

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

BOLIVIA

LAKE TITICACA CLEANUP PROGRAM

(BO-L1118)

LOAN PROPOSAL

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CONTENTS

PROJECT SUMMARY

I.	DESCRIPTION AND RESULTS MONITORING	1
A.	Background, problems addressed, and rationale	1
B.	Objectives, components, and cost	6
C.	Key outcome indicators	8
II.	FINANCING STRUCTURE AND MAIN RISKS	8
A.	Financing instruments	8
B.	Environmental and social risks	10
C.	Fiduciary risks	11
D.	Other project risks	12
III.	IMPLEMENTATION AND MANAGEMENT PLAN	13
A.	Summary of implementation arrangements	13
B.	Summary of results monitoring arrangements	15
C.	Post-approval design activities	15

ANNEXES	
Annex I	Summary Development Effectiveness Matrix (DEM)
Annex II	Results matrix
Annex III	Fiduciary agreements and requirements
ELECTRONIC LINKS	
REQUIRED	
1.	Multiyear execution plan
2.	Annual work plan
3.	Monitoring and evaluation plan
4.	Environmental and Social Management Report
5.	Procurement plan
OPTIONAL	
1.	Technical feasibility—sanitation
2.	Technical feasibility—solid waste
3.	Socioeconomic feasibility of the project sample
4.	Financial feasibility
5.	Institutional feasibility
6.	Draft Program Operating Regulations
7.	Metropolitan master water and sanitation plan for La Paz-El Alto and adjacent zones
8.	Table of program costs and sources of financing
9.	Analysis of compliance with the Bank's Public Utilities Policy
10.	Lessons learned in program execution
11.	Guide for integrated water resources management and comprehensive watershed management projects with a climate change approach—TESA
12.	Financing Agreement between the European Union and the Plurinational State of Bolivia
13.	Ministry of the Environment and Water (MMAyA) Letters – Commitment of Grant Funds from the European Union/Lake Titicaca program
14.	Grant Leverage Mechanism (GLM)—Document AB-2946
15.	Peruvian government activities—Lake Titicaca
16.	Disbursement arrangement for European Union resources
17.	Regional integration annex
18.	Detailed table on the use of GLM resources
19.	Safeguard Policy Filter
20.	Safeguard Screening Form

ABBREVIATIONS

AAPS	Autoridad de Fiscalización y Control Social de Agua Potable y Saneamiento Básico [Water and Basic Sanitation Oversight and Social Control Authority]
AWP	Annual work plan
BOD	Biochemical oxygen demand
CWM	Comprehensive watershed management
EPSA	Entidad Prestadora de Servicio de Agua y Saneamiento [water and sanitation service provider]
EPSAS	Empresa Pública Social de Agua y Saneamiento S.A. [Public Social Water and Sanitation Company]
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESMR	Environmental and Social Management Report
EU	European Union
FSO	Fund for Special Operations
GLM	Grant Leverage Mechanism
ICAS	Institutional Capacity Assessment System
IERR	Internal economic rate of return
IWRM	Integrated water resources management
LIBOR	London Interbank Offered Rate
masl	Meters above sea level
MEFP	Ministry of Economic Affairs and Public Finance
MMAyA	Ministry of the Environment and Water
MPD	Ministry of Development Planning
PCU	Program coordination unit
PDCK	Plan Director Cuenca Katari [Katari Basin Master Plan]
PEP	Multiyear Execution Plan
TDPS	Titicaca-Desaguadero-Poopó-Salar de Coipasa binational hydrographic system
UNEP	United Nations Environment Programme
VRHR	Vice Ministry of Water Resources
W&S	Water and sanitation

**PROJECT SUMMARY
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Financial terms and conditions							
Borrower: Plurinational State of Bolivia				IDB Blend		IDB GLM	EU GLM
Executing agency: Ministry of the Environment and Water (MMAyA)				Ordinary Capital	FSO	Ordinary Capital	
Source	Amount (US\$)	%					
IDB Ordinary Capital:	25,500,000	85	Amortization period:	30 years	40 years	30 years	N/A
IDB Fund for Special Operations (FSO):	4,500,000	15	Disbursement period:	5 years	5 years	5 years	5 years
Subtotal for blend	30,000,000	35					
IDB (Ordinary Capital) Grant Leverage Mechanism (GLM): ^(a)	47,330,000	85	Grace period:	6 years	40 years	6 years	N/A
			Inspection and supervision fee:	(c)	N/A	(c)	N/A
European Union (EU) grant ^(b) complementing the resources from the GLM:	8,400,000	15	Interest rate:	Single Currency Facility fixed ^(d)	0.25%	Single Currency Facility fixed ^(d)	N/A
Subtotal GLM:	55,730,000	65	Credit fee:	(c)	N/A	(c)	N/A
			Currency of approval:	U.S. dollars			
Total:	85,730,000	100					
Project at a glance							
Objective/description: To help clean up the Katari River and Titicaca's Lago Menor through implementation of a resilient comprehensive watershed management model, increased sanitation coverage, and comprehensive solid waste management.							
Special conditions precedent to the first disbursement of the loan: In keeping with the terms and conditions already agreed upon with the Bank: (i) a subsidiary agreement between the Ministry of Economic Affairs and Public Finance, the Ministry of Development Planning, and the Ministry of the Environment and Water on transferring the loan proceeds has been signed and come into effect; (ii) the executing agency has selected the following specific technical specialists: technical coordinator, social, environmental, solid waste, and community relations specialists, and a sanitation engineer; (iii) the program Operating Regulations have been approved and come into effect, incorporating the Environmental and Social Management Framework (ESMF) for the program as an integral part; (iv) an initial report has been submitted to the Bank which includes the multiyear execution plan, the procurement plan, the financing plan, the results matrix, and the risk matrix for the program; (v) the MMAyA has created the Katari basin management unit and its technical and fiduciary staff have been selected; and (vi) the executing agency has approved the ESMF with the Bank's no objection (paragraph 3.4).							
Special conditions for execution: Prior to awarding the works contracts in each of the participating municipios, the MMAyA will submit evidence to the effect that: (i) an intergovernmental agreement has been signed and come into effect between the MMAyA and the corresponding autonomous municipal government ^(e) on operating and maintaining the works and transferring the assets, under terms and conditions agreed upon in advance with the Bank; (ii) an agreement has been signed and come into effect between the MMAyA and Empresa Pública Social de Agua y Saneamiento S.A. [Public Social Water and Sanitation Company] (EPSAS) for execution of the works and operation and maintenance of the Puchukollo water treatment plant; (iii) the program's environmental and social conditions established in the Operating Regulations and the Environmental and Social Management Report have been fulfilled (paragraph 3.5).							

Exceptions to Bank policies: None.					
Strategic alignment					
Challenges: ^(f)	SI	<input checked="" type="checkbox"/>	PI	<input type="checkbox"/>	EI <input checked="" type="checkbox"/>
Cross-cutting issues: ^(g)	GD	<input type="checkbox"/>	CC	<input checked="" type="checkbox"/>	IC <input type="checkbox"/>

- (a) This sum will be financed from the Ordinary Capital resources in the Bank's regular lending program as established in document AB-2946 (Grant Leverage Mechanism: A Proposal) and will be blended with nonreimbursable resources from the European Union (EU) that will be donated directly to the Government of Bolivia (parallel cofinancing) (see paragraph 2.6).
- (b) For the purposes of this operation, the EU's grant is denominated in U.S. dollars.
- (c) 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 Bank policies.
- (d) The borrower will pay interest on the outstanding balances of the Ordinary Capital portion of the loan at a LIBOR-based rate. Once the outstanding balance reaches 25% of the net amount approved or US\$3 million, whichever is greater, the rate will be set on that balance.
- (e) The transfer of assets will be included in the MMAyA—autonomous municipal government intergovernmental agreements and will become effective when the final acceptance certificate for the works is signed.
- (f) SI (Social inclusion and Equality); PI (Productivity and Innovation); and EI (Economic integration).
- (g) 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 addressed, and rationale

- 1.1 The Lake Titicaca basin is part of the Titicaca-Desaguadero-Poopó-Salar de Coipasa (TDPS) binational hydrographic system,¹ which is an ecosystem shared by Bolivia and Peru that shelters more than two thirds of the indigenous peoples of both countries and has been suffering from the effects of unsustainable production models, climate change, and pollution from residential and industrial discharges and solid waste, and mining activities for decades. It is therefore crucial for these countries to have the political will for shared management of their water resources.
- 1.2 The strategic agenda for binational cooperation and integration and the Declaración de Isla de Esteves [Esteves Island Declaration]² set out guidelines and activities for the environmental rehabilitation of Lake Titicaca and its biological diversity,³ creating a binational commission that carries out wastewater and solid waste treatment activities, with the aim of balancing social demands and building the capacity of public institutions to respond to these problems.
- 1.3 In Bolivia, Katari basin-Titicaca Lago Menor forms a subsystem that is home to more than 30% of the population in the entire binational TDPS. It receives discharges from cities such as El Alto, Viacha, and the entire rural area of Bahía de Cohana.
- 1.4 The Katari basin is situated in La Paz department to the southeast of Lake Titicaca and its area of influence covers 7,882 km² distributed over 24 municipios.⁴ Its terrain is variable, with steep mountainous areas and plains. The altitude ranges from 5,500 masl in snowy Huayna Potosí to 3,820 masl in Bahía de Cohana. The Katari basin is made up of the Seco and Pallina rivers that run through the city of El Alto and which, at their confluence, form the Katari river that discharges into Bahía de Cohana at Lago Menor.
- 1.5 The Ministry of the Environment and Water (MMAyA) promotes the approval of programs with a comprehensive management approach in the Lake Titicaca basin to improve the use of glacial runoff, allocation of water resources for farming, and the water supply for the metropolitan area of La Paz and El Alto and adjacent municipios.⁵
- 1.6 Bolivia's National Watershed Plan,⁶ prepared as part of the National Development Plan,⁷ defines watershed sector policy and is implemented by the MMAyA's Vice

¹ United Nations Environment Programme (UNEP), 2011.

² Presidential Meeting and First Meeting of the Binational Bolivian-Peruvian Cabinet of Ministers, 23 June 2015.

³ High Level Peruvian-Bolivian Commission for Environmental Rehabilitation of Lake Titicaca and its Biological Diversity. Guidelines and Activities, November 2015.

