reports. The UCEP-MI RIEGO will be responsible for executing the Component 2 infrastructure projects and the respective administration costs. For execution of the Component 1 activities, the MMAyA will establish an execution mechanism that integrates watershed planning with all its users based on an analysis and modeling of water resources supply and demand and the related projection under climate change scenarios. For execution of the technical assistance activities, the program will coordinate with the Ministry of Rural Development and Land (MDRyT), through the Platform for Irrigated Production, on the timing and issues relating to technical assistance in order to generate synergies with complementary programs.<sup>11</sup>
- 3.2 **Formation of technical teams.** The UCP-PPCR and UCEP-MI RIEGO will form teams devoted exclusively to program execution. Each of these teams will include at least: (i) a program technical coordinator; (ii) a financial specialist; (iii) a procurement specialist; (iv) a planning specialist; (v) a social specialist; and (vi) an environmental specialist. **A special contractual condition precedent to the first disbursement of financing will be that evidence has been submitted that the key technical support team of each of the program execution units in charge**

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<sup>11</sup> To support and assist agricultural production in irrigation systems implemented through MMAyA-developed programs, the Platform for Irrigated Production has been established with the MDRyT under Biministerial Resolution 002/2027 of 15 September 2017.

**of program execution have been assigned or contracted, based on the terms of reference previously agreed upon with the Bank.** This condition is necessary to ensure that the executing agency has the minimum capacity necessary to start execution of the project. In line with the institutional capacity analysis, the program team will also be strengthened with the following positions based on execution and programming needs: (i) a legal specialist; and (ii) national and regional technical teams that include environmental and social specialists.

- 3.3 **Agreements with local governments.** To participate in the program, each participating autonomous territorial entity (ATE) will sign an intergovernmental agreement with the MMAyA, acting through the VRHR, as described in the program Operating Regulations. These agreements will include at least the following: (i) agreements to provide the necessary counterpart contribution to build the projects financed with program resources; (ii) if necessary, a requirement that the ATEs provide the legal instrument of ownership or possession of the land for pressurized irrigation and instruments of transfer or authorization where the infrastructure is to be built; (iii) the legal instrument of ownership, transfer, or possession of the reservoir area, as applicable; and (iv) once the works have been delivered, the commitment of the ATEs to finance and provide technical assistance to maintain the irrigation systems, including systems that include dams.
- 3.4 **Program Operating Regulations.** The program will be governed by Operating Regulations that, *inter alia*, describe: (i) the roles and responsibilities of the program actors and the mechanisms for coordination among them; (ii) the rules and procedures for programming and executing activities, flowchart, administrative and financial management, procurement, audits, monitoring, and evaluation; (iii) the eligibility and prioritization criteria for financing irrigation projects; (iv) the eligibility criteria for receiving pressurized irrigation financing; (v) execution strategies for organizational strengthening and production-oriented technical assistance (OSPTA); and (vi) the modalities for executing environmental and social management plan measures. **A special contractual condition precedent to the first disbursement of the financing will be that the MMAyA has approved and put the program Operating Regulations into effect on the terms and conditions previously agreed upon with the Bank.** This requirement is justified by the need for the executing agency to have clear procedures for program implementation and the fulfilment of its contractual obligations.
- 3.5 The main operational and eligibility criteria are described below and in further detail in the program Operating Regulations.

