

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

**BOLIVIA**

**MULTIPURPOSE DRINKING WATER AND IRRIGATION PROJECT FOR THE  
MUNICIPALITIES OF BATALLAS, PUCARANI AND EL ALTO**

**(BO-L1080, BO-G1004, BO-X1012)**

**OPERATION DEVELOPMENT PROPOSAL**

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**ABBREVIATIONS**

PAG	2025 Patriotic Agenda
AAPS	Authority for Oversight and Social Control of Drinking Water and Basic Sanitation
DW	Drinking Water
DW&S	Drinking Water and Sanitation
SSS	Sanitary Sewage System
W&S	Water and Sanitation
TA	Technical Assistance
CTA	Comprehensive Technical Assistance
COTEMU	Technical Commission for the Operation of the Multipurpose Project
CC	Climate Change
TC	Technical Cooperation
DEM	Development Effectiveness Matrix
COMDEV	Community Development
EMAGUA	Environment and Water Executing Agency
EPSAS	Drinking Water and Sanitation Company of La Paz and El Alto
EPSA	Water and Sanitation Service Provider
SCF	Strategic Climate Fund
IS	Institutional Strengthening
NDF	Nordic Development Fund
FSO	Fund for Special Operations
ADG	Autonomous Departmental Governments
AMG	Autonomous Municipal Governments
GoB	Government of Bolivia
GPM	Multipurpose Program Management Department
INE	National Institute of Statistics of Bolivia
ESMR	Environmental and Social Management Report
RM	Results Matrix
MEF	Ministry of Economy and Public Finance
IWM	Integrated Watershed Management
MMAYA	Ministry of Environment and Water
MPD	Ministry of Development Planning
EA	Executing Agency
O&M	Operation and Maintenance
PP	Procurement Plan
RP	Resettlement Plan
MYEP	Multi-year Execution Plan
ESMP	Environmental and Social Management Plan
SCMP	Social Compensation and Management Plan
MMPDWS	Metropolitan Master Plan of Drinking Water and Sanitation of La Paz and El Alto
AOP	Annual Operating Plan
SPBSD	Sector Plan of Basic Sanitation Development
WR	Water Resources
OR	Operation Rules
SECI	Institutional Capacity Evaluation System
SENARI	National Irrigation Service
TESA	Technical, Economic, Social and Environmental Assessment
IRR	Internal Rates of Return
NPV	Net Present Value

**PROGRAM SUMMARY**  
**PLURINATIONAL STATE OF BOLIVIA**  
**MULTIPURPOSE DRINKING WATER AND IRRIGATION PROJECT FOR THE MUNICIPALITIES OF**  
**BATALLAS, PUCARANI AND EL ALTO**  
**(BO-L1080, BO-G1004, BO-X1012)**

Financial Terms and Conditions							
<b>Borrowing country and Beneficiary:</b> Plurinational State of Bolivia				<b>OC</b>	<b>FSO</b>	<b>SCF</b>	<b>NDF</b>
<b>Executing Agency:</b> Environment and Water Executing Agency (EMAGUA)			<b>Term of repayment:</b>	30 years	40 years	N/A	N/A
			<b>Disbursement period<sup>1</sup>:</b>	5 years	5 years	5 years	5 years
<b>Source</b>	<b>Amount (USD)</b>	<b>%</b>	<b>Grace period:</b>	6 years	40 years	N/A	N/A
<b>IDB (OC):</b>	49.600.000	37	<b>Inspection and Surveillance Commission<sup>(c)</sup>:</b>	*	N/A	N/A	N/A
<b>IDB (FSO):</b>	12.400.000	9	<b>Interest rate:</b>	Based on LIBOR	0.25%	N/A	N/A
<b>Strategic Climate Fund (SCF)<sup>(a)</sup>:</b>	42.500.000	32					
<b>Nordic Development Fund (NDF)<sup>(b)</sup>:</b>	4.370.000	3	<b>Credit Commission<sup>(c)</sup>:</b>	*	N/A	N/A	N/A
<b>Local:</b>	24.145.136	18	<b>Currency of approval:</b>	United States Dollars charged to ordinary capital	US Dollars		
<b>Total:</b>	133.015.136	100					
Project Outline							
<p><b>Project Objective/Description. Objectives.</b> The overall objective of this program is to improve drinking water service delivery in the municipality of El Alto, taking climate change resilience aspects into account. The specific objectives are to: (i) increase water availability for the water supply system of El Alto and the communities of the municipality of Batallas; (ii) improve and expand the use of the irrigation systems in the municipalities of Pucarani and Batallas; (iii) promote integrated WR management and sustainable use of natural resources in the context of climate change.</p>							
<p><b>Special contract provisions that must be fulfilled before the first disbursement of funds:</b> (i) an intergovernmental agreement must be signed by the EMAGUA, the Ministry of Environment and Water, the Ministry of Development Planning and the Ministry of Economy and Public Finance<sup>(d)</sup>, for the purpose of transferring the loan resources and non-refundable funds as well as the execution and coordination of the activities under the program, in accordance with the terms and conditions previously agreed with the Bank, and such agreement must be in effect; (ii) the Multipurpose Program Management Department must be created and its specialized technical personnel selected in conformity with the terms and conditions previously agreed with the Bank (<b>¶Error! Reference source not found.</b>); (iii) the program Operation Rules (OR) must be approved and in effect pursuant to the terms and conditions previously agreed with the Bank; and (iv) an initial report must be submitted to the Bank including the multi-year execution plan, the procurement plan, the financial plan, and the program risks and Results Matrix (<b>¶Error! Reference source not found.</b>).</p>							
<p><b>Special execution contract provisions:</b> Prior to the commencement of infrastructure works in each of the municipalities participating in the program, the EMAGUA must provide evidence to prove that: (i) an intergovernmental agreement has been signed with the pertinent AMG to provide for works maintenance, local contributions and asset transfer<sup>2</sup>. In the case of El Alto works, an agreement must be subscribed with the EPSAS for the execution of works and O&amp;M of systems. These agreements will be in accordance with the terms and conditions previously agreed with the Bank; (ii) the program's environmental and social conditions established in the OR and ESMR have been fulfilled. Additionally, the COTEMU should be designed and in operation within three years from Program eligibility (<b>¶Error! Reference source not found.</b>).</p>							
<b>Exceptions to Bank's policies: -</b>							
<p><b>The project qualifies for<sup>(f)</sup>:</b>                      SV <input checked="" type="checkbox"/>                      PE <input checked="" type="checkbox"/>                      CC <input checked="" type="checkbox"/>                      CI <input type="checkbox"/></p>							

<sup>1</sup> For the SCF and the NDF, the execution and disbursement periods will be the same

<sup>2</sup> Asset transfer will be included in the EMAGUA – AMG intergovernmental agreement and performed at the time of execution of the certificate of final acceptance.

- (a) These resources will be provided on a non-refundable basis and will be taken from the “Pilot Program for Climate Resilience (PPCR)” of the Climate Strategic Fund (the “Fund”). The availability of these resources will be subject to prior Fund’s approval. Considering these resources have not been approved yet, it would be useful to know when the respective Subcommittee will approve them in order to identify the dates of the following steps in the operation processing (OPC and DIR).
- (b) These resources will be provided on a non-refundable basis and they have been already approved by the Board of Directors of the Nordic Fund (See [link](#)).
- (c) The credit commission and the inspection and surveillance commission will be set up from time to time by the Board of Executive Directors as part of their review of the Bank’s finance charges in accordance with the corresponding policies.
- (d) Pursuant to the laws of the Plurinational State of Bolivia, in the case of non-refundable resources the Ministry of Economy and Finance is not required to be a party to said agreement.
- (e) Asset transfer will be included in the EMAGUA – AMG intergovernmental agreement and performed at the time of execution of the certificate of final acceptance.
- (f) SV (Small Vulnerable Countries), PE (Poverty Reduction and Equity Increase), CC (Climate Change, Sustainable Energy and Environmental Sustainability), CI (Regional Cooperation and Integration).

## I. PROJECT DESCRIPTION AND RESULTS MONITORING

### A. Background, problems and justification

- 1.1 The metropolitan area of the city of El Alto, located in the Bolivian high plateau at 4 thousand meters above sea level, is one of Bolivia's main development centers and one of the big human settlements in the Bolivian central axis of major cities. With around a million inhabitants, El Alto has become one of the most dynamic economic poles in the country with an annual growth rate estimated at 5.10% as evidenced by the census<sup>3</sup> data, which show that 69% of the population in Bolivia (approximately 6.9 million) lives in urban areas. This situation depicts international projections,<sup>4</sup> according to which the most significant growth in developing countries is estimated to be achieved in urban areas, which will be competing for the use of resources against the adjoining rural areas and will require access to basic services.
- 1.2 The scarcity of water supply sources for El Alto, as evidenced by the fact that the service has been discontinued in vast areas,<sup>5</sup> was diagnosed in the Metropolitan Master Plan of Drinking Water and Sanitation of La Paz and El Alto (MMPDWS)<sup>6</sup> ([EEO#13](#)), where the balance between demand and supply with regard to the supply systems in the city of El Alto made it necessary to extend the supply sources to ensure the provision of the service in the city, whose population will increase from 849,467 inhabitants (INE 2012) to 1,482,837 in 2036<sup>7</sup> with a demand estimated at 54,4 million m<sup>3</sup> per year. With a view to solving this problem, in 2012, the Ministry of Environment and Water (MMAyA) requested the Identification Study (IS) in order to establish the best alternative to increase its capacity by at least 800 l/s. Water is currently supplied via two systems known as El Alto and Tilata,<sup>8</sup> which, with a mean annual production equal to 38.9 million m<sup>3</sup>, made it possible to tightly satisfy the demand in 2012, estimated at 38.8 million m<sup>3</sup>, but remain insufficient to match the population increase.
- 1.3 As a result of the IS, it was determined that the best alternative to increase the water supply for the city of El Alto entailed the intake and transportation of the excess water (that not used for irrigation and other purposes) from the watersheds of the Jacha Jahuira and Khullu Cachi rivers. Eleven alternatives were assessed to that effect employing social criteria (existing conflicts), environmental criteria (mining-produced pollution), and economic and technical criteria (water cost and availability). These studies were verified by the MMPDWS, which proposes the gradual incorporation of additional sources, the aforementioned, provided for in this program, constituting the first alternative. The offer for 2023 will be thus increased to 57.2 million m<sup>3</sup> to satisfy a demand estimated at 54.4 million m<sup>3</sup>. This will additionally make it possible to exploit the Tilata system in a sustainable manner, thus reducing costs through a decreased use of energy. The validity of these projections is based on the continuity and intensification of the water loss reduction program currently conducted by the

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<sup>3</sup> National Population and Housing Census 2012, INE.

