Board of Executive Directors
For consideration
On or after 29 June 2016

PR-4401
14 June 2016
Original: Spanish
Public
Simultaneous Disclosure

To: The Executive Directors

From: The Secretary

Subject: Bolivia. Proposal for a loan for the "National Irrigation Program with a Watershed Approach III – PRONAREC III"

Basic Information:

Loan type .....Global Multiple Works Operation (GOM)
Borrower .....Plurinational State of Bolivia

Amount ..... up to US$134,640,000
Source .....Single Currency Facility of the Ordinary Capital
Amount ..... up to US$23,760,000
Source .....Fund for Special Operations

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Remarks: This operation is included in Annex III of document GN-2849, "2016 Operational Program Report", approved by the Board of Executive Directors on 30 March 2016. However, the loan amount exceeds the ceiling established for Group D countries. Therefore, the operation does not qualify for approval by Simplified Procedure.

The financing for this operation corresponds to a parallel loan within the framework of the multilateral debt relief and concessional finance reform of the Bank.

Reference: GN-1838-1(7/94), DR-398-17(1/15), GN-2442(2/07), GN-2849(3/16), AB-2504(11/06), AG-9/06, PR-3328(11/08), DE-153/08, DE-154/08, PR-4072(10/13), DE-143/13, DE-144/13

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DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

BOLIVIA

NATIONAL IRRIGATION PROGRAM WITH A WATERSHED APPROACH III (PRONAREC III)

(BO-L1106)

LOAN PROPOSAL

This document was prepared by the project team consisting of: L. Hernando Hintze (RND/CUR) and Juan Manuel Murguía (RND/CBO), Project Team Co-leaders; Gina Peñaranda (CAN/CBO); Fernando Balcazar (RND/CCO); Abel Cuba and Carolina Escudero (FMP/CBO); Sergio Ardila, Lina Salazar, and Elizabeth Chávez (CSD/RND); Verónica Tejerina (GDI/CBO); Alfred Grünwaldt (CSD/CCS); María Castro (VPS/ESG); and Javier Jiménez (LEG/SGO).

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REQUIRED

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4. Environmental and Social Management Report
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OPTIONAL

1. Project Economic Analysis
2. Impact Evaluation
3. Strategy for Mainstreaming the Gender Focus in PRONAREC III
4. Institutional Analysis for Program Design
5. Program Operating Regulations
6. Safeguard Policy Filter and Safeguard Screening Form

ABBREVIATIONS

ADMG	Autonomous departmental and/or municipal government
CRF	Corporate Results Framework
ECLAC	Economic Commission for Latin America and the Caribbean
ESMR	Environmental and Social Management Report
FAO	United Nations Food and Agriculture Organization
FPS	Fondo Nacional de Inversión Productiva y Social [National Fund for Productive and Social Investment]
FSO	Fund for Special Operations
ha	Hectare
IICA	Inter-American Institute for Cooperation on Agriculture
IRR	Internal rate of return
LIBOR	London Interbank Offered Rate
MEFP	Ministry of Economy and Public Finance
MIRIEGO	Programa Más Inversiones para Riego ["More Investment for Irrigation" Program]
MMAyA	Ministry of Environment and Water
PCEU	Program Coordination and Execution Unit
PRONAR	National Irrigation Program
PRONAREC	National Irrigation Program with a Watershed Approach
SCF	Single Currency Facility
SIRH	Sistema de Información de Recursos Hídricos [Water Resources Information System]
UNFCCC	United Nations Framework Convention on Climate Change
VRHR	Vice Ministry of Water Resources and Irrigation

PROJECT SUMMARY

BOLIVIA
NATIONAL IRRIGATION PROGRAM WITH A WATERSHED APPROACH III (PRONAREC III)
(BO-L1106)

Financial Terms and Conditions					
			Financing	**Ordinary Capital**	**Fund for Special Operations**
Borrower: Plurinational State of Bolivia **Executing agency:** Ministry of Environment and Water (MMAyA)			**Amortization period:**	30 years	40 years
			Disbursement period:	5 years	5 years
			Grace period:	6 years	40 years
Source	**Amount (US$)**	**%**	**Interest rate:**	SCF fixed[a]	0.25%
IDB (Ordinary Capital) (85%):	134,640,000	68.7	**Inspection and supervision fee:**	[b]	N/A
IDB (FSO) (15%):	23,760,000	12.1	**Credit fee:**	[b]	N/A
Local:	37,600,000	19.2	**Currency:**	U.S. dollars from the Single Currency Facility	U.S. dollars
Total:	196,000,000	100.0			

Project at a Glance

Project objective/description:
The general objective of the program is to increase the incomes of beneficiary rural households. The specific objectives are to: (i) boost the productivity of small-scale farmers by increasing the land area under irrigation; (ii) enhance the efficiency of water use in irrigation systems; and (iii) improve the management of water resources for irrigation purposes.

Special contractual conditions precedent to the first disbursement: The Ministry of Environment and Water (MMAyA) will have approved and put into effect the program Operating Regulations, under terms and conditions previously agreed with the Bank, including the acceptance of the National Fund for Productive and Social Investment (FPS) with respect to execution of program activities (paragraph 3.3).

Special contractual conditions for execution: (i) To participate in the program, each autonomous departmental and/or municipal government will sign an intergovernmental agreement with the MMAyA and the FPS determining the parties' obligations during program execution (paragraph 3.8); (ii) prior to the start of tendering for program works under the responsibility of the FPS, the Ministry of Economy and Public Finance (MEFP), the Ministry of Development Planning, the MMAyA, and the FPS will sign the corresponding subsidiary agreements in which the following aspects, among others, are spelled out: (a) how the loan funds will be transferred to the FPS; and (b) a commitment to carry out the activities called for in the program, in accordance with the loan contract and the Operating Regulations (paragraph 3.1); (iii) prior to the start of tendering for the irrigation works, the autonomous departmental and/or municipal governments and the respective Irrigators' Organization will sign an agreement establishing, among other aspects, the responsibility of the Irrigators' Organization for maintaining the irrigation systems and the obligation to provide the information requested by the executing agency (paragraph 3.9).

Exceptions to Bank policies: None.

Strategic Alignment						
Challenges[c]:	SI	☐	PI	☑	EI	☐
Crosscutting Themes[d]:	GD	☐	CC	☑	IC	☐

[a] The borrower will pay interest on the outstanding balances of the Ordinary Capital portion of the loan at a LIBOR-based rate. Once the outstanding balance reaches 25% of the net amount approved or US$3 million, whichever is greater, the base rate will be set for this balance.

[b] The credit fee and inspection and supervision fee will be established periodically by the Board of Executive Directors as part of its review of the Bank's lending charges, in accordance with the applicable policies.

[c] SI (Social Inclusion and Equality); PI (Productivity and Innovation); and EI (Economic Integration).

[d] GD (Gender Equality and Diversity); CC (Climate Change and Environmental Sustainability); and IC (Institutional Capacity and Rule of Law).

I. DESCRIPTION AND RESULTS MONITORING

A. Background, problem addressed, and rationale

1.1 The agriculture sector in Bolivia is of great economic and social importance. It accounts for 13% of GDP and is the main economic activity for 77% of the country's rural population.[1] The sector is dominated by campesino and indigenous family agriculture, characterized by small farms and low productivity. Yields from cereal and tuber crops in Bolivia are 57% and 39% of the South American average (FAOSTAT), and the total productivity growth rate for the sector has remained below the average for Latin America and the Caribbean over the last two decades (Nin-Pratt, A. et al., 2015). This low productivity is reflected in low incomes for the rural population and in high levels of food insecurity. In 2013, 60% of Bolivia's rural population was living in poverty, and 39% in extreme poverty;[2] the incidence of poverty was even greater (80%) among households that derive their income solely from farming. In addition, the country has a malnutrition rate of 21%.[3]

1.2 The low coverage of irrigation, and in particular of systems that use water-efficient technologies, is an important factor in explaining Bolivia's poor agricultural productivity: 41% of the national territory is subject to a water deficit. In 2000, the country had 226,565 hectares (ha) under irrigation, a figure that had risen to 360,000 ha by 2014, equivalent to just 8% of the total land area under cultivation. The use of efficient irrigation systems can boost productivity and incomes for small-scale producers, in three ways: (i) they can increase their output by making it possible to have more harvests per year in areas where climatic conditions so permit, (ii) they can increase the returns from their output by planting crops of greater value, and (iii) they can expand the cultivated area under irrigation. The adoption of irrigation systems can also reduce the risk associated with water availability at critical times of the agricultural cycle, thereby encouraging other investments and innovations, and it allows farmers to plan their sowing times more effectively in order to fetch better prices and to allocate family labor more efficiently.

1.3 In this context, the Government of Bolivia has made the expansion of the area under irrigation and the improvement of existing irrigation systems a central thrust of its strategy to promote agricultural productivity, combat poverty, and guarantee food security.[4] The country's average annual investment in irrigation rose from US$11.3 million in 2000-2005 to US$37.8 million in 2006-2012. The 2007 National Irrigation Plan set the goal of having 450,000 ha irrigated by 2025, but the Ministry of Environment and Water (MMAyA) has updated that target to 1 million hectares. This goal is enshrined in Law 745 of October 2015, which declares the period 2015-2025 as the "Irrigation Decade," with a view to promoting agricultural output through investments geared to the development of irrigation. The strategic thrusts of the Irrigation Decade agenda include increasing the lands under irrigation and

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1 ECLAC, FAO, IICA, 2012: The Outlook for Agriculture and Rural Development in the Americas.