**Table 3. Operational and eligibility criteria**

1. <b>Organizational strengthening and production-oriented technical assistance (OSPTA)</b>	OSPTA will begin with construction of the work, will be offered to 100% of beneficiaries, and will last for up to three years. The OSPTA strategy will have a gender lens and be culturally appropriate. Technical assistance will include courses for women, support participation in events (food and childcare provided), use local languages, and will be tailored to the communities' traditions and customs. In addition, OSPTA will be aligned with watershed management, conservation, and climate change adaptation plans. Irrigation organizations will also be trained through OSPTA in dam operation and maintenance in the irrigation systems that include dams.
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2. <b>Financing of high-frequency pressurized irrigation</b>	<p>The program is designed so that 100% of potential beneficiaries have access to irrigation on their farms. The area of the farm covered by pressurized irrigation will be defined during preparation of the PITDSs. The installation of the high-frequency pressurized irrigation equipment will be part of the construction contract and will be handed over in working order to the beneficiaries. The program's target is to finance up to 20% of the irrigated area with high-frequency pressurized irrigation. This process will be supported by OSPTA to ensure beneficiary commitment and participation. Each farmer will benefit from up to an average nonreimbursable amount of US\$600 to implement high-frequency pressurized irrigation on their farm, which will be part of the irrigation PITDSs. This incentive will be fully funded by the program, allocated according to technical criteria of equity. Incentives for adopting high-frequency pressurized irrigation will comply with the following principles: (i) independent quality control; (ii) contribution to environmental and social sustainability objectives; (iii) technically and economically efficient, to ensure the highest technological adoption; (iv) transparent and nondiscretionary allocation; and (v) promotion of women's participation. Eligibility criteria for farmers to receive the incentive include: (i) right to use the land and/or evidence thereof; (ii) identity document; (iii) signature of a commitment to maintain the equipment provided; (iv) farmer's commitment to finance the necessary inputs; and (v) assurance that the producer has land located in the area with potential for high-frequency pressurized irrigation</p>
3. <b>Eligibility and prioritization criteria for irrigation projects</b>	<p>These criteria include that the project: (i) must be explicitly requested by the respective ATE; (ii) cannot be classified as Category "A" under the Bank's ESPF; (iii) must contribute to the targets of the Economic and Social Development Plan (PDES) and the program's Results Matrix targets; and (iv) must have a watershed planning strategy.</p>
4. <b>Water resources modeling and projection center</b>	<p>This center will use data from the National Meteorological and Hydrological Service (SENAMHI), MDRyT, the ATEs, and others. The information generated by the center will be used by various central and local government bodies. A multisector coordination body will be established during program execution. The execution mechanism for this activity and the location of the center will be defined in the program Operating Regulations in coordination with the highest authorities. Operation of the modelling center will be governed by specific regulations, as an annex to the program Operating Regulations.</p>

- 3.6 **External audit.** The UCP-PPCR will deliver one report per execution unit annually within 120 days after the close of the respective fiscal year, along with the financial statements audited by a firm of independent auditors acceptable to the Bank, for the duration of the operation. The determination of the scope and other related issues will be governed by document OP-273-12 and the Audited Financial Reports and External Audit Management Handbook. Audit costs will be funded with loan proceeds.
- 3.7 **Procurement.** Procurement will be conducted in accordance with the Policies for the Procurement of Goods and Works Financed by the IDB (document GN-2349-15), the Policies for the Selection and Contracting of Consultants Financed by the IDB (document GN-2350-15), and the procurement plan. As appropriate, each execution unit will conduct procurements for the projects under its responsibility in direct coordination with the Bank in terms of the necessary no objection procedures and reviews. In the interest of efficiency, price agreements (indefinite delivery contracts)

and framework agreements may be entered into for the recurrent selection of consulting services (paragraphs 4.5 and 4.6 of document GN-2350-15).

**B. Summary of arrangements for monitoring results**

- 3.8 **Evaluation of impact.** The program has a monitoring and evaluation plan ([required link 2](#)) that specifies the measurement of indicators, the impact evaluation methodology, the data requirements (i.e., baseline and monitoring survey), the responsible parties, and the estimated budget to implement the activities. The impact evaluation will focus on assessing the program's effectiveness in the adoption of pressurized irrigation, water use efficiency, agricultural yields, and food security. The project will be evaluated using a quasi-experimental methodology.
- 3.9 **Evaluation of outcomes.** A midterm evaluation will be performed 90 days after the date on which 50% of loan proceeds have been committed; a final evaluation will be performed 90 days after the date on which 90% of the loan proceeds have been disbursed. The final evaluation report will also include the results of the program's impact measurement, in accordance with the plan agreed upon with the Bank.