<sup>4</sup> United Nations, 2004.

<sup>5</sup> In accordance with the social and economic study conducted by Prointec, 37% of the population is involved.

<sup>6</sup> Approved by Resolution No. 604 dated 12/16/2014 and issued by the Ministry of Environment and Water.

<sup>7</sup> In accordance with the MMPDWS's demographic estimates.

<sup>8</sup> El Alto system. Source: Tuní reservoir. Tilata system. Source: Purapurani aquifer system, exploited through drilling.

service provider in El Alto (EPSAS) and which is also subject to assessment in the MMPDWS.

- 1.4 On the other hand, in the rural area located in the watersheds identified in the IS, which includes the municipalities of Pucarani and Batallas, an important percentage of the households lacks basic services such as tap water supply, electricity and sanitation services. The research conducted<sup>9</sup> indicates that the water consumed comes from streams, natural springs, and wells in unfavorable conditions. In these areas, communities are grouped in agricultural and irrigation associations which engage in trade and agricultural activities subject to some limitations. These organizations are very important for the big urban metropolis as they not only make their contribution through the production of food, but they also hold rights over the water sources which would serve El Alto. The growing of crops is currently dependent upon altitude, the characteristics of the climate (frosts, hailstorms, droughts), the soil, and the availability of irrigation. Sheep and cattle raising are important in the region. In Pucarani, for instance, 40%<sup>10</sup> of the households produce cow milk, for which they grow alfalfa and oats. The communities benefiting from irrigation water grow potatoes, broad beans, quinoa, alfalfa and barley, which ensure a higher income than that earned by the communities which do not rely on irrigation water, in which case their income comes from the sale of unirrigated potatoes produced during the rainy season as well as from camelids raising and beef.
- 1.5 In this line, in the high area of the watersheds the production is mainly livestock-based whereas crops are grown essentially for self-consumption due to the low productivity and absence of irrigation. In the communities located in the low and central areas, where irrigation is available and the climate and soil conditions are better, the production is higher and more varied; alfalfa fields abound, complemented by the milk production activity typical of this region. However, in the municipalities of Batallas and Pucarani, the existing irrigation infrastructure is over 30 years old, which means it has reached the end of its useful life. In addition, it was never properly maintained by the water users. Its low distribution efficiency, which results in the loss of plenty of water, jeopardizes the sustainability of these activities under a scenario of high demographic growth in the urban areas and climate change. Currently, the area at risk totals 1,232 hectares (363 hectares of crops and another 764 of grazing land) whereas the demand has not been met in respect of over 5 thousand hectares of agricultural land in such watersheds.
- 1.6 On the other hand, the potential impacts of climate change on the quality and availability of water in the area are to be added to the already existing demographic pressure on the water sources, which in turn affects the capacity of the systems to guarantee a reliable supply and continuous flow in order to meet the needs of the many water users. Currently, the supply for El Alto mainly originates from rainwater, ice (glaciers) and underground water. The contribution of each source varies annually on the basis of their seasonal nature, which is why it has been estimated<sup>11</sup> that, under an extremely critical scenario, the climate change could reduce the volume of available water in adjoining watersheds by approximately 10% in 2040, which can be largely attributed to a decrease in

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<sup>9</sup> Environmental and Social Impact Assessment (ESIA), CPM, 2014.

<sup>10</sup> Environmental and Social Impact Assessment (ESIA), CPM, 2014.

<sup>11</sup> Technical, Economic, Social and Environmental Assessment (TESA).



glacial ice. In fact, the fast retreat of the tropical glaciers in the Andean area (Francou *et al*, 2007; Ramirez *et al*, 2001, 2013) and higher rain variations make it necessary to seek additional water sources long before it had been originally planned in order to guarantee the resilience of the water supply service for El Alto. In some micro watersheds on the Royal Range, the run-off coming from the glaciers is an important source during the dry season. In the case of the program watersheds (Jacha Jahuira and Khullu Kachi), the current glacial contribution has been estimated at approximately 11% and 9.2%, respectively, in accordance with the Technical, Economic, Social and Environmental Assessment (TESA). Such conditions were considered in the assessment and hence in the design of the infrastructure financed by the program.

- 1.7 Given the above situation, i.e., the allocation of water from the Jacha Jahuira (Khara Khota) and Khullu Cachi (Taypichaca) watersheds aimed at the supply of drinking water for El Alto, the Ministry of Environment and Water conducted negotiations with the communities with prior irrigation and direct consumption rights. In consideration for the use of a given amount of available water from the aforementioned watersheds, the Ministry undertook to make an investment in order to improve (more efficient water transportation) and enlarge the existing irrigation systems through their modernization and to provide 13<sup>12</sup> communities from the municipality of Batallas with drinking water, which inures to the benefit of a population of around 7,900 inhabitants.
- 1.8 Finally, the above points can be summarized as the following challenges for the city of El Alto and its adjoining municipalities: (i) to increase water availability in a sustainable manner for a growing urban area, making it CC resilient; (ii) to improve the current transportation efficiency of the irrigation systems as well as the access to agricultural production technologies; (iii) to manage and use the water in a sustainable manner both in the urban and rural areas by respecting the existing uses and users; (iv) to monitor the impacts of climate change on the water sources in order to adapt the management of the watershed thereto; and (v) to identify the responses to the CC with regard to water availability which can help increase the watershed communities' resilience.
- 1.9 **Proposed Strategy:** To address these challenges, the new approach proposed is based on: (i) rainwater harvesting and regulation infrastructure that considers the impact of climate change (optimal dam height) on local hydrology to cover the demand projected until 2040; (ii) improvement in water transport and use efficiency of the irrigation systems required by the communities, both existing and new; (iii) an adaptive water management framed in a watershed management plan that enables: (a) water reallocation amongst users in times of scarcity and comprehensive governance; (b) identification of response measures to climate change, such as soil preservation, rainwater harvesting, current improvement in the farming practices of the area, and other practices defined with local communities;
- 1.10 The use of dams as an artificial element to stabilize glacier runoff, given the loss of ice, has been proposed as an adaptation measure in a number of studies in the Andean region. In addition, the effectiveness of improving or installing

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<sup>12</sup> Catacora, Chirapaca, Igachi, Pariri, Yaurichambi, Cullucachi, Cutusuma, Calasaya, Caluyo, Huayrocondo, Chijipata Alta, Chijipata Baja, Huanané.

efficient irrigation systems<sup>13</sup> and their impact on farmers' income has been widely demonstrated both in Bolivia and in similar contexts.<sup>14</sup> Likewise, comprehensive water management has been recognized as one of the best tools to pinpoint adaptation measures to climate change and include the associated risk (Feroz *et al.*, 2015; Pham Quy Giang, *et al.*, 2012.)

- 1.11 **The W&S sector.** The strategic planning and policy of the W&S sector is under the charge of the MMAyA. The Authority for Oversight and Social Control of Drinking Water and Basic Sanitation (AAPS) has been entrusted since 2009 with service regulation<sup>15</sup> and the duty to grant the rights to provide, use, and enjoy water sources for human consumption. In 2008, the National Basic Sanitation Sustainability Service (SENASBA) was created, a decentralized state entity, with administrative, financial, legal, and technical independence – under the charge of MMAyA – whose mission is to help reinforce and sustain EPSAs in the country, through the execution of Technical Assistance (TA) processes, Institutional Strengthening (IS), Community Development (CD), sanitation training and education, and research, as well as technological development. The Environment and Water Executing Agency (EMAGUA) is an autonomous state entity created<sup>16</sup> in 2009 to execute, follow up, and assess the W&S programs and projects of the MMAyA. To do so, being a public-law entity, EMAGUA has legal personality and funds of its own, as well as administrative, economic, financial, legal, and technical independence in terms of management. The General Executive Director is appointed through a Supreme Resolution ([EEO#4](#)). In addition, the National Production and Social Investment Fund (FPS)<sup>17</sup> is involved in W&S programs and projects, among other sectors.
- 1.12 **The WR and irrigation sector.** The State's Political Constitution (SPC) provides that water is a right to life, as well as a strategic resource, and that the State has exclusive jurisdiction over the general WR system and its resources. Moreover, the Autonomy and Decentralization Framework Law No. 031 of 2010 gives the central government the power to establish, by means of a law, the WR system and its services.<sup>18</sup> The Office of the Vice Minister of Water Resources and Irrigation, dependent upon the MMAyA, is in charge of this sector's policy. In addition, the Municipal Autonomous Governments (MAG) and Department Autonomous Governments (DAG) have the duty to prepare, finance, and execute WR and irrigation projects, and to define their plans and programs.

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<sup>13</sup> Pursuant to the Aide-Memoire by PROINTEC for Jacha-Jauira and the Aide-Memoire for Kullu Cachi, the project will increase current irrigation efficiency three times (from 0.11 to 0.37 and 0.38 for Jacha-Jauira and Kullu Cachi, respectively).

<sup>14</sup> Under the Country Program Evaluation, Bolivia 2011-2015, the evaluation of PRONAREC I found an increase in producers' income, reaching in average US\$1,341 per ha (90% of the goal set) based on information of 13 systems completed; and an average increase of 49% in the performance of the best crops. In 61% of the cases, new crops were introduced or else crops were expanded for the market.

<sup>15</sup> Oversees, controls, supervises, and regulates the activities of the basic DW&S pursuant to Law No. 2066 of 2000 on DW and W&S Service provision and use.

<sup>16</sup> Supreme Decree No. 0163/2009.

<sup>17</sup> A public-law, non-profit, promotion entity, decentralized, dependent upon the Ministry of Development Planning that executes projects from the W&S sector in a decentralized manner.

<sup>18</sup> Services include: (i) regulation of comprehensive watershed, investment, WR management and their use; (ii) definition of sector policies and institutional framework; (iii) conditions and restrictions for use and service in different states; (iv) granting and regulation of rights; (v) regulation as to use and enjoyment; (vi) regulation of service administration for TA and strengthening, as well as financial and administrative aspects related to WR; and (vii) the institutional framework that admits the involvement of social organizations from the sector.

