



# Board of Executive Directors

## For consideration

On or after 29 November 2017

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14 November 2017  
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**Public**  
**Simultaneous Disclosure**

**To:** The Executive Directors  
**From:** The Secretary  
**Subject:** Bolivia. Proposal for a loan for the "Program to Expand and Improve Water Supply Sustainability and Resilience in Cities"

**Basic Information:** Loan type ..... Global Multiple Works Operation (GOM)  
Borrower ..... Plurinational State of Bolivia  
Amount ..... up to US\$7,500,000  
Source ..... Concessional Ordinary Capital  
Amount ..... up to US\$42,500,000  
Source ..... Ordinary Capital  
Amount ..... up to US\$25,000,000  
Source ..... Korea Infrastructure Development Cofinancing Facility for Latin America and the Caribbean

**Inquiries to:** Omar Garzonio (telephone Country Office in Bolivia 591-2212-7740) or Raúl Muñoz (extension 3404)

**Remarks:** This operation is not included in Annex III of document GN-2884, "2017 Operational Program Report", approved by the Board of Executive Directors on 8 March 2017. In addition, its amount exceeds the ceiling established for Group D countries. Therefore, the operation does not qualify for approval by Simplified Procedure.

The financing of the 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-2884(2/17), AB-3066-2(8/16), AG-9/16, GN-2442-53(11/16), GN-2804(2/15), DE-12/15



DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

**BOLIVIA**

**PROGRAM TO EXPAND AND IMPROVE WATER SUPPLY SUSTAINABILITY  
AND RESILIENCE IN CITIES**

**(BO-L1191)**

**LOAN PROPOSAL**

This document was prepared by the project team consisting of: Omar Garzonio (WSA/CBO), Project Team Leader; Raúl Muñoz (INE/WSA), Alternate Project Team Leader; Lucio Javier García Merino, Mauro Nalesso, Efraín Rueda, and Liliana López (INE/WSA); Patricia Henríquez (VPS/ESG); Prem Jai Vidaurre (ESG/CBO), Alfred Grünwaldt (CSD/CCS); Cristina Mecerreyes and Fernando Loria (WSA/CBO); Javier Jiménez Mosquera (LEG/SGO); Shirley Foronda Nogales and Patricia Toriz Monroy (FMP/CBO); and Georgia Peláez (CAN/CBO).

This document is being released to the public and distributed to the Bank's Board of Executive Directors simultaneously. This document has not been approved by the Board. Should the Board approve the document with amendments, a revised version will be made available to the public, thus superseding and replacing the original version.

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ELECTRONIC LINKS	
<b>REQUIRED</b>	
1.	<a href="#">Multiyear Execution Plan and Annual Work Plan</a>
2.	<a href="#">Monitoring and Evaluation Plan</a>
3.	<a href="#">Environmental and Social Management Report</a>
4.	<a href="#">Procurement Plan</a>
<b>OPTIONAL</b>	
1.	<a href="#">Technical Feasibility</a>
2.	<a href="#">Socioeconomic Feasibility</a>
3.	<a href="#">Institutional Feasibility</a>
4.	<a href="#">Financial Feasibility</a>
5.	<a href="#">Draft Program Operating Regulations</a>
6.	<a href="#">Compliance with the Bank's Public Utilities Policy</a>
7.	<a href="#">Project Monitoring Report</a>
8.	<a href="#">Environmental and Social Assessment – Oruro Sample Project</a>
9.	<a href="#">Environmental and Social Assessment – La Paz Sample Project</a>
10.	<a href="#">Environmental and Social Management Framework</a>
11.	<a href="#">Midterm Evaluation Report for Program 2199/BO-BL</a>
12.	<a href="#">Lessons Learned from the W&amp;S Sector in Periurban Areas of Bolivia</a>
13.	<a href="#">2016-2020 Sector Plan for Basic Sanitation</a>
14.	<a href="#">Program Itemized Budget</a>
15.	<a href="#">Water and Sanitation Authority 2015 Performance Indicators</a>
16.	<a href="#">Metropolitan Master Plans for La Paz, El Alto, and Cochabamba</a>
17.	<a href="#">2016-2017 Drought in Bolivia and its Impact on the Capital Cities of La Paz, El Alto, Sucre, Oruro, and Potosí</a>
18.	<a href="#">2015 Joint Report on Multilateral Development Banks' Climate Finance</a>

## ABBREVIATIONS

AAPS	Autoridad de Fiscalización y Control Social de Agua Potable y Saneamiento Básico [Water and Sanitation Authority]
AECID	Agencia Española de Cooperación Internacional para el Desarrollo [Spanish Agency for International Development Cooperation]
APRAUR	Agua Potable para Recientes Asentamientos Urbanos de la Ciudad de Oruro [Potable Water Project for Recent Urban Settlements in Oruro]
AWP	Annual work plan
EIRR	Economic internal rate of return
EPSAs	Water and sanitation service operators
ESMF	Environmental and social management framework
hm	Hectometer
ICB	International competitive bidding
INE	Instituto Nacional de Estadística [Bolivian Institute of Statistics]
LIBOR	London Interbank Offered Rate
KIF	Korea Infrastructure Development Cofinancing Facility
N/A	Not applicable
NCB	National competitive bidding
MEFP	Ministry of Economy and Public Finance
MEP	Multiyear execution plan
mm	Millimeter
MMAyA	Ministry of Environment and Water
MMPs	Metropolitan Master Plans
NICQ	National individual consultant selection based on qualifications
O&M	Operation and maintenance
PCU	Program Coordination Unit
QCBS	Quality- and cost-based selection
SICOES	Sistema de Contrataciones Estatales [Government Procurement System]
SIGEP	Sistema Nacional de Gestión Pública [Public Management System]
W&S	Water and sanitation

## PROGRAM SUMMARY

### PROGRAM TO EXPAND AND IMPROVE WATER SUPPLY SUSTAINABILITY AND RESILIENCE IN CITIES (BO-L1191)

Financial Terms and Conditions			
	Source	Amount (US\$)	%
<b>Borrower:</b> Plurinational State of Bolivia	<b>IDB (regular Ordinary Capital):</b>	42,500,000	57
	<b>IDB (concessional Ordinary Capital):</b>	7,500,000	10
	<b>IDB:</b>	50,000,000	67
<b>Executing agency:</b> Ministry of Environment and Water, through the Program Coordination Unit	<b>Korea Infrastructure Development Cofinancing Facility for Latin America and the Caribbean (KIF):</b>	25,000,000	33
	<b>Total:</b>	75,000,000	100
	Regular Ordinary Capital (Flexible Financing Facility) <sup>(a)</sup>	Concessional Ordinary Capital	KIF
<b>Amortization period:</b>	25 years	40 years	30 years
<b>Disbursement period:</b>	5 years		
<b>Grace period:</b>	6.5 years <sup>(b)</sup>	40 years	10 years
<b>Interest rate:</b>	LIBOR-based	0.25%	1.5%
<b>Credit fee:</b>	<sup>(c)</sup>	N/A	0
<b>Inspection and supervision fee:</b>	<sup>(c)</sup>	N/A	N/A
<b>Front-end fee:</b>	N/A	N/A	0.1%
<b>Weighted average life:</b>	15.25 years	N/A	N/A
<b>Approval currency:</b>	United States dollar		
Program at a Glance			
<b>Program objectives/description:</b> The program's objectives are to: (i) increase and improve access to water services and enhance resilience to the effects of climate change, focusing on urban centers where a national emergency has been declared owing to drought and water shortages caused by extreme water-related climatic events; (ii) boost efficiency in managing the supply and demand for the available water resources in the program's beneficiary cities, by building the capacity of water service providers; and (iii) help build preinvestment capacity with a view to facilitating projects with the potential to improve water service delivery in the program's beneficiary cities.			
<b>Special contractual conditions prior to the first disbursement of the loan:</b> These are: (i) a subsidiary agreement between the Ministry of Economy and Public Finance, the Ministry of Development Planning (MPD), and the Ministry of Environment and Water (MMAyA) will have been signed and entered into effect; (ii) the <a href="#">program Operating Regulations</a> , to include an environmental and social management framework ( <a href="#">ESMF</a> ) as an annex, will have been approved and entered into effect; and (iii) the executing agency will have selected the minimum key staff needed to begin executing the program, in accordance with the terms and conditions approved by the Bank (paragraph 3.8). See also the special contractual conditions in Annex B of the environmental and social management report ( <a href="#">ESMR</a> ).			
<b>Special contractual conditions for execution:</b> Prior to awarding the works, evidence will be presented that intergovernmental agreements between the executing agency, the respective autonomous municipal government, the respective autonomous departmental government, and the respective water and sanitation service operator (EPSA) have been signed and entered into effect for each project for the operation and maintenance (O&M) of the works, in accordance with the terms and conditions previously agreed upon with the Bank (paragraph 3.9). See also the special contractual conditions in Annex B of the environmental and social management report ( <a href="#">ESMR</a> )..			
<b>Exceptions to Bank policies:</b> None			
Strategic Alignment			
<b>Challenges:</b> <sup>(d)</sup>	SI <input checked="" type="checkbox"/>	PI <input checked="" type="checkbox"/>	EI <input type="checkbox"/>
<b>Crosscutting themes:</b> <sup>(e)</sup>	GD <input type="checkbox"/>	CC <input checked="" type="checkbox"/>	IC <input checked="" type="checkbox"/>

<sup>(a)</sup> Under the Flexible Financing Facility (document FN-655-1), the borrower has the option of requesting changes to the amortization schedule, as well as currency and interest rate conversions. The Bank will take operational and risk management considerations, prevailing market conditions, and the loan's level of concessionality into account when reviewing such requests.