⁴ El Alto, Viacha, Laja, Pucarani, Puerto Pérez, Achocalla, Collana, Comanche, Colquencha, Calamarca, Batallas, Huarina, Desaguadero, Tito Yupanqui, Tiahuanacu, Taraco, Achacachi, San Pedro de Tiquina, Guaqui, Copacabana, San Andrés de Machaca, Jesús de Machaca, Huatajata, and Chua Cocani.

⁵ Pilot program on climate change adaptation capacity. The strategic program for climate resilience was designed with the Strategic Climate Fund.

⁶ MMAyA, 2006.

⁷ Supreme Decree 29272, 2007.

Ministry of Water Resources (VRHR). It is based on a conceptual framework for integrated water resources management (IWRM), which gives priority to social and institutional considerations, and comprehensive watershed management (CWM), which covers the technical tasks related to the utilization and management of the natural resources. The multiyear IWRM and CWM program 2013-2017⁸ provides for the development of master watershed plans. This institutional and sector policy framework was developed in the Katari basin master plan (PDCK).⁹

- 1.7 The PDCK includes a diagnostic of the main environmental problems and identifies actions to solve them. The quality of water resources has deteriorated steadily owing to the dumping of untreated residential and industrial wastewater, urban solid waste, waste from livestock farming, and the existence of mining liabilities, chiefly in the municipios of El Alto (population 912,000),¹⁰ Viacha (66,300), Laja (23,700), Pucarani (29,400), and Puerto Pérez (8,400). Just two of the 24 municipios in the area of influence of Lago Menor have wastewater treatment plants. El Alto has 60% percent sewerage coverage and effluent treatment at the Puchukollo wastewater treatment plant operated by Empresa Pública Social de Agua y Saneamiento S.A. [Public Social Water and Sanitation Company] (EPSAS) is insufficient. Laja has a wastewater treatment plant that does not comply with the maximum permissible limits.¹¹ The PDCK identified the need to improve the sanitary landfill at Viacha, close dumps, and build final disposal facilities for urban solid waste, and included the conclusions of the environmental audit performed by the Office of the Comptroller General,¹² which stresses the inefficiency and lack of coordination of the institutions responsible for environmental quality in the watershed to solve the pollution problems that have been identified.
- 1.8 The demographic situation will increase demand for water and sanitation and, given the potential impact of climate change (rising air temperature,¹³ amplifying the damaging effect of the incremental inflow of nutrients into water bodies¹⁴) there will be less water available in the future.
- 1.9 The conclusions of the PDCK were confirmed by monitoring conducted between 2011 and 2014 by the VRHR, which included 27 surface water points¹⁵ and indicated deteriorating quality, with pH indexes above 9, total phosphates and nitrates on the order of 50 mg/l and 60 mg/l respectively, and values for biochemical oxygen demand (BOD), chemical oxygen demand, and certain heavy metals that exceed the permissible limits.
- 1.10 This situation has a heavy impact on the economy and the quality of life of the population in the Katari basin, such as: (i) higher costs of providing water for human consumption and irrigation owing to the need to use more remote sources,

⁸ MMAyA and VRHR, February 2013.

⁹ MMAyA, June 2015.

¹⁰ National Statistics Bureau (INE), 2016.

¹¹ PDCK, June 2015.

¹² K2/APO5/J13, 2013.

¹³ Seiler et al., 2013b, 2070-2099, potential increase in temperature of 2.5°C to 5.9°C and 9% reduction in precipitation. Thibault et al., 2012, predict a reduction in precipitation and an increase in evapotranspiration.

¹⁴ Matzinger et al., 2007.

¹⁵ The Seco, Seke, Pallina, Colorado, Katari, and Sewenka rivers, and Bahía de Cohana.

or higher treatment costs; (ii) deterioration of the landscape, which reduces tourism; (iii) alterations in dairy¹⁶ and livestock farming because the cattle consume contaminated forage;¹⁷ (iv) disappearance and/or extinction of fish species, with the consequent reduction in fishing;¹⁸ (v) reduction in crop yield; and (vi) in particular, impacts on human and animal health caused by microbiological and toxicological contamination that can lead to diseases of varying levels of seriousness.¹⁹

- 1.11 The Lake Titicaca Authority published water quality and sediment monitoring results that include Bahía de Cohana²⁰ and found parameters that exceeded national standards.
- 1.12 Apart from other actions ([OEL#15](#)), in Peru there is a public-private partnership initiative for wastewater treatment in 10 cities bordering the lake and final studies are being prepared for comprehensive urban solid waste management. The works are expected to begin next year.
- 1.13 For its part, Bolivia has designed a plan to implement the activities prioritized in the PDCK and included in the comprehensive rehabilitation strategy for the Katari basin and the Bolivian sector of Lake Titicaca, to be executed concurrently by the central government, the autonomous departmental governments, and the autonomous municipal governments, with active public participation. Short-, medium-, and long-term actions are planned to increase sanitation coverage, manage urban solid waste, recoup and strengthen resilience to the observed and anticipated impacts of climate change, and monitor and control pollution sources,²¹ under a comprehensive productive development model that takes account of climate resilience and the empowerment of and participation by society in conserving the basin.
- 1.14 **Gender considerations.** The program's community development activities will include gender activities to build the leadership, administrative, and technical

¹⁶ "La Bahía de Cohana, Actualización 2009-2010." Ribera Arismenia estimates a 70% reduction in cheese production in Pajchiri.

¹⁷ Five thousand head of cattle fed with totora reeds suffer from low weight and physiological stress. Instituto para una Alternativa Agraria [Institute for Agricultural Alternatives] (MMAyA December 2014): 80% of totora samples test positive for parasites.

¹⁸ UNEP, 2011: Approximately 4,000 fishermen in the Bolivian area of Lake Titicaca, Pajchiri zone, estimated a 95% drop in the number of kilograms caught each day.

¹⁹ LIDEMA (Liga de Defensa del Medio Ambiente) [Environmental Protection League], "Informe del estado ambiental departamental La Paz 2009–2013." Institute for Agricultural Alternatives, MMAyA, December 2014.

²⁰ "Evaluación de la Calidad del Agua del Lago Titicaca Perú-Bolivia," March 2014: high hardness with 150, 300, and over 300 mg/l of CaCo₃; pH exceeding 8 and 9, except at points in Bahía de Cohana (under 8) and the Katari River (under 7); and parameters exceeding classes A, B, C, and D in Bolivian legislation. According to the U.S. Environmental Protection Agency, sediments in Titicaca Lago Mayor and Lago Menor are moderately polluted and in the Katari River and Titicaca Lago Mayor off Copacabana they are highly polluted.

²¹ Empirical evidence of the effectiveness of sewerage systems on environmental improvement can be found in: *Avaliação do Projeto Belém-Pará. Estudo Longitudinal da Bacia do UNA*, 2004 ([link](#)); Ampla. 2006; Ex post evaluation of project 649/OC-BR ([links A](#) and [B](#)); 10 Lecciones Aprendidas en el Manejo Integrado de las Subcuencas de los Ríos Los Hules-Tinajones y Canho Quebrado, Fondo para la Conservación y Recuperación de la Cuenca Hidrográfica del Canal de Panamá [Fund for the Conservation and Rehabilitation of the Panama Canal Watershed]. USAID-Panama Canal Authority, Panama, September 2006 ([link](#)); Montevideo case study. IDB ([link](#)); Potable water and sanitation for the city of Cuenca (PCR), IDB ([link](#)); Adaptation to climate change and integrated water resources management in La Ceiba, Honduras. IDB ([link](#)).

capabilities of female committee members and female program beneficiaries, increasing their active participation.

- 1.15 The program will support and coordinate its activities with responsible actors to ensure and strengthen the management and operation of the services and infrastructure provided and to coordinate and design innovative production models, implementing an awareness and education strategy.
- 1.16 Through the strategic interventions described above (paragraphs 1.13 to 1.15), in this first stage the Bolivian government seeks to have a positive impact on water-resource recovery and conservation.
- 1.17 **Program strategy.** The operation's design includes actions prioritized in the PDCK and the strategy for comprehensive rehabilitation of the Katari basin, stepping up coordination between the different levels of government. To that end, it will finance the preparation, implementation, and monitoring of a communication strategy and a social management and environmental education plan, in coordination with the different actors.
- 1.18 On account of the problems described and the investment requirements identified, rehabilitation of the quality of the Katari basin is a medium- and long-term task that needs to be approached from a binational Bolivian-Peruvian perspective, since the actions that are initiated will have an impact on all the water resources shared by the two countries. This operation is the first stage in a series that will extend over the PDCK planning horizon and includes the specific actions described under the program's components (paragraphs 1.27 to 1.30), which are coordinated through the Katari basin interagency platform.²² Since there are 24 municipios in the basin, the planned activities are significant but they are constrained, chiefly on account of the resources available at present. The strategy includes studies and projects that will identify and design the actions to be taken in the subsequent stages.
- 1.19 **The water and sanitation (W&S) sector.** The MMAyA is the lead agency in the W&S sector, while the Autoridad de Fiscalización y Control Social de Agua Potable y Saneamiento Básico [Water and Basic Sanitation Oversight and Social Control Authority] (AAPS) regulates services and grants rights to water for human consumption. The program coordination unit (PCU) is a decentralized MMAyA unit established to execute, monitor, and evaluate W&S projects. W&S service delivery is the responsibility of the autonomous municipal governments, through water and sanitation service providers (EPSAs) that can take different forms: state or municipal entities, public-social companies, cooperatives, or water committees. The country's main EPSAs have been able to cover their operating costs from their operating income.²³
- 1.20 **The water resources and irrigation sector.** Bolivia's constitution establishes that water is a human right and strategic resource and that the State has exclusive authority over the general water resource and water services regime. The Framework Law on Autonomous Governments and Decentralization²⁴ assigns

²² Body headed by the La Paz Autonomous Departmental Government that brings together different social, institutional, economic, and political players to coordinate a management model for the PDCK, through an agenda of priority actions. The platform has four components: board of directors, technical council, social participatory forum, and management unit.

²³ Informe AAPS de Indicadores de Desempeño de Gestión de EPASs, 2014.

²⁴ Law 031 of 2010.

authority to the central level to establish the water resources and water services regime by law. The VRHR is the arm of the MMAyA responsible for sector policy. The autonomous municipal governments and the autonomous departmental governments are responsible for preparing, financing, and executing water resources and irrigation projects.