Development Effectiveness Matrix		
Summary BO-O0007 & BO-L1226		
<b>I. Corporate and Country Priorities</b>		
<b>Section 1. IDB Group Strategic Priorities and CRF Indicators</b>		
Development Challenges & Cross-cutting Issues	<ul style="list-style-type: none"> <li>-Social Inclusion and Equality</li> <li>-Productivity and Innovation</li> <li>-Gender Equality and Diversity</li> <li>-Climate Change</li> <li>-Institutional Capacity and the Rule of Law</li> </ul>	
CRF Level 2 Indicators: IDB Group Contributions to Development Results	<ul style="list-style-type: none"> <li>-Farmers with improved access to agricultural services and investments (#)</li> <li>-Agencies with strengthened digital technology and managerial capacity (#)</li> </ul>	
<b>2. Country Development Objectives</b>		
Country Strategy Results Matrix	GN-3088	1.1 Contribute to support economic reconstruction; 1.2 Improve the productivity of the selected sectors of the economy; and 2.1 Support productive diversification in selected sectors.
Country Program Results Matrix		The intervention is not included in the 2022 Operational Program.
Relevance of this project to country development challenges (If not aligned to country strategy or country program)		
<b>II. Development Outcomes - Evaluability</b>		
<b>3. Evidence-based Assessment &amp; Solution</b>	Evaluable	
3.1 Program Diagnosis	8.3	
3.2 Proposed Interventions or Solutions	2.5	
3.3 Results Matrix Quality	3.5	
<b>4. Ex ante Economic Analysis</b>	2.3	
4.1 Program has an ERR/NPV, or key outcomes identified for CEA	10.0	
4.2 Identified and Quantified Benefits and Costs	1.5	
4.3 Reasonable Assumptions	3.0	
4.4 Sensitivity Analysis	2.5	
4.5 Consistency with results matrix	2.0	
<b>5. Monitoring and Evaluation</b>	1.0	
5.1 Monitoring Mechanisms	9.5	
5.2 Evaluation Plan	4.0	
	5.5	
<b>III. Risks &amp; Mitigation Monitoring Matrix</b>		
Overall risks rate = magnitude of risks*likelihood	Medium High	
Environmental & social risk classification	B	
<b>IV. IDB's Role - Additionality</b>		
The project relies on the use of country systems		
Fiduciary (VPC/FMP Criteria)		
Non-Fiduciary		
The IDB's involvement promotes additional improvements of the intended beneficiaries and/or public sector entity in the following dimensions:		
Additional (to project preparation) technical assistance was provided to the public sector entity prior to approval to increase the likelihood of success of the project	Yes	BO-T1390; BO-T1406; BO-T1408

*The project is the first of the CCLIP, whose general objective is to contribute to water security in the country's priority basins to ensure the sustainable availability of the resource for agricultural irrigation and human consumption, under a basin and climate change approach. The specific objectives are: (i) to improve water resource governance capacities at the national and local levels; (ii) to increase the efficiency in the use of water for irrigation in prioritized departments; and (iii) to increase agricultural productivity and climate resilience of producers, prioritizing the participation of women. The achievement of these goals will contribute to the overall goal of improving food security and income of rural households.*

*In general, the diagnosis is adequate, with a well-identified problem and clear determinants. The results matrix exhibits vertical logic with clear specific objectives, although this is diminished by the scope of Specific Objective 1. The indicators of the results matrix are mostly SMART and allow demonstrating compliance with the specific objectives. The economic analysis consisted of estimating the net benefits of the program through a Cost Benefit Analysis (CBA) for Components 1 and 2.*

*The program has a Monitoring and Evaluation Plan that specifies: (i) the indicator measurement methodology; (ii) attribution of results to project activities; (iii) data requirements; and (iv) those responsible and the estimated budget. A quasi-experimental impact evaluation is proposed, which seeks to estimate the impact of the project on the adoption of irrigation, on the value of agricultural production, agricultural income and food security of rural households in the areas prioritized by the project. It is suggested to take into account a power calculation to estimate the optimal size of the sample and thus increase the possibility that this impact evaluation can effectively estimate the expected impacts. Additionally, the evaluation of the other results of the results matrix will be done with a before and after analysis, where the attribution of the results depends on the link between the specific products of each component and the associated results.*

## RESULTS MATRIX

<b>Objective of the CCLIP:</b>	Contribute to water security in the country's priority watersheds, to ensure sustainable water availability for agricultural irrigation and human consumption with a watershed and climate change approach.
<b>Objective of the first operation:</b>	The specific objectives are: (i) to build capacity for water resource governance at the national and local levels; (ii) to increase efficiency of water use for irrigation in prioritized departments; and (iii) to increase producers' agricultural productivity and climate resilience, prioritizing women's participation. Achieving these objectives will contribute to the general objective to improve the food security and income of rural households.

### EXPECTED IMPACTS

Indicators	Unit of measure	Baseline value	Baseline year	Target	Expected year achieved	Means of verification	Comments
<b>General development objective:</b> Improve the food security and income of rural households.							
Indicator 1: Beneficiary families improving their food security (Food and Agriculture Organization's Food Security Index)	Percentage	0	2022	25	2027	Impact evaluation survey	Target: Based on prior studies on the adoption of irrigation technology in Bolivia (Salazar et al., 2015)
Indicator 2: Farm income of beneficiary families (US\$)	US\$/year/family	464	2022	631	2027		

### EXPECTED OUTCOMES

Indicators	Unit of measure	Baseline		Targets		Means of verification	Comments
		Value	Year	Value	Year		
<b>Specific objective 1.</b> Build capacity for water resource governance at the national and local levels.							
Indicator 1: Municipios have a portfolio of investment projects for sustainable watershed management	Number of municipios	39	2022	53	2027	State Integrated Planning System (SIGEP) Monitoring and Evaluation Information System for Irrigation Investments (SUSIRH)	Municipios annually register their investment plans with the Ministry of Development Planning in the SIGEP and the Investment Information System (SISIN). The projects to be registered must be watershed management projects in addition to the program-financed projects.