<sup>(b)</sup> Under the flexible repayment options of the Flexible Financing Facility, changes to the grace period are permitted provided that they do not entail any extension of the original weighted average life of the loan or the last payment date as documented in the loan contract.

<sup>(c)</sup> 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.

<sup>(d)</sup> SI (Social Inclusion and Equality); PI (Productivity and Innovation); and EI (Economic Integration).

<sup>(e)</sup> 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, problems to be addressed, and rationale

- 1.1 **Background.** According to the 2012 Census<sup>1</sup> projections for 2017, Bolivia has a population of 11.1 million, 7.6 million of whom reside in urban areas with more than 2,000 residents, and 3.5 million in rural areas. Studies on demographic trends in Bolivia<sup>2</sup> show that the country is undergoing an accelerated urbanization process, as people migrate from rural areas to the major cities. These migration flows have significantly altered the distribution, composition, and settlement patterns of the Bolivian population, resulting in demographically dynamic urban areas that are growing three times faster than the population of rural areas. Owing to the demographic and economic trends of the last 30 years, the country has 35 cities with a population of more than 20,000 where 88% of the urban population live, according to data from the 2012 National Population and Housing Census.
- 1.2 **Sector institutional framework.** The Autonomy and Decentralization Framework Law<sup>3</sup> states that the central government is responsible for approving the country's basic services systems, policies, plans and programs. The autonomous municipal governments are responsible for providing water and sanitation services (W&S) and approving the respective rates when they directly provide such services. Law 2066 on W&S services identified different, separate entities responsible for the planning, regulation, and delivery of these services. Governance of the sector was assigned to the MMAyA, through the Office of the Deputy Minister of Water and Basic Sanitation, which formulates policy, plans investments, and manages international financing. The sector's regulatory role falls to the Water and Sanitation Authority,<sup>4</sup> which is responsible for consumer protection and the approval of rates proposed by service operators. The autonomous municipal governments are in charge of service delivery and the development of expansion plans and programs, either directly or through water and sanitation service operators (EPSAs), in coordination with the autonomous departmental governments. EPSAs are organized in different ways, including departmental and municipal agencies, public-community partnerships, cooperatives, leagues of municipios, and water and sanitation committees.
- 1.3 **Diagnostic assessment of the problem.** According to the 2012 Census, that year the country had drinking water and sanitation coverage rates of 80.8% and 52.7%, respectively. IDB financing was used to prepare the country's 2016-2020 Sector Plan for Basic Sanitation ([optional electronic link 13](#)). Considering the investments made in the sector in recent years, the plan showed that, by 2015, the aforementioned coverage rates had climbed to 84.7% and 57.1%, respectively. In terms of the distribution of water service, coverage was 90.28% in towns with more than 20,000 residents, 89% in small villages, but only 60.91% in rural communities—more than 20 percentage points below the national

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<sup>1</sup> 2012 National Population and Housing Census, Bolivian Institute of Statistics (INE).

<sup>2</sup> Urbanization Study in Bolivia – Diagnostic Assessment, June 2013, World Bank.

<sup>3</sup> Law 031.

<sup>4</sup> A decentralized agency of the MMAyA.



average. The corresponding sanitation coverage rates were 62.86%, 32.14%, and 40.06%, respectively. According to a recent inventory of wastewater treatment plants in Bolivia,<sup>5</sup> among towns with more than 20,000 residents, only 73% (24) had some type of wastewater treatment service. Coverage with that service only averaged 47% among the population of these towns and, in some cases, the service did not properly function. Consequently, of the entire population of this segment, 33% is covered with adequate wastewater treatment service, leaving approximately four million people with no wastewater treatment. These figures clearly show that, although Bolivia has made considerable progress in the W&S sector, significant coverage gaps persist in urban areas, where approximately 740,000 residents lack access to drinking water and 2.82 million have no sanitation service.<sup>6</sup> If the coverage targets established in the 2016-2020 Sector Plan for Basic Sanitation (paragraph 1.5) are to be met, an investment of approximately US\$50 million<sup>7</sup> will be needed for preinvestment studies in the 2016-2020 period, as significant weaknesses have been identified in key aspects of the preinvestment stage. Consequently, this limits the availability of the quality studies needed to appropriately execute the programmed sector investment.<sup>8</sup>

- 1.4 This gap, an indicator of health risk exposure, is exacerbated by the fact that it is occurring in rapidly growing periurban areas with the highest levels of poverty and indigence. This is relevant, since there is a positive link between health and access to W&S services.<sup>9</sup> According to 2016 data of Bolivia's INE, the incidence of acute diarrhea among children under 5 was 18.9% in urban areas, and of the total number of cases recorded in the main departments, most were in metropolitan areas.<sup>10</sup>
- 1.5 One of the key factors driving the increase in the demand for W&S services is the rapid growth observed in the country's largest cities (paragraph 1.1), which in many cases spreads beyond their municipal boundaries. These expansion processes have largely overwhelmed planning efforts or occurred with no

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<sup>5</sup> National Inventory of Wastewater Treatment Plants, 2017. Financed by the IDB's TC operation ATN/LA-15449-BO.

<sup>6</sup> The Bank has executed a number of programs in Bolivia to increase sanitation service coverage in urban areas (paragraph 1.5), with a total of approximately 250,000 beneficiaries of sewerage and water treatment services, and is also considering a sanitation operation proposed for 2018. Other financing projects are under way with the World Bank (in the approval process through the 2016-2020 Country Partnership Framework with Bolivia), Spanish Agency for International Development Cooperation (AECID) (e.g. debt swap and European Union's Latin America Investment Facility), and Kreditanstalt für Wiederaufbau (e.g. Periurban Programs I and II).

<sup>7</sup> 2016-2020 Sector Plan for Basic Sanitation.

<sup>8</sup> Program to Support Preinvestment for Development (loan 3534/BL-BO).

<sup>9</sup> Documented in numerous studies, such as the ones summarized by Brennenman, A. and M. Kerf. "Infrastructure and Poverty Linkages: A Literature Review." World Bank, 2002. Other studies include: Annette Prüss-Ustün et al. Burden of Disease from Inadequate Water, Sanitation, and Hygiene in Low- and Middle-income Settings: A Retrospective Analysis of Data from 145 Countries. *Tropical Medicine and International Health*, Volume 19, Issue 8, pages 894–905, August 2014. Peterson Zwane, A. and M. Kremer (2007) "What Works in Fighting Diarrheal Diseases in Developing Countries? A Critical Review," National Bureau of Economic Research Working Paper 140, March 2007.

<sup>10</sup> Metropolitan areas of: La Paz-El Alto 65.8%; Cochabamba 47.5%, Oruro 68.6%, and Sucre 43.1%. Acute diarrheal diseases (2016), epidemiological surveillance reports, SINIS-VE, Ministry of Health.

- planning whatsoever. This hinders the delivery of basic services and/or adversely affects their quality, which in turn has a negative impact on the sustainability of these settlements. Other factors in play include the significant changes in the distribution of real income observed in urban areas of Bolivia. This increases the consumption capacity of households and produces a widespread increase in income levels, which in turn leads to increased demand for public services such as water and sanitation.
- 1.6 To further the planning of urban W&S systems, operation 2199/BL-BO (and GRT/WS-11830-BO), Water and Sewerage Program in Periurban Areas, Phase I (paragraph 1.12), financed metropolitan master plans<sup>11</sup> ([optional electronic link 16](#)). Accordingly, these plans identified insufficient water supply scenarios<sup>12</sup> and developed actions to mitigate this risk and provided solutions to the gradual impacts driven by increased demand, the expansion of coverage, and the reduced availability of water from sources as a result of climate change.
  - 1.7 In this regard, several studies ([optional electronic link 17](#)) show that the average temperature in the tropical Andean Cordillera has risen approximately 0.11°C per decade since 1939. This trend has increased in the last 25 years, reaching up to 0.33°C per decade, which in the long term will produce marked changes in the water balances of the basins that supply the country's major cities and production areas. This situation, coupled with the existing demographic pressure on water sources, is affecting the systems' ability to ensure a reliable, uninterrupted supply of water to meet the needs of multiple users, which is becoming even more critical in arid and/or semiarid zones due to their already low precipitation cycles. The clearest manifestation of this type of impact are the increasingly frequent and intense droughts that are affecting the population, with the poorest areas being the most vulnerable.
  - 1.8 In 2016, many parts of Bolivia suffered a severe and prolonged drought. The low levels of precipitation and high temperatures recorded in the altiplano and inter-Andean valleys in the latter months of 2015 and throughout 2016—possibly associated with the effects of the 2015/2016 El Niño phenomenon—provoked a water shortage in rural areas and major population centers. In August 2016, the Office of the Deputy Minister of Civil Defense reported that 131 municipios had been affected by the drought, and the Ministry of Rural Development and Land reported that 175,000 hectares of crops had been impacted. Beginning in the second half of 2016, the water shortage was also affecting the water supply of the country's main cities, which led to restrictions in La Paz, Sucre, Cochabamba, Potosí, and Oruro,<sup>13</sup> where significant rationing was instituted. This led the Bolivian government to declare a water emergency, initially in those cities

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<sup>11</sup> MMAyA Ministerial Resolution 604 of 16/Dec/2014 approved "Metropolitan Master Plans for Water and Sanitation in La Paz-El Alto, Cochabamba, Santa Cruz, and Tarija" ([optional electronic link 16](#)). Currently, using financing from the operation 3091/BL-BO, MMPs are being developed for the cities of Oruro, Sucre, and Potosí.

<sup>12</sup> System deficits: La Paz-El Alto, 6 cubic hectometers per year; and Cochabamba metropolitan area, 35 cubic hectometers per year.