2 National Statistics Institute (INE), http://www.ine.gob.bo/indice/EstadisticaSocial.aspx?codigo=30601. June 2015.

3 See INE/RND. 2014. Bolivia: Sector Input Note, Country Strategy 2014-2019.

4 Ministry of Water. 2007. Plan Nacional de Desarrollo del Riego "para Vivir Bien" ["Living Well" National Irrigation Development Plan].

boosting their productivity, as well as institutional strengthening. The law also indicates that investments under the Irrigation Decade agenda will be made through the "More Investment for Irrigation" Program (MIRIEGO). The operational principles adopted for irrigation development in Bolivia include: (i) self-management of irrigation by beneficiary farmers, (ii) promoting mechanized irrigation, (iii) using a watershed approach in the planning and operation of irrigation systems, (iv) inclusion of gender considerations, and (v) enhancing food security and market access. To fulfill these goals and guidelines, the country needs to strengthen its investment planning and water resource management capacities. Implementation of these principles will also contribute to the national strategy on climate change, and represents a strategic line of action in the adaptation aspect of Bolivia's Intended Nationally Determined Contribution (INDC) under the United Nations Framework Convention on Climate Change (UNFCCC).[5]

1.4 Since 1996 the Bank has supported Bolivia through three programs to expand and improve community irrigation systems. Between 1996 and 2005, the National Irrigation Program (PRONAR, loan 964/SF-BO) financed 158 projects, upgrading infrastructure on 8,000 ha, benefitting more than 12,000 families and bringing irrigation to more than 14,000 ha. From 2009 to 2015, the National Irrigation Program with a Watershed Approach (PRONAREC, loan 2057/BL-BO) financed 54 systems and incorporated irrigation into 9,060 ha, benefiting 10,691 families. Lastly, PRONAREC II (loan 3060/BL-BO), in execution since 2014 with 80% of funding committed, has to date contracted 73 projects to bring an additional 12,604 ha under irrigation for 14,800 families.

1.5 Sustained work on these programs has allowed each operation to build on the lessons previously learned. In addition to financing works, PRONAREC furthered a series of relevant topics such as registration of water use rights, inclusion of the watershed approach, the gender dimension, and development of the National Irrigation Information System. With PRONAREC II, greater emphasis has been placed on promoting mechanized irrigation (56% of the target area under irrigation), providing greater technical assistance to farmers using irrigation, and reinforcing the watershed approach in projects. In both operations, the projects financed had their origin in initiatives and requests of the beneficiary communities. The promotion of mechanized irrigation responds to the need to make water use more efficient, both by improving the delivery infrastructure in order to reduce losses and by using more efficient pressurized systems such as drip irrigation or sprinklers,[6] while the watershed approach seeks to ensure a sustainable water supply for irrigation systems. The adoption of mechanized irrigation will require efforts to overcome obstacles facing the program: for example, systems need to be properly designed for mechanization, their cost is greater than that of gravity-fed irrigation, and beneficiary farmers and the local technicians who must design the systems and provide technical assistance have insufficient knowledge of the technology.

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5 http://www4.unfccc.int/submissions/INDC.

6 According to the FAO, the typical efficiency of a system with 200-2,000 m of conveyance in sandy soil and with gravity-fed irrigation is 42%. If the system is changed to a covered channel with drip irrigation, it is 86%, and 71% for sprinkler systems. According to data from 16 PRONAREC projects, the average efficiency rose from 10% to 53%.

1.6 PRONAR and PRONAREC were evaluated using different methodologies. According to those evaluations, the programs have proven to be economically viable: they have helped to boost productivity, productive diversification, and farmers' incomes. For the most part, they have demonstrated adequate levels of acceptance and sustainability, and their environmental and social impacts have been largely positive. The various evaluations have noted an increase in incomes and an improvement in food security indices,[7] thanks to increased output from conventional crops that are now grown on irrigated land, as well as the introduction of new crops with greater gross margins. On this point, an ex post economic evaluation of PRONAR projects found an average internal rate of return (IRR) of 13%.[8]

1.7 **The PRONAREC impact evaluation.** As part of the design of the present operation, an evaluation of PRONAREC was undertaken to measure its impacts, based on a sample of 47 projects under PRONAREC I. To this end, 1,682 farmers (including beneficiaries and a control group) were interviewed in seven departments. Using a quasi-experimental "propensity score matching" methodology, the analysis found that, in comparison with the control group, beneficiary farmers increased their use of improved seeds, technology, and machinery for production. It also confirmed that beneficiaries increased the value of agricultural output, boosted household incomes, and strengthened their linkages to markets. Specifically, the analysis shows that beneficiaries increased the number of hectares under irrigation (46%), the value of agricultural output (47%), the value of sales of agricultural products (80%), and household incomes (30%) (see Impact Evaluation).

1.8 The sustainability of irrigation investments managed by the Irrigators' Organizations in Bolivia has for the most part been adequate. An assessment of 20 PRONAR projects after three years or more in operation found that overall sustainability was high in 50% of cases, and average in 30% (based on the situation of the Irrigators' Organizations, water sources, water rights, and maintenance, among other factors).[9] In addition, an analysis of a sample of 40 projects from PRONAREC and MIAGUA (micro-irrigation) found that the quality of self-management could be considered high to medium and that, in general, it should be possible to make the operation and maintenance[10] of the system financially sustainable.

1.9 The findings from irrigation project evaluations in Bolivia are consistent with the empirical evidence, which shows that irrigation is one of the key determinants of productivity and stability in agricultural yields. The positive impacts of access to irrigation in terms of production, incomes, and food security have been thoroughly

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7 PRONAR. 2003. Project Completion Report.

8 *Consulting Engineers Salzgitter GmbH–C3B*. 2007. Evaluación de Sistemas de Riego PRONAR e Identificación de Lecciones Aprendidas [Evaluation of PRONAR irrigation systems and identification of lessons learned]. Evaluation Report. IDB-Ministry of Water.

9 Salazar, R., et al., 2010. Sustentabilidad y Autogestión de Sistemas de Riego [Sustainability and Self-management of Irrigation Systems]. PROAGRO-GTZ.

10 Vice Ministry of Water Resources and Irrigation (VRHR), 2015. Evaluación ex post de Resultados de Proyectos de Riego de los Programas MIAGUA I y PRONAREC I [Ex post evaluation of the outcome of irrigation projects under the MIAGUA and PRONAREC I programs].

documented.[11] Access to irrigation ushers in a virtuous circle, by increasing the number of annual crop harvests and encouraging diversification into higher-value crops (Palmer Jones et al., 2012). An analysis of the portfolio of irrigation projects financed by the World Bank shows that, between 1998 and 2008, 92% of the projects analyzed reported increases in farm output (IEG, 2011). As well, access to irrigation boosts incomes and generates mechanisms that reduce the risk of and the vulnerability to climatic events by enhancing the capacity of beneficiaries to respond to high seasonal variability in precipitation.[12] In Peru, participation in irrigation projects has increased the value of output (72%) and of sales (83%).[13] In turn, systems where irrigators' associations are responsible for water management are more efficient in resolving disputes over collective action, they provide better maintenance for systems by empowering the associations in the governance of their own resources, and they create incentives for cooperative marketing.[14]

1.10 Lessons learned

Table 1. Lessons learned

Principal lessons learned	Reflection in program design
Technical quality of designs. The designs of irrigation systems presented by local governments and municipios frequently fall short in quality terms, and must be enhanced. This problem is due primarily to the shortage of specialized staff and financial resources in those institutions. The required adjustments and supplements place a heavy burden on the program technical team, they lead to greater costs and longer execution times, and they may frustrate the expectations of beneficiaries. The review of the sample of projects (paragraph 1.24) confirmed that there were limitations both in the technical and in the management aspects of the irrigation systems.	The preinvestment and project supervision mechanism has been redefined. Preinvestment (adjustments or new designs), which was until now the responsibility of the FPS, will fall to the MMAyA, which has a specialized technical team that is to be strengthened. The program will finance the preparation of local water use plans, thus making for the more timely and orderly identification of high quality projects that can be included in PRONAREC III. Lastly, technical capacities for identifying and supporting irrigation projects will be reinforced.
Technical assistance for beneficiaries. A key factor for project success and sustainability is to provide support and coaching for irrigators during the execution of the works and subsequent technical assistance. To date, these activities have been contracted and supervised by the FPS, although it has no particular expertise in these areas, and the results have been mixed.	With PRONAREC III, the MMAyA will have the lead responsibility for contracting support and technical assistance services. For the supervision of technical assistance, it will work locally with the departmental agriculture services (SEDAG) and the municipios, and at the national level with the National Irrigation Service (SENARI).
Involvement of beneficiaries. The success of irrigation projects requires the active participation of beneficiaries at all stages. PRONAREC beneficiaries are involved from the project proposal phase, as well	To reinforce the degree of project ownership by the Irrigators' Organizations, this program will work with them to focus their contribution on implementing the watershed approach. The Irrigators' Organizations

[11] Ahmed et al., 2014; Nkhata, 2014.

[12] Hagos et al., 2012; Kuworny and Owusu, 2012; Dillon, 2011; Wood, You and Zhang, 2004.

[13] Del Carpio, Loayza, Datar, 2011.

[14] Vermillion, 2005; Bandyopadhyay, Shyamsundar and Xie, 2010; Araral, 2011.