- 1.13 **Bank support to the sectors.**<sup>19</sup> The Bank satisfactorily executes seven projects<sup>20</sup> in the WR and DW&S sectors ([EEO#18](#)) and prepares the Watershed-Focused Irrigation Programs (PRONAREC III) (BO-L1106) and the Titicaca Lake sanitation program (BO-L1118). Both programs are focused on areas set as priority by the GoB (metropolitan areas, small towns, rural communities, and irrigation deficient areas.) In addition, the Bank supported the structuring of a Policy Reform Program (2771/BL-BO) for these sectors, successfully executing the first operation. The second one will be approved in the first quarter of 2016 (BO-L1100).
- 1.14 **Country Strategy.** The W&S sector constitutes one of the strategic priorities of the GoB. The country strategy, which is given expression in the SPBSD, includes: (i) increasing investments, by giving priority to the country's main cities' suburban areas, to small towns, and to rural areas; (ii) consolidating ADG and AMG participation in investments, IS, TA, and COMDEV; (iii) prioritizing investments according to the Areas for Investment and Basic Sanitation Index (IARIS); (iv) implementing initiatives designed to improve service quality and sustainability; (v) consolidating the MMAyA and other entities in order to conduct an industry reform within a comprehensive water management framework and devise a support and follow-up strategy for investment programs; and (vi) reforming and strengthening the service regulation system. Furthermore, the GoB established the 2025 Patriotic Agenda (PAG), which includes 13 Pillars for Sovereign and Dignified Bolivia, of which Pillars 2 and 9 are part of the sector's policy and relate to basic services.<sup>21</sup> On the other hand, the MPD prepared the 2015-2020 Five-Year Development Plan – Government Plan called “Together we are doing well in order to live well,” consisting of 12 Proposals, of which Proposals 2 and 7 are part of the sector's policy and relate to basic services.<sup>22</sup>
- 1.15 The WR and irrigation sector has been given priority by the GoB on both the PAG and the 2025 Irrigation Agenda. This program is consistent with the three main topics of such Agenda: (i) using modernized irrigation, irrigation revitalization, water harvesting, and multiple-use projects; (ii) organization strengthening, training of farmer water users, institutional consolidation and development of rules and instruments; and (iii) increased production and productivity for food security, technology for

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<sup>19</sup> The TC ATN/SX-13423-BO and ATN/OC-12995-RG financed the DW and irrigation TESA studies, and supplemental analyses.

<sup>20</sup> 2199/BL-BO and GRT/WS-11830-BO; 2597/BL-BO and GRT/WS-12956-BO; 2440/BL-BO; 2880/BL-BO; 3091/BL-BO; 2057/BL-BO; and 3060/BL-BO.

<sup>21</sup> Pillar 2: Socialization and Universalization of Basic Services with Sovereignty in order to Live Well; Target 1: 100% of all Bolivian men and women are provided with DW and sewage services; Pillar 9: Environmental Sovereignty with Comprehensive Development, respecting the Rights of Mother Land; Target 8: The Plurinational State of Bolivia encourages and develops effective initiatives so that the Bolivian people may breathe clean air, Bolivia may be free of polluted rivers and dumps, and every city may develop conditions for liquid and solid waste treatment.

<sup>22</sup> Proposal 2: Basic Services for All; Targets: 100% coverage of DW in urban areas and 90% coverage in rural areas; 80% coverage of sewage services in urban areas and 70% coverage in rural areas; Proposal 7: Water for Life and Respect for Mother Land. This proposal was put forward before the SPBSD was prepared, for which reason the latter document includes the latest review of such targets, as indicated in paragraph 1.1.

agricultural production, agricultural job creation, and increased CC adaptation. Similarly, the program is consistent with the National CC Adaptation Mechanism under Pillar 6 of the Patriotic Agenda and with other aspects of such agenda including initiatives to ensure access to basic services such as DW&S.

- 1.16 **IDB Strategy.** The program is consistent with the 2011-2015 IDB-Bolivia Strategy (BO-P1123), since it will contribute to the strategic objectives of increasing DW coverage in urban areas by prioritizing CC adaptation initiatives across the board. The program will contribute to the financing priorities under the Ninth General Increase in the Resources of the Inter-American Development Bank (AB-2764) (GCI-9): “Lending to Small and Vulnerable Countries,” “Poverty Reduction and Equity Enhancement,” and “CC Initiatives, Sustainable Energy and Environmental Sustainability,” given that the Bank’s intervention will focus on: (i) extending DW coverage in suburban and rural areas vulnerable to CC, by introducing tools and schemes for proper WR management that may facilitate adaptation in the medium and long run; and (ii) improving the efficiency of existing irrigation systems in all Program watersheds, taking into account the expected CC impacts on water sources. It will further contribute to the following regional targets: “Infrastructure for Competitiveness and Social Welfare” and “Protecting the Environment, Responding to Climate Change, Promoting Renewable Energy and Food Security;” and to the following products: “Households with Improved Access to DW” and “Climate Change Pilot Projects in Agriculture, Energy, Health, Water and Sanitation, Transport, and Housing,” as defined in the Results Framework. The program is further aligned with: (i) the Sustainable Infrastructure Strategy for Competitiveness and Inclusive Growth (GN-2710-5), since it contributes to: (a) promoting access to infrastructure services, and (b) supporting the construction and maintenance of a socially and environmentally sustainable infrastructure; (ii) the Integrated Strategy for Climate Change Adaptation and Mitigation, and Sustainable and Renewable Energy (GN-2609-1) in particular with strategic topics A, B and D; and (iii) the Dimensions of Success and Lines of Action under the Water and Sanitation Sector Framework Document (GN-2781-3), for universal access and improved service quality, and social and environmental sustainability.
- 1.17 **Consistency with Bank Policies.** The proposed program and the national sector objectives are consistent with the principles of the Residential Utilities Policy (GN-2716-6) and meet the relevant financial sustainability and economic assessment conditions, while the Operation and Maintenance Costs (O&M) of drinking water and sewage service providers are covered by their operating income (§ 2.11). In addition, the works to be financed under the program are socially and financially viable (§ 2.8) ([EEO#17](#)).

## **B. Objectives, Components, and Costs**

- 1.18 **Objectives.** The overall objective of this program is to improve drinking water supply in the municipality of El Alto, taking climate change resilience aspects into account. The specific objectives are: (i) to increase water availability for the water supply system in the city of El Alto and in the communities of the municipality of Batallas; (ii) to improve and expand the use of irrigation systems in the municipalities of Pucarani and Batallas; (iii) to promote integrated WR management and the sustainable use of natural resources in a context of climate change.

- 1.19 **Component I. Increase of DW availability for the Municipalities of El Alto and Batallas** (US\$ 72.27 million): Items to be financed include: (i) the construction, improvement, and expansion of DW systems; (ii) work supervision; (iii) the implementation and supervision of Social Management initiatives; and (iv) activities in support of the development of EPSAs.<sup>23</sup> Infrastructure items to be financed include: dams, intake works, reservoirs, DW treatment plants, water supply, conveyance, and distribution networks, residential DW connections. Social and environmental management activities to be financed will include, but not be limited to: sanitary and environmental education.
- 1.20 **Component II. Improvement and expansion of irrigation systems for the Municipalities of Batallas and Pucarani** (US\$ 48.95 million): Two irrigation projects will be financed: one for the Jacha Jauira watershed and another one for the Khullu Cachi watershed. Items to be financed of both projects include: (i) the construction of new conveyance pipe networks, thereby increasing current water transportation efficiency; (ii) the repair of existing channel systems; (iii) the repair, expansion and construction of water intakes; (iv) work supervision; (v) a modernized irrigation sector for Alto Peñas; (vi) delivery works and pressure reducing valves; (vii) headwater dams; and (viii) Comprehensive Technical Assistance (CTA) for efficient water use and increased agricultural productivity with CC adaptation.
- 1.21 **Component III: Climate change-oriented, comprehensive watershed management and land organization** (US\$ 4.37 million): Implementation of plans will be financed for climate change-oriented management of the Jacha Jauira and Khullu Cachi subwatersheds based on the initial proposal ([EEO#10](#)). Such plans will include, but not be limited to, community-led initiatives for sustainable soil management (including recovery of cushion bogs), sustainable crop and cattle management, native meadows and biodiversity management, sustainable water storage, harvesting, and use. Similarly, a watershed hydrology monitoring and observation system will be financed which will generate information to facilitate effective planning of WR use, thus contributing to sustainable WR use by all users. Lastly, institutional capabilities will be strengthened<sup>24</sup> for climate change management through municipal adaptation plans and community adaptation information sheets. All experiences and lessons learned for the integration of the CC approach into this kind of planning tools will be duly documented and reported.
- 1.22 **Monitoring, Evaluation, and Auditing.** Financial support will be given to the IS of EMAGUA, and to the auditing, monitoring, evaluation, and management of the program. All expenses related to such activities, and other expenses related to potentially unforeseen events resulting from price increases, are shown in Table 1 below.

## **B. Key Result Indicators**

- 1.23 The most relevant indicators and their expected targets are shown in Table 1.

**Table 1. Key Indicators for the Results Matrix**

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<sup>23</sup> Initiatives will be carried out in support of the design of a new management model for the company.

<sup>24</sup> Climate change management will be strengthened at various levels, including the Vice Minister of Water Resources and Irrigation, the Municipalities of Batallas and Pucarani, water users' associations, and communities.

Indicators	Year 1	Year 2	Year 3	Year 4	Year 5	Target
Households with improved DW access in El Alto	128,400					183,437
Number of farmers with access to improved irrigation services	0					6,500

## II. FINANCING STRUCTURE AND MAIN RISKS

### C. Financing Instruments

- 2.1 **Financing Structure.** The program will cost US\$ 133,015,136 and will be financed with a specific investment loan given by the Bank of up to US\$ 49.6 million, to be charged against the Bank's ordinary capital, and US\$ 12.4 million to be charged against the Fund for Special Operations (FSO). In addition, the Bank will provide a grant facility of up to US\$ 42.5 million out of the Strategic Climate Fund (SCF) and of up to US\$ 4.37 out of the Nordic Development Fund (NDF). The remaining local resources are estimated to amount to US\$ 24,145,136 and will be provided by the GoB.