<sup>13</sup> Average annual precipitation deficits: Oruro, 14.5 millimeters; Sucre, 30 mm; Potosí, 8 mm; Cochabamba, 14 mm; and La Paz, 16 mm. Source: National Meteorology and Hydrology Service (SENAMHI).

and later nationally,<sup>14</sup> and support was significantly stepped up to address the situation, including in the affected urban areas. As of December 2016, 51% of the country's municipios had been affected by the drought and seven of the 10 largest cities experienced water shortages, impacting nearly 177,000 families, 600,000 hectares of crops, and 600,000 head of cattle, which, according to official figures, resulted in estimated economic losses of US\$125 million. It was also estimated that the average household expenditure attributable to mitigating the effects of water rationing was approximately US\$150, totaling US\$9.6 million in the city of El Alto alone.

- 1.9 With the exception of Cochabamba, these cities have satisfactory levels of water coverage;<sup>15</sup> however, the metropolitan master plans and performance indicators of the Water and Sanitation Authority<sup>16</sup> reveal the need for the EPSAs to improve supply and demand management. The poor efficiency and quality indicators of these operators, coupled with insufficient water supply scenarios, means that most such operators have a continuous water supply of less than 24 hours,<sup>17</sup> and that they have not achieved optimal parameters in terms of the efficient resource use<sup>18</sup> and efficient operation index indicators<sup>19</sup> ([optional electronic link 15](#)). Consequently, there are no guarantees regarding the quality and quantity of the services received by the population, and some service operators are limited in their ability to properly manage them and make the necessary investments.<sup>20</sup> During the crisis caused by the drought, shortcomings in the EPSAs' responses were documented, such as system deficiencies that prevented them from being able to efficiently ration service, properly manage pressures, measure flows, as well as a lack of hydraulic modeling of systems, drought plans, and alert and control systems for available water at their sources.
- 1.10 **Rationale and proposed interventions.** This operation will finance the following types of interventions: (i) the construction, expansion, and improvement of water systems, as well as investments to improve supply and demand management, which will help mitigate severe water stress; and (ii) activities that will enhance knowledge and management capacity of the watersheds currently serving as the primary sources of water supplied to the beneficiary cities, as well as the planning and expansion of these systems to ensure a reliable and resilient supply in the medium and long term. Both of these types of interventions should support the country's efforts to reduce the current vulnerability of water systems in the program's beneficiary cities.

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<sup>14</sup> Supreme Decree 2987 of 21 November 2016.

<sup>15</sup> La Paz-El Alto 94.7%, Cochabamba 70.9%, Potosí 98.5%, Sucre 95.3%, and Oruro 95.8%. Source: CNPV 2012 population in private homes with residents present.

<sup>16</sup> Water and Sanitation Authority, 2015. 2015 Performance Indicators ([link](#)).

<sup>17</sup> La Paz-El Alto, 24 hours; Cochabamba, 15.04 hours; Potosí, 11.64 hours; Sucre, 22.64 hours; and Oruro, 8.47 hours.

<sup>18</sup> Efficient resource use = (volume of water billed)/volume extracted from sources x100.

<sup>19</sup> Efficient operation index = (service operating costs)/(service operating revenue).

<sup>20</sup> Renovation of old networks, investments in the control of production (macro metering) and consumption (micro metering), elimination of illegal connections, and nonvisible leak detection activities (ideally, under a program to reduce unaccounted-for water).

1.11 The effectiveness of the proposed interventions has been demonstrated in several studies of works carried out in similar contexts.<sup>21</sup> In addition, the comprehensive management of water resources has been recognized as one of the best tools for identifying climate change adaptation measures, including the associated risk.<sup>22</sup>

1.12 **The Bank's knowledge of the sector.** The Bank has supported the sector in periurban areas with financing for the following programs:

**Table I-1 – IDB programs in execution (US\$ million)**

Program		Financing (US\$ million)				Beneficiaries	Execution status (%)
Number	Name	IDB	Local contribution	Other (nonreimbursable)	Total		
2199/BL-BO GRT/WS-11830-BO; (BO-L1034 and BO-X1004)	Water and Sewerage Program in Periurban Areas, Phase I	20	3.39	80*	103.39	300,000 residents	86
3091/BL-BO	Water and Sewerage Program in Peri Urban Areas, Phase II	60	24		84	220,000 residents	19
3599/BL-BO	Multipurpose Water Supply and Irrigation Program for the Municipios of Batallas, Pucarani, and El Alto	62	24.15	42.5** 4.37***	133.02	370,418 households	1.7

\* AECID's Spanish Cooperation Fund for Water and Sanitation in Latin America.

\*\* Strategic Climate Fund.

\*\*\* Nordic Development Fund.

<sup>21</sup> Galiani et al. provide evidence of the effectiveness of interventions in reducing the incidence of waterborne diseases in Argentina (2002, [link](#)). In that study, the authors examined the effects of expanding the water network in urban settlements. They found major reductions in the presence, frequency, and severity of diarrhea episodes among children covered by network expansions compared to children in the control group. Moreover, the expanded connections resulted in water cost (and time) savings, as families were able to replace more expensive water from sources farther away from the home with water supplied by the network. The impact on health and savings were also significant among households with an illegal connection to the water system, which although free, provided poor quality water. Evidence of the effectiveness of the installation of micrometers can be found in Da Silva, Nalca Regina, *Estudo Metodológico para Avaliação de Sue Edição de Hidrometros Domiciliares em Sistemas de Agua*, master's thesis, Universidade de Brasília, publication PTARH-DM-2008 ([link](#)). Evidence of the effectiveness of interventions to control unaccounted-for water may be observed in: Alex Rizzo, David Pearson, Matthew Stephenson, and Neil Harper, Apparent Loss Control: A Practical Approach; International Water Association (IWA), Water 21 seventh article, IWA Task Force, June 2004. Evidence of the link between micrometering and financial sustainability can be found in Lentini, E.: *Desafíos de los Operadores de Áreas Urbanas de más de 300.000 Habitantes* [Challenges Facing Operators in Urban Areas with More than 300,000 Residents], IDB, 2015 ([link](#)).

<sup>22</sup> Feroz et al., 2015; Pham Quy Giang et al., 2012.

- 1.13 **Lessons learned.** Lessons learned from other similar operations in Bolivia and the region ([optional electronic link 12](#)) were taken into account in preparing this operation. These include the need to: (i) consider the impacts of climate change in the preinvestment development stage, and improve its quality; (ii) construct water systems in a way that enhances their resilience to severe drought events; (iii) build operators' capacities to make their management of supply and demand more efficient; and (iv) conduct water management studies and develop water management plans based on a comprehensive model for their use, to ensure medium- and long-term supply.
- 1.14 The program includes resources for preparing and/or supplementing the final program designs. These take into account issues related to risk management and climate change adaptation, water system expansion and improvement, improving supply and demand management, and comprehensive planning of water resources in the affected cities.
- 1.15 **The government's strategy.** The diagnostic assessment conducted (paragraph 1.3) points to the need to continue the activities aimed at fulfilling the constitutional mandate on access to W&S services and achieving the targets set forth by the government in the 2016-2020 Sector Plan for Basic Sanitation ([optional electronic link 13](#)). These targets are: 95% water coverage in urban areas and 80% in rural areas, which entails connecting some 1,350,000 residents to the water network over that period. In addition, because the Bolivian government declared a national emergency due to water shortages (paragraph 1.3), the central, departmental, and municipal governments must mobilize the financial resources necessary to ensure water supply for the population. The government also implemented the 2016 National Drought and Water Shortage Emergency Plan and worked on developing the new 2017 Contingency Plan for Drought, Water Shortages, and Food Security. This plan focuses on helping the EPSAs identify projects to increase water sources and on developing management plans and policies aimed at closing the gap between supply and demand.
- 1.16 **The Bank's country strategy with Bolivia.** The program is aligned with the IDB Country Strategy with Bolivia 2016-2020 (document GN-2843), through the priority area "closing social gaps," due to the strategic objective of expanding W&S coverage primarily in periurban and rural areas. Accordingly, the Bank has emphasized its support for investing in infrastructure and continuing the reforms under way to ensure its sustainability. Furthermore, and to ensure the effectiveness and sustainability of the required investments in the sector, the Bank will offer support to build the execution capacities of the sector's public institutions. The program is also linked to Bank-supported initiatives that reduce vulnerability to natural disasters and promote climate change adaptation, particularly by identifying hydro-geological models that could be used to design water projects.
- 1.17 **Strategic alignment.** The program is consistent with the Update to the Institutional Strategy 2010-2020 (document AB-3008) and is aligned with the objective of Bank's public policy interventions with the aim of offering inclusive services and infrastructure, especially in urban areas for poor and vulnerable populations, where a safe and stable water supply must be ensured. The

program is also aligned with the development challenges of: (i) social inclusion and equality, as it will help increase coverage of basic services; (ii) productivity and innovation, through the objective of improving urban planning and infrastructure, since improvement in the delivery of water services will increase productivity in cities, thereby facilitating activities that contribute to economic growth. In addition, it is aligned with the crosscutting themes of: (i) institutional capacity and rule of law, since it will contribute to the institutional strengthening of water operators in the program's beneficiary cities, which will help improve the service they provide; and (ii) climate change and environmental sustainability, since 100% of the operation's resources are invested in climate change adaptation activities, based on the multilateral development banks' joint methodology for tracking climate finance ([optional electronic link 18](#)). These resources contribute to the IDB Group's goal of increasing financing for climate change-related projects to 30% of all operation approvals by year-end 2020. In this regard, the program is also aligned with the IDB Infrastructure Strategy: Sustainable Infrastructure for Competitiveness and Inclusive Growth (document GN-2710-5), particularly the priority area of supporting the construction and maintenance of an environmentally and socially sustainable infrastructure that will help improve quality of life. Furthermore, the program will contribute to the Corporate Results Framework 2016-2019 (document GN-2727-6) through the indicator "households with new or upgraded access to drinking water." Lastly, it is consistent with the dimensions of success and lines of action in the Water and Sanitation Sector Framework (document GN-2781-3) on universal access and improved quality of services and social and environmental sustainability.