Principal lessons learned	Reflection in program design
as in financing through their personal contribution (in cash or in labor) and in operation and maintenance. The labor contribution, which is the option preferred by the beneficiaries, has been difficult to fulfill because of problems in reconciling the works schedule with the other activities of the beneficiaries. In practice, the beneficiary contribution in many cases has been covered by the municipio. This can affect the degree of commitment on the part of beneficiaries, and hence the sustainability of the project.	will provide their labor, and the program will provide the necessary materials. By improving the likelihood of their active participation in project execution, the intent is to strengthen their empowerment and the sustainability of the project.
The watershed approach. Incorporation of the watershed approach is important, but to date it has been weak, as the projects have not taken it into account from the outset (paragraph 1.14). There is a need for further precision and training as to what the watershed approach involves in project execution and supervision.	The water use plans will identify projects that incorporate this approach from the outset. In addition, the program will coordinate efforts with the projects of the National Watersheds Directorate of the MMAyA, and the municipios will be involved in monitoring activities in the watersheds. As well, the scope of the watershed approach and its activities have been specified with greater clarity.
The role of the FPS in contracting works. It is important to ensure participation by a specialized entity such as the FPS in contracting works, as this will leave the MMAyA free to focus on strategic aspects and on the technical supervision of projects. However, some roles could be more clearly specified, and the mechanisms for providing information on projects (as needed for proper program management) must be improved in terms of timeliness and quality.	The Operating Regulations will provide greater detail on the responsibilities of the FPS and the MMAyA in the construction of irrigation works, aligning those responsibilities with each entity's capacities and incentives. In addition, the MMAyA will have access to the systems for monitoring the FPS works contracts, so as to obtain adequate and timely information.

1.11 Design of the operation

1.12 PRONAREC III is intended to continue the experience from PRONAREC II, building on the foundation of lessons learned and capacities generated. PRONAREC III proposes tools for supporting increased investment in the sector as well as for rounding out quality irrigation infrastructure with aspects that are essential if that infrastructure is to produce the expected benefits, with greater efficiency and with socioeconomic and environmental sustainability. In particular, PRONAREC III is designed with a watershed approach, which seeks to support campesino small farmers and to mainstream the gender dimension in interventions, with the emphasis on coaching and technical assistance as a key element for the success of the investments.

1.13 **Target population.** The beneficiaries of the program are typically small-scale farmers from campesino communities where incomes are low, primarily because of low agricultural productivity. Their main source of income is farming (70%) and they work with plots of land averaging 3 ha, more than 70% of which is devoted to traditional crops of little commercial value. Of their total output, these farmers earmark 31% for household consumption and 43% for sales. The beneficiaries also tend to identify themselves as indigenous (73%) and as having little formal

education (70% have not completed primary school) and scarce access to credit or savings (18% report access to formal credit and 15% to savings). In addition, 60% of households are facing food insecurity.[15]

1.14 The watershed approach of PRONAREC III entails applying a set of structural and nonstructural mitigation measures that will serve to protect, rehabilitate, and conserve the microwatershed's water and soil resources, which have a direct impact on the sustainability of the soil and water used in the projects. The strategy for incorporating the watershed approach (Environmental and Social Management Report, Chapter VIII) details the tasks to be accomplished through the program, which includes the identification and characterization of the microwatershed, including its various stakeholders: prioritizing and implementing measures to protect the water source and its recharge areas, and to protect the hydraulic works. The idea of incorporating the watershed approach throughout the project cycle stems from the lessons learned with irrigation projects in Bolivia (see Project Completion Report, PRONAREC I) which showed that, with integrated resource management, this approach offers a suitable tool for identifying measures for adaptation to climate change and including the associated risk.[16]

1.15 Irrigation can make a significant contribution to stabilizing and increasing yields in the context of ever-growing climate variability.[17] The effects of climate change in Bolivia are expected to manifest themselves in changes to the hydrological cycle (for example, fewer days of rain). The program will provide direct support for vulnerable small-scale farmers to adapt to the effects of climate change through its investment in irrigation systems, together with training for their efficient use, and measures to strengthen the country's planning and response capacities in this area. This is consistent with the priorities for reducing vulnerability, which the country has identified in its National Communication[18] to the UNFCCC and in the National Program for Investment in Adaptation presented to the Strategic Climate Fund. In addition, the MMAyA is now in the process of approving new preinvestment guidelines for irrigation, which include a more detailed analysis of disaster risks and the effects of climate change on projects.

1.16 **The gender focus.** The program will continue and reinforce the gender focus implemented during operation 3060/BL-BO. It responds to the gender inequality observed in roles in Bolivia's rural sector (for example, only men are members of the Irrigators' Organization and can vote) and its effects on the sustainability of irrigation systems. The evidence shows that this inequality adversely affects agricultural productivity,[19] and that targeting women has a greater impact on poverty reduction. In addition, seasonal migration by males is very common in Bolivia. Therefore, allowing women to participate in taking decisions about irrigation systems and to be trained to manage those systems would serve to make the systems more productive and sustainable. Experience with irrigation in Bolivia reinforces the importance of having diagnostic assessments, personnel, and

[15] Impact evaluation survey for loan 3060/BL-BO.

[16] Feroz et al., 2015; Pham Quy Giang et al., 2012.

[17] McCarthy, N. 2014. *Climate-smart agriculture in Latin America. IDB. Technical Note 652.*

[18] http://unfccc.int/resource/docs/natc/bolnc2exsume.pdf.

[19] Blackden and Bhanu, 1999.

specific gender-related actions.[20] To that end, the program has a strategy for mainstreaming the gender focus. This includes, among other things: (i) the provision of technical assistance with a gender focus (tailoring the planning, content, and methods to the needs of women and their workload); (ii) the contracting of experts in gender issues for the program; and (iii) the measurement of indicators disaggregated by gender, including beneficiaries and technicians trained to provide technical assistance. In addition, as a criterion for eligibility, at least 30% of board members of each beneficiary's Irrigators' Organization must be women. PRONAREC III will reinforce the gender focus, starting with the preinvestment phase, by requiring that the registry of beneficiaries include both the man and the woman of the household.

1.17 **Technical assistance.** Support and coaching (during the construction of the works) and technical assistance for managing the systems and boosting the productivity of land under irrigation have been shown to be key factors for the success of irrigation systems. PRONAREC III will concentrate responsibilities for support and technical assistance in the MMAyA, which will supervise those activities with the help of the departmental and municipal governments. Beneficiaries will be assured construction support and technical assistance for a period of 18 months, covering three crop cycles. These services will be provided in three successive stages, starting with support during construction of the works for strengthening the Irrigators' Organization and irrigation planning. Next, technical assistance will be offered on matters relating to irrigated farming, system operation, and crop processing. Lastly, support and technical assistance will be provided in relation to marketing. Details on the scope of support and technical assistance are included in the Operating Regulations (paragraph 3.9).

1.18 **Consistency with the Update to the Institutional Strategy 2010-2020, the Corporate Results Framework 2016-2019 (CRF) and the Bank's Country Strategy with Bolivia 2016-2020.** The program is consistent with the Update to the Institutional Strategy (document AB-3008) and is aligned with the challenge of developing productivity and innovation, by increasing the agricultural productivity of small-scale farmers and thereby contributing to the CRF indicator on the number of beneficiaries of better management and sustainable use of natural capital. The program is also aligned with the crosscutting theme of climate change and environmental sustainability (paragraph 1.15) through irrigation investments that will promote adaptation to climate change and the sustainability of water resources. The program is aligned with the Bank's country strategy with Bolivia (document GN-2843) in that it will contribute to the priority area of increasing productivity and diversification in the economy, and to meeting its strategic objectives of: (i) reducing vulnerability to natural disasters and climate change; (ii) promoting innovation; and (iii) providing quality public goods and services. The operation is included in the Country Programming Document 2016 and the Operational Program Report 2016 (document GN-2849). Lastly, the program is consistent with the following Sector Framework Documents: Agriculture and Natural Resources Management (document GN-2709-2), Food Security (document GN-2825-3, food availability dimension), and Climate Change

[20] Breiter, 2004. Género y medio ambiente en proyectos de riego [Gender and environment in irrigation projects].

(document GN-2835, dimension of success 1: including climate considerations in the sectors).

B. Objectives, components, and cost

1.19 The general objective of the program is to increase the incomes of beneficiary rural households. The specific objectives are to: (i) boost the productivity of small-scale farmers by increasing the land area under irrigation; (ii) enhance the efficiency of water use in irrigation systems; and (iii) improve the management of water resources for irrigation purposes.

1.20 The program supports the objectives of Law 745 and of MIRIEGO (paragraph 1.3). To achieve these objectives, the program is divided into three components as detailed below:

1.21 **Component 1. Investments in the development of community irrigation with a watershed approach (US$124.55 million).** Intended to expand and improve the area under irrigation, this component includes preinvestment studies (including adjustments), construction, rehabilitation and upgrades, as well as supervision of construction and preinvestment for community irrigation systems in seven of the country's departments. In addition, it may finance specialized technical support for the preparation and supervision of projects. The Bank's financing does not include investments on the individual farms, which will be covered by the beneficiaries. The local contribution to this component will be covered jointly by the departmental and municipal governments, as spelled out in the respective agreements. The minimum overall contribution for the projects will be 30%. In the case of mechanized irrigation projects or of projects that originate from a local water use plan, the minimum contribution will be reduced to 20%. Works under Component 1 are to begin within four years, since the typical execution time for works is six months.

1.22 **Eligible beneficiaries** will be those Irrigators' Organizations that: (i) have legal status or are in the process of obtaining it; (ii) have signed a commitment to assume the operation and maintenance of the irrigation systems transferred to their use; (iii) have committed to contribute the equivalent of at least 10% of the investment cost, to be quantified in cash or in kind in the Operating Regulations; and (iv) have at least 30% female representation on their board of directors; in addition, (v) the project must not be located within a protected area.