**Table 1. Program Costs and Sources of Financing**

Components	Total	IDB	SCF <sup>25</sup>	Nordic Development Fund <sup>26</sup>	Local Contribution
Component I	72,273,148	54,576,095	0	0	17,697,053
Component II	48,948,083	0	42,500,000	0	6,448,083
Component III	4,370,000	0	0	4,370,000	0
Adm. & Fin.	3,290,466	3,290,466	0	0	0
Auditing	250,000	250,000	0	0	0
M&E	425,000	425,000	0	0	0
Unforeseen Events	3,458,439	3,458,439	0	0	0
<b>Total</b>	<b>133,015,136</b>	<b>62,000,000</b>	<b>42,500,000</b>	<b>4,370,000</b>	<b>24,145,136</b>

- 2.2 **Disbursement Schedule.** A five-year disbursement schedule has been contemplated (see Table 2)

**Table 2. Disbursement Schedule**

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Bank Loan	1,144,003	25,676,627	18,172,728	12,276,850	4,729,792	62,000,000
Local Contribution	500,000	1,000,000	9,346,254	10,757,199	2,541,683	24,145,136
SCF+NDF	1,115,730	13,298,227	13,298,227	9,668,977	9,488,839	46,870,000
<b>Total</b>	<b>2,759,733</b>	<b>39,974,854</b>	<b>40,817,209</b>	<b>32,703,026</b>	<b>16,760,314</b>	<b>133,015,136</b>

### D. Environmental and Social Risks

- 2.3 The project has been classified as "Category A" risk under the Bank's Environment and Safeguards Compliance Policy (OP-703), for which reason the following guidelines will apply: B.1, Bank Policies; B.2, National Laws and Regulations; B.3, Pre-Evaluation and Classification; B.5, Environmental Assessment; B.6, Consultation; B.7, Supervision and Compliance; B.9, Natural Habitats and Cultural Sites; B.11, Pollution Prevention and Mitigation; and B.15,

<sup>25</sup> All SCF resources from the PPACC (*Pilot Program for Climate Resilience*) will be subject to loan approval by the SCF Trust Fund Committee.

<sup>26</sup> These grant facilities have already been approved by the Board of Directors of the Nordic Development Fund ([link](#)).

Co-Financing Operations. The following policies will also apply: OP-102, Disclosure of Information; OP-765, Indigenous Peoples, since the affected communities include Aymara groups; OP-761, Gender Equality, to ensure that women are not excluded from the project or its benefits; OP-704, Disaster Risk Management, given the risks associated with CC in connection with water availability in the area; and, OP-710, Involuntary Resettlement. Based on the documentation available and the observations made during field visits, there will not be involuntary resettlement as a result of the program. However, several communities will experience different degrees of economic displacement during construction and operation.

- 2.4 **Mitigation Measures.** The program's Environmental and Social Impact Assessment (ESIA) identified several environmental and social risks, including impacts on habitats and natural resources (water availability), economic displacement and impacts on the livelihoods of several indigenous communities. To address these risks, an Environmental and Social Management Plan (ESMP), a Social Compensation and Management Plan (SCMP) and an Integrated Watershed Management Plan (IWM) with CC considerations have been prepared. A Resettlement Plan (RP) has been developed in order to address the issue of economic displacement through community involvement and the agreements have been executed with the affected communities. The proper implementation of the ESMP, SCMP, IWM and RP, along with an ongoing communication process with the community, will significantly minimize any potential environmental and social risks and impacts of the program, while its multiple benefits are delivered<sup>27</sup>. (¶3.3).

#### **E. Fiduciary risks**

- 2.5 The evaluation of the institutional capacity was conducted using the Institutional Capacity Evaluation System (SECI) ([EEO#4](#)), and leads us to conclude that the EMAGUA has capacity to carry out the corresponding procurement, disbursement, reporting, monitoring and follow-up tasks. Notwithstanding the foregoing, for a more efficient and smooth execution, the following actions are anticipated: (i) establishment of the Multipurpose Program Management Department (GPM) as a legally autonomous administrative entity responsible for the procurement and financial management processes, to be staffed with technical personnel duly specialized in the execution of this kind of projects; (ii) implementation of an abbreviated procedure between the EMAGUA and the MMAyA for budget registration and amendments; (iii) dissemination of the Operation Rules (OR), which include the duties of the GPM and the EMAGUA areas which are to be involved in the Program; and (iv) focalized training for the EMAGUA personnel, to take place before the commencement of execution and once the GPM is staffed accordingly.

#### **F. Other risks of the Project**

- 2.6 Other risks identified and the relevant mitigation measures include: (i) limited adoption of irrigation technologies by the communities. To mitigate this risk, a CTA subcomponent is included for irrigation users; (ii) shortage of water for the city of El Alto, due to the nonperformance of water distribution agreements, thus

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<sup>27</sup> These benefits include: improved access to DW, increased sustainable irrigation in agricultural and pasture areas, and the restoration of highly deteriorated wetlands.

bringing about tension amongst communities because of water use rights. To mitigate this risk, the establishment of a Technical Commission for the Operation of the Multipurpose Project (COTEMU) is proposed, so that it can see to the compliance with the agreements and the strengthening of community organization structures, as contemplated in the SCMP implementation process ([EEO#17](#)); and (iii) noncompliance or delays in regard to the commitments undertaken for the execution of the works, given that this program entails a high degree of social involvement. To mitigate this risk, ongoing follow-up shall be included in the SCMP implementation process during the project's lifecycle.

## **E. Feasibility analysis**

- 2.7 **Technical feasibility.** The projects being proposed for funding represent the priorities and lines of work identified during the preparatory stages. A review of the designs for DW supply projects was conducted by a specialized consulting firm retained by the Bank. On this basis, it can be affirmed that the proposed works are the response to the comparison of all available technology options with a medium- and long-term view, as explained in the technical feasibility Exhibit ([EEO#1](#)). The projects were developed following generally accepted engineering standards and principles. Irrigation projects also took social requirements into consideration for the approval by the communities where they are to be located. The studies thus conducted have enabled an estimation of investment costs for each project and a determination of the requirements for proper operation. As regards excess wastewater to be generated from the additional flow derived from the project, the MMAyA and the Bank have, as established under the MMPDWS, prioritized for 2016 an investment project for the Titicaca Lake sanitation plan (BO-L1118), which includes, as main component, the treatment of such effluent.
- 2.8 **Social and economic feasibility.** A global cost-benefit analysis of the program was conducted, and it is feasible in social and economic terms at an Internal Economic Rate of Return (IRR) of 15.73%, with a discount rate of 12%, and a Net Present Value (NPV) of US\$29.2 million ([EEO#2](#)). For the evaluation of the global program, all costs and benefits were considered in regard to the supply of drinking water for the city of El Alto and the irrigation systems, since the irrigation projects are an essential part of the whole project, as they enable water resource availability for the El Alto supply system, in addition to the fact that the communities in the Batallas and Pucarani municipalities have priority to use such water based on custom. The study was supplemented with a sensitivity analysis which shows the strength of the results. Finally, according to the information furnished by EPSAS, the average bill users pay for water services in El Alto is, for an average household, US\$2.3 per month, which represents 0.3% of the average monthly family income. A social tariff is in place for poor households, and thus the monthly bill payable by such users is about US\$1.8, which represents 0.7% of the average monthly family income. These values are acceptable under international standards.
- 2.9 Once again, investments in irrigation projects are part of the costs involved in obtaining resources to be used in the supply of drinking water. In any event, irrigation projects have been optimally designed from a technical perspective, subject to the layout restrictions required by the communities holding rights over water resources. The aim will be to minimize such layout restrictions through the mutual agreement with the communities, in order to achieve investment savings and reduce the cost per irrigated hectare, while funding the adoption of intra-plot



- technology to lift the liquidity restrictions the communities might have, given that the irrigation systems contemplated under the project entail extra-plot irrigation (except for the case of Alto Peñas).
- 2.10 **Institutional feasibility.** The results of the EMAGUA expanded SECI show that the entity is able to take over the program's management responsibilities (§2.5). Institutional Strengthening measures were identified and will be included in the program ([EEO#4](#)).
- 2.11 **Financial feasibility.** EPSAS' financial analysis was conducted on the basis of operative and financial information from this entity, which has been covering its O&M costs with operating income (EBITDA mean margin of 28.6% during the past three years). Collection levels are above 90% and financial projections show that the entity will continue to have positive operating margins over the next years. This entity was subject to AAPS intervention in 2013, situation which continues to date, due to the low investment levels and coverage deficiencies in some areas. The goals driving intervention were to reengineer the entity<sup>28</sup> and design a new management model, which goals are currently being fulfilled. It is expected that the intervention process will come to an end over the next months with the establishment of a metropolitan EPSA. With the program resources, the definition and implementation of this new management model will be completed. In the following months, with the resources from GRT/WS-11830-BO, additional IS actions will be taken<sup>29</sup> in the entity, in order to support the performance improvements ([EEO#3](#)). Under the inter-governmental agreement to be executed between the EA and EPSAS for the proper O&M of the El Alto drinking water works, a requirement will be included so that the operating income should be sufficient to cover at least their O&M costs. Likewise, the OR will provide that EPSAS shall send to the EA, on an annual basis, and the EA shall in turn send the Bank, the audited financial statements and the key financial and operation indicators.
- 2.12 To secure the financial feasibility of the irrigation projects, the recovery of maintenance costs will be required. Water user associations will be responsible for the operation of irrigation works and the Municipal Autonomous Governments of Batallas and Pucarani will be responsible for the maintenance of such works; to that end, an agreement shall be executed with the MMAyA. It is expected that the annual repair and maintenance costs shall be as follows: (i) Tupac Katari US\$4,226.2; (ii) Khara Khota- Suriquiña US\$7,341.4; (iii) Taypichaca-Suriquiña US\$2,697.2; and (iv) Palcoco US\$3,467.2<sup>30</sup>.
- 2.13 As regards the 13 communities in the Batallas Municipality and the DW management boards (which report to the MAG), they shall be responsible for the O&M of the DW systems. It is expected that actions will be implemented to support the sustainability of the systems, which actions shall be linked to organizational strengthening programs. An execution condition shall be included in order ensure the proper O&M of these systems. (**¶Error! Reference source not found.**)

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<sup>28</sup> Supported by the ATN/OC-13769-BO-2.