- 1.18 **Compliance with the Public Utilities Policy.** The proposed program and national sector objectives are consistent with the principles of the Public Utilities Policy (document GN-2716-6) and meet its conditions of financial sustainability and economic evaluation, since the EPSAs that operate the works in the sample cover their O&M costs with rate revenues, thereby demonstrating positive EBITDA<sup>23</sup> margins, and the financial projections indicate that they will be able to maintain these operating margins (paragraph 1.30). Furthermore, the cost/benefit analysis of the works included in the sample indicates that they are viable from the socioeconomic standpoint (economic internal rate of return (EIRR) of 16% and 14%, respectively, for the projects evaluated, and higher than 12% for any projects requesting financing) (paragraph 1.28). The respective eligibility criteria are included for projects outside the sample, to ensure fulfillment of the conditions set out in that policy ([optional electronic link 6](#)).

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

- 1.19 **Objective.** The program's objectives are to: (i) increase and improve access to water services and enhance resilience to the effects of climate change, focusing on urban centers where a national emergency has been declared owing to drought and water shortages caused by extreme water-related climatic events; (ii) boost efficiency in managing the supply and demand for the available water resources in the program's beneficiary cities, by building the capacity of the

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<sup>23</sup> EBITDA: Earnings before interest, tax, depreciation and amortization.



EPSAs; and (iii) help build preinvestment capacity with a view to facilitating projects with the potential to improve water service delivery in the program's beneficiary cities. To achieve these objectives, the program will be structured in the following components:

- 1.20 **Component I. Infrastructure works (US\$55.46 million).** This component will finance water system construction, rehabilitation, and expansion in urban centers where a state of emergency has been declared, through actions aimed at mitigating the impact of drought in the short term, and through the construction of works to improve supply, including water collection systems, headworks, water treatment plants, tanks, distribution networks, connections, pumping stations, residential connections, and social management actions to promote the implementation and supervision of the works.<sup>24</sup>
- 1.21 **Component II. Supply and demand management (US\$11.5 million).** This component will finance investments to improve and optimize water system management, to ensure more efficient use of water resources in the medium and long term, including water network sectorization, pressure reduction, reducing unaccounted-for water, efficient macro and micro metering, renovation and rehabilitation of networks, to include the development of hydraulic network modeling, implementation of management information systems, communication plans for managing user demand, and studies to improve operator efficiency.
- 1.22 **Component III. Preinvestment studies (US\$2 million).** This component will include preinvestment studies for water system construction, rehabilitation, and expansion, to ensure sufficient projects for future phases that are aligned with the metropolitan master plans the Bank has been supporting in the country.
- 1.23 **Component IV. Water management and drought control (US\$2.5 million).** This component will include activities to support the improvement of systems and networks for monitoring water and climatic data, as well as studies and technical tools for the development and implementation of drought management/control plans and water management plans for the cities targeted by the program.
- 1.24 The program will also finance the executing agency's administrative and operational requirements, as well as the program's external audit and evaluation costs.
- 1.25 **Cost and financing.** The total cost of the program is up to US\$75 million, with US\$50 million financed by the Bank with Ordinary Capital resources, and US\$25 million financed by the Korea Infrastructure Development Cofinancing Facility for Latin America and the Caribbean (KIF) ([optional electronic link 18](#)).<sup>25</sup> The consolidated budget for each component appears in Table I-1 below. The

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<sup>24</sup> The project sample includes the expansion and upgrading of the Pampahasi water treatment plant in La Paz and the Potable Water Project for Recent Urban Settlements in Oruro (APRAUR) ([optional electronic link 1](#)).

<sup>25</sup> The estimated concessional financing from the KIF is 42.8%, which exceeds the level of concessionality associated with the structure of parallel loans to Bolivia in 2017-2018 (25.5%) approved by the Board of Executive Directors (document GN-2442-53). The estimated concessional resources as a percentage of total financing is 31.3%.

proceeds will finance all costs inherent to the program ([optional electronic link 14](#)).

**Table I-1 – Program cost (US\$ millions)**

Component	IDB	KIF	Total
Component I: Infrastructure works	41.96	13.5	55.46
Component II: Supply and demand management		11.5	11.50
Component III: Preinvestment studies	2.00	–	2.00
Component IV: Water management and drought control	2.50	–	2.50
Program administration	3.04	–	3.04
Monitoring, evaluation, and audit	0.50	–	0.50
<b>Total</b>	<b>50.00</b>	<b>25.0</b>	<b>75.00</b>

### C. Key results indicators

- 1.26 The program's key results indicators are associated with improving access to drinking water through comprehensive interventions. The key results indicators appear in Table I-2 below (see Annex II).

**Table I-2 – Key indicators**

Outcome Indicator	Unit of measurement	Baseline	Target
Households in the program's beneficiary cities with ongoing water rationing for more than 20 hours per day	Household	0	262,900
Increase in water supply <sup>26</sup> in the program's five beneficiary cities	%	0	60
Number of EPSAs with rate revenues/operating costs indicator > 1	Number	2	5

- 1.27 **Technical feasibility.** The waterworks included in the program will be identified on the basis of the respective feasibility studies and final designs, which will be used to tender the construction of works previously approved by the MMAyA. All studies and designs will be prepared in accordance with current national legislation and international standards. In each case, the adopted solution will be the technically feasible alternative with the lowest cost, subject to approval by the community. The program Operating Regulations will describe the procedures to be used by the executing agency as well as the eligibility criteria for each project. In addition, the representative sample of substantiated technically feasible

<sup>26</sup> Availability of water in the systems.



projects was reviewed, with additional information required in some cases or minimum adjustments to documentation in others ([optional electronic link 1](#)).

- 1.28 **Socioeconomic feasibility.** Since the program will be executed under the multiple works modality, a cost/benefit analysis was conducted for projects in the cities of La Paz (Pampahasi system) and Oruro, for a total investment cost of US\$39 million,<sup>27</sup> representing 30.17% of the total amount. The benefits of these projects stem from the value system users place on the elimination of rationing—whether during periods or years of drought and the impact of climate change (Pampahasi project in La Paz)—or rationing in normal years, such as in the city of Oruro, estimated as total savings of resources used to purchase and/or transport water plus the benefits from increased consumption. The projects evaluated are economically feasible, with an EIRR of 16.7% in La Paz and 14% in Oruro. A cost/benefit analysis will be conducted for projects that were not evaluated, and only those with an EIRR above 12% would qualify for program financing. A sensitivity analysis based on the main assumptions of the economic evaluation was conducted, which demonstrated the robustness of the results ([optional electronic link 2](#)).
- 1.29 **Institutional feasibility.** The updated evaluation of the executing agency's capacity using the expanded Institutional Capacity Assessment System (ICAS) ([optional electronic link 3](#)) finds a satisfactory degree of development and low risk, which is consistent with the experience and knowledge of the MMAyA's program coordination unit (PCU) regarding the Bank's procurement and financial policies. Having assessed its capacities for this program, the PCU's structure will be strengthened by adding an execution team with responsibility for programming, as well as the program's financial, technical, and operational management, monitoring, and evaluation. Institutional strengthening activities for the PCU are also included, which will enhance program execution and monitoring.
- 1.30 **Sustainability of investments.** As part of the program's financial feasibility analysis, the following EPSAs involved in the sample of projects to be financed were analyzed: Empresa Pública Social de Agua y Saneamiento<sup>28</sup> and Servicio Local de Acueductos y Alcantarillado.<sup>29</sup> The financial analysis of the former found that in the last few years, the company has been covering its O&M costs with its operating revenues,<sup>30</sup> its collection levels are above 90%, and its financial projections indicate that it will continue to have positive operating margins over the next several years. Although the company has been under audit by the Water and Sanitation Authority (AAPS) since 2013, due to its low level of investments and coverage gaps in some areas, the objectives of this intervention are being achieved, i.e. the company is being re-engineered<sup>31</sup> and a new management model for it is being designed. This process is expected to culminate in the next

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<sup>27</sup> Total cost of the Oruro project: US\$28.4 million (first phase) with US\$12.03 million in IDB financing; Pampahasi project: US\$10.6 million with US\$22.63 million in IDB financing.

<sup>28</sup> Public company that provides W&S services in the cities of La Paz, El Alto, and surrounding areas.

<sup>29</sup> Decentralized public company that provides W&S services in the city of Oruro.

<sup>30</sup> Average EBITDA margin of 32.5% in the last three fiscal years.

<sup>31</sup> Supported by operations ATN/OC-13769-BO-2 and 3599/BL-BO.

few months with the formation of a metropolitan EPSA. Using the resources provided under the operations GRT/WS-11830-BO and ATN/OC-13769-BO-2, a comprehensive institutional strengthening plan for the company has been formulated.<sup>32</sup> The financial analysis of the latter, Servicio Local de Acueductos y Alcantarillado, found that the company also has sufficient revenues to cover its O&M costs.<sup>33</sup> According to the financial projections, it will continue to have positive operating margins over the next several years ([optional electronic link 4](#)). The intergovernmental agreements to be executed as well as the program Operating Regulations will include the requirement that the beneficiary EPSAs' operating revenues must be sufficient to cover at least their O&M costs. The EPSAs will also have to submit their annual audited financial statements along with their main operating and financial indicators to the MMAyA, which will in turn forward these to the Bank.