Indicators	Unit of measure	Baseline		Targets		Means of verification	Comments
		Value	Year	Value	Year		
<b>Indicator 2:</b> Interconnected hydrological information databases to prioritize investments for sustainable water use	Number of report downloads per month	0	2022	10	2027	VRHR reports	The databases that have been identified to be connected are: SUSIRH, the Coordination and Execution Unit for the “More Investment for Irrigation” Program (UCEP-MI RIEGO), the State Procurement System (SICOES), the Inventory Control System (SICOIN), the National Productive and Social Investment Fund (FPS), and governor’s offices (five departments). SUSIRH downloads.
<b>Indicator 3:</b> Additional hectares under irrigation financed by prioritized municipios	Hectares	0	2022	1,227	2027	Program monitoring reports and agreements with municipios	Calculated on the basis of MMAyA reference prices. Additionality refers to high-frequency pressurized irrigation financed using resources from the municipios.
<b>Indicator 4:</b> Irrigation boards strengthened with increased women's participation ( $\geq 30\%$ )	Number of irrigation boards with increased women's participation	0	2022	57	2027	SUSIRH reports	Women's participation over 30% on irrigation boards.
<b>Specific objective 2.</b> Increase efficiency of water use for irrigation in prioritized departments.							
<b>Indicator 1:</b> Average water efficiency at irrigation system level for prioritized projects	Water intake / water distributed *100	35	2022	75	2027	Midterm and final evaluation	All preinvestment technical design studies (PITDSs) include information on the amount of water currently used and the area under irrigation. The portfolio of VRHR-prioritized projects includes 57 irrigation systems.
<b>Indicator 2:</b> Percentage of program beneficiary farmers adopting high-frequency pressurized irrigation on farm	Percentage	0	2022	25	2027	Impact evaluation surveys and monitoring reports	Target: Based on prior studies of technology adoption in Bolivia that estimate average adoption of 75% (Aramburu et al., 2019; Salazar et al., 2015); 75% equals the sum of farmers adopting pressurized irrigation (25%) and traditional irrigation (50%). Adoption refers to farmers using the technology for at least one crop year. Corporate Results Framework (CRF) 2.20.

Indicators	Unit of measure	Baseline		Targets		Means of verification	Comments
		Value	Year	Value	Year		
<b>Specific objective 3.</b> Increase producers' agricultural productivity and climate resilience, prioritizing women's participation.							
<b>Indicator 1:</b> Percentage increase in the value of agricultural production per hectare for farmers in prioritized departments (US\$/hectare)	Percentage	0	2022	92	2027	Impact evaluation surveys and monitoring reports	Target: Based on prior impact studies on the adoption of irrigation technology in Bolivia (Aramburu et al., 2019; Salazar et al., 2015).
<b>Indicator 2:</b> Farmers adopting complementary climate change adaptation technologies	Number of farmers	0	2022	6,104	2027	Impact evaluation surveys and monitoring reports	Target: Based on prior impact studies on the adoption of irrigation technology in Bolivia (Aramburu et al., 2019; Salazar et al., 2015). The practices to be identified are: (crop diversification, seeds, contour lines, agronomic practices, pressurized irrigation) CRF 2.11.
<b>Indicator 3:</b> Farmers adopting traditional irrigation or pressurized irrigation on their farm	Percentage	0	2022	75	2027	Impact evaluation surveys and project monitoring reports	Target: Based on prior studies on technology adoption in Bolivia that estimate an average adoption of 75% (Aramburu et al., 2019; Salazar et al., 2015). Sum of producers adopting pressurized irrigation (25%) and traditional irrigation (50%). Adoption refers to farmers using the technology for at least one crop year. Indicator disaggregated by gender. Producers who have not used any type of irrigation.
<b>Indicator 4:</b> Greater women's empowerment	Women's Empowerment in Agriculture Index (%)	0	2022	30	2027	Impact evaluation surveys and project monitoring reports	<a href="#">Women's Empowerment in Agriculture Index</a> Source: Fahsbender and Salazar (CRIAR program of Direct Supports for the Creation of Rural Agrifood Initiatives in Bolivia).
<b>Indicator 5:</b> Months of the year with irrigation water supply for irrigation systems in prioritized departments	Number of months with irrigation	3	2022	5	2027	Impact evaluation surveys and project monitoring reports	Proposal of the MMAyA's National Pressurized Irrigation Program.