1.23 The eligibility and priority setting criteria for each project are defined in the Operating Regulations and include: (i) irrigation systems operated by communities of small farmers, as defined under the Unified Agrarian Regime; (ii) a positive economic return, with a social IRR of at least 12%; (iii) the project must not be in a protected area; and (iv) there must be reasonable certainty (more than 80%) that the water source will have sufficient flow to meet the estimated demand for water in the irrigation zone during the useful life of the project. In addition, Bank financing will cover no more than US$4 million of the investment cost per project. In cases where there is more than one system within a microwatershed that has a local water use plan, this amount may be increased to US$8 million, provided the final investment cost per irrigated hectare does not exceed US$8,000. In addition, before contracts are awarded the availability of the necessary property and water

rights for the works needs to be verified, in keeping with the mechanisms to be established in the Operating Regulations.

1.24 **Sample of projects.** During preparation of the operation, the project team analyzed the technical, social, and economic feasibility and the quality of design of 24 new projects, totaling US$29.2 million, of which nine, costing an estimated US$9.7 million, had technically acceptable designs and were subject to the detailed economic evaluation (paragraph 2.2). The analysis and preparation of a sample smaller than the typical size of 30% of the financing is amply justified in this case, as this is the fourth project in a series (PRONAR, PRONAREC I and II) devoted to investing in small irrigation projects with similar characteristics and therefore the technical, economic, and environmental issues and existing demand are well known. The sample included various types of projects, by altitude (Altiplano, Valles, Llanos, Chaco), irrigation technology (mechanized and gravity-fed irrigation, upgrades to existing systems, projects that include small dams and others that draw upon groundwater). Beyond this sample, an additional set of at least 10 projects (the design of which was financed by PRONAREC II) may be put to tender during the first year of execution of PRONAREC III.

1.25 **Component 2. Developing irrigators' capacities to ensure the sustainability of irrigation systems (US$22.08 million).** This component is geared to promoting sound management of the irrigation systems and ensuring that beneficiaries can seize the productive opportunities of agriculture under irrigation. It includes the contracting of support and technical assistance services (and their supervision) with a gender focus, a watershed approach and a market orientation, as well as financing of workshops, materials, instructors and the sharing of experience among farmers. These services may be provided by firms or by individuals, depending on the specific circumstances of each region. The planning and delivery of services will take into account and be adapted to the language spoken by the beneficiaries. The services will include: (i) specialized technical assistance in operating and maintaining irrigation infrastructure and efficient water use; (ii) training in the management of crops under irrigation and identification of marketing opportunities; (iii) technical assistance to enhance the organizational and operational capacities of the irrigation associations; (iv) the gender focus; and (v) training in water source conservation, the watershed approach, and risk management. In order to boost the quality of the services offered to the irrigators, the component will also finance training in the sustainable management of irrigation systems for the municipal and departmental officials involved in the program.[21]

1.26 **Component 3. Improved investment planning and management of water resources for irrigation (US$4.82 million).** This component seeks to ensure the sustainability of water resources and to impart information and knowledge for the proper planning of irrigation investments. It will include financing of: (i) the design and dissemination of Local Water Use Plans;[22] (ii) approval of the manual for irrigation project supervision during the preinvestment and investment phases; (iii) training for technical staff in formulating projects with a watershed approach;

[21] This training will prioritize the outputs of the Training Plan and the modules developed within that plan, as part of PRONAREC II.

[22] Priority will be given to plans that carry the commitment of the municipio and/or department to cover the counterpart contribution for at least one irrigation project identified in the plan.

(iv) implementation of strategies for irrigation-watershed articulation at the national level and irrigation-watershed-production articulation at the subnational level; (v) performance evaluations of the irrigation subsector; (vi) design of a manual for undertaking impact evaluations in the subsector; (vii) management of the Water Resource Information System (SIRH)[23] by the departmental governments; (viii) priority studies for managing water for irrigation purposes; and (ix) small-scale meteorological stations for better management of the resource.

C. Results matrix and key indicators

1.27 The Results Matrix for the program has been agreed with the government and includes the program's objectives, impacts, outcomes and outputs, along with their respective indicators and means of verification.

Table 2. Main indicators in the Results Matrix

Impact and outcome indicators	Timing of measurement	Rationale for selection
Annual incomes per household (US$)	Years 1 and 5	Measures the impact on living standards through the increase in incomes
Value of production (US$/ha)	Years 1 and 5	Measures the change in agricultural productivity due to the adoption of technologies.
Value of agricultural sales (US$)	Years 1 and 5	
Number of hectares under irrigation (#)	Years 1 and 5	Measures the adoption of irrigation.

II. Financing Structure and Principal Risks

A. Financing instruments

2.1 The program is designed as an investment loan under the global multiple works operation modality (GOM), as it will finance projects that are similar but independent (paragraph 1.21), with defined eligibility criteria (paragraphs 1.21 to 1.23) for which there is substantial evidence of their viability and a representative sample (paragraph 1.24). The total cost of the program is US$196 million, of which US$158.4 million will be financed by the Bank using a blend of resources from the Single Currency Facility of the Ordinary Capital and the Fund for Special Operations. Table 3 presents the breakdown of costs and their source of financing. The program will have a disbursement period of five years.

[23] The SIRH has adopted the National Irrigation Information System, which was supported by PRONAREC II.

Table 3. Program cost and financing (US$ millions)

Components	IDB	Local Counterpart*	TOTAL	%
Component 1. Investments in the development of community irrigation with a watershed approach	124.55	35.00	159.55	81.40
Component 2: Developing irrigators' capacities to ensure the sustainability of irrigation systems	22.08	-	22.08	11.27
Component 3: Improved investment planning and management of water resources for irrigation	4.82	-	4.82	2.46
Administration, audit, and evaluation	6.95	2.60	9.55	4.87
TOTAL	**158.40**	**37.60**	**196.00**	**100**

* Local counterpart resources to finance administration, auditing, and evaluation will come from the National Treasury.

B. Economic viability

2.2 An economic viability analysis was conducted for a total of 56 projects (47 from PRONAREC I and nine new projects from PRONAREC III). The data used for the economic analysis were drawn from the impact evaluation of PRONAREC I and from surveys of a selection of farm households involved in each of the sample projects. In the case of PRONAREC I projects, the annualized investment costs in infrastructure and net annual incremental incomes per hectare were used to calculate the benefit-cost ratio. For the projects to be financed by PRONAREC III, a cost-benefit analysis was conducted for a sample of nine representative projects by type of irrigation technology (conventional and mechanized) and agro-ecological zone. The marginal benefits were calculated from the increase in the value of farm output, sales, and incomes of beneficiary households.

2.3 The economic analysis of the projects by type included the costs financed by the beneficiary households and by the program. The private costs include: (i) agricultural output; (ii) investment in farm-specific infrastructure; and (iii) administration, operation and maintenance of the irrigation system. The costs financed with public funds include: (i) preinvestment studies; (ii) investment in shared water-related infrastructure and the associated environmental mitigation costs; and (iii) technical assistance. A time horizon of 15 years was assumed, with the hypothesis that the farms would achieve their expected yields gradually over five years. It was found that the internal rate of return (IRR) for all of the sample projects surpassed the required 12%, and was robust to sensitivity analysis.

2.4 The economic viability of the program as a whole was also analyzed, using economic efficiency prices. With conservative assumptions for the different project categories, the IRR at market prices is 14.16%. Sensitivity to cost increases and income reductions was also analyzed in order to identify breakeven points, which express the limit values of a critical variable within which the program remains economically viable (see Economic Evaluation).

C. Environmental and social risks

2.5 In accordance with the Environment and Safeguards Compliance Policy (OP-703), this has been classified as a category B operation. An Environmental and Social Management Report has been prepared for the program, and it includes the Environmental and Social Management Plan. The analysis concluded that, given the scale and type of investments, no significant or lasting social-environmental risks were expected. On the contrary, the program is expected to yield positive impacts, by improving living conditions for low-income rural families and making more efficient use of water. The program includes a specific budget for monitoring the Environmental and Social Management Plan. The program will not finance projects in protected areas. Recognizing the prevalence of the indigenous population in rural areas of Bolivia, the program will ensure compliance with operational policy OP-765: in particular, it will benefit indigenous people directly, it will conduct consultations in a culturally appropriate manner, and it will recognize indigenous authorities in the process. Lastly, based on experience with the preceding projects, there is not expected to be any need for resettlement, although the program will have a Resettlement Framework in case it should be necessary.

D. Fiduciary and other risks

2.6 Given the satisfactory experience with PRONAREC II on the part of the FPS and the MMAyA, through the Vice Ministry of Water Resources and Irrigation (VRHR), there are not expected to be any fiduciary risks that could affect achievement of program objectives.[24] Nevertheless, since the preinvestment phase (adjustments or new designs) will become the responsibility of the MMAyA, and it is important to ensure that procurement methods are tailored to program needs, it will be necessary to strengthen the specialized technical team and to apply the options spelled out in Annex III, such as contracting mechanisms that will allow the mass selection and award of contracts. To address any risks of a shortfall in local counterpart funds or in the supply of services for the program, steps will be taken with the MEFP to guarantee the contribution, and sessions will be held to promote the program among potential suppliers.

2.7 **Other risks** identified have to do with poor quality in the design and supervision of works; shortcomings in the support provided for beneficiaries and in departmental capacities to take over technical assistance at the end of the program; and limited consolidation of water resource management. The program's design includes mitigation measures in support of the program and funding to adjust the design and supervision of works, to strengthen technical assistance, and to bolster the departmental teams for program execution.

2.8 The sustainability of the irrigation investments on the part of the Irrigators' Organizations has been shown to be satisfactory (paragraphs 1.8 and 1.9), and will be further enhanced with improvements to technical assistance and municipal support.