- 1.21 **Bank support in the sectors.** This program is being supported by four technical-cooperation projects.²⁵ The Bank has satisfactorily executed nine programs²⁶ in the water resources and irrigation sector and in water and sanitation. The Multipurpose Water Supply and Irrigation Program for the Municipios of Batallas, Pucarani, and El Alto (loan 3599/BL-BO)²⁷ aims to sustainably boost water availability and with resilience to climate change by improving the efficiency of irrigation systems and agricultural production techniques in several microwatersheds in the Katari basin. An irrigation program with a watershed approach has been approved (BO-L1106), and Phase III of the storm drainage program (BO-L1114) is being prepared. The Bank supported a program of reform in the water and sanitation and water resources sectors through two operations (loans 2771/BL-BO and 3667/BL-BO), and it is supporting the sector through technical-cooperation projects for the wastewater treatment program (PROTARS) and institutional strengthening for EPSAs (BO-T1255 and BO-T1196). The proposed operation supports the National Watershed Plan in a context of vulnerability to natural disasters and climate change ([OEL#11](#)).
- 1.22 **Lessons learned.** Programs in the W&S, water resources and irrigation ([OEL#10](#)), and urban solid waste sectors, and in integrated water resources management in Bolivia and the region have revealed that the following are necessary: (i) development of an institutional framework for the watershed by creating the Katari basin management unit, coordinating the different components of the PDCK, providing planning and management elements (Components II and III); (ii) publicizing the program with key actors, financing activities that are necessary for sustainable management, establishing the interagency platform, the participatory forum, and the communication strategy (Component III); and (iii) implementation of a water quality monitoring system to identify sources of pollution and monitor the impact of steps taken to improve the situation through an information system accessible to all actors included in the PDCK (Component IV).
- 1.23 **Country strategy.** The Bank's country strategy with Bolivia, incorporated into the Basic Sanitation Sector Plan 2016-2020, includes: (i) increasing investments, prioritizing periurban areas, small towns, and rural areas; (ii) consolidating participation by the autonomous departmental governments and the autonomous municipal governments in investments, institutional strengthening, technical assistance, and community development activities; (iii) prioritizing investments by identifying areas for investment and basic sanitation; (iv) taking steps to improve the quality and sustainability of services; (v) strengthening the MMAyA and other institutions so they can lead sector reform; and (vi) reforming and strengthening the service-regulation system.

²⁵ BO-T1158, BO-T1250, BO-T1252, and BO-T1254.

²⁶ GRT/WS-11830-BO, 2597/BL-BO, and GRT/WS-12956-BO, 3091/BL-BO, 2880/BL-BO, 2240/BL-BO, 3599/BL-BO, 3060/BL-BO, and 3536/BL-BO.

²⁷ Cofinancing from the Strategic Program for Climate Resilience.

- 1.24 **Strategic alignment.** The program is aligned with the Country Strategy with Bolivia 2016-2020 (document GN-2843), contributing to the objective “Expand water and sanitation coverage, principally in periurban and rural areas”; it is consistent with the Update to the Institutional Strategy 2010-2020 (document AB-3008) and is aligned with the development challenges of: (i) social inclusion and equality; and (ii) economic integration ([OEL#17](#)), since it will expand sanitation coverage, helping to narrow the gap between rural and urban zones by improving a regional resource. According to the Sector Strategy to Support Competitive Global and Regional Integration (document GN-2565-4), the program satisfies two of the four criteria for the classification of regional integration projects: (a) a “cross-country focus” as this is a national intervention with regional impacts (paragraph 1.18); and (b) “national subsidiarity,” since it is consistent with the action commitments agreed upon bilaterally by Peru and Bolivia for coordinated watershed management (paragraph 1.2). It is also consistent with the crosscutting issues of climate change and environmental sustainability, since it includes building institutional capacity, strengthening the climate change dimension in the W&S sector, through a reduction in vulnerability and comprehensive watershed management, and a reduction in greenhouse gas emissions in solid waste and wastewater treatment. Lastly, it contributes to the Corporate Results Framework indicator “households with new or upgraded sanitary connections” and is aligned with the Sustainable Infrastructure Strategy for Competitiveness and Inclusive Growth (document GN-2710-5) by helping to: (i) promote access to infrastructure services and ongoing improvements in their governance; and (ii) support the construction and maintenance of a structure that is socially and environmentally sustainable, consistent with the dimensions for success and lines of action of the Water and Sanitation Sector Framework Document (document GN-2781-3) of universal access and better quality services, stronger sector governance, prioritization of investments, efficient and sustainable management, and social and environmental sustainability. The operation is also included in the 2016 Operational Program Report (document GN-2849).
- 1.25 **Consistency with Bank policies.** The program and country sector objectives are consistent with the principles of the Public Utilities Policies (document GN-2716-6) ([OEL#9](#)) and comply with financial sustainability and economic evaluation conditions, given that EPSAS’ operating income covers its operation and maintenance costs (paragraph 2.18). The works to be financed are feasible from a socioeconomic standpoint ([OEL#3](#)). The separation of roles and functions in the sector promotes efficiency (paragraph 1.19). The program is aligned with the Operational Policy on Indigenous Peoples (OP-765), bringing significant benefits for indigenous populations in the intervention area, and has identified and adequately mitigated potential adverse social and environmental impacts of the works financed ([REL#4](#)).
- B. Objectives, components, and cost**
- 1.26 The general objective of the operation is to help clean up the Katari River and Titicaca’s Lago Menor through implementation of a resilient comprehensive watershed management model, increased sanitation coverage, and comprehensive solid waste management.
- 1.27 **Component I. Pollution control works and equipment (US\$65.03 million)** including: (i) expansion and upgrading of the Puchukollo wastewater treatment plant, including rehabilitation of its outfall; (ii) construction and/or expansion of

sanitary sewerage systems and wastewater treatment plants in four localities that have been identified as necessary to decontaminate the Katari basin and Lago Menor; (iii) design and implementation of plans for institutional strengthening of water committees/EPsAs in the Katari basin; (iv) a plan to strengthen EPsAs in operating and maintaining the Puchukollo wastewater treatment plant; and (v) training workshops in operation and maintenance with a gender and inter-cultural focus. Also included are the costs of technical, economic, social, and environmental feasibility studies, works supervision, community development activities, communication, and strengthening for the sustainability of the investments.

- 1.28 **Component II. Comprehensive urban solid waste management in localities in the Katari basin (US\$7.15 million)** including: (i) procurement of machinery to operate sanitary landfills and vehicles and containers to collect urban solid waste; (ii) construction of drainage works and access to cells in two landfills (Copacabana and Tiahuanaco); (iii) construction of three sanitary landfills or equivalent works; (iv) closure of three existing dumps; (v) support for municipal trash collection and final disposal units; and (vi) education campaigns for the beneficiary population. Also included are the costs of technical, economic, social, and environmental feasibility studies, works supervision, community development activities, communication, and institutional strengthening for municipios in comprehensive urban solid waste management. The interventions in this component will be prioritized in the Master Comprehensive Solid Waste Management Plan for the Katari Basin, being drafted under the technical-cooperation project to support program preparation.
- 1.29 **Component III. Strengthening management of the Katari basin (US\$4.54 million)** including: (i) training and functioning of the board of directors of the interagency platform; (ii) strengthening for its technical council; (iii) establishment of the participatory forum; (iv) support for operation of the Katari basin management unit; (v) implementation of the socio-communication strategy for Katari basin management; and (vi) design, coordination, and implementation of the information management system for the watershed. Through the interagency platform, diagnostic and institutional strengthening, mapping of stakeholders, training, support for functioning and contacts in the Katari basin, social communication activities, the creation of an information management system, impact monitoring, and decision-making on different levels of participation are planned.
- 1.30 **Component IV. Strategic action studies for Katari basin management (US\$4.81 million)** including: (i) preparation and implementation of prioritized interventions in five demonstration projects on comprehensive watershed management in localities in the Katari basin;²⁸ and (ii) studies on monitoring, identification of pollution sources, and profiling of the impact of discharges on water quality through: (a) updating the industrial census; (b) preparing a climate change adaptation and risk management plan; and (c) supporting the profiling of receiving water bodies.

²⁸ IWRM-CWM MMAyA, 2014. Guía para la Elaboración de Proyectos de GIRH y MIC, VRHR. Puerto Pérez, Pucarani, Isla Suriqui, Pallina Medio, and Bahía de Cohana subbasins, productive activity management, reuse, phyto-remediation, etc.

C. Key outcome indicators

1.31 The most relevant indicators and their expected targets are:

Table 1. Key results matrix indicators

Indicator	Baseline	Target
Water quality in the Seco River, which is an affluent of the Katari River after the Puchukollo wastewater treatment plant comes into operation (BOD mg/l)	46.8	30
Water quality in Lago Menor (BOD mg/l)	37.0	29
Households in El Alto whose wastewater is treated by the Puchukollo plant	0.0	160,000
Social-environmental conflicts in the Katari basin (conflicts/year)	10.0	5

II. FINANCING STRUCTURE AND MAIN RISKS

A. Financing instruments

- 2.1 The program is cofinanced with funds from the Bank and a nonreimbursable contribution from the European Union (EU), under a grant financing agreement for “Sector budget support for the national watershed plan II – (Phase II-IDB): Bolivia/integrated water resources management,” hereinafter the “grant financing agreement” ([OEL#12](#)).²⁹ The Bank’s financing will be charged to the following sources: (i) the biennial allocation for Bolivia (document GN-2442-46) of parallel loans from the Ordinary Capital and the Fund for Special Operations, as provided for in the Debt Sustainability Framework (document GN-2442); and (ii) the allocation of Ordinary Capital resources from the Bank’s regular lending program, as established in the Grant Leverage Mechanism (document AB-2946) ([OEL#14](#)).
- 2.2 This operation is structured as a multiple works program, which will be governed by Operating Regulations, since this modality is used to finance eligible independent projects that are physically similar, including sewerage systems, wastewater treatment plants, and the master comprehensive solid waste management plan for the Katari basin. The works sample consists of expanding and upgrading the Puchukollo wastewater treatment plant and closing two dumps in El Alto and outfitting two sanitary landfills at Copacabana and Tiahuanaco, for a total of approximately US\$48.3 million (equivalent to 59.9% of the direct costs) ([OEL#1](#) and [OEL#2](#)). The other projects to be financed will be prioritized in the 24 municipios, on the basis of population size and impact on quality and: (i) cost-benefit analysis;³⁰ (ii) projects that are feasible from the socioeconomic, technical, environmental, and financial standpoints as per the Operating Regulations; (iii) if necessary, a plan to accredit beneficiary jurisdictions’ ownership of the properties where the works will be built, where land use conditions are compatible with the proposed project; (iv) if necessary, evidence will be submitted of the existence of a legally established operator, together with its written commitment to adequately operate and maintain the infrastructure to be financed; and (v) compliance with the environmental and social aspects established in Chapter VI of the program’s ESMR. The designs of projects that are not part of the sample will be contracted

²⁹ Government of Bolivia and the EU, 27 July 2015.