<sup>29</sup> These actions shall include both the development of an IS Plan for EPSAS as well as the implementation of higher priority actions as defined in such Plan. The business management tool developed by INE/WSA shall also be applied ([see link](#)) (ATN/MA-14955-RG).

<sup>30</sup> *Evaluación Socioeconómica del Componente de Riego en Los Municipios de Batallas y Pucarani*. PROINTEC, 2015.

- 2.14 **Social management.** The program's social feasibility relies on the agreements for the distribution of water flows and the mitigation measures intended to address the impacts arising from the project's works. To address the involuntary resettlement and economic impacts, the SCMP was prepared ([EEO#5](#)), which includes a community liaison and communication program, a community management plan for efficient water use and health promotion; additionally, the COTEMU shall be responsible for securing agreements on water distribution during periods of shortage and/or crisis. Two consultation processes were carried out in indigenous language, which followed the assembly procedures established by the communities, to provide information about the characteristics, scope and impacts of the program and the mitigation measures planned for those affected; further actions were included in order to benefit and strengthen women's organizations.

### III. IMPLEMENTATION AND MANAGEMENT PLAN

#### A. Summary of Implementation Arrangements

- 3.1 **Execution scheme.** The GOB shall be the borrower. The EA shall be EMAGUA, acting through the GPM, to be established within its organizational structure and exclusively dedicated to the execution of the program. The GPM shall be responsible for all the fiduciary obligations under the program, including administration, coordination, planning and execution. To that end, it shall be an autonomous administrative entity as regards procurement, contracting and financial management tasks, while maintaining coordination relations with the other EMAGUA departments, as well as the MMAyA. The GPM shall be at least staffed with the following technical specialized personnel: manager, specialists (procurement, finance, social, environmental and CC experts); engineers (civil, hydraulics, soil); and monitoring and evaluation specialists. It shall submit half-yearly progress reports to the Bank and will have the following duties: (i) to open separate bank accounts and keep accounting records which enable the identification of the sources and uses for the program's resources under each component; (ii) to prepare and submit the disbursement applications to the Bank and to adequately account for eligible expenses, and submit the program's audited financial statements; (iii) to prepare the procurement processes, sign contracts, and make the relevant payments; (iv) to prepare and submit to the Bank and any competent agencies of the GOB, and make available to the public, the consolidated monitoring and evaluation reports as required; (v) to ensure compliance with environmental and social laws within the scope of the program; and (vi) to ensure compliance with the contract clauses set forth in the loan agreement and the donor agreements.
- 3.2 **Special contract provisions that must be fulfilled before the first disbursement of funds:** (i) an intergovernmental agreement must be signed by the EMAGUA, the Ministry of Environment and Water, the Ministry of Development Planning and the Ministry of Economy and Public Finance<sup>31</sup>, for the purpose of transferring the loan resources and non-refundable funds as well as the execution and coordination of the activities under the program, in accordance with the terms and conditions previously agreed with the Bank, and such

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<sup>31</sup> Pursuant to the laws of the Plurinational State of Bolivia, in the case of non-refundable resources the Ministry of Economy and Finance is not required to be a party to said agreement.

- agreement must be in effect; (ii) the Multipurpose Program Management Department must be created and its specialized technical personnel selected in conformity with the terms and conditions previously agreed with the Bank; (iii) the program Operation Rules (OR) must be approved and in effect pursuant to the terms and conditions previously agreed with the Bank; and (iv) an initial report must be submitted to the Bank including the multi-year execution plan (MYEP), the procurement plan (PP), the financial plan, and the program Risks and Results Matrix (RM).
- 3.3 **Special execution contract provisions:** Prior to the commencement of infrastructure works in each of the municipalities participating in the program, the EMAGUA must provide evidence to prove that: (i) an intergovernmental agreement has been signed with the pertinent AMG to provide for works maintenance, local contributions and asset transfer<sup>32</sup>. In the case of El Alto works, an agreement must be subscribed with the EPSAS for the execution of works and O&M of systems. These agreements will be in accordance with the terms and conditions previously agreed with the Bank; (ii) the program's environmental and social conditions established in the OR and ESMR have been fulfilled. Additionally, the COTEMU should be designed and in operation within three years from Program eligibility.
- 3.4 **Operation Rules (OR).** The execution of the program will be governed by the provisions contained in its OR, which sets out the following aspects, among others: (i) detailed execution scheme; (ii) institutional roles and responsibilities of the entities involved; (iii) intervention strategy at various stages of project cycle; (iv) rules and procedures for selection and procurement of works, goods and services; (v) rules and procedures for administrative and financial management; and (vi) procedures for follow-up and monitoring. The ESMP will be included in the OR as an annex ([EEO#5](#)).
- 3.5 **Procurement of works, goods and consulting services.** Procurement will be conducted within the framework of the GN-2349-9 and GN-2350-9 Policies. There will be no exceptions and no local regulations will be applied.
- B. Summary of results monitoring arrangements**
- 3.6 **Follow-up and Evaluation.** The EA will prepare reports on the progress and results of the activities under its responsibility. The monitoring and evaluation scheme will include: (i) PP; (ii) MYEP; (iii) Annual Operating Plans (AOP); (iv) annual verification of compliance with the targets set in the RM; and (v) six-monthly reports containing: (a) activities carried out during that period, progress made in their implementation, problems encountered and how to solve them, (b) evaluation of the RM, PP, AOP and Risk Analysis; and (c) analysis of the Project Monitoring Report (PMR), for which purposes compliance with targets for output and outcome indicators in the RM will be evaluated. The execution of that period and the planning for the following semester will be evaluated. The EA will also send these six-monthly reports to the MMAyA, for the latter to consolidate all the information related to the implementation of the Strategic Program for Climate Resilience (SPCR), and to issue the reports required by the SCF subcommittee.

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<sup>32</sup> Asset transfer will be included in the EMAGUA – AMG intergovernmental agreement and performed at the time of execution of the certificate of final acceptance.

- 3.7 Consultants will be hired to perform the following assessments<sup>33</sup>: (i) program interim assessment report, to be submitted 90 days after the date on which 50% of the loan resources were disbursed; and (ii) program final assessment, which will begin six months before the conclusion of the program.
- 3.8 **Audit.** During the loan disbursement period, within 120 days following the end of the executing agency's financial year, the annual audited financial statements for the program will be submitted to the Bank. The audit will be carried out by independent auditors acceptable to the Bank. The determination of the scope and other related aspects will be governed by the Financial Management Policy for IDB-Financed Projects (OP-273-6) and the Financial Statements and External Auditing Guidelines. Audit costs will be financed with program resources. EMAGUA will be responsible for hiring the auditing firm.

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<sup>33</sup> For the evaluation of irrigation projects a quasi-experimental methodology of *Differences-in-Differences* combined with *Propensity Score Matching* will be used. Additionally, an experimental economics study will also be conducted to compare COTEMU's regulation and design alternatives.

Development Effectiveness Matrix			
Summary			
<b>I. Strategic Alignment</b>			
<b>1. IDB Strategic Development Objectives</b>		Aligned	
Lending Program	-Lending to small and vulnerable countries -Lending for poverty reduction and equity enhancement -Lending to support climate change initiatives, renewable energy and environmental sustainability		
Regional Development Goals	-Incidence of waterborne diseases (per 100,000 inhabitants) -Countries with planning capacity in mitigation and adaptation of climate change		
Bank Output Contribution (as defined in Results Framework of IDB-9)	-Households with new or upgraded water supply -Climate change pilot projects in agriculture, energy, health, water and sanitation, transport, and housing		
<b>2. Country Strategy Development Objectives</b>		Aligned	
Country Strategy Results Matrix	GN-2631	"Increasing coverage water and basic sanitation in urban areas; Increasing coverage water and basic sanitation in rural areas"	
Country Program Results Matrix		The intervention is not included in the 2015 Operational Program.	
Relevance of this project to country development challenges (If not aligned to country strategy or country program)			
<b>II. Development Outcomes - Evaluability</b>		Highly Evaluable	Weight
		10.0	Maximum Score
		10.0	10
<b>3. Evidence-based Assessment &amp; Solution</b>		10.0	33.33%
3.1 Program Diagnosis		3.0	
3.2 Proposed Interventions or Solutions		4.0	
3.3 Results Matrix Quality		3.0	
<b>4. Ex ante Economic Analysis</b>		10.0	33.33%
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	
<b>5. Monitoring and Evaluation</b>		10.0	33.33%
5.1 Monitoring Mechanisms		2.5	
5.2 Evaluation Plan		7.5	
<b>III. Risks &amp; Mitigation Monitoring Matrix</b>			
Overall risks rate = magnitude of risks*likelihood		Low	
Identified risks have been rated for magnitude and likelihood		Yes	
Mitigation measures have been identified for major risks		Yes	
Mitigation measures have indicators for tracking their implementation		Yes	
Environmental & social risk classification		A	
<b>IV. IDB's Role - Additionality</b>			
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	During the preparation of the operation the participation of indigenous women in the consultations related to the project and specific actions for their benefit were identified ensured. Thus they incorporated actions to benefit and strengthen women's organizations.	
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	It featured the NRTC BO-RG-T1158 and T2059 to finance preparatory activities and program startup.	
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			

**Evaluability Assessment Note:** The purpose of this note is to provide an overall assessment of the project's evaluability based on the standards described in the Evaluability Guidelines, as well as to ensure that the Board understands why scores were or were not given to the project. The following information should be developed in order to achieve this purpose. Assess and summarize the diagnosis and the level of empirical evidence to support it. Assess and summarize the level of empirical evidence (or cost-effectiveness) of the solution proposed. Assess and comment on the Results Matrix Quality. Assess and describe the evaluation methodology ex ante and ex post to be used by the project to demonstrate its results. Describe the main type of risk the operation is subject to and its intensity. Describe whether mitigation measures are in place and whether they can be monitored during the life of the project.