[24] The institutional capacity of the executing agency and the FPS for execution was evaluated during program preparation using the Institutional Capacity Analysis Platform (ICAP) and was supplemented with an institutional analysis for the design of the program.

III. Implementation and Management Plan

A. Program execution and administration

3.1 The borrower will be the Plurinational State of Bolivia, and the executing agency will be the Ministry of Environment and Water (MMAyA), through its Vice Ministry of Water Resources and Irrigation (VRHR), which in turn will act through the Program Coordination and Execution Unit of the "More Investment for Irrigation" Program (PCEU-MIRIEGO). The VRHR will be the main point of contact between the Bank and the borrower during execution, and will be responsible for general administration, financial management and accounting, and program monitoring and evaluation. The FPS will serve a coexecuting agency for part of Component 1. Maintaining the execution arrangements from loans 3060/BL-BO and 2057/BL-BO, the VRHR will also handle program procurement, while delegating to the FPS the tendering of contracts for the execution and supervision of irrigation system-related works under Component 1 (paragraph 3.5). The autonomous departmental and/or municipal governments (ADMGs) will select and present the irrigation projects. **Prior to the start of tendering for program works under the responsibility of the FPS, the Ministry of Economy and Public Finance (MEFP), the Ministry of Development Planning, the MMAyA, and the FPS will sign the corresponding subsidiary agreements in which the following aspects, among others, are spelled out: (i) how the loan funds will be transferred to the FPS; and (ii) a commitment to carry out the activities called for in the program, in accordance with the loan contract and the Operating Regulations.**

3.2 The designs for Component 1 may be taken from the projects generated by: (i) autonomous departmental and/or municipal governments, whose designs will be evaluated by the MMAyA and may be supplemented as necessary, or (ii) the program, as a result of the Local Water Use Plans (paragraph 1.26), by mutual agreement with the departments and municipios.

3.3 The responsibilities of the VRHR include: (i) maintaining consolidated accounting records that enable identification of the sources and uses of program funds by component; (ii) preparing and submitting to the Bank disbursement requests and audited consolidated financial statements for the program; (iii) preparing public bidding and tendering processes, processing contracts and relevant payments, and providing technical supervision of contracts for activities under its responsibility; (iv) ensuring that the technical documentation supporting investments under the responsibility of the FPS is consistent with the program objective; (v) preparing the required consolidated monitoring and evaluation reports, as well as submitting these to the Bank and making them publicly available; (vi) ensuring compliance with the contractual clauses established in the loan contract, the program Operating Regulations, and the agreements signed for program implementation; and (viii) development and supervision of support and technical assistance. **As a special contractual condition precedent to the first disbursement of the loan, the MMAyA will have approved and put into effect the Operating Regulations, under terms and conditions previously agreed with the Bank, including the acceptance of the FPS with respect to execution of program activities.**

3.4 The VRHR will carry out the above-mentioned tasks through the PCEU-MIRIEGO, created in 2015 by Ministerial Resolution 307, amending the name of the Program Coordination and Execution Unit for the National Irrigation Program with a Watershed Approach, the executing agency for PRONAREC I and II. It will also allocate to the PCEU the responsibility for other programs and projects to be implemented in the irrigation subsector. The PCEU-MIRIEGO (hereinafter "the PCEU") consists of a coordinator with overall responsibility as well as a team of specialists in irrigation project cycle management, including finance and accounting, procurement, and monitoring. The VRHR will have the support of MMAyA staff in the environmental and information technology areas.

3.5 The FPS will be responsible for contracting the execution and technical supervision of the works. Throughout the project cycle it will ensure compliance with environmental laws and the clauses in the loan contract, including the Operating Regulations. The FPS will also be responsible for monitoring compliance with the operation and maintenance of the delivered works by the beneficiaries. In addition, the FPS will prepare and, through the PCEU, will submit to the Bank disbursement requests and supporting documentation for expenditures and bidding processes, as well as semiannual execution reports, ensuring that this information is sent at least 10 working days before the deadline for sending the PCEU report to the Bank. The FPS will also send monthly reports to the PCEU, with information as agreed by the two institutions in the Operating Regulations, and (as stipulated in the Operating Regulations) it will give the PCEU and the Bank access to the DataGen, iSAP and APK monitoring systems, so as to allow for real-time monitoring of the physical and financial progress of the works.

3.6 The FPS will carry out the above-mentioned tasks through a specialized water resources unit created as part of execution of the loan for BO-L1106. That unit will be supported by staff assigned to the program in the areas of project management, economic analysis, environmental analysis, procurement, finance and accounting and administration, and its composition must be reported to the PCEU.

3.7 The ADMGs will be responsible for selecting and presenting the projects in their respective jurisdictions to the PCEU. They will: (i) provide beneficiaries with supplementary agricultural technical assistance in irrigation and other areas within their competence, through their departmental agricultural services (SEDAG) and their irrigation and risk management units; (ii) conduct additional activities in the relevant watersheds in support of the irrigation projects; and (iii) be responsible for ensuring local counterpart financing for each project. They will receive technical support from the MMAyA and the FPS for the evaluation of studies and final designs as part of the prior evaluation of the projects.

3.8 To participate in the program, each ADMG will sign an intergovernmental agreement with the MMAyA and the FPS determining the parties' obligations during program execution, including: (i) providing the counterpart financing necessary to undertake projects financed with program resources; (ii) where necessary, requiring municipios to pass a resolution expropriating the land on which the infrastructure will be built, as well as the flooding area for the irrigation projects; (iii) in the event that the ADMG decides not to prioritize an irrigation project for which preinvestment studies have been carried out using program funds, reimbursing the costs incurred in preparing the preinvestment studies;

(iv) the commitment of the respective ADMG to sign the transfer and financing agreements with the FPS for each project; and (v) the commitment by the respective ADMG to transfer the works to the municipios upon completion.

3.9 The ADMGs will be involved in project identification, in monitoring the execution of those projects, in coaching and technical assistance activities, and in ensuring the sustainability of the systems. Among other aspects relating to coaching and technical assistance, pursuant to the Operating Regulations the municipios and departmental governments will support the supervision of the services provided, strengthening the links with the Irrigators' Organizations in order to maintain their commitment after the program is completed. Prior to the start of tendering for the irrigation works, the autonomous departmental and/or municipal governments and the respective Irrigators' Organization will sign an agreement establishing, among other things, the responsibility of the Irrigators' Organization for maintaining the irrigation systems and the obligation to provide the information requested by the executing agency.

3.10 Procurement of goods, works, nonconsulting services, and consulting services will be carried out in conformity with the Bank policies set forth in documents GN-2349-9 and GN-2350-9, and with the mass selection and contracting mechanisms (which are consistent with document GN-2350-9), to be laid out in the program Operating Regulations. Procurement will be supervised in accordance with the procurement plan. Processes for procuring goods, nonconsulting services, and works in amounts within the thresholds for national competitive bidding, and consulting services by individuals and consulting firms for less than US$200,000, will be reviewed ex post; subsequently, this procedure may be extended to higher thresholds, depending on the procurement management performance of the MMAyA and the FPS. The consulting firm for the SIRH software will be contracted directly, pursuant to document GN-2350-9 (paragraph 3.10a), as these services represent a continuation of work successfully completed with PRONAREC II (Annex III, paragraph 6.5.5); direct contracting will also be used for individual amounts of less than US$500 (when as a block they do not exceed US$5,000), as was approved for PRONAREC II (consistent with document GN-2349-9, paragraph 3.6(a); and Annex III, paragraph 6.16).

3.11 **Audits.** For the duration of program execution, audited annual financial statements will be submitted to the Bank, pursuant to OP-273-6 and the Guidelines for Financial Reports and External Audit. Audits will be carried out by an independent audit firm acceptable to the Bank, contracted with program funds, and selected in accordance with the Bank's policies and procedures.

B. Monitoring and evaluation plan

3.12 As part of program monitoring, the VRHR will submit semiannual progress reports to the Bank within 60 days after the end of each six-month period during program execution, indicating the level of fulfillment and progress (both physical and financial) for the program as a whole and for individual works, using the indicators and activities set out in the Results Matrix, the Annual Work Plan, and the Procurement Plan. The reports will examine any problems encountered and propose corrective measures to deal with them. The reports relating to the second six-month period will also include the maintenance status and plans for the works executed under the program.

3.13 **Impact evaluation.** The evaluation will identify the effects attributable to PRONAREC in terms of beneficiary households' incomes and productivity. It will also provide tools for analyzing the process of adopting irrigation technologies in Bolivian agriculture. The evaluation will be financed with program funds and will be based on a quasi-experimental Propensity Score Matching methodology combined with Differences in Differences, to create a counterfactual scenario.