³⁰ Projects with an internal economic rate of return (IERR) above 12% may receive program financing. The cost-benefit analysis method will be spelled out in the Operating Regulations.

and completed during the first 24 months of execution, and all program works are therefore expected to begin no later than 48 months after the date of eligibility.

- 2.3 With respect to the GLM, the Bank may finance investment loan operations from the Ordinary Capital regular lending program, blended with nonreimbursable resources from bilateral and multilateral donors. The resources will be disbursed simultaneously (*pari passu*) to meet the concessionality requirements. Under the GLM, the EU's contribution under the grant financing agreement will be considered parallel cofinancing and administered directly by the Bolivian government.³¹ The funds will be released once the indicators established in the financing agreement have been fulfilled.
- 2.4 To ensure approval and timely disbursement of the grant funds and fulfillment of the concessionality requirements,³² compliance with the *pari passu* from nonreimbursable financing (EU funds) and the Ordinary Capital loan will be verified annually, through documentary evidence of the availability of funds through: (i) deposits of the EU grant funds in the General Treasury Account, as shown in an regular funds passbook; (ii) inclusion of the nonreimbursable funds in Bolivia's national budget system; and (iii) creation of a specific budget program category in which the MMAyA records the grant. The Bank's Ordinary Capital resources from the GLM may be disbursed once the procedure described above has been carried out.
- 2.5 Each amount disbursed from the Ordinary Capital loan under the GLM will have a counterpart to be disbursed *pari passu*, in the proportions described in the financial conditions (US\$47.33 million from the Ordinary Capital and US\$8.40 million from the EU grant). The Bank may disburse proceeds from the Ordinary Capital loan once the EU's funds are available for program purposes.
- 2.6 As established in paragraph 2.11 of document AB-2946 ([OEL#14](#)), each country eligible for the GLM can access a maximum of US\$30 million during the life of the mechanism, to ensure that all eligible countries can benefit from it. However, to avoid leaving Ordinary Capital resources unutilized, if six months prior to the termination of the GLM, an eligible country has reached its maximum and other eligible countries will not use up all the resources available, a proposal may be submitted for consideration and approval by the Board of Executive Directors to provide resources to that country in excess of the maximum established for that country if the matching grant resources for an eligible operation are available. Considering that: (i) the GLM will expire on 13 September 2016; (ii) for the purposes of the present operation, sufficient matching funds are available from the EU; and (iii) expected demand for GLM funds before its termination is represented by the present project and a loan operation for Nicaragua (NI-L1094), it is proposed for the purposes of this operation that Bolivia be allocated US\$47.33 million from the GLM. For further details on how GLM resources have been used, see [OEL#18](#).

³¹ The EU resources will be administered without the Bank's involvement and therefore no administration agreement between the EU and the Bank is required.

³² Document AB-2946, paragraph 2.7, footnote 7.

Table 2. Program costs and sources of financing

Components	Total	IDB	EU grant
Component I	65,028,084	65,028,084	-
Component II	7,153,000	7,153,000	-
Component III	4,540,000	300,000	4,240,000
Component IV	4,810,000	650,000	4,160,000
Adm. and institutional strengthening	3,248,916	3,248,916	-
Monitoring and evaluation and auditing	950,000	950,000	-
Total	85,730,000	77,330,000	8,400,000

2.7 The estimated budget totals US\$85.73 million. The Bank will finance US\$47.33 million from its Ordinary Capital loan, channeled through the GLM, and US\$30 million from the Ordinary Capital and FSO parallel loans as part of its biennial allocation of FSO resources (document GN-2442-46). The EU will provide US\$8.4 million under the grant financing agreement.

2.8 **Disbursement timetable.** The disbursement period will be five years.

Table 3. Disbursement schedule

Source	Year 1	Year 2	Year 3	Year 4	Year 5	Total
IDB disbursement from the GLM			3,000,000	21,000,000	23,330,000	47,330,000
% IDB disbursement from the GLM	0%	0%	41%	100%	100%	85%
EU disbursement	1,000,000	3,000,000	4,400,000			8,400,000
% EU disbursement	100%	100%	59%	0%	0%	15%
Total GLM + EU	1,000,000	3,000,000	7,400,000	21,000,000	23,330,000	55,730,000
IDB loan disbursement (Ordinary Capital + FSO)	2,000,000	8,000,000	13,300,000	6,700,000		30,000,000
TOTAL	3,000,000	11,000,000	20,700,000	27,700,000	23,330,000	85,730,000

B. Environmental and social risks

2.9 **Environment and Safeguards Compliance Policy (OP-703).** This is classified as a Category "B" operation, triggering the following guidelines: B.1: Bank policies; B.2: Country laws and regulations; B.3: Screening and classification; B.4: Other risk factors; B.5: Environmental assessment and requirements; B.6: Consultations; B.7: Supervision and compliance; B.9: Natural habitats and cultural sites; B.10: Hazardous materials; B.11: Pollution prevention and abatement; and B.17: Procurement. The following policies are also triggered: OP-102: Access to Information; OP-765: Indigenous Peoples, since a significant portion of the population in the area belongs to ancestral ethnic communities, predominantly Aymara; OP-761: Gender Equality in Development, for equitable participation by men and women in activities associated with the operation; and OP-710:

Involuntary Resettlement.³³ The applicability of these policies and the project's compliance with them is described in detail in the ESMR ([REL#4](#)).

- 2.10 When the program was being prepared, public consultations were held with the affected populations and beneficiaries of the expansion and improvement of the Puchukollo wastewater treatment plant and of the closure of two former dumps in El Alto. The consultation processes for the Copacabana and Tiwanaku sanitary landfills had already been completed in accordance with the Bank's safeguards policy. The measures to upgrade the outfall from the Puchukollo wastewater treatment plant will be disseminated and consulted with the neighboring population as a condition precedent to awarding the works.
- 2.11 **Environmental and social risks.** Although the socioenvironmental impact of the work is markedly positive, the environmental and social analysis identified several risks: possible episodes of odors being emitted during Puchukollo plant construction, soil or water contamination associated with the handling and disposal of sewage sludge, inadequate operation & maintenance of the wastewater treatment plants to be financed, and social conflicts with communities near the projects. An Environmental and Social Management Framework (ESMF) was prepared to mitigate these risks, which will be implemented through specific environmental and social management plans (ESMPs) for the projects. If necessary, a job retraining plan will be developed for informal recyclers who work in the dumps, in light of the Bank's Regional Initiative for Inclusive Recycling. The ESMF includes guidelines for an ongoing process of community consultation and relations that will be complemented with community development programs and the interagency platform's social participation forum.
- 2.12 In response to petitions received from communities close to the Puchukollo wastewater treatment plant during the public consultations, actions were included to improve the outfall, mitigating the main annoyances caused by its operation and the odors emitted. An odor panel will be established with participation by those communities to maintain adequate control and monitoring of odors during the construction and operating stages.

C. Fiduciary risks

- 2.13 The institutional capacity assessment system (ICAS) evaluation ([OEL#5](#)) found that the PCU has the capacity for fiduciary management and monitoring. However, the fiduciary risk of "higher costs and longer time to implement the program" was identified, which will be mitigated through the following actions: (i) to record it as an investment program, including all the resources from the different sources of financing, so as not to limit the amount reported in the budget and available to the committed quotas or run the risk of budget cancellation at the end of each fiscal year; (ii) to implement an action plan to mitigate the risk of incurring higher implementation costs and longer times; (iii) to strengthen the fiduciary team by

³³ In the projects in the sample, the need has been identified for the involuntary resettlement of just one house and guidelines have been included for a proposal to do this in accordance with OP-710. Completion of the resettlement will be a contractual condition prior to the start of the corresponding works. Owing to the types of works planned, the number of resettlements is expected to be small and therefore it is not considered necessary to develop a resettlement framework for the program. The ESMP establishes that for each new project, if the need for resettlement is identified, a specific resettlement plan will be drawn up and submitted to the Bank as a condition precedent to the respective bid call.

contracting professionals to work full time on program execution; and (iv) to promote refresher workshops in fiduciary management.