## II. FINANCING STRUCTURE AND MAIN RISKS

### A. Financing instruments

- 2.1 **Modality.** The program has been designed as an investment loan under the multiple works modality, in that it provides for independent yet physically similar water projects based on eligibility criteria, and includes a representative sample for evaluation and execution. The program has a five-year execution and disbursement period, which is consistent with the multiyear execution plan ([required electronic link 1](#)). It will address the demands prioritized by the central and municipal governments and will be governed by the program Operating Regulations ([optional electronic link 5](#)). The disbursement schedule appears in Table II-1 below.

Table II-1 – Disbursement schedule (US\$)

Source	Year 1	Year 2	Year 3	Year 4	Year 5	Total
IDB	5,000,000	15,000,000	17,500,000	10,000,000	2,500,000	50,000,000
KIF	3,750,000	10,000,000	7,500,000	3,750,000	0	25,000,000
<b>Total</b>	<b>8,750,000</b>	<b>25,000,000</b>	<b>25,000,000</b>	<b>13,750,000</b>	<b>2,500,000</b>	<b>75,000,000</b>

- 2.2 **Representative sample.** To determine the feasibility of the program and streamline execution once it has been approved, a sample of projects representative of the types of works to be executed was analyzed. These include the expansion and improvement of the Pampahasi water treatment plant project in La Paz, and the APRAUR project in Oruro, which entail an investment of US\$22.63 million and account for 30.17% of the investment amount. Because this is a multiple works program, a series of eligibility and prioritization criteria has been established that apply to all types of projects to be financed by the program.

<sup>32</sup> Updated users' roster, increased revenues, meter renovation plan.

<sup>33</sup> Average EBITDA margin of 46.8% in the last three fiscal years.

- 2.3 **Eligibility criteria and prioritization.** For projects to receive financing under the program, the following eligibility criteria will apply: (i) eligible projects (studies and/or works) will demonstrate their capacity to improve the continuity and/or quality of water service, including the construction of water collection, treatment, and conveyance works, and improve the efficiency of service delivery, which will enhance the resilience of operators during drought events; technical options and service levels will be confined to the socioeconomic parameters of the alternative selected; in each case, the adopted solution will be the technically feasible alternative with the lowest cost; (ii) eligible projects will have a distribution system, tanks, and functioning residential connections in areas where demand has been confirmed, or have institutional agreements and/or arrangements for the execution and operation of the respective supplementary projects; (iii) projects classified as category “A” operation under the Bank’s environmental and social safeguards policies will be ineligible; (iv) eligible projects will meet the requirements included in the program’s ESMF; and (v) the operating revenues of the beneficiary EPSAs must be sufficient to cover at least their O&M and administrative costs.

**B. Environmental and social risks**

- 2.4 **Environmental safeguards.** In accordance with the Bank’s Environment and Safeguards Compliance Policy (Operational Policy OP-703), the program was classified as a category “B” operation with a moderate disaster risk. During the due diligence process, the negative environmental and social impacts were largely found to be local and temporary, and have existing mitigation measures. The investments are expected to have a positive environmental and social impact on the beneficiaries’ quality of life and well-being.
- 2.5 The program calls for increasing and improving access to water services in the cities most affected by drought and water shortages, and the two projects in the sample address drought risks (Type 1 disaster risk<sup>34</sup>): the APRAUR project in Oruro; and the expansion and improvement of the Pampahasi water treatment plant project in La Paz. The sample projects each have an environmental and social assessment that identified the following main temporary and local impacts during the construction stage: (i) traffic interruptions; (ii) particulate matter and flue-gas emissions; (iii) water and soil pollution; (iv) noise emissions; (v) impact on flora; (vi) sludge production; and (vii) impacts on health and occupational safety and on the community in general. To address the identified impacts, whether environmental or social, each project has a prevention and mitigation plan and an environmental implementation and monitoring plan, which are included in the environmental and social management plan. In addition, a medium flood risk has been identified for the APRAUR project in Oruro and a low landslide risk was identified for the Pampahasi water treatment plant project in La Paz, as part of the Type 1 and 2 disaster risk analysis, in accordance with Operational Policy OP-704.
- 2.6 The program has an [ESMF](#) which is included in the [program Operating Regulations](#) to ensure that each project complies with the Bank’s policies. This

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<sup>34</sup> Project is likely to be exposed to the risk of natural disasters due to its geographic location.

plan includes detailed procedures for evaluating the required social and environmental impacts and studies. Although no resettlement impacts have been identified based on Operational Policy OP-710, a resettlement framework is included for preventive purposes. The eligibility criteria for future projects under the program exclude category “A” operations.

- 2.7 Consultations have been held on the two sample projects, in accordance with the requirements of Directive B6 of Operational Policy OP-703 and Operational Policy OP-765. The final versions of the program’s [ESMF](#), environmental and social assessments, and environmental and social management plans for the sample projects, including the consultation reports, are available on the Bank’s website (see [optional electronic link 8](#) and [optional electronic link 9](#)).

### **C. Fiduciary risks**

- 2.8 The program’s fiduciary risks are considered low, since the executing agency has previous experience with the Bank’s fiduciary policies (paragraph 1.29).

### **D. Other risks**

- 2.9 In addition, other medium level development, public management, and governance risks have been identified, associated with: (i) inadequate O&M of the works to be built, which will be mitigated by supporting the EPSAs with institutional strengthening plans funded by program resources, and closely monitoring O&M expenditures; (ii) the need to reach agreement with the population in the area of influence where water sources or access easements are located, which will be mitigated through social support in the preinvestment and execution stages and implementation of a community relations plan;<sup>35</sup> (iii) increase in project costs during execution, which will be mitigated by reviewing the projects prior to tendering; and (iv) delays in program execution, which will be mitigated by monitoring social considerations and institutional coordination of the entities involved during execution. Such delays will be mitigated by the following activities: (a) monitoring the social considerations of implementing the projects; (b) institutional coordination; and (c) review and analysis of pre-existing agreements.

## **III. IMPLEMENTATION AND MANAGEMENT PLAN**

### **A. Summary of implementation arrangements**

- 3.1 **Execution arrangements.** The borrower will be the Plurinational State of Bolivia. The program’s executing agency will be the MMAyA’s PCU,<sup>36</sup> which will form an execution team within its structure that will be responsible for fulfilling fiduciary and technical obligations ([optional electronic link 3](#)).
- 3.2 The PCU will be responsible for general coordination, resource management, and technical, administrative, and operational execution activities. The execution team to be set up within the PCU will be comprised of a program coordinator,

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<sup>35</sup> Included in the ESMF.

<sup>36</sup> The PCU was created through MMAyA Ministerial Resolution 283 of 3 December 2009. It is a decentralized unit of the MMAyA created for the execution, monitoring, and evaluation of W&S projects.

- and the technical, environmental, social, financial, procurement, planning, and monitoring specialists. Profiles for these specialists will be included in the program Operating Regulations, and their hiring will be subject to the Bank's no objection. The executing agency's execution team will have the following duties: (i) prepare and periodically update the MEP, the annual work plan (AWP), and the procurement plan; (ii) carry out processes for the selection of works, goods, and consulting services; (iii) perform activities involving the supervision of works, monitoring of execution, and evaluation; and (iv) financial management and submission of any required financial reports to the Bank ([optional electronic link 3](#)).
- 3.3 The program's works will be operated and maintained by the respective EPSAs, which will each have intergovernmental agreements signed with the executing agency, the municipal government, the departmental government, and the respective EPSA; these agreements will establish the conditions for joining the program as well as the commitments regarding proper O&M of the systems to be built.
- 3.4 **Program Operating Regulations.** Program execution will be governed by the provisions of the program Operating Regulations, including the following: (i) detailed execution plan; (ii) eligibility and prioritization criteria; (iii) institutional roles and responsibilities of the participating entities; (iv) intervention strategy in the different phases of the project cycle; (v) policies and procedures for the selection and contracting of goods, works, and services; (vi) administrative and financial management policies and procedures; (vii) social and environmental feasibility criteria for approval of the projects to be financed under the program; (viii) procedures for evaluating the environmental and social impact of the projects to be financed under the program; (ix) ESMF ([optional electronic link 10](#)); and (x) tracking and monitoring procedures ([optional electronic link 5](#)).
- 3.5 **Multiyear execution plan.** The activities carried out under the program will follow a schedule set out in the MEP ([required electronic link 1](#)) and its annual revision, which will be included in the respective AWP. The MEP has the same level of detail as the AWP for each year of execution. However, it should be updated each year based on the actual progress made in the program. Annual revisions of the MEP will be forwarded to the Bank.
- 3.6 **Fiduciary agreements and requirements.** The fiduciary agreements and requirements (Annex III) reflect the guidelines for financial management and procurement execution that will apply to program execution. These agreements and requirements were developed on the basis of an assessment of the fiduciary context of Bolivia and the executing agency, and on the institutional analysis of the executing agency, the risk workshop with staff from all participating entities, the meetings held with executing agency staff, and ongoing meetings with the project team and key personnel of the participating stakeholders.
- 3.7 **Procurement plan.** The procurement plan ([required electronic link 4](#)) contains details on the program's procurement processes, which will be carried out in accordance with the Policies for the Procurement of Goods and Services Financed by the Inter-American Development Bank (document GN-2349-9) and the Policies for the Selection and Contracting of Consultants Financed by the Inter-American Development Bank (document GN-2350-9), and specifies: (i) the

contracts for works, goods, and consulting services required to execute the program; (ii) the methods proposed for the procurement of goods and the selection of consultants; and (iii) the procedures used by the Bank to review procurement processes. The borrower will update the procurement plan annually, or as required based on program needs. Any proposed revision of the procurement plan will be submitted to the Bank for approval.