Development Effectiveness Matrix			
Summary			
I. Strategic Alignment			
1. IDB Strategic Development Objectives	**Aligned**		
Development Challenges & Cross-cutting Themes	**-Productivity and Innovation -Climate Change and Environmental Sustainability**		
Regional Context Indicators			
Country Development Results Indicators	**-Beneficiaries of improved management and sustainable use of natural capital (#)**		
2. Country Strategy Development Objectives	**Aligned**		
Country Strategy Results Matrix	**GN-2843**	**i) Reduce vulnerability to natural disasters and climate change, and ii) Improve the provision of quality public goods and services.**	
Country Program Results Matrix	**GN-2849**	**The intervention is included in the 2016 Operational Program.**	
Relevance of this project to country development challenges (If not aligned to country strategy or country program)			
II. Development Outcomes - Evaluability	**Highly Evaluable**	**Weight**	**Maximum Score**
	10.0		**10**
3. Evidence-based Assessment & Solution	**10.0**	**33.33%**	**10**
3.1 Program Diagnosis	**3.0**		
3.2 Proposed Interventions or Solutions	**4.0**		
3.3 Results Matrix Quality	**3.0**		
4. Ex ante Economic Analysis	**10.0**	**33.33%**	**10**
4.1 The program has an ERR/NPV, a Cost-Effectiveness Analysis or a General Economic Analysis	**4.0**		
4.2 Identified and Quantified Benefits	**1.5**		
4.3 Identified and Quantified Costs	**1.5**		
4.4 Reasonable Assumptions	**1.5**		
4.5 Sensitivity Analysis	**1.5**		
5. Monitoring and Evaluation	**10.0**	**33.33%**	**10**
5.1 Monitoring Mechanisms	**2.5**		
5.2 Evaluation Plan	**7.5**		
III. Risks & Mitigation Monitoring Matrix			
Overall risks rate = magnitude of risks*likelihood	**Medium**		
Identified risks have been rated for magnitude and likelihood	**Yes**		
Mitigation measures have been identified for major risks	**Yes**		
Mitigation measures have indicators for tracking their implementation	**Yes**		
Environmental & social risk classification	**B**		
IV. IDB´s Role - Additionality			
The project relies on the use of country systems			
Fiduciary (VPC/FMP Criteria)	**Yes**	**Financial Management: Budget, Treasury, Accounting and Reporting. Procurement: Information System.**	
Non-Fiduciary			
The IDB's involvement promotes additional improvements of the intended beneficiaries and/or public sector entity in the following dimensions:			
Gender Equality	**Yes**	**The project aims to increase the participation of women in the water user associations and to benefit them with tailored interventions.**	
Labor			
Environment			
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			
The ex-post impact evaluation of the project will produce evidence to close knowledge gaps in the sector that were identified in the project document and/or in the evaluation plan	**Yes**	**The proposed impact evaluation seeks to shed light on the cycle of adoption of irrigation systems, primarily as it relates to sustainability.**	

Note: (*) Indicates contribution to the corresponding CRF's Country Development Results Indicator.

The objective of the program is to increase the income of rural households benefited through increased agricultural area under irrigation and improved efficiency in water use and distribution of water for agricultural purposes, and better resource management.

The proposed program is the fourth loan to support the expansion of hectares of agricultural production under irrigation in rural Bolivia, and the third with a watershed approach. In the 20 years that the Bank has been supporting the expansion and improvement of community irrigation systems there is substantial experience and information that has been gathered, from baseline surveys and impact assessments, to studies on the sustainability of the systems implemented, which widely support the analysis presented in the program documentation. Irrigation effectiveness in increasing productivity is widely validated through impact assessments in other countries and the evaluation of the PRONAREC.

The Results Matrix demonstrates vertical logic, allowing for the linkage of the products, the outcomes and the expected impact, and generally contains SMART indicators, baseline and set targets.

The economic analysis presented consists of a cost-benefit of 9 sample projects and a cost-benefit analysis of the entire program based on key parameters derived from the experience of previous projects. The economic analysis is based on quantifying gross margins of production, differentiated with and without the project. The assumptions used in general seem reasonable.

The Monitoring and Evaluation Plan proposes an identification strategy based on difference in difference with Propensity Score Matching, and focuses on the technology adoption cycle. Overall the Plan meets the requirements.

RESULTS MATRIX

General objective of the program:	To increase the incomes of beneficiary rural households.
Specific objectives:	a. To boost the productivity of small-scale farmers by increasing the land area under irrigation. b. To enhance the efficiency of water use in irrigation systems. c. To improve the management of water for irrigation purposes.

EXPECTED IMPACT

Indicators	Baseline (2016)	Target (2020)	Means of verification	Comments
Expected impact: increase the incomes of beneficiary rural households				
Percentage increase in annual incomes (%)	0%	30%	Program impact evaluation	• The estimated targets emerge from the program impact evaluation surveys • The targets will be measured using the difference between beneficiary and control groups. • Baseline for annual gross income: US$3,370 • baseline for net farming income/ha:US$2,100

EXPECTED OUTCOMES

Project outcomes	Baseline (2016)	Target (2020)	Means of verification	Comments
Outcome 1: Boost the productivity of beneficiary households by increasing the land area under irrigation				
Indicator 1.1: percentage increase in the value of agricultural production (%)	0%	35%	The targets will be measured using the difference between the beneficiary and control groups as revealed by the impact evaluation surveys	• The estimated targets emerge from the program impact evaluation surveys • Baseline: - value of production/ha: US$3,000 - value of sales: US$1,460
Indicator 1.2: percentage increase in the value of agricultural sales (%)	0%	55%		

Project outcomes	Baseline (2016)	Target (2020)	Means of verification	Comments
Indicator 1.3: increase in the number of hectares under irrigation, new or improved (#)	0	25,000	Final program evaluation	
Disaggregation: increase in the number of hectares under mechanized irrigation	0	12,500		
Outcome 2: Enhance the efficiency of water use in irrigation systems and strengthen capacities for community management				
Indicator 2.1: average water use efficiency in mechanized irrigation systems (%)	25%	75%	Final program evaluation	• Efficiency refers to the volume of water used on the farm divided by the total volume of water captured by the system. • The baseline will be validated during program execution. • The baseline and target values reflect the analysis of the project sample.
Indicator 2.2: average water use efficiency in traditional irrigation systems (%)	20%	45%		
Indicator 2.3: beneficiaries who have made the required contributions to the Irrigators' Organization (%)	0%	70%	Impact evaluation surveys of leaders of the Irrigators' Organization.	
Outcome 3: Improve resource management through application of municipal water use plans				
Indicator 3.1: irrigation projects prioritized for financing, emerging from the local water use plans (#)	0	35	Final program evaluation	
Indicator 3.2: No. of persons benefiting from better management and sustainable use of natural capital	0	21,100	Final program evaluation	The beneficiaries are members of the program irrigation systems that have made the required on-farm investments

OUTPUTS

Outputs	Unit of measure	Base-line	Year 1	Year 2	Year 3	Year 4	Year 5	Target	Means of verification	Comments
			2017	2018	2019	2020	2021			
Component 1. Investments in the development of community irrigation with a watershed approach										
Output 1: designs of irrigation projects with program approach, adjusted	# designs	10	20	40	50	0	0	120	Project designs adjusted	Projects with program approach take into account the PRONAREC III watershed, gender, and market approaches
Output 2: designs of larger irrigation projects with program approach, prepared	# designs	0	0	5	10	20	20	55	Project designs prepared	Projects with program approach take into account the PRONAREC III watershed, gender, and market approaches
Output 3: irrigation systems built	# systems	0	0	50	65	75	0	190	Final delivery certificates for projects	
Disaggregation 1: smaller irrigation systems built, rehabilitated and/or improved (up to US$300,000)	# systems	0	0	30	40	50	0	120	Final delivery certificates for smaller projects	
Disaggregation 2: irrigation systems built, rehabilitated, and/or improved (> US$300,000l)	# systems	0	0	20	25	25	0	70	Final delivery certificates for irrigation projects	
Milestone 3: hydro-meteorological stations installed	# stations	0	25	25	0	0	0	50	Delivery certificates	
Component 2: Developing irrigators' capacities to ensure sustainability of irrigation systems										
Output 5: technical personnel trained in sustainable management of irrigation systems	# technicians	0	50	50	50	0	0	150	PCEU reports	
Disaggregation: female technicians trained in sustainable management of irrigation systems	# women	0	0	10	20	0	0	30	PCEU reports	

Outputs	Unit of measure	Base-line	Year 1	Year 2	Year 3	Year 4	Year 5	Target	Means of verification	Comments
			2017	2018	2019	2020	2021			
Output 6: farmers who receive support services under the program	# farmers	0	0	5,800	6,700	8,600	0	21,100	Support service conformity certificate issued by the PCEU	
Disaggregation: female farmers who receive support services	# women	0	0	780	1,040	840	0	6,650	PCEU reports	
Output 7: farmers who receive technical assistance under the program	# farmers	0	0	0	5,800	6,700	8,600	21,100	Technical assistance service conformity certificate issued by the PCEU	
Disaggregation: female farmers who receive technical assistance services	# women	0	0	0	1,950	2,600	2,100	6,650		
Component 3: Improved investment planning and management of water resources for irrigation										
Output 8: local water use plans designed and disseminated	# plans	0	5	10	15	20	0	50	Plan documents	
Milestone 1: study prepared for definition of hydro-meteorological stations	Study	0	1	0	0	0	0	1	Program progress report	
Milestone 2: hydro-meteorological stations installed	# stations	0	25	25	0	0	0	50	Delivery certificates	
Output 9: manual for preinvestment and investment supervision of irrigation projects, approved	# manual	0	1	0	0	0	0	1	Manual approved	
Output 10: technical personnel trained in formulating projects with program approach	# technicians	0	100	100	0	0	0	200	Approval certificates issued by VRHR	
Output 11: strategies implemented for intersectoral irrigation-watershed articulation	# strategies	0	0	0	1	1	0	2	Program progress reports	
Output 12: performance evaluation of the irrigation subsector completed	# evaluation	0	0	1	1	1	1	4	Program progress reports. The evaluations use the performance evaluation matrix defined by the MMAyA	

Outputs	Unit of measure	Base-line	Year 1	Year 2	Year 3	Year 4	Year 5	Target	Means of verification	Comments
			2017	2018	2019	2020	2021			
Output 13: manual designed for conducting impact evaluations of the irrigation subsector	# manual	0	0	0	1	0	0	1	Program progress reports. Preparation of the manual includes development of the impact evaluation methodology	
Output 14: departmental governments are managing SIRH information	# departmental governments	0	0	0	0	1	1	2	Program progress reports	

FIDUCIARY AGREEMENTS AND REQUIREMENTS

Country:	The Plurinational State of Bolivia
Project number/ name:	BO-L1106 – National Irrigation Program with a Watershed Approach III (PRONAREC III)
Executing agency:	Ministry of Environment and Water (MMAyA)
Prepared by:	Carolina Escudero (PRM) and Abel Cuba (FM)

I. EXECUTIVE SUMMARY

1.1 This Annex III has been prepared on the basis of the following elements, used to determine the level of fiduciary risk associated with the program: (a) results of the most recent Public Expenditure and Financial Accountability (PEFA) assessment, 2009; (b) analysis of the institutional capacity of the Vice Ministry of Water Resources and Irrigation's Program Coordination and Execution Unit (PCEU-VRHR) and of the National Fund for Productive and Social Investment (FPS) carried out during design of the operation; and (c) results of supervision conducted by FMP/CBO staff during execution of operation BO-L1084.