D. Other project risks

- 2.14 The other risks identified and main mitigation measures are: (i) defunding of the program owing to delays in the EU contribution to leverage funds from the GLM. As described earlier, use of the pari passu verification mechanism described in paragraph 2.4 will be required in the sole annex to the loan contract; (ii) inadequate operation and maintenance of the works. A management model for solid waste operators will be implemented and operational and financial performance will be supported for W&S operators; (iii) community obstruction of operation of the systems. Complaint resolution mechanisms, community development plans, and participatory monitoring mechanisms will be designed and introduced; and (iv) failure to comply with the program's environmental and social requirements. Technical environmental specifications will be included in the bidding requirements for the works, and the PCU will have an environmental specialist and a social specialist. The Bank will send missions to verify compliance with the environmental and social safeguards.
- 2.15 **Technical feasibility** will be based on a review of the technical proposals and cost estimates for the projects in the program sample. The detailed engineering designs for the interventions to be financed will be produced by specialized engineering firms and comply with the applicable standards and international good engineering practices, and the Bank's no objection will be required for execution of the corresponding works ([OEL#1](#) and [OEL#2](#)).
- 2.16 **Socioeconomic feasibility.** A cost-benefit analysis was performed of the sample of projects, and they were found to be socioeconomically feasible, with IERRs of 21.8% for the Puchukollo wastewater treatment plant and between 17.3% and 60.2% for the solid waste projects. Using a discount rate of 12%, the net present values are US\$35.7 million and between US\$48,700 and US\$160,200, respectively ([OEL#3](#)). The evaluations were complemented by the corresponding sensitivity analyses, which indicate that the results are robust. According to information provided by EPSAS, W&S service in El Alto costs an average household US\$5.8/month or 0.7% of average monthly family income. Poor families are charged a reduced rate for low-income customers and pay about US\$3.7/month or 1.1% of their average monthly family income. These values are acceptable by international standards.
- 2.17 **Institutional feasibility.** The expanded institutional capacity assessment of the executing agency ([OEL#5](#)) indicates satisfactory development and low risk, which is consistent with the PCU's (paragraph 3.3) experience and understanding of the Bank's procurement and financial policies. Based on a projection of its capacity for the proposed program, the PCU's structure will be strengthened with an execution team to take responsibility for programming, financial, technical, and operational management, monitoring and evaluation of the program. Also included are institutional strengthening for the PCU which will contribute to program execution and monitoring.
- 2.18 **Financial feasibility.** The financial analysis of EPSAS was based on information provided by the company, which has been covering its operation and maintenance

costs from its operating income.³⁴ Its collection levels exceed 90%, and the financial projections indicate that it will continue to have positive operating margins in the coming years. The AAPS took over the company in 2013 on account of its low investment levels and deficient coverage in certain zones. The objectives of the takeover are being met, which are to reengineer the company³⁵ and design a new management model. The process is expected to be completed in the coming months, with the establishment of a metropolitan EPSA. Resources have been allocated from the program for institutional strengthening for the proper operation of the Puchukollo wastewater treatment plant. Funds from GRT/WS-11830-BO and ATN/OC-13769-BO-2 have also been used to design an institutional strengthening program for the entire company ([OEL#4](#)).³⁶ The intergovernmental agreement to be signed by the executing agency, the corresponding autonomous municipal government, and EPSAS and the Operating Regulations will include the requirement that operating income cover at least operation and maintenance costs and depreciation, and EPSAS will be required to submit its audited financial statements and its main operating and financial indicators annually to the MMAyA, which will forward them to the Bank.

- 2.19 The operators of projects outside the sample have been included in the institutional strengthening activities (paragraph 1.27) to support their financial sustainability. The interagency agreements to be signed by the autonomous municipal governments and the MMAyA, and the Operating Regulations will include the requirement that the operating income of the respective water committees/EPsAs be sufficient to cover their operation and maintenance costs and, if not, the autonomous municipal governments must commit to taking the necessary steps, acceptable to the Bank, to guarantee the financial sustainability of those operators.
- 2.20 **Social management.** All the projects to be financed will include: (i) consultation processes that comply with national rules and the Bank's safeguards policies, in accordance with the measures and guidelines in the ESMF; (ii) a complaints resolution mechanism to identify and proactively resolve public complaints; and (iii) community relations processes to strengthen public participation and training in health, hygiene, etc., as part of the community development programs.

III. IMPLEMENTATION AND MANAGEMENT PLAN

A. Summary of implementation arrangements

- 3.1 **Execution arrangement.** The borrower will be the Plurinational State of Bolivia. The program executing agency will be the MMAyA's PCU (paragraph 1.19), which will create an execution team inside its structure to take charge of all fiduciary obligations. The MMAyA will establish the Katari Basin management unit. It will be a deconcentrated unit that reports to the VRHR, executes Components III and IV financed with EU resources, and has sufficient technical and fiduciary staff to ensure proper execution of the resources for which it is accountable ([OEL#5](#) and [OEL#6](#)).

³⁴ Average earnings before interest, taxes, depreciation, and amortization (EBITDA) of 30.4% over the last three years.

³⁵ ATN/OC-13769-BO-2 and 3599/BL-BO.

³⁶ Updating the user rolls, improving income, meter renewal program.

- 3.2 Governance will be provided by: a program steering committee,³⁷ whose functions include approving the portfolio of projects and reallocating the financial resources for the components; a technical committee,³⁸ as an execution monitoring body; the PCU (paragraph 3.3); and the Katari basin management unit. The functions, responsibilities, and obligations of the parties and their coordination will be formalized in the program's Operating Regulations ([OEL#6](#)).
- 3.3 The PCU will be responsible for general coordination, resource management, and technical, administrative, and operational execution of the program. The execution team to be established in the PCU will consist of a technical program coordinator, a group of technical and environmental specialists, financial, procurement, social management, institutional strengthening, planning, and monitoring specialists, as listed in the Operating Regulations, and they will be contracted after obtaining the Bank's no objection. The executing agency's execution team will have the following functions: (i) preparing and periodically updating the PEP, the AWP, and the procurement plan; (ii) conducting the selection processes for works, goods, and consulting services; (iii) carrying out works supervision, execution monitoring, and evaluation activities; and (iv) managing finances and submitting the financial reports required by the Bank ([OEL#5](#)).
- 3.4 **Special conditions precedent to the first disbursement of the loan:** In keeping with the terms and conditions already agreed upon with the Bank: (i) a subsidiary agreement between the Ministry of Economic Affairs and Public Finance, the Ministry of Development Planning, and the Ministry of the Environment and Water on transferring the loan proceeds has been signed and come into effect; (ii) the executing agency has selected the following specific technical specialists: technical coordinator, social, environmental, solid waste, and community relations specialists, and a sanitation engineer; (iii) the program Operating Regulations have been approved and come into effect, incorporating the Environmental and Social Management Framework (ESMF) for the program as an integral part; (iv) an initial report has been submitted to the Bank that includes the multiyear execution plan, the procurement plan, the financing plan, the results matrix, and the risk matrix for the program; (v) the MMAyA has created the Katari basin management unit and its technical and fiduciary staff have been selected; and (vi) the executing agency has approved the ESMF with the Bank's no objection.
- 3.5 **Special conditions precedent to execution:** Prior to awarding the works contracts in each of the participating municipios, the MMAyA will submit evidence to the effect that: (i) an intergovernmental agreement has been signed and come into effect between the MMAyA and the corresponding autonomous municipal government^(e) on operating and maintaining the works and transferring the assets, under terms and conditions agreed upon in advance with the Bank; (ii) an agreement has been signed and come into effect between the MMAyA and Empresa Pública Social de Agua y Saneamiento S.A. [Public Social Water and Sanitation Company] (EPSAS) for execution of the works and operation and

³⁷ Chaired by the Minister of the Environment and Water and consisting of the Vice Ministers of Potable Water and Basic Sanitation, Water Resources, and the Environment, the Director General of Planning of the MMAyA, the Katari basin management unit coordinator, the PCU general coordinator, and the program coordinator.

³⁸ Composed of one technical representative each from the PCU, the Katari basin management unit, the Vice Ministry of Potable Water and Basic Sanitation, the VRHR, and the Vice Ministry of the Environment.

maintenance of the Puchukollo wastewater treatment plant; (iii) the program's environmental and social conditions established in the Operating Regulations and the Environmental and Social Management Report have been fulfilled.

- 3.6 **Operating Regulations.** Program execution will be governed by the Operating Regulations, which will include the following: (i) detailed execution plan; (ii) institutional roles and responsibilities of the entities involved; (iii) strategy for intervention in the different phases of the project cycle; (iv) rules and procedures for the selection and contracting of works, goods, and services; (v) rules and procedures for administrative and financial management; and (vi) monitoring procedures. The ESMP is annexed to the Operating Regulations ([OEL#6](#)).
- 3.7 **Procurement of works, goods, and consulting services.** Procurements will be made in accordance with the policies in documents GN-2349-9 and GN-2350-9. No exceptions are foreseen, and local rules will not apply.
- 3.8 **Direct contracting.**³⁹ Goods and nonconsulting services for individual amounts under US\$500 and blocks up to US\$5,000 may be contracted directly, with approval by the Project Team Leader through the procurement plan.
- 3.9 **Auditing.** During the loan disbursement period, and within 120 days following the close of the executing unit's fiscal year, the annual financial statements audited by independent auditors acceptable to the Bank and contracted by the PCU will be submitted to the Bank. The contract will be governed by the Operational Guidelines for Financial Management of IDB-financed Projects (document OP-273-6) and the Guide for Financial Reports and External Audits. The costs will be financed by the program.

B. Summary of results monitoring arrangements

- 3.10 **Monitoring and evaluation.** The executing agency will prepare reports on the status and results of the activities for which it is responsible. The monitoring and evaluation arrangement will include: (i) the procurement plan; (ii) the PEP; (iii) the AWP; (iv) annual verification of attainment of the targets established in the results matrix; and (v) semiannual reports on: (a) activities, progress in their execution, problems encountered, and solutions adopted; (b) evaluation of the results matrix, the procurement plan, the AWP, and risk analysis; and (c) analysis of the project monitoring report, to which end attainment of the indicator targets and planning for the following six-month period will be examined.
- 3.11 The midterm evaluation will be contracted, with the report to be submitted within 90 days after 50% of the resources have been disbursed; the final evaluation will be contracted within 90 days after 90% of the loan has been disbursed, which will include an ex post socioeconomic evaluation.

C. Post-approval design activities

- 3.12 Contingent on technical feasibility (paragraph 2.15), the final designs will be prepared by a design contractor, supervised by an independent third party.

³⁹ Document OP-272-2 establishes a threshold of US\$750,000 for direct contracting of goods, works, and nonconsulting services, subject to the opinion of the Procurement Specialist and the decision of the Project Team Leader and provision 3.6(a) of the policy in document GN-2349-9, which refers to cases in which no economic advantage or additional efficiency can be obtained by holding competitive bids.