**OUTPUTS**

Output	Unit of measure	Baseline value	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	End of project	Means of verification	Comments
<b>Component 1:</b> Integrated water resource management in productive watersheds.											
<b>Output 1.</b> Design of preinvestment projects in preparation completed	Design	0	2022	10	45	25	0	0	80	PITDSs approved by the VRHR	PITDSs available at the VRHR.
<b>Output 2.</b> Design of new preinvestment projects completed	Design	0	2022	-	20	16	-	-	36	PITDSs approved by the VRHR	
<b>Output 3.</b> Studies for watershed water management developed	Study	0	2022	-	36	55	64	-	155	PITDSs approved by the VRHR	
<b>Output 4.</b> Water resources modelling center designed and in operation	Center	0	2022	-	-	1	1	1	1	Ministerial resolution	Rules of operation attached to the program Operating Regulations as an annex.
Milestone: Equipment									0		
<b>Output 5.</b> Information system for monitoring and evaluation of irrigation investments in operation	System	0	2022	-	1	1	1	1	1	VRHR reports	
<b>Output 6.</b> Agricultural producers receiving technical assistance and support services on pressurized irrigation with a climate change adaptation focus and a gender lens	Producers	0	2022	-	-	3,352	4,883	4,273	12,508	VRHR reports – SUSIRH	Each group of producers receives technical assistance from the start of the construction process and for up to two years after completion of the works. Each target corresponds to the group that begins its technical assistance process. CRF 2.11.
Milestone 1: Disaggregated by gender	Women	0	2022	-	-	916	1,465	1,282	3,662	VRHR reports – SUSIRH	Corresponds to 30% of the total number of producers assisted.
Milestone 2: Number of companies implementing organizational strengthening and production-oriented technical assistance (OSPTA) with technical	Companies	0	2022	14	23	20	-	-	57	VRHR reports – SUSIRH	

<b>Output</b>	<b>Unit of measure</b>	<b>Baseline value</b>	<b>Baseline year</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>End of project</b>	<b>Means of verification</b>	<b>Comments</b>
assistance and support activities											
<b>Output 7.</b> Irrigation boards trained	Boards	0	2022	-	-	14	23	20	57	VRHR reports – SUSIRH	Training on irrigation system administration, accounting, irrigation board management (part of OSPTA).
<b>Component 2:</b> Investment in pressurized irrigation projects.											
<b>Output 8.</b> Community irrigation systems built	Systems	0	2022	-	-	14	23	20	57	VRHR reports – SUSIRH	CRF 2.23.
Milestone 1: Hectares covered by irrigation systems	Hectares	2	2022	-	-	3,468	5,548	4,855	13,871	VRHR reports – SUSIRH	
<b>Output 9.</b> Hectares of pressurized irrigation implemented	Hectares	0	2022	-	-	694	1,170	971	2,835	VRHR reports – SUSIRH	Reforestation and dead and living barriers.
<b>Output 10.</b> Areas with watershed protection and water security for irrigation	Hectares										

**Country:** Bolivia      **Division:** RND/CSD      **Operation Number:** BO-L1226      **Year:** 2022

## FIDUCIARY AGREEMENTS AND REQUIREMENTS

**Executing agency:** Ministry of Environment and Water (MMAyA), acting through its Office of the Vice Minister for Water Resources and Irrigation (VRHR)

**Subexecuting agencies:** The VRHR will operationalize the program through its deconcentrated units: the Program Coordination Unit for Climate Resilient Programs and Projects (UCP-PPCR) and the Coordination and Execution Unit for the “More Investment for Irrigation” Program (UCEP-MI RIEGO)

**Operation name:** National Pressurized Irrigation Program with a Watershed Approach I

### I. FIDUCIARY CONTEXT OF THE EXECUTING AGENCY

#### 1. Use of country systems in the operation

<input checked="" type="checkbox"/> Budget	<input type="checkbox"/> Reports	<input checked="" type="checkbox"/> Information system	<input type="checkbox"/> National competitive bidding (NCB)
<input checked="" type="checkbox"/> Treasury	<input type="checkbox"/> Internal audit	<input checked="" type="checkbox"/> Shopping	<input type="checkbox"/> Others
<input checked="" type="checkbox"/> Accounting	<input type="checkbox"/> External control	<input checked="" type="checkbox"/> Individual consultants	