Results Matrix										
<b>Project Objective</b>	The overall objective of this program is to improve drinking water service delivery in the municipality of El Alto, taking climate change resilience aspects into account. The specific objectives are to: (i) increase water availability for the water supply system of El Alto and the communities of the municipality of Batallas; (ii) improve and expand the use of the irrigation systems in the municipalities of Pucarani and Batallas; (iii) promote integrated WR management and sustainable use of natural resources in the context of climate change.									
<b>Impact: Increased income of the water users benefiting from the program</b>										
Indicator	Unit of Measure	Baseline	Baseline Year	Year 1	Year 2	Year 3	Year 4	Year 5	End of Project	Comments/ Means of Verification
Net FARM income of the beneficiaries, measured as the annual Net farm Income.	US\$/hectare	US\$1,513							US\$2,500	Impact Assessment Report (contributes to PPCR core outcome indicator 5)
<b>Outcomes</b>										
<b>Component 1: Increase in water supply for the municipalities of El Alto and Batallas</b>										
<b>Outcome 1: Improved drinking water service for the city of El Alto</b>										
Indicator	Unit of Measure	Baseline	Baseline Year	Year 1	Year 2	Year 3	Year 4	Year 5	End of Project	Comments/ Means of Verification
Households with improved access to drinking water in El Alto. Definition of improved: service continuity hours per day of the 24-hour service.	Household	128,400	2015					183,437	183,437	EPSAS Operational Management Report. Final Assessment Report (contributes to PPCR core outcome indicator 5)
Water storage capacity of the dams built as part of the project <sup>1</sup>	Water volume (Hm3)	20,5	2015	0	0	0	0	50,6	50,6	Same as above (contributes to PPCR core outcome indicator 3)
<b>Outcome 2: Drinking water service provided in thirteen rural communities</b>										
Indicator	Unit of Measure	Baseline	Baseline Year	Year 1	Year 2	Year 3	Year 4	Year 5	End of Project	Comments/ Means of Verification
Indigenous households with new access to drinking water in 13 communities of the municipality of Batallas.	Household	0	2015					1,772	1,772	Six-Monthly Reports and Final Assessment Report

<sup>1</sup> Climate change considerations have been taken into account in relation to the hydrology of the watershed to optimize the height of the dams.

										(contributes to PPCR core outcome indicator 5)
Households that benefit from new or improved access to drinking water, sanitation and/or wastewater treatment	Household	0	2015					185,209	185,209	It relates to the <u>sector-specific indicator</u> that reflects the number of households whose access to drinking water has been improved as a result of the program.  (Contributes to PPCR core indicator 5)
<b>Outcome 3: Water system in 13 communities operating sustainably</b>										
Water system of the 13 communities operating and maintained according to technical design specifications <sup>2</sup>	System	0	2015					1	1	Final Assessment Report  (contributes to PPCR core outcome indicator 3)
<b>Outcome 4: EPSAS management model approved by water authorities</b>										
EPSAS management model approved by AAPS and MMAYa	Model	0	2015					1	1	Report by MMAYa and AAPS approving the management model
<b>Outcome 5: Women, children and youth educated in water use and health</b>										
Women participating in water use and health education campaigns in 13 communities	Number of women	0	2015					>1,500	>1,500	Final Assessment Report
<b>Outcome 6: Complaints and conflicts effectively resolved</b>										
Community leaders trained in conflict resolution	Percentage	0	2015					>10	>10	Same as above
<b>Outcome 7: Productive projects operating sustainably</b>										
Family solar greenhouses built as part of the program that are used to grow food	Number of family solar greenhouses	0	2015					> 20	> 20	Same as above  (contributes to PPCR core outcome indicator 3)

<sup>2</sup> It is a comprehensive system that will supply water to 13 communities.

<b>Component 2: Improvement and expansion of irrigation systems</b>											
<b>Outcome 8: Improved irrigation systems for agricultural production in the Jacha Jahuira and Khullu Cachi River watersheds</b>											
Number of farmers with access to improved irrigation services in the program target area	Farmers	0	2015						6,600	6,600	Final Assessment Report (contributes to PPCR core indicator 5)
Water use efficiency in modern irrigation systems	Water volume used in farm over total water volume captured by system	25	2015						75	75	Same as above (contributes to PPCR core indicator 3)
Value of beneficiary households' crop production	US\$ per hectare	673	2015						1158	1158	Same as above
Value of beneficiary households' livestock and milk production	US\$ per beneficiary	2,071	2015						2,491	2,491	Same as above
<b>Component 3: Climate change-oriented integrated watershed management and land management</b>											
<b>Outcome 9: Government's enhanced capacity to mainstream climate change</b>											
Operator's operational and planning staff trained in water supply system resilient and sustainable management	people	0	2015	0	0	5	10		10	25	Operator's Reports (contributes to PPCR core outcome indicator 4)
<b>Outcome 11: Enhanced capacity to adapt to climate change</b>											
Households with agricultural activities in the project target area implementing climate change adaptation measures [def: measures that help improve the capacity to respond to climate variability or change impacts, such as: (i) water harvesting (ii) efficient resource use, (iii) use of modern irrigation, (iii) conservation of soil moisture, (iv) conservation of cushion bogs and high mountain ecosystems and, (v) protection of animals and crops from frost and hail	Households	0	2015							40 <sup>3</sup>	Final Assessment Report (contributes to PPCR core outcome indicator 4)
<b>Outputs</b>											
<b>Component 1: Increase in water supply for the municipalities of El Alto and Batallas</b>											
Output	Unit of Measure	Related Outcomes	Cost (US\$)	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	End of Project	Comments/ Means of Verification

<sup>3</sup> The target will be reviewed once the IWM initial activities are carried out.



Dams built in Khotia-Khota and Taypichaca Lakes	Dams	1,2,8	3,951,640	0	0	0	0	1	1	2	Provisional Acceptance of Works
Raw water supply line built	Km	1	43,256,457	0	0	0	15	30	11,2	56,2	Same as above
Water Treatment Plant built	Plant	1	9,643,752	0	0	0	0	0	1	1	Same as above
Drinking water interconnecting piping built	Km	1	11,544,531	0	0	0	2,0	8,0	2,6	12,6	Same as above
Drinking water rural system built for 13 communities in the municipality of Batallas	System	2	2,317,519	0	0	0	0	1	0	1	Same as above
Drinking Water and Sanitation Committee (CAPyS) for the operation and maintenance of the drinking water system for 13 communities trained <sup>4</sup>	Committee	2,3	50,000	0	0	0	0	1	0	1	EMAGUA's Report
Technical Commission for the Operation of the Multi-purpose Project (COTEMU) on the Jacha Jahuira and Kullu Cachi watersheds created <sup>5</sup>	Commission	1,2,8	50,000	0	0	0	1	0	0	1	Same as above
Conflict handling and management program implemented <sup>6,7</sup>	Program	6	80,678	0	0	0	0	0	1	1	Same as above
Gender-and youth-focused water use and health education events held in 13 communities of the municipality of Batallas <sup>8</sup>	Event	5	245,000	0	0	26	26	26	0	78	Same as above
Participatory communication campaigns on sustainable water management and health carried out for the rural population in the project area <sup>9</sup>	Campaign	5	200,000	0	0	0	3	3	3	9	Same as above

<sup>4</sup> The CAPyS training includes: workers and chiefs with sufficient knowledge to operate and maintain the water service in proper operating condition over the useful life of the project.

<sup>5</sup> The creation of the entity involves its formation and incorporation.

<sup>6</sup> The program will be considered implemented when: 1) 4 customer relations and complaint handling centers have been set up; 2) 96 meetings have been held with the target population; and 3) 12 training events for leaders have been held.

<sup>7</sup> Output included in the Environmental and Social Management Plan (ESMP).

<sup>8</sup> Output included in the ESMP.

<sup>9</sup> Output included in the ESMP.

Resettlement Plan implemented <sup>1011</sup>	Plan	6	164,470	0	0	0	0	0	1	1	Same as above
Productive initiatives program for women implemented <sup>1213</sup>	Program	7	569,570	0	0	0	0	1	0	1	Report by EMAGUA
EPISA management model designed	Model	4	200,000	0	1	0	0	0	0	1	Consulting Report
<b>Component 2: Improvement and expansion of irrigation systems</b>											
Irrigation water conveyance pipeline built in the Jacha Jahuira Watershed <sup>14</sup>	Km	8	21,685,627.93	0	0	25	40	47,8	0	112,8 <sup>15</sup>	Provisional Acceptance of Works
Irrigation water conveyance pipeline built in the Kullu Kachi Watershed <sup>16</sup>	Km	8	23,642,584.77	0	0	25	40	43.7	0	108,7	Same as above
P1 and P2 channels restored	Km	8	2,467,497.1	0	0	0	22,8	25	0	47,8	Same as above
Modern irrigation pilot project carried out in Alto Peñas	Km	8,10	552,373.69	0	0	0	23	0	0	23	Reports by the Executing Entity
Comprehensive technical assistance plan (CTA) relating to irrigation and / or crop production in the Jacha Jahuira watershed implemented <sup>17</sup>	Plan	8,10	300,000	0	0	0	0	0	1	1	Same as above
Comprehensive technical assistance plan (CTA) relating to irrigation and / or crop production in the Kullu Kachi watershed implemented <sup>18</sup>	Plan	8,10	300,000	0	0	0	0	0	1	1	Same as above
<b>Component 3: Climate change-oriented integrated watershed management and land management</b>											
<b>Output</b>	<b>Unit of</b>	<b>Related</b>	<b>Cost</b>	<b>Baseline</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>End of</b>	<b>Comments/ Means</b>

<sup>10</sup> Output included in the ESMP

<sup>11</sup> The implementation of the plan implies payment for flooded land and rights of way; and compensation for economic displacement.

<sup>12</sup> Output included in the ESMP

<sup>13</sup> The program will be considered implemented when: 1) 26 family solar greenhouses for growing food have been built and the relevant training on how to run them has been provided; 2) 18 craft places have been built and 32 training events have been held; 3) production guidelines have been introduced in the existing bylaws of the Bartolina Sisa organization and organization leaders have been trained.

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<sup>14</sup> It includes the headworks.

<sup>15</sup> Table 61: Pipe diameters and lengths of the Tupac Katari System. Jacha-Jahuira Project Report, PROINTEC, 2015.

<sup>16</sup> It includes the headworks.

<sup>17</sup> The implementation of the CTA will include the following activities: i) Phase I (4 months), water users' knowledge of the future irrigation system in terms of works, water distribution, operation and maintenance and common organization, among others; ii) Phase II (18 months), establishing agreements, instruments, equipment and staff to start the operation of the irrigation systems; iii) Phase III (14 months), implementing agreements, instruments and other outputs from the previous phase to evaluate and correct as needed based on field experience and to achieve self-management of the associations involved and sustainability of the irrigation systems.