Development Effectiveness Matrix				
Summary				
I. Strategic Alignment				
1. IDB Strategic Development Objectives		Aligned		
Development Challenges & Cross-cutting Themes		-Social Inclusion and Equality -Economic Integration -Climate Change and Environmental Sustainability		
Regional Context Indicators				
Country Development Results Indicators		-Households with new or upgraded access to sanitation (#)		
2. Country Strategy Development Objectives		Aligned		
Country Strategy Results Matrix		GN-2843	Expand water and sanitation coverage, principally in rural areas.	
Country Program Results Matrix		GN-2849	The intervention is included in the 2016 Operational Program.	
Relevance of this project to country development challenges (If not aligned to country strategy or country program)				
II. Development Outcomes - Evaluability		Highly Evaluable	Weight	Maximum Score
		9.0		10
3. Evidence-based Assessment & Solution		9.6	33.33%	10
3.1 Program Diagnosis		3.0		
3.2 Proposed Interventions or Solutions		3.6		
3.3 Results Matrix Quality		3.0		
4. Ex ante Economic Analysis		10.0	33.33%	10
4.1 The program has an ERR/NPV, a Cost-Effectiveness Analysis or a General Economic Analysis		4.0		
4.2 Identified and Quantified Benefits		1.5		
4.3 Identified and Quantified Costs		1.5		
4.4 Reasonable Assumptions		1.5		
4.5 Sensitivity Analysis		1.5		
5. Monitoring and Evaluation		7.5	33.33%	10
5.1 Monitoring Mechanisms		2.5		
5.2 Evaluation Plan		5.0		
III. Risks & Mitigation Monitoring Matrix				
Overall risks rate = magnitude of risks*likelihood		Medium		
Identified risks have been rated for magnitude and likelihood		Yes		
Mitigation measures have been identified for major risks		Yes		
Mitigation measures have indicators for tracking their implementation		Yes		
Environmental & social risk classification		B		
IV. IDB's Role - Additionality				
The project relies on the use of country systems				
Fiduciary (VPC/FMP Criteria)	Yes	Financial Management: Budget, Treasury, Accounting and Reporting. Procurement: Information System.		
Non-Fiduciary				
The IDB's involvement promotes additional improvements of the intended beneficiaries and/or public sector entity in the following dimensions:				
Gender Equality	Yes	The program will create equal job opportunity for women by providing training activities related to management, operation and maintenance of sanitary systems.		
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	The project's preparation has received support through the following TCs: BO-T1158, BO-T1250, BO-T1252 and BO-T1254.	
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 operation's general objective is to contribute to reduce the pollution of the Katari River and Lake Titicaca Minor, with the implementation of an integrated and resilient basin management model, increasing sanitation coverage, and comprehensive management of solid waste.

The project presents a solid justification of the problem and its causes on the basis of empirical evidence. However, there is no sufficient evidence on the effectiveness of similar interventions in contexts that are similar in characteristics to those of the project. The results matrix presents indicators that are SMART, although the matrix could have been summarized in terms of the number of indicators that are presented and could have been also more homogeneous in terms of the type of indicators presented for expected results of a similar nature.

The economic analysis is complete and detailed for three of the projects that will be financed by this operation. This analysis identifies benefits through willingness to Pay and contingent valuation methods, the potential real state valuation resulting from of land adjoining the existing dumpsites; and transfer of values. All projects have internal rates of return above 12%. The Monitoring and evaluation plan proposes an ex post economic evaluation. The risks identified are reasonable and include mitigation measures and indicators for monitoring.

RESULTS MATRIX										
Project objective	To help clean up the Katari River and Titicaca's Lago Menor through implementation of a resilient comprehensive watershed management model, increased sanitation coverage, and comprehensive solid waste management.									
Results										
Result 1: Water quality improved in the Katari River										
Indicator	Unit of measure	Baseline	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	End of project	Comments/means of verification
Water quality: Río Seco (affluent of the Katari River) after the Puchukollo wastewater treatment plant-SC-5 comes into operation	BOD mg/l ¹	46.8	2015					30	30	Katari basin monitoring network at point SEC-05 –Río Seco after the EPSAS treatment plant in El Alto comes into operation
Result 2: Water quality improved in Lago Menor										
Water quality in Lago Menor	BOD mg/l ¹	37	2015					29	29	Katari basin monitoring network at point Bahía de Cohana
Result 3: Wastewater treatment capacity implemented in El Alto										
Wastewater flow treated at the Puchukollo plant	l/s	459	2016					600	600	Reports on plant operations (1)
Households in the city of El Alto whose wastewater is treated at the Puchukollo plant	Household	0	2016					160,000	160,000	Idem (1)
Result 4: Quality of treated wastewater improved										
Quality of the effluent treated by the Puchukollo plant	BOD ₅ (mg/l) Phosphorus (mg/l)	69 7	2016					30 2	30 2	Idem (1)
Result 5: Increased participation by women in bodies responsible for the management, operation, and maintenance of water and sanitation services										
Participation by women in bodies responsible for the management, operation, and maintenance of water and sanitation services in the beneficiary localities	Women in charge of management and O&M activities/ people in charge of management and O&M x 100	35%	2016					40%	40%	Records of the make-up of management bodies
Result 6: Wastewater treatment capacity built in localities in the Katari basin ²										
Households in the beneficiary localities whose wastewater is treated by a plant. Note: Since this is a multiple works program, the localities where the works will be built have not yet been determined.	Household	0	2016					5,000	5,000	Operations reports by the pertinent committee
Result 7: Access to sanitary sewerage services expanded in localities in the Katari basin										
Households in the beneficiary localities connected to sanitary sewerage systems. Note: Since this is a multiple works program, the localities where the works will be built have not yet been determined.	Household	3,200	2016					5,000	5,000	Operations reports by the pertinent committee (2)

¹ BOD: Biochemical oxygen demand measured in mg/l.

² The target values will be adjusted once the designs have been finalized.

Result 8: Service providers strengthened										
Puchukollo plant operating and being maintained up to the technical design specifications	Plant	0	2016					1	1	Idem (1)
Sanitation systems operating in target localities and being maintained up to the technical design specifications	System	0	2016					4	4	Idem (2)
EPSAs/water committees with operating income/operating costs indicators >1	Company	1	2016					4	5	Annual financial statements of EPSAs/water committees
Result 9: Access to solid waste collection and disposal implemented in Copacabana and Tiahuanacu										
Households in Copacabana and Tiahuanacu whose solid waste is disposed of in sanitary landfills	Household	0	2016					4,000	4,000	Idem (2)
Tons of solid waste in Copacabana and Tiahuanacu disposed of in sanitary landfills	Tons/day	0	2016					6	6	Idem (2)
Result 10: Access to solid waste collection and disposal implemented in localities in the Katari basin										
Households in localities in the Katari basin whose solid waste is disposed of in sanitary landfills	Household	0	2016					4,500	4,500	Idem (2)
Tons of solid waste in localities in the Katari basin disposed of in sanitary landfills	Tons/day	0	2016					13.5	13.5	Idem (2)
Result 11: Areas in the city of El Alto available for urban use										
Land in the Katari basin rehabilitated ³ for urban use ⁴	Ha	0	2016			4.0		3.0	7.0	Report by the Municipio of El Alto
Result 12: Comprehensive management of the Katari basin improved										
Socioenvironmental conflicts in the Katari basin ⁵	Conflicts/year	10	2016					5	5	Reports by the National Monitoring and Analysis Unit of the Vice Ministry of Coordination with Social Movements of the Office of the President
Families benefiting from comprehensive watershed management financed by the program	Family	25	2016					1,000	1,000	Final implementation report on comprehensive watershed management

³ Rehabilitated land means that a site (considering the quality and state of decomposition of waste already deposited) will be closed (identified, levelled, and covered with inert material) so that it does not pose sanitary or environmental problems.

⁴ Urban use means that the site has the potential to be used by the municipio of El Alto as it sees fit (parks or squares) in a way that is compatible with the quality of the existing landfill and the permissible uses. It does not include the option of use for housing.

⁵ For the purposes of this program, social conflict refers to collective disputes "aired at public meetings or consultations and the respective record of proceedings" relating to the implementation or operation of projects financed or related to natural resources affected by a project, between two or more social groups or between one or more social groups and public institutions.

Outputs											
Component 1: Works and equipment for pollution control											
Output	Unit of measure	Associated results	Cost (US\$)	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	End of project	Comments/means of verification
Puchukollo wastewater treatment plant expanded and upgraded	Plant	3	47,300,000	0	0	0	0	0	1	1	Certificate of final receipt signed by the construction company, the works supervising consultant, and the inspector and general coordinator of the PCU (3)
Puchukollo plant outfall rehabilitated	Outfall	3	1,000,000	0	0	0	1	0	0	1	Idem (3)
Sanitary sewerage systems ⁶ built and/or expanded in localities in the Katari basin	System	6	5,000,000	0	0	0	0	2	2	4	Idem (3)
Wastewater treatment plants ³ built and/or expanded in localities in the Katari basin	Plant	5	8,000,000	0	0	0	1	1	2	4	Idem (3)
Plans implemented to strengthen water committees/EPsAs ⁷	Plan	7	1,600,000	0	0	0	0	2	2	4	Operators' annual reports based on the breakdown of actions identified in their institutional strengthening plans
Strengthening plan implemented for EPSAS in operation and maintenance of the Puchukollo plant ⁸	Plan	7	400,000	0	0	0	0	0	1	1	Operation and maintenance plan for the Puchukollo plant
Odor monitoring system implemented	System	3	220,000	0	0	1	0	0	0	1	Odor measurement report by EPSAS
Workshops with a gender and intercultural approach in operation and maintenance	Workshop	4	30,000	0	0	0	2	3	5	10	Lists of participants in training courses
Component 2: Comprehensive urban solid waste management in the Katari basin											
Machinery procured to operate the sanitary landfills in localities in the Katari basin	Machine	9	560,000	0	0	2	2	0	1	5	Certificates of receipt signed by the executing agency (4)
Trash collection vehicles procured for localities in the Katari basin	Vehicle	8	1,340,000	0	0	3	5	0	5	13	Idem (4)
Trash containers procured for localities in the Katari basin	Container	9	208,000	0	0	120	200	0	200	520	Idem (4)
Drainage and access works built for existing landfills in localities in the Katari basin	Work	8	100,000	0	0	2	0	0	0	2	Idem (4)
Sanitary landfills built in localities in the Katari basin	Sanitary landfill	9	2,785,000	0	0	0	2	0	1	3	Idem (4)
Dumps closed in localities in the Katari basin	Dump	10	1,050,000	0	0	2	0	0	1	3	Idem (4)
Municipal units in charge of solid waste collection and final disposal operating in localities in the Katari basin	US\$/year	9	625,000	0	0	60,000	130,000	180,000	255,000	625,000	Semiannual municipal operating reports (5)
Training campaigns in sorting solid waste for the beneficiary population in localities in the Katari basin	No. of campaigns	9	215,000	0	0	3	10	3	10	26	Idem (5)

⁶ Since this is a multiple works program, the specific projects will be defined during execution.