- 3.8 **Special contractual conditions prior to the first disbursement of the loan:** These are: (i) a subsidiary agreement between the Ministry of Economy and Public Finance, the Ministry of Development Planning, and the MMAyA will have been signed and entered into effect; (ii) the [program Operating Regulations](#), to include an environmental and social management framework (ESMF) as an annex, will have been approved and entered into effect; and (iii) the executing agency will have selected the minimum key staff needed to begin executing the program, in accordance with the terms and conditions approved by the Bank. These conditions are considered essential to ensuring that the borrower will be prepared to begin execution of the program, with an executing team that has been properly set up within the executing agency, as well as program Operating Regulations for the executing agency that include detailed guidelines on operations and coordination aspects.
- 3.9 **Special execution conditions.** Prior to awarding the works for each project included in the program, the executing agency will submit evidence that an intergovernmental agreement between the executing agency, the municipal government, the departmental government, and the respective EPSA has been signed and entered into effect. This agreement will specify, *inter alia*, the responsibilities of the parties during the execution of each project, including O&M, in accordance with the terms and conditions previously agreed upon with the Bank. This condition is required to ensure that the borrower has established a forum for dialogue between the entities participating in the program, which will help facilitate their coordination and participation, and to ensure that the municipal government and respective EPSA have clearly specified their roles and obligations with respect to execution and the O&M activities of works financed under the program.
- 3.10 **Audit.** During the loan disbursement period, the program's annual audited financial statements will be submitted to the Bank within 120 days after the close of each fiscal year. The audit will be conducted by independent auditors acceptable to the Bank. Determination of scope and other related issues will be governed by the Financial Management Guidelines for IDB-financed Projects (document OP-273-6) and the guidelines for financial statements and external audits. Auditing costs will be financed with program resources. The PCU will be responsible for contracting the auditing firm.

**B. Summary of results monitoring arrangements**

- 3.11 **Monitoring.** The executing agency will prepare reports on the status and results of activities for which it is responsible. The monitoring arrangements will include the procurement plan, the MEP, the AWP, the results matrix, the progress monitoring report (PMR), and the risk management plan. The executing agency will submit semiannual reports on the progress made, the results achieved, and



an action plan for the following six months, within 60 days after the end of each six-month period ([required electronic link 2](#)).

- 3.12 **Evaluation.** The PCU will contract the following program evaluations: (i) midterm evaluation, to be submitted 90 days after the date on which 50% of the program resources have been disbursed; and (ii) final evaluation, to be submitted 90 days from the date on which 90% of the program resources have been disbursed. The proposed evaluation methodology will be the before-and-after method, and will consist of measuring the project's baseline indicators and results after the interventions have been completed, and comparing the measurements against the targets to determine if they were achieved. An ex post economic evaluation will also be conducted using the methodology for the ex ante evaluation, comparing the costs of investments made with the project's O&M costs and benefits, estimated as described in the monitoring and evaluation plan ([required electronic link 2](#)).

Development Effectiveness Matrix		
Summary		
I. Corporate and Country Priorities		
1. IDB Development Objectives	Yes	
Development Challenges & Cross-cutting Themes	-Social Inclusion and Equality -Productivity and Innovation -Climate Change and Environmental Sustainability -Institutional Capacity and the Rule of Law	
Country Development Results Indicators	-Households with new or upgraded access to drinking water (#)*	
2. Country Development Objectives	Yes	
Country Strategy Results Matrix	GN-2843	Reduce vulnerability to natural disasters and climate change.
Country Program Results Matrix		The intervention is not included in the 2017 Operational Program.
Relevance of this project to country development challenges (If not aligned to country strategy or country program)		
II. Development Outcomes - Evaluability	Evaluable	
3. Evidence-based Assessment & Solution	10.0	
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	
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	6.6	
5.1 Monitoring Mechanisms	2.5	
5.2 Evaluation Plan	4.1	
III. Risks & Mitigation Monitoring Matrix		
Overall risks rate = magnitude of risks*likelihood	Low	
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, Price Comparison.
Non-Fiduciary		
The IDB's involvement promotes additional improvements of the intended beneficiaries and/or public sector entity in the following dimensions:		
Gender Equality		
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	Yes	Support was provided by Technical Cooperation BO-T1301, which includes feasibility studies and consultancies to support coordinaton with the beneficiaries as well as social economic evaluation and other documents necessary for the approval process.
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		

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

The objective of the Program for Expansion and Improvement for Sustainable and Resilient Water Supply in Cities I is to increase and improve access to potable water services and improve the resilience to impacts of climate change in the country's capital cities, focused on urban centers declared in emergency drought. To achieve these objectives, the program finances infrastructure, management of supply and demand, studies, and institutional and technical strengthening for water resources management and drought management.

The project presents a cost-benefit analysis that supports the economic feasibility of the proposed activities in a sample of cities. The vertical logic presented in the loan proposal is consistent with the indicators presented in the results matrix, and includes indicators for the main outputs and outcomes. Indicators meet SMART criteria and include baseline and target values as well as the sources and means of verification that will be used to measure them. Although no final impact indicators are proposed, the program monitors intermediate indicators related to the continuity of service to the beneficiary population and water billing by water companies.

The Program Coordinating Unit will be responsible for carrying out the evaluation activities agreed in the Monitoring and Evaluation Plan. The program does not propose an impact assessment to measure the causal effects of the program. The final evaluation will be based on an ex post economic cost-benefit analysis.



## RESULTS MATRIX

<b>Program Objectives</b>	The program's objectives are to: (i) increase and improve access to water services and enhance resilience to the effects of climate change, focusing on urban centers where a national emergency has been declared owing to drought and water shortages caused by extreme water-related climatic events; (ii) boost efficiency in managing the supply and demand for the available water resources in the program's beneficiary cities, by building the capacity of water service providers; and (iii) help build preinvestment capacity with a view to facilitating projects with the potential to improve water service delivery in the program's beneficiary cities.
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Outcomes										
Outcome 1:										
Indicator	Unit of measurement	Baseline	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	End of program	Comments/means of verification
1.1 Households in program beneficiary cities with ongoing rationing (OR) for more than 20 hours per day	Household	0	2017			57,000	60,000	145,900	262,900	Water and Sanitation Authority (AAPS) annual report on performance indicators  OR = $(1 - \frac{\sum_{i=1}^n H_i x C_i}{24 x Conex}) \times 24$ , total hours per user affected by rationing. $H_i$ : number of hours users affected; $C_i$ : number of users affected; $Conex$ : total connections. This indicator is recorded for each EPSA.
1.2 Water and sanitation service providers' (EPSAs) percentage of unaccounted-for water										AAPS records on performance indicators

Indicator	Unit of measurement	Baseline	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	End of program	Comments/means of verification
– EPSAs	%	30 <sup>1</sup>	2017		29.5	29			29	AAPS on performance indicators
– Other operators (Sucre, Oruro, Potosí, Cochabamba) <sup>2</sup>	%	45 <sup>3</sup>	2017				43	40	40	AAPS records on performance indicators
1.3 Increase in water service supply <sup>4</sup> of the program's five beneficiary cities	%	0	2017					60	60	EPSA management activity records Contractor reports on final acceptance of works
1.4 Number of EPSAs with a rate of revenues-to-operating, maintenance, and administrative costs indicator > 1	EPSAs	2 <sup>5</sup>	2016	2				5	5	EPSA annual audited financial statements

<sup>1</sup> EPSA average losses.

<sup>2</sup> As part of Component II, baselines and unaccounted-for water will be determined during program execution.

<sup>3</sup> Average based on 2017 operations data. This will be adjusted on the basis of the diagnostic assessment of the metropolitan master plans being formulated.

<sup>4</sup> Availability of water in the systems.

<sup>5</sup> Number of operators in the sample.

Indicator	Unit of measurement	Baseline	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	End of program	Comments/means of verification
1.5 Number of indicator and drought monitoring systems based on best available technologies <sup>6</sup> up and running	#	TBD during program execution	2017					10	10	EPSA management activity records
1.6 Number of operating and management systems for drought management up and running	#	0	2017			1		1	2	EPSA management activity records

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<sup>6</sup> BATs. Understood as the national or international technical standard or reference protocol (e.g. European Drought Centre; Guidelines for Preparation of Urban Drought Management Plans – United States).

Outputs											
Component I. Infrastructure works											
Output	Unit of measurement	Associated outcomes	Cost (US\$)	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	End of program	Comments/means of verification
Water systems built, improved, or expanded Milestones:	System	1.1	55,461,842				1	2	2	5	Program monitoring report (PMR)
Potable water treatment plants built (new) or expanded	Plant	1.1	11,130,000				1			1	PMR Final acceptance of works
Storage tanks built	Tank	1.1	2,800,000					2	2	4	
Pipelines and/or conveyance systems for drinking water and untreated water built or improved <sup>7</sup>	km	1.1	23,660,000				10	20	30	60	
Collection works built, rehabilitated, and/or expanded	Work	1.1	17,871,842				1	1	1	3	

<sup>7</sup> Improved systems: replaced systems.