<sup>18</sup> The implementation of the CTA will include the activities described in the preceding footnote.

	Measure	Outcomes								Project	of Verification
Climate change-oriented Integrated Watershed Management (IWM) Plan for the Jacha Jahuira River Watershed implemented <sup>19</sup>	Plan	9,10	1,669,611	0	0	0	0	0	1	1	Certificate of Acceptance of Works and consultancy completion reports
Climate change-oriented Integrated Watershed Management (IWM) Plan for the Kullu Khachi River Watershed implemented <sup>20</sup>	Plan	9,10	1,818,238	0	0	0	0	0	1	1	Same as above
Water body monitoring and conservation systems implemented in the program target area <sup>21</sup>	System	9	810,151	0	0	0	0	0	1	1	Same as above
Community adaptation information sheets in the program target area prepared <sup>22</sup>	Information Sheets	10	72,000	0	0	0	0	10	10	20	Same as above

<sup>19</sup> The IWM plan for the Jacha Jahuira River watershed will be considered implemented when all investment projects defined by subject area in the Watershed Management Plan have been carried out, including (i) climate change adaptation management, (ii) sustainable soil management, (iii) management of degraded areas, (iv) management and recovery of native meadows, (v) awareness-raising and research for biodiversity management, (vi) source conservation and proper use of water, (vii) social and institutional strengthening, and finally, when the monitoring system for water sources and cushion bogs has been designed and installed in the subwatershed.

<sup>20</sup> The IWM plan will be considered implemented when the activities mentioned in the preceding footnote have been carried out.

<sup>21</sup> The implementation of the monitoring plan will include the following activities: (i) design of the monitoring systems to be implemented, (ii) monitoring of glaciers in micro-watersheds, (iii) monitoring of water levels, evaporation, effluents and flows released in the Khara Khota dam and water flow monitoring in the Jacha Jahuira, Chirapaca, Khullu Cachi, Subcuenca, Yaurichambi and Punku Rivers, (iv) monitoring of natural lakes and wetlands in the Khara Khota, Jacha Jahuira, Taypichaca and Khullu Cachi micro-watersheds, (v) monitoring of the ecological quality of river bodies, (vi) aquifer level monitoring, (vii) monitoring through satellite image processing to determine changes in cushion bogs and water bodies.

<sup>22</sup> Community information sheets will include those activities identified by the communities of the target watersheds that can be developed within the framework of the implementation of the Integrated Plan for both watersheds and that will help them respond to the observed and anticipated climate change impacts.

## FIDUCIARY AGREEMENTS AND REQUIREMENTS

Country: Plurinational State of Bolivia

Project: BO-L1080, BO-G1004, BO-X1012: Multipurpose Drinking water and Irrigation program for the municipalities of Batallas, Pucarani and El Alto.

Executing Agency: Ministry of Environment and Water (MMAyA) through the Environment and Water Executing Agency (EMAGUA)

Prepared by: Carolina Escudero and Abel Cuba (FMP/CBO)

### I. EXECUTIVE SUMMARY

- 1.1 This annex was prepared on the basis of the results obtained by the Institutional Capacity Evaluation System (SECI) applied to EMAGUA, as defined in the agreement made with MMAyA, as Executing Agency (EA) of this Program.
- 1.2 The operation's accounting processes, as well as its budget and treasury management, will be handled by the country's national system: Integrated Administrative Management and Modernization System (SIGMA).<sup>1</sup> For execution purposes, the Bank's standard bidding documents will be used, or those eventually agreed with the Vice Minister of Public Investment and External Financing (VIPFE) and made available through the State Procurement System (SICOES),<sup>2</sup> where all calls to bid and results related to national bidding processes will be published.
- 1.3 The Bolivian Government and the Bank are currently drafting an agreement to partially adopt the Basic Rules of the Goods and Services Administration System (NB-SABS) in all operations funded by the Bank in Bolivia. This program could apply such agreement once it is signed and in force.

### II. FIDUCIARY CONTEXT OF THE EXECUTING AGENCY

- 2.1 The EMAGUA is a public-law entity, with its own legal personality and funds. It has administrative, economic, financial, legal, and technical independence in terms of management, for an indefinite period, and is governed by Law No.1178 on Governmental Administration and Control (SAFCO),<sup>3</sup> approved on July 20, 1990. Its administrative and financial structure was designed for the execution of projects with internal and external financing.
- 2.2 For procurement execution, EMAGUA applies the NB-SABS or the provisions of any external financing agreement.
- 2.3 Financial operations are processed through the SIGMA, which makes information on budget execution available in a safe and reliable way. This system provides financial information in local currency based on an accounting classifier according the subject-matter of the expense. Accounting records are kept pursuant to the governmental accounting system. The financial reports required

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<sup>1</sup> The Ministry of Economy and Public Finance (MEFP) developed the Public Management System (SIGEP) which will replace SIGMA in the medium term. Some SIGEP modules will be deployed in 2016 in central government entities.

<sup>2</sup> [State Procurement System](#). Set of bidding documents authorized by the Bank to be applied in processes below ICB thresholds.

<sup>3</sup> This law governs the administration and control systems of the Plurinational State's resources and their relation to national public investment and planning systems.

by the Bank will be supported by the Project Administration System (SIAP-BID)<sup>4</sup> until the Public Management System becomes effective (SIGEP), which includes an accounting module for external resources.

- 2.4 Project procurement and payment will be made by EMAGUA through the Multipurpose Program Management Department (GPM), devoted solely to performing those activities. This Department will be officially created within EMAGUA's organizational structure.

### III. EVALUATION OF FIDUCIARY RISK AND MITIGATION MEASURES

- 3.1 The assessment of institutional capacity under the SECI methodology applicable to EMAGUA reveals a medium degree of development and institutional capacity. The fiduciary risk was classified as MEDIUM because of possible time extensions and implementation cost increases, since this will be the first operation funded by the IDB that EMAGUA will execute.
- 3.2 The primary mitigation measure proposed is reinforcing EMAGUA for program execution by creating the GPM, formed by professionals skilled in procurement, financial and accounting management, and a lawyer, among others, with expertise in the execution of this type of project. To ensure an adequate progress of purchase, procurement, and financial management processes, the GPM will have administrative and legal independence.
- 3.3 Mitigation measures for the identified risk include: (i) Deployment of a summary proceeding between EMAGUA and the MMAyA for registration and budget amendments, (ii) wide broadcasting of OR, including the duties of the GPM and other EMAGUA areas that will interact during Program implementation, and (iii) fiduciary training focused on the Executing Agency's personnel, before execution and after GPM personnel is hired.

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

- 4.1 **Program Operation Rules (OR).** These will include execution scheme, procedures, and information flows, as previously agreed between the Executing Agency and the Bank.
- 4.2 **Exchange rate agreed upon with the executing agency for accountability.** The exchange rate will be that in force in Bolivia on the effective date of the conversion of resources in foreign currency into the local currency, in the accounts held by the Executing Agency.
- 4.3 **Financial statements and other audited reports.** Within one hundred and twenty (120) days following the end of each financial year of the Executing Agency, and during the term provided for disbursements, the program's audited financial statements approved by an Independent Auditing Firm (FAI) will be submitted to the Bank, to the Bank's satisfaction. The last report will be submitted within one hundred and twenty (120) days following the date set for the last fund disbursement.
  - 4.3.1 The terms of reference related to the hiring of the FAI shall be previously approved by the Bank, which may include products framed within the IAS, in connection with the financial audit of the program and associated works. The scope and other related aspects will be governed by the Financial Management

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<sup>4</sup> SIAP-BID, IDB Project Administration System.

Policy for IDB-Financed Projects (OP-273-6) and the Financial Statements and External Auditing Guidelines.

- 4.4 **Purchases.** Purchases will be framed within the GN-2349-9 and GN-2350-9 policies, and pursuant to the partial application of the NB-SABS referred to in paragraph 1.3.

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

- 5.1. **Procurement Execution.** Purchases under the Program will be listed and described in the Procurement Plan approved by the Bank, and made pursuant to the GN-2349-9 and GN-2350-9 policies (for which no exception is provided), or the partial application of the NB-SABS referred to in paragraph 1.3
- 5.2. **Procurement of Works, Goods, and Non-Consulting Services.** Contracts for works, goods, and non-consulting services subject to International Competitive Bidding (ICB) will be executed using the Standard Bidding Document (SBD) in force issued by the Bank. Processes below the ICB threshold will be subject to the documents agreed with the VIPFE and available on SICOES. Amendments to these documents will have to be previously uncontested by the Bank.
- 5.3. **Selection and Contracting of Consultants.** Contracts for consulting services generated under the project will be executed on the basis of the following:
- (i) **Selection of consulting firms.** The Standard Request for Proposals (RFP) in force issued by the Bank will be used. For processes below US\$200,000, the documents agreed with the VIPFE and available on SICOES will apply. Amendments to these documents will have to be previously uncontested by the Bank.
  - (ii) **Short list of consulting firms.** This list may include Bolivian firms only for contracts valued below the threshold set for Bolivia of US\$200,000.
  - (iii) **Selection of individual consultants.** This selection will take into account the consultants' qualifications to perform the work, based on a comparison of the qualifications of at least three candidates and, as a general rule, no interviews will be performed. Whenever the works involve the engagement of other people – to provide special support or assistance – consulting firms will normally be hired, unless such support involves the engagement of 2 or 3 individuals. In such circumstances, the appropriateness of resorting to individual consultants providing supplemental services will be analyzed on a case-by-case basis.
- 5.4. **Procurement Plan.** The EMAGUA will publish the Procurement Plan in the Procurement Plan Execution System (SEPA) and update it at least once a year, or as necessary, to reflect the Program's execution needs.
- 5.5. **Early Purchases/Retroactive Funding.** No early purchases are estimated that require retroactive funding.
- 5.6. **Domestic Preference.** For the execution of this operation, domestic preference will not be included in procurement procedures.
- 5.7. **Terms of Reference and Technical Specifications.** Reviewing the criteria for short-list selection, terms of reference, or technical specifications will be a duty of the Project Team Leader and, in all cases, they will be agreed with the Executing Agency before process execution.
- 5.8. **Table of Threshold Amounts (thousands of US\$)**