1.2 Program execution will be the responsibility of the PCEU-VRHR, which comes under the Ministry of Environment and Water, except in the case of investments in irrigation systems with a watershed approach (Component 1, Subcomponent 1), which will be executed by the FPS.

1.3 Accounting records for the operation will be maintained in the Public Management System (SIGEP). The IDB's Project Management System (SIAP-IDB), developed by the Country Office in Bolivia (CAN/CBO), will be used for the financial reports required by the Bank. The IDB's standard bidding documents or other documents agreed with the Vice Ministry of Public Investment and External Financing (VIPFE) and made available through SICOES[1] will be used for execution of this operation. Similarly, SICOES will be used for the publication of specific procurement notices.

1.4 The Government of Bolivia and the Bank have drawn up an agreement for making partial use of the Basic Regulations for the System for the Administration of Goods and Services in IDB-financed operations in Bolivia. This program could apply that agreement once it enters into force.

II. THE EXECUTING AGENCY'S FIDUCIARY CONTEXT

2.1 As a State agency, the MMAyA is governed by Law 1,178 of 20 July 1990 on Government Control and Administration. This law regulates the administration

[1] County Procurement Subsystem, which has been approved for use in Bank operations.

and control systems for government resources, and their relationship with country planning and public investment systems.

2.2 The Ministry uses SIGEP for all of its financial records. SIGEP offers secure and reliable access to budget execution information. It does not provide data in foreign currency, or on the basis of the program's investment categories. However, with Bank support the MEFP[2] has developed the Accounting Management Module, which allows reports to be issued based on the financing structures and the currency of loans from international development partners, meaning that these limitations should be overcome. Until such time as this module is in full production, the PCEU-VRHR will use SIAP-IDB as a supplementary accounting and reporting system for accountability and financial reporting purposes. As a State agency, the MMAyA is supervised by the Office of the Comptroller General and an internal audit unit.

2.3 The FPS is a decentralized public entity attached to the Ministry of Development Planning. Its function is to execute investment projects in the areas of social infrastructure and support for production at the subnational level. It acts in response to sector ministry requests for its services, and is financed by nonreimbursable transfers. FPS activities are framed within national and sector development policies.

2.4 The FPS was created to achieve average annual investment levels of approximately US$50 million in the 2001 to 2006 period. Since 2007, the volume of investment executed by the institution has been trending upward, reaching nearly US$110 million in 2012. Several IDB-financed operations with satisfactory performance are included in this amount.

III. Fiduciary Risk Evaluation and Mitigation Measures

3.1 The Institutional Capacity Assessment System (ICAS) evaluation of both the PCEU-VRHR and the FPS, combined with the observations of the FMP/CBO team during execution of operation BO-L1084, indicate an adequate level of institutional development and capacity, and a LOW level of fiduciary risk. However, the fiduciary risk associated with the operation is considered MEDIUM, given the need to implement appropriate mechanisms to ensure effectiveness in mass contracting (taken from the Procurement Policies and developed in the Operating Regulations) for the preinvestment phase (adjustments or new designs), and the geographic dispersal of the projects, which could result in a shortage of bids to meet the contracting needs for the works planned under the program.

3.2 **Coordination.** With a view to ensuring optimal coordination and relations between PCEU-VRHR and the FPS, the program's Operating Regulations will include flow charts based on independent and exclusive administrative and legal functions, as well as the coordination mechanism that will govern participants under the framework of this project. Among other things, that framework will define time limits and responsibilities for the FPS to generate and send operational and financial information.

[2] Ministry of Economy and Public Finance.

3.3 **Procurement.** While the PCEU-VRHR has performed satisfactorily under PRONAREC I and PRONAREC II, it must be recognized that PRONAREC III calls for that unit to assume the contracting of preinvestment activities. Consequently, the PCEU-VRHR will have to be strengthened with the least one additional procurement specialist with experience in applying the Bank's procurement policies, to ensure that the planned quality and timing of contracting will not be affected.

3.4 **Internal processes in the legal and administrative areas.** It is recommended that the staff of the legal and administrative departments of both the MMAyA and the FPS should be familiarized with PRONAREC III and its conditions of execution. They will therefore be invited to take part in the operation's startup workshop and in the training sessions offered by the Bank on the IDB's fiduciary management standards, as well as participating in the preparation of bidding documents or calls for proposals.

3.5 **Public financial management.** The PCEU-VRHR will have access to SIGEP for the timely recording of payment requests and financial records. SIAP-IDB will be used as a supplementary system for recording program transactions. The FPS will use SIGEP to record transactions under its component, and it will be expected to submit periodic reports to the PCEU on cash flow management so that the latter can monitor the integrity of program investments.

IV. CONSIDERATIONS FOR THE SPECIAL CONDITIONS OF THE CONTRACT

4.1 **Operating Regulations.** Based on prior agreement between the Bank and the parties, the Operating Regulations will include details of execution arrangements, procedures, and information flows.

4.2 **Exchange rate agreed with the executing agency for rendering accounts.** The exchange rate used will be that prevailing in the borrowing country on the effective date of the conversion of funds into local currency in the executing agency's accounts.

4.3 **Financial statements and other audited reports.** For the duration of the program disbursement period, audited program financial statements will be submitted to the Bank within 120 days after the end of each of the executing agency's financial periods. The statements will be audited by an independent auditing firm acceptable to the Bank. The final audit will be submitted to the Bank within 120 days following the date stipulated for last disbursement under the loan.

4.4 The terms of reference for contracting the independent auditing firm will be subject to the Bank's prior approval and may include outputs framed within the International Standards on Auditing, related to the financial audit of the program, and related audit tasks.

V. Considerations for the Special Conditions of Execution

5.1 The procurement of vehicles under the program will not be required to follow the procedure established in Supreme Decree 2063 of 23 July 2014[3] and its amendments, as long as the contract (and its content: procurement plan, annual work plan, etc.) is approved by the Congress and has the force of law.

VI. Agreements and Requirements for Procurement Execution

6.1 **Procurement execution.** Procurement will be carried out in accordance with Bank policies set forth in documents GN-2349-9 and GN-2350-9.

6.2 **Procurement of works, goods, and nonconsulting services.** Program-related contracts for works, goods, and nonconsulting services subject to International Competitive Bidding (ICB) will be carried out using the Standard Bidding Documents issued by the Bank.

6.3 Works for an estimated amount of less than US$3 million will be contracted via the Shopping method, using the Standard Price Comparison Document for Works Procurement prepared by the Bank for operations in Bolivia, as these are simple undertakings and their execution is uncomplicated.

6.4 Works for amounts of less than US$250,000 will be executed via the Shopping method, using the document for requesting quotes for small contracts agreed with the Vice Ministry of Public Investment and External Auditing (VIPFE), which is available in SICOES.

6.5 **Selection and contracting of consultants.** Contracts for consulting services will be listed in the initial procurement plan and executed as follows:

6.5.1 **Selection of consulting firms.** Consulting firms for the project will be selected using the Bank's Standard Request for Proposals.

6.5.2 **Shortlist of consulting firms.** For the application of methods other than selection based on the consultants' qualifications (CQS), this list may be comprised entirely (100%) of Bolivian firms, for contracts under the threshold the Bank established for Bolivia of US$200,000.

6.5.3 **Mass selection of consulting firms for the preinvestment component.** Initially, at least 18 contracts with consulting firms are planned for preinvestment (adjustments or new designs) and monitoring.

6.5.4 These contracts may be considered minor services, for which the preparation and evaluation of competitive proposals is not justified. In this respect, and pursuant to provision 3.7 of document GN-2350-9, the CQS method will be used. Implementation of this method will be spelled out in the Operating Regulations.

6.5.5. **Single-source selection of consulting firms.** Because these are services that represent a continuation of work begun under PRONAREC II and those services have been performed satisfactorily, the preparation of

[3] See the full text of this decree at: https://www.sicoes.gob.bo/documentos/14-0283-17-487613-1-2_RC_20140929163832.pdf.

regulations for the use, management, and administration of the SIRH, preparation of computer modules for the SIRH and employee training in the use of the system will be handled directly pursuant to provision 3.10 (a) of document GN-2350-9.

6.6 **Selection of individual consultants.** Individual consultants will be selected on the basis of a comparison of the candidates' individual qualifications. When the call for proposals is made through SICOES, one qualified candidate will suffice; when the call is by invitation, the qualifications of at least three candidates will be compared. When the tasks will involve other persons in providing administrative or operational assistance, the advisability of using individual consultants with supplementary services will be examined on a case-by-case basis.