Component II. Supply and demand management											
Output	Unit of measurement	Associated outcomes	Cost (US\$)	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	End of program	Comments/means of verification
EPSAs' supply and demand management plans designed, including water balances, actions for reducing unaccounted-for water, pressure reduction, and water network sectorization	Plan	1.2, 1.3, 1.4	2,300,000		1	1	3			5	PMR Reports of contracted firms PCU approval report and acceptance reports of the AAPS, the Office of the Deputy Minister of Water and Basic Sanitation, and/or operators
EPSAs' supply and demand management plans implemented <sup>8</sup>	Plan	1.2, 1.3, 1.4	9,200,000				1	2	2	5	PMR EPSA management report
Component III. Preinvestment studies											
Output	Unit of measurement	Associated outcomes	Cost (US\$)	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	End of program	Comments/means of verification
Potable waterworks designs prepared	Design	1.1	2,000,000			1		2		3	PMR Final report of contracted firm, including works designs PCU approval report and acceptance report of the Office of the Deputy Minister of Water and Basic Sanitation

<sup>8</sup> Based on detailed actions defined in the institutional strengthening plan of each EPSA.

Component IV. Water management and drought control											
Output	Unit of measurement	Associated outcomes	Cost (US\$)	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	End of program	Comments/means of verification
Drought plans prepared	Plan	1.5, 1.6	1,000,000		1		1	2		4	PMR Reports of contracted firms PCU approval report and acceptance reports of the AAPS, the Office of the Deputy Minister of Water and Basic Sanitation, and/or operators
Drought plans implemented	Plan	1.5, 1.6	1,000,000			1		1	2	4	PMR EPSA management reports
Monitoring of and improvement in the availability of information	Report	1.5	500,000						5	5	PMR EPSA management reports

## **FIDUCIARY AGREEMENTS AND REQUIREMENTS**

Country:	Plurinational State of Bolivia
Project:	BO-L1191 – Program to Expand and Improve Water Supply Sustainability and Resilience in Cities
Executing agency:	Ministry of Environment and Water (MMAyA), through the PCU
Prepared by:	Patricia Toriz Monroy and Shirley Foronda (FMP/CBO)

### **I. EXECUTIVE SUMMARY**

- 1.1 The institutional capacity assessment of the Program Coordination Unit (PCU) of the Ministry of Environment and Water (MMAyA) was conducted using the Institutional Capacity Assessment System (ICAS) methodology.
- 1.2 The results of the ICAS assessment conclude that the MMAyA's PCU has a satisfactory level of institutional capacity development, which is associated with a low level of risk for executing the program and performing fiduciary management. The assessment recommends strengthening the program by recruiting full-time staff with training and experience in the procurement and financial areas. It also suggests including the mechanisms for program coordination, procurement and financial management policies and procedures, as well as process flowcharts in the respective program Operation Regulations.
- 1.3 Financial management will be performed using the Public Management System (SIGEP), which includes accounting, cash management, and budget modules. The IDB's project management system (IPAS-IDB)<sup>1</sup> will be used for all financial reports required by the Bank, including disbursement requests. The Single Treasury Account (CUT) system may also be used, which is national in scope and handles both local and foreign currencies, without distinction.
- 1.4 The IDB's standard bidding documents or other documents agreed upon with the Office of the Deputy Minister of Public Investment and External Financing (VIPFE) will be used to execute the program, and made available through the Government Procurement System (SICOES).<sup>2</sup>
- 1.5 Advertising for processes of international competitive bidding (ICB) and selection of international consultants (e.g. calls for bids, requests for expressions of interest, clarification documents, amendments, and results of the processes) will be publicized on the United Nations Development Business (UNDB) website. These processes and any others may also be publicized on the SICOES website and in national newspapers.

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<sup>1</sup> IPAS-IDB: Integrated Project Administration System of the Inter-American Development Bank.

<sup>2</sup> Government Procurement System; bid documentation package authorized by the Bank for use in processes for amounts below the ICB thresholds.

- 1.6 An agreement is being signed by the Bolivian government and the Bank to adopt partial use of the Basic Standards of the Goods and Services Management System (NB-SABS) for Bank-financed operations in Bolivia. This program may implement that agreement once it has entered into effect.

## II. FIDUCIARY CONTEXT OF THE EXECUTING AGENCY

- 2.1 Law 1178 on Government Administration and Control of 20 July 1990, known as the SAFCO Act, regulates the systems that manage and control government resources and their linkage with the country planning and public investment systems, and establishes planning subsystems (e.g. operations programming, administrative organization, and budget), execution subsystems (e.g. treasury and public credit, integrated government accounting, personnel management, and administration of goods and services), and government control subsystems (e.g. internal and external control). This law is mandatory for the MMAyA. Although the systems contribute to the transparent, comprehensive execution of public finances, there are certain areas that require further strengthening:
- 2.2 **Administration of goods and services (procurement).** Notwithstanding the provisions of paragraph 1.6, use of the NB-SABS system will not be acceptable for procurement processes that are fully or partially financed with Bank resources. In accordance with paragraph 1.2, both entities must have the fiduciary capacity to carry out the activities related to the execution component for which they are responsible.
- 2.3 **Budget.** In Bolivia, there is no multiyear budget system, which means the program budget must be recorded annually (external funds and cash).
- 2.4 **Government accounting.** SIGEP offers secure and reliable access to budget execution information. However, It does not provide data in foreign currency, or on the basis of the program's investment categories. The IDB is currently supporting an initiative of the Ministry of Economy and Public Finance to implement a project accounting module within the SIGEP system, which is currently in the pilot phase and should be in production in 2018. This new module will facilitate the preparation of reports that are acceptable to the Bank.
- 2.5 **Government control.** Government control is the responsibility of the Office of the Comptroller General, which for the time being has technical and staff limitations that prevent it from conducting ongoing and timely reviews of projects financed by multilateral cooperation agencies.



### III. FIDUCIARY RISK EVALUATION AND MITIGATION MEASURES

- 3.1 The institutional capacity assessment determined that the MMAyA, through its PCU, has a low level of risk, due to its experience in technical and fiduciary areas related to the execution of IDB-financed projects, and its satisfactory performance executing such projects. However, the PCU's project portfolio has grown considerably in terms of both the volume of operations and their amount, and this new operation entails additional work for the Ministry's current staff. This situation could cause delays in the program's implementation timetable; however, the evaluated impact is "medium" and has a low likelihood of occurring, and therefore entails a low risk. Consequently, the inclusion of a specific mitigation measure in the risk mitigation plan is not required.
- 3.2 Despite the foregoing, the ICAS assessment identified certain actions that would improve the PCU's capacity to efficiently execute the operation, including: (i) hire dedicated staff with experience in IDB procurement and financial management to work exclusively on the program; (ii) include standards and procedures for procurement processes and process flowcharts in the program Operating Regulations; (iii) prepare a procurement plan and budget; (iv) continue implementing the dashboard; (v) provide a physical space for the program's documentation; (vi) comply with the maintenance plan; and (vii) timely monitor the implementation of the recommendations made in the internal and external audits.
- 3.3 It has been established that SIGEP will be used for financial management. The integrated government chart of accounts developed in SIGEP records expenses on the basis of budget headings and manages an appropriate system for recording and tracking expenditures. In addition, SIGEP is able to administer the program funds, which are managed in the single treasury account through "libretas." This system provides a sufficient basis for external auditors to issue opinions on the accounts. However, the system does not generate reports on financial execution that reflect the investment status of the loan (e.g. investment category, currency, and accounting basis) which is why a complementary system must be used, in this case the IDB-IPAS, which can record expenses and generate reports acceptable to the Bank.

### IV. CONSIDERATIONS FOR THE SPECIAL CONDITIONS OF CONTRACT

- 4.1 **Exchange rate agreed upon for accounting purposes.** The exchange rate in effect in the country on the date that funds in foreign currency are converted into local currency in the executing agency's account will be used.
- 4.2 **Financial statements and other audited reports.** Within 120 days following the close of each financial year during the loan disbursement period, the executing agency will submit the program's financial statements to the Bank, duly audited by an independent firm of auditors acceptable to the Bank. The last of these reports will be submitted within 120 days after the date stipulated for the final disbursement. The contracting procedures, scope, and presentation of the aforementioned audits will comply with the Financial Management Guidelines for IDB-financed Projects (document OP-273-6).

- 4.3 **Terms of reference and technical specifications.** Reviews of the selection criteria for shortlists, terms of reference, technical specifications, and bidder or consultant qualification requirements needed to evaluate proposals will be approved in advance for the executing agency by the sector specialist in his/her capacity as the Project Team Leader, regardless of the procurement review method (ex ante/ex post).

## **V. AGREEMENTS AND REQUIREMENTS FOR PROCUREMENT EXECUTION**

- 5.1 **Procurement execution.** Procurement processes for the program will be set out in the procurement plan approved by the Bank, and will be carried out in accordance with the terms of policies GN-2349-9 and GN-2350-9. No exceptions to the use of these policies are anticipated, but the agreement on partial use of NB-SABS mentioned in paragraph 1.6 may be used once it has entered into effect.
- 5.2 **Procurement of works, goods, and nonconsulting services.** Procurement processes for works, goods, and nonconsulting services subject to ICB will use the Bank's most recent standard bidding documents. Procurement processes for amounts below the ICB thresholds will use the standard documents agreed upon with the Bank and made available through SICOES. Simple works and off-the-shelf goods for amounts below the ICB threshold may be procured through the shopping method if authorized by the Bank, which will recommend the documents to be used. The modification of any standard document will require the Bank's statement of no objection.
- 5.3 **Selection and hiring of consultants.** Procedures for the selection of consultants will be implemented considering the following:
- (i) **Selection of consulting firms.** The current standard request for proposals issued by the Bank will be used.
  - (ii) **Short list of consulting firms.** The list may consist solely of national firms <sup>3</sup> for contracts below the international shortlist threshold established by the Bank for Bolivia.
  - (iii) **Selection of individual consultants.** Individual consultants will be selected on the basis of a comparison of the individual qualifications of at least three qualified candidates to perform the work, considering that the support of external professionals will not be required. When the call for consultants is issued through SICOES, only one candidate will need to be evaluated in order for the contract to be awarded.
- 5.4 **Operating costs.** The recurring and maintenance costs required to implement the program during its useful life cover items such as the leasing of offices; utilities; radio, print, or televised communications; procurement notices; translations; bank fees; basic office supplies; photocopies; postage; and fuel, as agreed upon with the Bank. They will be financed by the program as part of the annual budget approved by the Bank and will be included in the program's procurement plans. Recurring expenses will be incurred based on the executing

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<sup>3</sup> Foreign firms are eligible to participate.

agency's administrative procedures, as set out in the program Operating Regulations. The Bank may take exception to and refuse to finance these expenses if it determines that they violate the principles of competition, efficiency, and economy.