⁷ Plans will be deemed to have been implemented when the main institutional strengthening activities identified in the institutional strengthening diagnostic analysis to be conducted by each water committee/EPsA have been completed.

⁸ "Implemented" means when the operation and maintenance plan has been complied with for at least one year of plant operation.

Output	Unit of measure	Associated results	Cost (US\$)	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	End of project	Comments/means of verification
Component 3: Strengthening of Katari basin management											
Institutional strengthening plan implemented for management of the Katari basin	Plan	11	940,000		0	0	0	0	1	1	The strengthening plan has four outputs, whose means of verification are indicated below:
<i>Board of directors of the interagency platform established and functioning</i>	<i>Meetings/year</i>	<i>11</i>	<i>70,000</i>		<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>10</i>	<i>Minutes of meetings (6)</i>
<i>Technical council of the interagency platform strengthened</i>	<i>Meetings/year</i>	<i>11</i>	<i>70,000</i>		<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>15</i>	<i>Idem (6)</i>
<i>Social participatory forum established</i>	<i>Meetings/year</i>	<i>11</i>	<i>300,000</i>		<i>6</i>	<i>6</i>	<i>6</i>	<i>6</i>	<i>6</i>	<i>30</i>	<i>Idem (6)</i>
<i>Katari basin management unit in operation⁹</i>	<i>Unit</i>	<i>11</i>	<i>650,000</i>		<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>1</i>	<i>Contracts signed with the MMAyA</i>
Social communication strategy implemented for Katari basin management	Strategy	11	300,000		1	0	0	0	0	1	Semiannual progress report
Information management system for the basin in operation	System	11	3,150,000								Annual reports by the information system
Component 4: Strategic activities for Katari basin management											
Demonstration projects for comprehensive watershed management implemented in localities in the Katari basin	Project	11	3,960,000		0	1	1	1	2	5	Final report on comprehensive watershed management by the Katari basin management unit
Industrial census updated and the most heavily polluting industries in the Katari basin identified	Study	11	500,000		0	0	1	0	0	1	Consultant's final report (7)
Plan prepared for adaptation to climate change and risk management in the Katari basin	Plan	11	200,000		0	0	1	0	0	1	Idem (7)
Profiles prepared of receiving water bodies in the project area	Study	11	150,000		0	0	0	0	1	1	Idem (7)

⁹ Deemed to be operating when the staff of the Katari basin management unit has been hired.

FIDUCIARY AGREEMENTS AND REQUIREMENTS

Country: Plurinational State of Bolivia
Project No./Name: BO-L1118 – Lake Titicaca Cleanup Program
Executing agency: Ministry of the Environment and Water (MMAyA)
Prepared by: Carolina Escudero (PRM) and Abel Cuba (FM)

I. EXECUTIVE SUMMARY

- 1.1 This annex was prepared taking the following into consideration: (a) the results of the most recent Public Expenditure and Financial Accountability Report (PEFA 2009); (b) the institutional capacity analysis applied to MMAyA's program coordination unit (PCU) when the operation was being designed; and (c) the results of fiduciary supervision, by the FMP/CBO team, of execution of the portfolio for which the unit is responsible.¹
- 1.2 The PCU will be responsible for execution of Components 1 and 2, which will be fully financed by blended Bank Ordinary Capital and FSO resources and resources from the GLM.² Components 3 and 4, for which the European Union (EU) grant will be used, will be executed by the Katari basin management unit.³
- 1.3 The operation's accounting records will be kept in the Public Management System (SIGEP). The Bank's integrated project management system (SIAP-BID) developed by CAN/CBO will be used for financial reporting. For procurements, the Bank's standard bidding documents or documents agreed upon with the Vice Ministry of Public Investment and External Financing (VIPFE) will be used. They are available on the Government Procurement System (SICOES) portal,⁴ where national bid calls will be published.
- 1.4 The Bolivian government and the Bank have prepared an agreement whereby the Basic Standards of the Goods and Services Management System (NB-SABS) will be partly used in IDB-financed operations in Bolivia. The program will apply the agreement once it has come into effect.

II. THE EXECUTING AGENCY'S FIDUCIARY CONTEXT

- 2.1 As a public institution, the MMAyA is governed by Law 1178 of 20 July 1990 on Government Administration and Control (SAFCO), which regulates the systems for the administration and control of public resources and their linkage with the country planning and public investment systems.
- 2.2 The ministry uses SIGEP for all its financial records; it provides reliable and secure information on budget execution. With Bank support, the system has developed an

¹ GRT/WS-11830-BO; GRT/WS-12952-BO; 2880/BL-BO, and 3091/BL-BO.

² Grant Leverage Mechanism.

³ The MMAyA will establish the Katari basin management unit in July 2016. It will be a deconcentrated unit, reporting operationally to the Vice Ministry of Water Resources and Irrigation (VRHR).

⁴ Country procurement subsystem that has been authorized for use in Bank operations.

accounting management module that systematizes the production of reports, respecting the financing structures and currency of loans from international agencies, and is expected to come on stream in 2017. In the meanwhile, the MMayA will use SIAP-BID as a complementary financial accounting and reporting system. As an arm of government, the MMayA is supervised by the Office of the Comptroller General (CGE) and an internal audit unit.

III. FIDUCIARY RISK EVALUATION AND MITIGATION ACTIONS

- 3.1 The institutional capacity assessment system (ICAS) evaluation of the PCU determined that institutional development and capacity were adequate and that the fiduciary risk was LOW. However, the project's risk management matrix found the risk associated with program execution to be medium. The following are planned to mitigate that risk: (a) report the program as an investment program, including all resources from the different sources of financing, so as not to limit the amounts reported in the budget and available to the committed quotas or run the risk of budget cancellation at the end of each fiscal year; (b) take steps to mitigate the risk of incurring higher implementation costs and longer times; (c) strengthen the PCU by contracting professional staff with expertise in financial management and procurement to work full time on the program; and (d) promote refresher workshops in fiduciary management.

IV. CONSIDERATIONS FOR THE SPECIAL PROVISIONS OF THE CONTRACT

- 4.1 **Program Operating Regulations.** Will include the execution arrangement, procedures, and information flows agreed on in advance between the interested parties and the Bank.
- 4.2 **Exchange rate for accounting purposes agreed on with the executing agency.** The exchange rate in effect in the borrower's country as of the effective date that funds in foreign currency are converted into local currency in the executing agency's accounts will be used.
- 4.3 **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 (IFA) acceptable to the Bank. The last of these reports will be submitted within 120 days after the date stipulated for the final disbursement.
- 4.4 The terms of reference for contracting the IFA must receive the Bank's approval in advance. The scope of the audits and other related aspects will be governed by the Operational Guidelines for Financial Management of IDB-financed Projects (document OP-273-6) and the Guide for Financial Reports and External Audits. The auditing costs will be financed by the program. The PCU will be responsible for contracting the firm.

V. CONSIDERATIONS FOR THE SOLE ANNEX TO BE INCLUDED IN THE DESCRIPTION OF THE CORRESPONDING COMPONENT

- 5.1 The program plans to purchase 13 heavy vehicles and two light vehicles for US\$1.41 million. The details are spelled out in the procurement plan agreed on with the Bank, and the program's Operating Regulations will include a technical and legal analysis and the technical specifications governing the procurement process.
- 5.2 The mechanism for verifying compliance with the requirement for *pari passu* disbursement of the nonreimbursable financing (EU funds) and the Ordinary Capital loan will be applied annually, through documentary evidence of the availability of funds via: (i) deposit of the EU grant funds in the General Treasury Account, as shown in a regular funds passbook; (ii) inclusion of the nonreimbursable funds in Bolivia's national budget system; and (iii) creation of a specific budget program category in which the MMAY reports the grant. The Bank's resources from the GLM (Ordinary Capital loan) may be disbursed once the procedure in question has been carried out.

VI. PROCUREMENT EXECUTION AGREEMENTS AND REQUIREMENTS

- 6.1 **Procurement execution.** Procurement will be carried out in accordance with the policies set forth in documents GN-2349-9 and GN-2350-9.
- 6.2 **Procurement of works, goods, and nonconsulting services.** Contracts for works, goods, and nonconsulting services subject to international competitive bidding will be executed using the Bank's standard bidding documents.
- 6.3 Works estimated to cost up to US\$3 million will be obtained using the price comparison method. Processes for amounts between US\$3 million and US\$250,000 will apply the standard price comparison document for works prepared by the Bank for Bolivia's portfolio, and processes for up to US\$250,000 will use the request for quotations for small works available in SICOES.
- 6.4 Off-the-shelf goods (light vehicles, computer equipment, etc.) estimated to cost less than US\$200,000 will be procured via the price comparison method, using the request for quotations for goods that is available in SICOES.
- 6.5 **Selection and contracting of consultants.** Consultants will be selected applying the selection methods established in document GN-2350-9, as follows:
 - 6.5.1 **Selection of consulting firms.** Consulting firms will be selected using the Bank's standard request for proposals and documents requesting proposals for contracts under US\$200,000 agreed upon with the VIPFE, which are available in SICOES.
 - 6.5.2 **Shortlist of consulting firms.** The list may consist solely of national firms for contracts up to US\$200,000.
 - 6.5.3 **Selection of individual consultants.** Individual consultants will be selected on the basis of a comparison of the individual qualifications of the candidates. When the call for proposals is issued by SICOES, one qualified candidate will suffice. When bids are by invitation, the qualifications of at least three candidates able to perform the work will be compared. When the work requires other persons to provide

administrative or operating assistance, the suitability of relying on individual consultants with complementary services will be examined on a case-by-case basis.