#### 2. Fiduciary execution mechanism

<input checked="" type="checkbox"/>	Special features	The borrower will be the Plurinational State of Bolivia. The executing agency will be the MMAyA, acting through the VRHR via the subexecuting agencies. Both deconcentrated units have administrative, financial, and technical independence in performance of their functions. The UCP-PPCR will be responsible for the program's general administration, financial and accounting management, monitoring, and evaluation. The IDB resources will be disbursed in accordance with the program Operating Regulations.
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#### 3. Fiduciary capacity

Fiduciary capacity of the executing agency	The fiduciary capacity level is <b>medium</b> , according to the Institutional Capacity Assessment Platform (ICAP) methodology. The analysis focused on: (i) programming and organizational capacity; (ii) capacity for execution of programmed and organized activities, including personnel, goods and services, and financial management systems; and (iii) control capacity. According to the assessment, both subexecuting agencies generally possess technical, planning, and programming competencies and fiduciary processes. Procurement strengthening interventions are recommended.
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**4. Fiduciary risks and risk response**

Taxonomy	Risk	Level	Response
Financial and procurement management	General fiduciary capacity level.	Medium	(i) Training on financial management policies in the areas of accounting and internal control; (ii) training on procurement policies; and (iii) the contracting/appointment of trained, qualified personnel with fiduciary job descriptions (in financial management and procurement) exclusively for the execution units.

- 5. Policies and guidelines applicable to the operation:** Procurements will be identified in the Bank-approved procurement plan and conducted in accordance with the Policies for the Procurement of Goods and Works Financed by the IDB (document GN-2349-15) and the Policies for the Selection and Contracting of Consultants Financed by the IDB (document GN-2350-15), or policies in force.
- 6. Exceptions to Bank policies and guidelines:** Not applicable.

**II. CONSIDERATIONS FOR THE SPECIAL PROVISIONS OF THE LOAN CONTRACT**

<b>Exchange rate:</b> For the purposes of Article 4.10 of the General Conditions, the parties agree that the exchange rate to be used will be the rate stipulated in Article 4.10(b)(i). For the purpose of determining the equivalency of expenditures incurred in local currency chargeable against the local contribution or the reimbursement of expenditures chargeable against the loan, the exchange rate will be the rate in effect on the effective date on which the borrower, the executing agency, or any other person or corporation with delegated authority to incur expenditures makes the respective payments to the contractor, vendor, or beneficiary.
<b>Type of audit:</b> Program audited financial reports. The executing agency will deliver the annual audited financial statements for the program, duly audited by an independent audit firm acceptable to the Bank, within 120 days after the close of each fiscal year of the executing agency, during the original disbursement period or as extended, and within 120 days after the date of the last disbursement of the loan, pursuant to the terms of reference agreed upon by the Bank with the UCP-PPCR.

### III. PROCUREMENT EXECUTION AGREEMENTS AND REQUIREMENTS

<input checked="" type="checkbox"/>	Bidding documents	The Bank's standard bidding documents or those agreed on by the executing agency and the Bank for the procurement in question will be used for procurements of goods, and nonconsulting services conducted in accordance with the procurement policies (document GN-2349-15) and subject to international competitive bidding (ICB). The standard request for proposals issued by the Bank or agreed on by the executing agency and the Bank for the selection in question will be used for the selection and contracting of consulting services in accordance with the consultant selection policies (document GN-2350-15). A procurement document agreed on by the country's competent authority and the Bank will be used for national competitive bidding (NCB), shopping, and individual consulting services. The project's sector specialist is responsible for reviewing the technical specifications and terms of reference of procurements during preparation of the selection processes. This technical review may be ex ante and is independent of the procurement review method.						
<input checked="" type="checkbox"/>	Training	The UCEP-MI RIEGO will receive two training workshops on the use of NCB and ICB methodologies for procurement of works.						
<input checked="" type="checkbox"/>	Recurrent expenditures	Any financed recurrent expenditures required to deploy a project approved by the Project Team Leader will be incurred pursuant to the executing agency's administrative procedures. Such procedures will be reviewed and accepted by the Bank, provided that they do not violate the principles of economy, efficiency, and competition.						
<input checked="" type="checkbox"/>	Procurement supervision	<p><b>Ex post</b>, except where ex ante supervision is warranted. For procurements executed using the country system, supervision will be performed using the country supervision system. The supervision method ((i) ex ante, (ii) ex post, and (iii) country system) will be determined for each selection process. Ex post reviews will be every 12 months in accordance with the supervision plan, subject to change during execution. Ex post review reports will include at least one physical inspection visit (the inspection verifies the existence of procurements), chosen from the procurement processes subject to ex post review [no less than 10%].</p> <p>The thresholds for ex post review are as follows:</p> <table border="1"> <thead> <tr> <th>Works</th> <th>Goods/services</th> <th>Consulting services</th> </tr> </thead> <tbody> <tr> <td>ICB &gt; US\$3,000,000</td> <td>ICB &gt; US\$200,000</td> <td>ICB &gt; US\$200,000</td> </tr> </tbody> </table>	Works	Goods/services	Consulting services	ICB > US\$3,000,000	ICB > US\$200,000	ICB > US\$200,000
Works	Goods/services	Consulting services						
ICB > US\$3,000,000	ICB > US\$200,000	ICB > US\$200,000						
<input checked="" type="checkbox"/>	Records and files	The subexecuting agencies will be responsible for establishing the necessary controls for the safekeeping and completeness of the documentation generated by ex ante or ex post execution of the program. The Bank may verify the organization, control, and security standards of the record-keeping at any time.						