- 5.5 **Procurement planning.** The executing agency will publish the procurement plan in the Procurement Plan Execution System (SEPA) and will update it as necessary, but at least once a year. A procurement process may begin provided it is included in the procurement plan previously approved by the Bank.
- 5.6 **Domestic preference.** The use of domestic preference is not anticipated in any procurement process. The threshold amounts applicable to this project are:

**Thresholds (US\$)**

ICB		National competitive bidding (NCB)*		Shopping		International shortlist	National shortlist
Works	Goods	Works	Goods	Works	Goods	Consultants	Consultants
Over 3 million	Over 200,000	250,000 to 3 million	50,000 to 200,000	Up to 250,000	Up to 50,000	Over 200,000	Up to 200,000

\* Simple works and off-the-shelf goods for amounts within the NCB threshold range may be procured through the Shopping method.

## 5.7 Main procurement planning

Description	Selection method	Estimated amount (US\$000)
<b>Goods</b>		
Purchase of miscellaneous equipment and instruments	ICB	2,940.0
<b>Works</b>		
Works for the Pampahasi potable water treatment plant project	ICB	10,600.0
Works for the Jove Rancho-Quillacollo water supply line 5 project	ICB	3,720.0
Works for the Jove Rancho-Quillacollo (Chojñacollo)-Vinto-Zipizape water supply line 6 project	ICB	9,300.0
Works for the Jove Rancho-Colcapirhua-Zona Sur water supply line 2 project	ICB	12,090.0
Works for the potable water project for recent urban settlements (APRAUR) in the city of Oruro	ICB	11,800.0
<b>Nonconsulting services</b>		
Technical services for the implementation of a management information system for the EPSAs in La Paz-EI Alto	NCB	150.0
Implementation of drought plans (may be broken down into several processes)	NCB	1,000.0
<b>Consulting firms</b>		
Supervision of works for the Pampahasi potable water treatment plant project	QCBS	530.0

Description	Selection method	Estimated amount (US\$000)
Supervision of works for the projects: Water Supply Line 2, 5, and 6	QCBS	1,350.0
Supervision of works for the potable water project for recent urban settlements (APRAUR) in the city of Oruro	QCBS	590.0
Social management to support the projects in Component I	QCBS	1,075.7
Preinvestment studies for projects in La Paz-El Alto, Cochabamba, Oruro, Sucre, and Potosí	QCBS	1,900.0
Supervision of preparation of preinvestment studies for other projects	QCS	100.0
Drought plans (includes studies, data modeling and collection, and design)	QCBS	1,000.0
Monitoring and improvement of information availability	QCBS	500.0
Implementation of a document management system in the PCU	QCBS	200.0
<b>Individual consultants</b>		
Program technical specialist	NICQ	161.18
Financial, procurement, environmental, planning and monitoring, and legal specialists	NICQ	629.8
Five PCU civil engineers and three junior engineers	NICQ	630.0
Three social specialists and one driver	NICQ	296.6
Specialized consulting	NICQ	300.0
<b>Operating costs</b>		
PCU	NICQ	642.7

\* Click here \*Click [here](#) to access the procurement plan for the first 18 months.

- 5.8 **Procurement supervision.** The program will use the ex ante review modality for all international processes and exceptions such as: direct contracting, single-source selection, and modalities outside the established thresholds. An external audit firm will perform the ex post procurement review, as determined by the Bank.
- 5.9 The Bank may make periodic visits to update the procurement management capacity level and fiduciary risk level associated with the execution of the operation.
- 5.10 **Records and files.** The executing agency will be responsible for establishing the controls necessary for safeguarding the integrity of the documentation generated by the ex ante or ex post execution of the program. The Bank may at any time verify the standards used to organize and control the files and ensure their security.

## VI. FINANCIAL MANAGEMENT

- 6.1 **Programming and budget.** The executing agency will record and identify each source of the financing and resources used for the execution of the project. It will also be responsible for programming and planning program activities based on the approved works agreed upon with the Bank and included in the annual work

plan. The formulation, approval, execution, monitoring, evaluation, and reformulation of the budget will follow the guidelines set out in the specific regulations of the MMAyA's budget system.

- 6.2 **Accounting and information systems.** The executing agency will record program transactions in SIGEP, which integrates the different accounting stages, such as budget (budget execution), assets (assets, liabilities, equity, and earnings), and treasury (cash transfers) records into a master file, using the accrual accounting method, and in accordance with international accounting standards and government standards in a parallel manner, since execution in SIGEP is governed by both sets of standards. The use of the IPAS-IDB system will also be required as a complementary accounting system for generating the reports required by the Bank, including disbursement requests. A chart of accounts will be prepared which identifies management costs, matching investment categories with the respective budget items and accounts.
- 6.3 **Disbursements and cash flow.** The loan will be disbursed primarily using the advance of funds modality, with the frequency of advances determined on the basis of financial programming, which will be periodically updated by the executing agency. The loan proceeds will be deposited into the Banco Central de Bolivia's single treasury account and subsequently transferred to an account in local currency ("libreta"). The Bank may only make a new advance of funds when at least 80% of the total amount previously disbursed has been justified. The executing agency is responsible for the administration of funds, all of which are subject to compliance with internal institutional control systems. The payment reimbursement modality may be used to recognize expenses incurred by the MMAyA before the operation is declared eligible for disbursements. The direct payment modality may be used on an exceptional basis, subject to the Bank's no objection.
- 6.4 **Internal control and internal audit.** The MMAyA has an internal control system that includes before and after control tools. These are incorporated into its organizational chart, rules of operation, and procedures manuals. It also has an internal audit unit that reports directly to the highest-level executive authority and is responsible for conducting independent reviews to determine the degree of compliance and efficiency of the management systems and internal control instruments incorporated in the entity. The internal audit reports resulting from this review contain recommendations to be implemented by management and cover the programs managed by the PCU. The program is expected to be included in reviews of this kind, and these reports will be used for planning the external auditor's work. The Bank will invite the internal audit units to participate in fiduciary workshops on the financial execution of projects.
- 6.5 **External control and reports.** The PCU will be responsible for the timely contracting of the audit firm. The contract will be multiyear in order to: (i) avoid transaction costs; (ii) provide continuity for the auditors' work; and (iii) ensure preliminary reviews at six-month intervals.
- 6.6 **Financial supervision plan.** Financial supervision will be performed on an ex post basis. Supervision plans will include the following activities carried out at least once a year: (i) one comprehensive visit (procurement and financial) by the

Bank; (ii) one onsite visit to the projects that received financial investments; (iii) one desk review of the program's external audit.

- 6.7 **Execution mechanisms.** The PCU will be strengthened by adding financial-accounting management staff so that it can assume the additional fiduciary responsibilities required to execute this operation. In addition, the respective program Operating Regulations will regulate activities such as contracting of the audit firm, financial management of the resources executed for the program, overall financial programming, and the flow of information between the stakeholders involved in the operation.

**PROGRAM TO EXPAND AND IMPROVE WATER SUPPLY SUSTAINABILITY AND RESILIENCE IN CITIES**

**B0-L1191**

**CERTIFICATION**

The Grants and Co-Financing Management Unit (ORP/GCM) certifies that the operation received the non-objection for financing by the Fund **Korea Infrastructure Development Co-Financing Facility for Latin America and the Caribbean (KIF)** for the amount of up to **US\$25,000,000** confirmed by Chang You (ORP/GCM), September 29, 2017.

*(original signed)*

\_\_\_\_\_  
Sonia M. Rivera

Chief

Grants and Co-Financing Management Unit  
ORP/GCM

\_\_\_\_\_  
October 25/2017

Date

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-\_\_\_/17

Bolivia. Loan \_\_\_\_/BL-BO to the Plurinational State of Bolivia  
Program to Expand and Improve Water Supply  
Sustainability and Resilience in Cities

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 the program to expand and improve water supply sustainability and resilience in cities. Such financing will be chargeable to the Bank's Ordinary Capital (OC) resources in the following manner: (i) up to the amount of US\$7,500,000, subject to concessional financial terms and conditions ("Concessional OC"); and (ii) up to the amount of US\$42,500,000, subject to financial terms and conditions applicable to loan operations financed from the Bank's regular program of OC resources ("Regular OC"), as indicated in the Project Summary of the Loan Proposal, and subject to the Special Contractual Conditions of said Project Summary.

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



DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-\_\_\_/17

Bolivia. Loan \_\_\_\_/\_-BO to the Plurinational State of Bolivia  
Program to Expand and Improve Water Supply  
Sustainability and Resilience in Cities

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, acting as Administrator of the Korea Infrastructure Development Co-financing Facility for Latin America and the Caribbean (hereinafter, the "Facility"), 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 the program to expand and improve water supply sustainability and resilience in cities. Such financing will be for an amount of up to US\$25,000,000 from the resources of the Facility, 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 \_\_\_\_\_)