- 6.6 **Procurement planning.** The PCU will publish the procurement plan in the Procurement Plan Execution System (SEPA) and will update it at least once a year.
- 6.7 **Advance procurement/retroactive financing.** No advance procurement/retroactive financing is expected.
- 6.8 **Domestic preference.** Not considered for this program.
- 6.9 **Terms of reference and technical specifications.** Reviews of the selection criteria for shortlists, terms of reference, and/or technical specifications are the responsibility of the PCU in conjunction with the IDB Project Team Leader. In all cases they will be agreed on ex ante.
- 6.10 **Table of thresholds (US\$ thousands)**

Works		Goods and nonconsulting services			Consulting	
International competitive bidding	Price comparison	International competitive bidding	National public bidding	Price comparison	International consulting notice	Shortlist 100% national
Over US\$3,000	US\$3,000 and under	Over US\$200	US\$200 and under	US\$50 and under US\$200 and under for common goods and services	Over US\$200	US\$200 and under

6.11 **Major procurement processes***

Activity	Type of bidding	Estimated date	Estimated amount (US\$ thousands)
Consulting firms			
2 works supervision contracts: Puchukollo wastewater treatment plant outfall and wastewater treatment plants elsewhere in the Katari basin	QCBS	As per the procurement plan	2,090
2 works supervision contracts for sewerage systems and sanitary landfills	CQS	As per the procurement plan	291
4 community development contracts: Puchukollo plant outfall, wastewater treatment plants elsewhere in the Katari basin, sewerage systems, and sanitary landfills	QCBS	As per the procurement plan	1,415
2 institutional strengthening contracts for operators of the Puchukollo plant, sewerage systems, and wastewater treatment plants elsewhere in the Katari basin	QCBS	As per the procurement plan	2,025
Institutional strengthening for sanitary landfill operators	QCBS	As per the procurement plan	625
Establishment of the baseline for odors	QCBS	As per the procurement plan	220
Updating the industrial census and identification of the most heavily polluting industries	QCBS	As per the procurement plan	500
Profiling of receiving water bodies in the project area	CQS	As per the procurement plan	150
Design, development, and implementation of a dashboard to manage programs in the PCU-PAAP	CQS	As per the procurement plan	200
External advisory services on legal and procurement	CQS	As per the	100

Activity	Type of bidding	Estimated date	Estimated amount (US\$ thousands)
matters		procurement plan	
External audits	QCBS	As per the procurement plan	250
Establishment of the baseline	CQS	As per the procurement plan	200
Midterm evaluation	CQS	As per the procurement plan	100
Final evaluation	QCBS	As per the procurement plan	300
Individual consultants			
Various contracts for the execution team	NICQ	As per the procurement plan	1,735
Various specialists to review and adjust preinvestment projects	NICQ/IICQ	As per the procurement plan	400
Goods			
3 contracts for heavy machinery to operate the sanitary landfills, 13 vehicles and containers for trash collection	ICB	As per the procurement plan	2,108
6 contracts for light vehicles, office equipment and furniture, computer equipment, etc.	Price comparison	As per the procurement plan	372
Works			
Upgrading and expansion of the Puchukollo wastewater treatment plant	ICB	As per the procurement plan	45,000
Work to rehabilitate the Puchukollo outfall	Price comparison	As per the procurement plan	1,000
Upgrading and expansion of sewerage systems elsewhere in the Katari basin	ICB	As per the procurement plan	5,100
Wastewater treatment plants built and/or expanded in localities in the Katari basin	ICB	As per the procurement plan	8,110
Sanitary landfills	Price comparison	As per the procurement plan	2,677
Closure of dumps	Price comparison	As per the procurement plan	1,050
Nonconsulting services			
Implementation of the social communication strategy of the Katari basin master plan (includes Components 1 and 2)	ICB	As per the procurement plan	550
Technical services for wiring and installing connections in the PCU-PAAP and the Katari basin management unit	Price comparison	As per the procurement plan	10
Technical assistance to strengthen the National Service for the Sustainability of Basic Sanitation Services (SENASBA)	NCB	As per the procurement plan	170

* For the initial procurement plan, click [here](#).

QCBS: Quality- and cost-based selection

IICQ: International individual consultant selection based on qualifications

NICQ: National individual consultant selection based on qualifications

NCB: National competitive bidding

CQS: Selection based on the consultants' qualifications

6.12 Procurement supervision. The project will use ex post reviews of processes up to 100% of the threshold for NCB as per the following table (contracts not covered in the table will be subject to ex ante review). The program's firm of external auditors will perform annual ex post reviews of procurements. The Bank will offer ongoing training and advisory services to mitigate errors in ex post reviews.

Thresholds for ex post reviews			
Works	Goods and nonconsulting services	Consulting firms. Shortlist may be 100% national	Individual consultants
None	Contracts for US\$200,000 and under	Contracts for US\$200,000 and under	No cap on the amount

- 6.13 **Recurring or operating expenses** are those incurred for goods and services needed to start up the program (stationery, toner, electricity, water, Internet and telephone, per diems, travel for PCU staff, etc.). These expenses will be approved by the Project Team Leader through the procurement plan and executed in accordance with the NB-SABS rules applied by the PCU. This aspect will be included in the Operating Regulations.
- 6.14 **Direct contracting.**⁵ Goods and nonconsulting service (room/site rental, audiovisual equipment, transportation, facilitators, etc., for workshops/meetings) for individual amounts up to US\$500 and blocks up to US\$5,000 may be contracted directly for purposes of economy and efficiency in execution. Such contracts will be approved by the Project Team Leader through the procurement plan.
- 6.15 **Files.** In accordance with the loan contract, the PCU will be responsible for: preparing the supporting documentation for procurement processes; adequately and diligently documenting the verifications and controls necessary for approvals by the PCU; and keeping complete, secure, and orderly documentation of all the program's fiduciary processes.

VII. FINANCIAL MANAGEMENT AGREEMENTS AND REQUIREMENTS

- 7.1 **Programming and budget.** The MMAyA will establish the project in an administrative directorate,⁶ thereby permitting the sources of financing and resources used in project execution to be reported and identified individually in the budget. Budget reporting and future budgetary modifications will be based on the AWP and the PEP approved by mutual agreement with the Bank. Changes in the budget must be approved through a Ministerial Resolution by the Ministry of Development Planning.
- 7.2 With regard to the EU grant, the MMAyA will open a specific program budget category to report these resources. The entire program will also be reported as an investment, with all the funds from the different sources of financing, including the EU grant.
- 7.3 **Accounting and information systems.** Program transactions will be reported in SIGEP. In addition, for project accounting purposes, a chart of accounts will be prepared to identify the expenditures made during each fiscal year on a cash

⁵ The Procurement Function Operational Guidelines (document OP-272-2) establish a threshold of US\$750,000 for direct contracting of goods, works, and nonconsulting services subject to the opinion of the Procurement Specialist and the decision of the Project Team Leader, and provision 3.6(a) of document GN-2349-9 refers to cases in which no economic advantage or additional efficiency can be obtained by holding competitive bidding.

⁶ In SIGEP's programmatic structure for the budget, an administrative directorate can incorporate various projects, which are reported and controlled independently.

- basis, standardizing the program's investment categories with the respective budget items and accounting categories. The MMAyA will use SIAP-BID temporarily as a complement for issuing financial reports until SIGEP's accounting management module becomes available.
- 7.4 **Disbursements and cash flow.** The funds provided by the Bank will be disbursed as advances, chiefly in function of the financial programming, which will be periodically updated. The Bank may make a new advance when at least 80% of all previous advances has been disbursed. The loan proceeds will be deposited in an independent account in U.S. dollars and transferred to another account in local currency—both in the General Treasury Account (CUT).⁷
- 7.5 The proceeds from the EU grant will be disbursed to the Ministry of Economic Affairs and Public Finance and managed by the Katari basin management unit. The PCU will maintain accounting records for the entire program.
- 7.6 **Internal control and internal audit.** The PCU's financial management is subject to annual reliability reviews by the internal audit unit and, given the relative importance of the program, it is expected to be included in those reviews. The Katari basin management unit will also be subject to reviews of this kind. As a strategic activity in its mandate, the Bank will coordinate annual meetings with the internal audit units to identify program monitoring actions.
- 7.7 **External control and reporting.** To comply with the requirement to present audited annual financial statements, the PCU will contract an independent firm of auditors acceptable to the Bank, in accordance with IDB policies. The scope of the audits will include all the sources of program financing and the cost will be covered by the program.
- 7.8 **Financial supervision plan.** Supervision plans and frequencies will be determined on the basis of the identified fiduciary risks. The actions envisaged include: (i) annual external audits contracted to review the program's financial statements; (ii) field visits to the investment sites; and (iii) visits to verify compliance with the internal control recommendations made by the program's external auditor.

⁷ CUT: Cuenta Única del Tesoro.

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-___/16

Bolivia. Loan ____/BL-BO to the Plurinational State of Bolivia
Lake Titicaca Cleanup Program

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such contract or contracts as may be necessary with the Plurinational State of Bolivia, as Borrower, for the purpose of granting it a financing to cooperate in the execution of a Lake Titicaca cleanup program. Such financing will be for the amount of up to US\$25,500,000 from the resources of the Single Currency Facility of the Bank's Ordinary Capital, corresponds to a parallel loan within the framework of the multilateral debt relief and concessional finance reform of the Bank, and will be subject to the Financial Terms and Conditions and the Special Contractual Conditions of the Project Summary of the Loan Proposal.

(Adopted on __ ____ 201__)

BO-L1118
LEG/SGO/ CAN/IDBDOCS#40401241

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-___/16

Bolivia. Loan ____/BL-BO to the Plurinational State of Bolivia
Lake Titicaca Cleanup Program

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such contract or contracts as may be necessary with the Plurinational State of Bolivia, as Borrower for the purpose of granting it a financing to cooperate in the execution of a Lake Titicaca cleanup program. Such financing will be for the amount of up to US\$4,500,000 from the resources of the Bank's Fund for Special Operations, corresponds to a parallel loan within the framework of the multilateral debt relief and concessional finance reform of the Bank, and will be subject to the Financial Terms and Conditions and the Special Contractual Conditions of the Project Summary of the Loan Proposal.

(Adopted on __ _____ 201__)

BO-L1118
LEG/SGO/CAN/IDBDOCS#4041286

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

RESOLUTION DE-___/16

Bolivia. Loan ___/OC-BO to the Plurinational State of Bolivia
Lake Titicaca Cleanup Program

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such contract or contracts as may be necessary with the Plurinational State of Bolivia, as Borrower, for the purpose of granting it a financing to cooperate in the execution of a Lake Titicaca cleanup program. Such financing will be for the amount of up to US\$47,330,000 from the resources of the Ordinary Capital of the Bank, corresponds to a parallel loan within the framework of the Grant Leverage Mechanism authorized pursuant to Resolution AG-9/13, 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 __ __ 201__)

BO-L1118

LEG/SGO/CAN/IDBDOCS#40401438