<input checked="" type="checkbox"/>	Sustainable procurement	Sustainability criteria (environmental, social, or economic) may be incorporated at different stages, including: planning, preparation of standard bidding documents, definition of specifications, contractual conditions, and others.
<input checked="" type="checkbox"/>	Other recommendations	<ul style="list-style-type: none"> <li>▪ Contracting of individual consultants or consulting firms under indefinite delivery contracts (paragraph 4.5, document GN-2350-15) and/or preparation of framework agreements between the UCP-PPCR and individual consultants and firms establishing the terms and conditions applicable to the specific consulting services (paragraph 4.6, document GN-2350-15).</li> <li>▪ A fiduciary supervision visit at least once a year during the life of the operation.</li> </ul>

### Main procurements

Procurement description	Selection method	Estimated date	Estimated amount (US\$)
<b>Works</b>			
Contracting of firm to build the <b>Pasopaya</b> dam project	ICB	3 May 2023	3,627,697
Contracting of firm to build the <b>Calicanto</b> dam project	ICB	3 May 2023	9,525,958
Contracting of firm to build the <b>Calderas</b> dam project	ICB	3 May 2023	4,559,577
Contracting of firm to build the <b>Rosillas</b> dam project	ICB	10 May 2023	4,175,486
<b>Firms</b>			
Contracting of consulting firm to design the water resources modeling and simulation center	Least-cost selection (LCS)	25 April 2023	500,000
Contracting of consulting firms to implement organizational strengthening and production-oriented technical assistance (OSPTA) for producers and irrigation boards – Group 1 (year 1 target)	Quality- and cost-based selection (QCBS)	22 March 2023	2,689,400
Contracting of consulting firm to supervise works on the <b>Pasopaya</b> dam project	LCS	11 April 2023	118,941

Procurement description	Selection method	Estimated date	Estimated amount (US\$)
Contracting of consulting firm to supervise works on the <b>Calicanto</b> dam project	LCS	28 March 2023	312,326
Contracting of consulting firm to supervise works on the <b>Calderas</b> dam project	LCS	11 April 2023	149,494
Contracting of consulting firm to supervise works on the <b>Rosillas</b> dam project	LCS	11 April 2023	136,901

To access the 18-month procurement plan, click [here](#).

#### IV. FINANCIAL MANAGEMENT AGREEMENTS AND REQUIREMENTS

<input checked="" type="checkbox"/> Programming and budget	<p>Since the borrower is the Plurinational State of Bolivia, the funds from this operation will be incorporated into the national budget and then transferred to the subexecuting agencies, which must also add them to their budgets. No challenges are foreseen that could affect execution.</p>
<input checked="" type="checkbox"/> Treasury and disbursements	<p><b>Special fiduciary condition precedent to the first disbursement:</b> The appointment/contracting of key personnel of the subexecuting agencies on the terms agreed upon with the Bank, with a minimum number of members including the financial specialist devoted exclusively to the operation with the background, experience, and skills required by the job description.</p> <p><b>Exchange rate:</b> The exchange rate used for accounting purposes will be the rate in effect on the effective date on which the borrower, the executing agency, or any other person or corporation with delegated authority to incur expenditures makes the respective payments or transfers. Article 4.01(b)(i) of the General Conditions.</p> <p><b>Disbursement method:</b> Advances of funds and/or reimbursements.</p> <p><b>Disbursement mechanism:</b> Electronic disbursement requests submitted via the Online Disbursements platform.</p> <p><b>Bank account:</b> The borrower/executing agency will hold the advanced funds in an exclusive U.S.-dollar bank account for the program at the Central Bank of Bolivia, which will be controlled/reconciled by means of the Libreta treasury single account (designated account).</p> <p><b>Financial plan:</b> Advances will be made for a period of up to 6 months (180 days), according to liquidity needs, based on commitments made.</p> <p><b>Percentage for accountability reporting:</b> 80% of the balance of advances pending justification.</p>