6.7 **Mass selection of individual consultants.** This type of contracting will be based on the individual consultant selection method indicated in the Procurement Policies, and its implementation will be spelled out in the Operating Regulations based on similar mechanisms used in PRONAREC II. PRONAREC I and II showed that, given the great geographic dispersal of projects, hiring consulting firms is not the best way to provide preinvestment services (adjustments or new designs), coaching, and technical assistance, and can result in higher costs for the project.

6.8 **Procurement planning.** The PCEU-VRHR and the FPS will publish the procurement plan in the Procurement Plan Execution System (SEPA) and will update it at least once each year to reflect the project's actual execution needs and progress achieved.

6.9 **Advance procurement/retroactive financing.** No advance procurement or retroactive financing is foreseen.

6.10 **Domestic preference.** The application of domestic preference will not be considered in the procurement processes envisaged for this operation.

6.11 **Terms of reference and technical specifications.** The executing agency, in coordination with the Project Team Leader, is responsible for reviewing the shortlist selection criteria, terms of reference, and/or technical specifications. In all cases these must be agreed ex ante.

6.12 **Table of threshold amounts.**

Works			Goods and Nonconsulting Services			Consultancies	
International Competitive Bidding	**National Competitive Bidding**	**Shopping**	**International Competitive Bidding**	**National Competitive Bidding**	**Shopping**	**International Advertising for Consulting Services (except when CQS is used)**	**Shortlist 100% National**
Greater than US$3 million	Less than or equal to US$3 million	Less than US$1 million	Greater than US$200,000	Less than or equal to US$200,000	Less than or equal to US$50,000	Greater than US$200,000	Less than or equal to US$200,000

6.13 **Main procurements.** The main procurements for this operation are detailed below:

Activity	Type of Bidding Process	Estimated Date	Estimated Amount
Consulting firms			
18 contracts (initial estimate) for preinvestment (adjustments or new designs), monitoring, and tracking of targets	CQS	To be determined	US$3,025,000
7 contracts for various services, including larger contracts for design preparation, external audit and program impact evaluation	QCBS	To be determined	US$2,850,000
Development of regulations for use, handling, and administration of the SIRH; SIRH software modules and employee training in use of the system	SSS	To be determined	US$300,000
Individual consultants			
Various contracts for preinvestment services (adjustments or new designs), coaching, and technical assistance for projects.	NICQ, IICC, or Mass Selection	To be determined	US$35,379,000
Goods			
4 contracts to acquire vehicles, furnishings, and computer equipment for the PCEU-VRHR and departmental offices, and for the functioning of the SIRH	Shopping	To be determined	US$395,000
Measuring equipment	NCB	To be determined	US$300,000
Meteorological stations	ICB	To be determined	US$1,000,000
Works			
Various contracts for small irrigation systems in portfolios 1, 2, and 3	Shopping	To be determined	US$24,000,000
Various contracts for irrigation systems in portfolios 1, 2, and 3	ICB	To be determined	US$108,000,000

* To access the procurement plan for the first 18 months, click here.

6.14 **Procurement supervision.** The project may be executed based on ex post review for procurement processes worth up to 100% of the threshold for NCB, as set out in the table below. (Single-source selection and procurement transactions not included in this table will be subject to ex ante review.) The external audit firm for the program will conduct the annual ex post procurement reviews. As the level of fiduciary risk is rated MEDIUM, the Bank will offer ongoing training and advisory services for using the mass selection methods for firms and individuals.

Threshold for Ex Post Review

Works	Goods and Nonconsulting Services	Consulting firm services Shortlist may be 100% national	Consulting Services Individual
Contracts for amounts less than or equal to US$3,000,000	Contracts for amounts less than or equal to US$200,000	Contracts for amounts less than or equal to US$200,000	Not subject to any limit.

6.15 **Recurring expenses.** Recurring expenses are those operational and maintenance expenses that are necessary for program functioning. These will be agreed with the Project Team Leader and included in the procurement plan. Recurring expenses will be governed by the executing agency's administrative procedures, as referenced in the Operating Regulations.

6.16 **Single-source selection.** Contracts for less than US$500 individually, and which in total do not exceed US$5,000, may be contracted directly in order to achieve economy and efficiency in execution. These contracts will be for logistic expenses, technical coordination meetings, and workshops. This is aligned with provision 3.6(a) of document GN-2349-9, complementing the Procurement Function Operational Guidelines (document OP-272-2), which set the threshold of up to US$750,000 for purchases or direct contracting of goods, works, and nonconsulting services that are subject to review by the Procurement Specialist and the no objection of the Project Team Leader whenever the need arises. These contracts are to be approved by the Project Team Leader and the procurement plan should also be updated.

6.17 **Files.** The MMAyA and the FPS will be responsible for the supporting documentation, procedures, and controls necessary for project execution, as well as maintaining these in accordance with the terms of the loan contract and local laws.

VII. FINANCIAL MANAGEMENT AGREEMENTS AND REQUIREMENTS

7.1 **Programming and budget.** The PCEU-VRHR, which is currently in operation, has an administrative division[4] under which the project will be created. This will allow budget records to be based on individual identification of the sources of financing and funds used in project execution. Initial inclusion in the budget as well as future budget modifications will be based on the annual work plan and project execution plan agreed with the Bank. Budget modifications must also be approved through a Ministerial Resolution by the Ministry of Development Planning (MPD).

7.2 The FPS will establish a budgetary programming structure in SIGEP that will allow for identification of budget line items that are relevant for the corresponding component. The FPS will comply with MPD and MEFP guidelines in the case of

[4] Under SIGMA's budgetary programming structure, an administrative division may include several projects with independent records and controls.

any budget entry, addition, or modification that might be required to ensure the timely execution of resources it administers.

7.3 **Accounting and information systems.** Both the PCEU and the FPS will record program transactions in SIGEP. The PCEU is currently authorized (via ministerial resolution) to prioritize payments.[5] This system integrates the following subsystems: Budget (budget execution), Assets (assets, liabilities, equity, and earnings), and Treasury (cash transfers), all compiled on an accrual basis. In addition, for purposes of project accounting, an accounting catalog will be prepared to allow for the identification of expenditures incurred by transaction on a cash basis, aligning the program's investment categories with the respective budget line items and accounts. In addition, until such time as the SIGEP Accounting Management Module is in operation, the PCEU-VRHR will use the SIAP-IDB on an interim basis for program accounting and as a supplementary accounting system for the compilation of financial reports.

7.4 **Disbursements and cash flow.** The loan will be disbursed in the form of independent advances of funds to both the PCEU-VRHR and the FPS. The frequency of advances will be determined as a function of the program's financial programming, which will be updated periodically by the PCEU-VRHR and the FPS on a coordinated basis. The Bank may make a new advance of funds once at least 80% (in the case of the PCEU-VRHR) or 60%[6] (for the FPS) of previous fund advances has been accounted for. Loan proceeds will be deposited in a separate account in U.S. dollars, and subsequently transferred to another account in local currency (both within the GTA)[7]. The MMAyA and the FPS are responsible for the management of funds disbursed to them for execution of the components under their responsibility.

7.5 **Internal control and internal audit.** Financial management by the PCEU-VRHR is subject to annual reliability reviews by the internal audit unit, due to the level of execution for which it is responsible within the MMAyA structure. Therefore, the program is expected to be included in this type of review. Similarly, the FPS has an internal audit unit within its organizational structure that performs the same role. Execution of the program is thus expected to fall within the scope of this reliability review. As a strategic activity under its mandate, the Bank will arrange annual coordination meetings with the internal audit units of both bodies, in order to identify monitoring activities for the program.

7.6 **External control and reports.** In order to comply with the annual submission of the program's audited financial statements, the PCEU-VRHR will need to hire an independent auditing firm acceptable to the Bank, following Bank policies. The scope of the audit will include a review of the entire program, including execution under the responsibility of the FPS.

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5 Prioritization constitutes the electronic transfer of funds via SIGMA. It is the final step in the system cycle (commitment, accrual, payment, and prioritization).

6 Pursuant to document OP-237-6, the FPS has accounted for the required percentage of advances, recognizing that the executing agency's administrative and financial systems are slow in making available the funds needed for payment during the first days of each month, as the receipts presented by its decentralized offices are bunched in the last days of the previous month, due to the cyclical nature of project execution.

7 General Treasury Account (Spanish CUT).

7.7 **Financial supervision plan.** The planning and frequency of supervision will be based on identified fiduciary risks. The following activities are envisaged: (i) the annual external audit by the firm hired for the review of program financial statements; (ii) onsite visits to the program's investment sites; and (iii) visits to verify compliance with the internal control recommendations issued by the program's external auditor.

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-__/16

Bolivia. Loan ____/BL-BO to the Plurinational State of Bolivia
National Irrigation Program with a Watershed Approach III
(PRONAREC III)

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 to cooperate in the execution of a national irrigation program with a watershed approach III – PRONAREC III. Such financing will be for the amount of up to US$134,640,000 from the resources of the Single Currency Facility of the Bank's Ordinary Capital, corresponds to a parallel loan within the framework of the multilateral debt relief and concessional finance reform of the Bank, 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 _____, 2016)

BO-L1106
LEG/SGO/CAN/IDBDOCS#40322193-16

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-__/16

Bolivia. Loan ____/BL-BO to the Plurinational State of Bolivia
National Irrigation Program with a Watershed Approach III
(PRONAREC III)

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 to cooperate in the execution of a national irrigation program with a watershed approach III – PRONAREC III. Such financing will be for the amount of up to US$23,760,000 from the resources of the Bank's Fund for Special Operations, corresponds to a parallel loan within the framework of the multilateral debt relief and concessional finance reform of the Bank, 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 _____, 2016)

BO-L1106
LEG/SGO/CAN/IDBDOCS#40322406-16