		<p><b>Flow of project resources:</b> The funds will be disbursed to the executing agency into the account opened with the Central Bank of Bolivia and transferred from there to contractors/vendors as payment for goods and services.</p>
<input checked="" type="checkbox"/>	Accounting, information systems, and reporting	<p>The specific accounting rules for the execution will be the regulatory framework of the Plurinational State of Bolivia.</p> <p>The accountability reports will be the statement of cash received and disbursements made and the statement of cumulative investments, with their respective notes, prepared on the basis of the accounting generated by the Public Financial Information System.</p> <p><b>Accounting method and currency:</b> Accounting will be on an accrual basis, but the financial reports to be submitted to the Bank will be prepared on a cash basis in U.S. dollars.</p>
<input checked="" type="checkbox"/>	External control and financial reports	<p>The UCP-PPCR will select and contract external audit services pursuant to terms of reference previously agreed upon with the Bank. These will provide for annual financial audits under the International Standards on Auditing (ISA), to be submitted by 30 April of the year following the review. The final audit of the program will be delivered within 120 days after the date of the last disbursement. The audit will be conducted in accordance with the guidelines established in the Financial Management Guidelines for IDB-financed Projects (document OP-273-12).</p>
<input checked="" type="checkbox"/>	Financial supervision of the operation	<p>Financial supervision will be performed onsite at the subexecuting agencies and via workshops and desk reviews of reports and audited financial reports, and other methods by the Bank's financial management team, supporting consultants, and the audit firm engaged for the annual audit of the financial statements. This supervision may be adjusted based on experience during project execution.<sup>1</sup></p>

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<sup>1</sup> Opinion on the audited annual financial statements and internal control observations/findings, if any.

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-\_\_/22

Bolivia. Conditional Credit Line for Investment Projects (CCLIP)  
for the National Water Resources Program with a  
Watershed Approach (BO-O0007)

The Board of Executive Directors

RESOLVES:

1. To authorize the President of the Bank, or such representative as he shall designate, to enter into such agreement or agreements as may be necessary with the Plurinational State of Bolivia, to establish the Conditional Credit Line for Investment Projects (CCLIP) for the National Water Resources Program with a Watershed Approach (BO-O0007) (the "Line") for an amount of up to US\$500,000,000 chargeable to the resources of the Ordinary Capital of the Bank.

2. To establish that the resources allocated to the Line shall be used to finance individual operations under the Line, in accordance with: (a) the objectives and regulations of the Conditional Credit Line for Investment Projects approved by Resolution DE-58/03, as amended by Resolutions DE-10/07, DE-164/07, DE-86/16, and DE-98/19; (b) the provisions set forth in documents GN-2564-3 and GN-2246-13; and (c) the terms and conditions included in the proposal for the corresponding individual operation.

(Adopted on \_\_\_\_\_ 2022)

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-\_\_/22

Bolivia. Loan \_\_\_\_/OC-BO to the Plurinational State of Bolivia. National Pressurized Irrigation Program with a Watershed Approach I. First Individual Operation under the Conditional Credit Line for Investment Projects (CCLIP) BO-O0007

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such contract or contracts as may be necessary with the Plurinational State of Bolivia, as borrower, for the purpose of granting it a financing aimed at cooperating in the execution of the National Pressurized Irrigation Program with a Watershed Approach I, which constitutes the first individual operation under the Conditional Credit Line for Investment Projects (CCLIP) BO-O0007 approved by Resolution DE-\_\_/22 on \_\_\_\_\_. Such financing will be in the amount of up to US\$150,000,000, from the resources of the Bank's Ordinary Capital, and will be subject to the Financial Terms and Conditions and the Special Contractual Conditions of the Project Summary of the Loan Proposal.

(Adopted on \_\_\_\_\_ 2022)

LEG/SGO/CAN/EZSHARE-1720032226-17322  
BO-L1226