**Table 1. Threshold Amounts (thousands of US\$)**

Works			Goods			Consulting Firms	
ICB	NCB	Shopping	ICB	NCB	Shopping	International Publicity *	National Publicity **
More than US\$3,000	US\$3,000 or less	US\$250 or less	More than US\$200	US\$200 or less	US\$50 or less	More than US\$200	US\$200 or less

\* Short list: not more than 2 firms of the same nationality

\*\* Short list can be 100% national

5.9. **Main Purchases.** The main purchases planned for this Operation are listed in Table 2:

**Table 2. Main Purchases Plan**

Activity	Selection Method	Estimated Date	Estimated amount (thousands of US\$)
<b>Contracts for Consulting Firms</b>			
Works Supervision for Drinking Water Systems in the Municipalities of El Alto, Batallas, and Pucarani	QCBS	TBD	2,245
Implementation of Social Management Plan	QCBS	TBD	1,360
EPSAS Organizational Restructuring	CQS	TBD	200
Comprehensive Technical Assistance for Jacha Jahuira and Kullu Kachi Irrigation System (2 contracts)	QCBS	TBD	600
Works Supervision for Jacha Jahuira and Kullu Kachi Irrigation System (2 contracts)	QCBS	TBD	1,490
Preparation and implementation of IWM for the Jacha Jahuira and Kullu Kachi Basins.	QCBS	TBD	3,488
Implementation of Monitoring System for Bodies of Water	QCBS	TBD	882
Program final assessment	QCBS	TBD	400
External auditing and <i>ex-post</i> review of purchases under the program	QCBS	TBD	250
<b>Contracts for Works</b>			
Drinking water system for the Municipalities of El Alto, Batallas, and Pucarani	ICB	TBD	68,500
Jacha Jahuira Irrigation System	ICB	TBD	24,000
Kullu Kachi Irrigation System	ICB	TBD	22,900
<b>Contracts for Goods Procurement</b>			
Procurement of office furniture and equipment, computer equipment and software for IT program BPM (3 contracts)	Shopping	TBD	108
Procurement of light vehicles (4 trucks)	Shopping	TBD	160
<b>Contracts for Individual Consultants</b>			
Contracts for 17 professionals to form the GPM to reinforce several technical and administrative areas for program execution.	QCNI	TBD	1,905

\* [See](#) Procurement plan for the first 18 months.

5.10. **Procurement Supervision.** Annual inspections will be performed to update the capacity level for procurement management as well as the fiduciary risk associated with operation execution. If applicable, *ex-post* annual review inspections will also be performed.

5.11. *Ex-post* review thresholds are listed in Table 3 (direct purchases and procurement not listed in the following table will be subject to *ex-ante* reviews). The external auditing firm will perform the *ex-post* review of purchases.

**Table 3. Thresholds for *Ex-Post* Review (in thousands of US\$)**

<b>Works</b>	<b>Goods and Non-Consulting Services</b>	<b>Consulting Services (Firms)</b>	<b>Consulting Services (Individuals)</b>
Contracts for US\$3,000 or less	Contracts for US\$200 or less	Contracts for US\$200 or less	Those who are not part of the GPM with no threshold amount.

- 5.12. **Operating or Recurring Expenses.**<sup>5</sup> All operating or recurring expenses will be agreed with the JEP, included in the project budget and in the Procurement Plan. All acquisitions will be made following the NB-SABS and/or the Executing Agency's administrative procedures. The Bank may refrain from financing such expenses if the Bank determines that their application has infringed the fundamental principles of competition, efficiency and economy. The independent auditing firm will be responsible for reviewing the relevant expense supporting documents.
- 5.13. **Records and Files.** EMAGUA will be responsible for establishing the supporting documents, procedures, and controls necessary for the proper safeguarding of all documentation created either before or after the implementation of the Program. The Bank may, at any time, verify all organization, control, and safety standards applicable to records and files.

## **VI. FINANCIAL MANAGEMENT**

- 6.1 **Planning and Budgeting.** The GPM, in coordination with the Finance and Administration Department, and the appropriate MMAyA authorities, will do the planning and budgeting based on the annual operating plan agreed upon, and will cause the Program to be registered under the heading of capital budget on the SIGMA system. When it comes to external resources, according to Bolivia's budget laws and regulations, budgetary changes may be made at any time during the year, subject to approval by the Ministry of Development Planning.
- 6.2 **Accounting and Information Systems.** EMAGUA will record all Program transactions on the SIGMA system. This system integrates into a single record the different accounting stages: budgeting stage, accounting transactions recording stage, on an accrual basis. For accounting purposes, a chart of accounts will be prepared which will identify management expenses on a cash basis and match the Program's capital budget categories with the appropriate budgetary items and general ledger accounts. The SIGEP system will replace the SIGMA system and is expected to come into operation in 2016. It has a project accounting management module, which will allow the Executing Agency to issue financial reports in the currency of the loan agreement and according to the relevant budget.

<sup>5</sup> Operating or recurring expenses include, among others: real property leases; radio, TV, or press releases, advertisements or communications; translations, bank charges, basic office supplies, photocopies, postage, fuel, maintenance, seminars, operating personnel's travel expenses, among other expenses necessary for the successful operation of the Program.



- 6.3 In case the coming into operation of the SIGEP system is delayed, EMAGUA will, for the time being, adopt the SIAP-IADB system for accounting registration and control of Program transactions.
- 6.4 **Disbursements and Cash Flow.** The loan will be disbursed in the form of cash advances and direct payments according to the Program's financial plan, which will be periodically updated by the Executing Agency. The Bank may make a new cash advance provided that at least 80% of the accumulated balance of all disbursed advances has been properly accounted for. The loan proceeds will be deposited in a separate account, in U.S. dollars, and subsequently transferred to another account, in local currency, both accounts being included in the CUT.<sup>6</sup>
- 6.5 The form of repayment may be used for the recognition of expenditures to be incurred by EMAGUA before the operation becomes eligible.
- 6.6 **Internal Control and Internal Audit.** Annually, EMAGUA's financial management results will be subject to reliability reviews by the Internal Audit Unit (UAI). It is expected that the Program will be included in such kind of reviews. In turn, the Bank, as a strategic activity, will invite the UAI to take part in focus workshops annually, for the Bank to gain further insight into the stage of development of projects as well as into follow-up and monitoring mechanisms. This activity will be coordinated with the Office of the Comptroller General (CGE). Furthermore, the Bank has been supporting the CGE with a CT in order to strengthen the internal control system. The aim is to provide the UAIs, which are the centerpieces in this control scheme, with practical tools for conducting their reviews and improving their performance.
- 6.7 **External Control and Reporting.** Annually, EMAGUA will retain a FAI to the satisfaction of the Bank. Such hiring must extend for several years (covering at least three administrations) so as to minimize transaction costs and allow continuity of the auditors' work, in addition to ensuring timely interventions enabling preliminary reviews every six months. In this context, steps will be taken to allow the same FAI auditing the rest of the projects currently being developed by the Executing Agency to be retained for this operation.
- 6.8 A no-objection statement will be obtained from the Bank in respect of the TOR for the retaining of the FAI, which will define the scope of the audit work to be performed<sup>7</sup> according to the stage and level of implementation of the Program.
- 6.9 **Financial Supervision Plan.** Supervision activities may be adjusted annually based on the independent auditors' reports and on a Program risk assessment to be conducted by the fiduciary team in conjunction with the Executing Agency. Expenditure supervision will be conducted on an ex-post basis. However, the annual supervision plan will include at least a comprehensive visit (to evaluate financial and procurement-related matters) by the Bank.

**Implementation Mechanisms.** The GPM will be in charge of the coordination, planning, and implementation of the Program. The GPM will enjoy administrative and legal autonomy to carry on all procurement and financial management processes, while maintaining coordination relationships with all other EMAGUA

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<sup>6</sup> Treasury's Single Account.

<sup>7</sup> It has been defined at the IADB Offices in Bolivia that the FAI should engage in tasks ensuring proper procurement review on an ex-post basis. However, other kind of tasks may be considered as well.

agencies and the MMAyA. All relationships, coordination levels, and responsibilities will be defined in the Program's Operating Rules.

BO-L1080: Multip irrigation/drinking water Proj for the Mun of Batallas,Pucaracani,El Alto

## SAFEGUARD SCREENING FORM

This Report provides a summary of the project classification process and is consistent with Safeguard Screening Form requirements. The printed Report should be attached as an annex to the PP (or equivalent) and sent to ESR.

1. Save as a Word document. 2. Enter additional information in the spaces provided, where applicable. 3. Save new changes.

<b>PROJECT DETAILS</b>	<b>IDB Sector</b>	ENVIRONMENT AND NATURAL DISASTERS- CLIMATE CHANGE ADAPTATION POLICY
	<b>Type of Operation</b>	Other Lending or Financing Instrument
	<b>Additional Operation Details</b>	
	<b>Country</b>	BOLIVIA
	<b>Project Status</b>	
	<b>Investment Checklist</b>	Generic Checklist
	<b>Team Leader</b>	Grunwaldt, Alfred Hans (ALFREDG@iadb.org)
	<b>Project Title</b>	The Multipurpose Water Resources Project for La Paz and El Alto
	<b>Project Number</b>	BO-L1080
	<b>Safeguard Screening Assessor(s)</b>	Collins, Steven Charles (STEVENC@iadb.org)
	<b>Assessment Date</b>	2013-05-02
	<b>Additional Comments</b>	

	<b>Project Category:</b> A	<b>Override Rating:</b>	<b>Override Justification:</b>
			<b>Comments:</b>
		<p>Category "A" operations require an Environmental Impact Assessment or a Strategic Environmental Assessment (see Environment Policy Guideline: Directive B.5 for EIA and SEA requirements) and at least two consultations with affected parties.</p>	



BO-L1080: Multip irrigation/drinking water Proj for the Mun of Batallas,Pucaracani,El Alto

<p><b>PROJECT CLASSIFICATION SUMMARY</b></p>	<p><b>Conditions/ Recommendations</b></p>	<p>These operations will require an environmental assessment (EA), normally an Environmental Impact Assessment (EIA) for investment operations, or other environmental assessments such as a Strategic Environmental Assessment (SEA) for programs and other financial operations that involve plans and policies. Category "A" operations are considered high safeguard risk. For some high safeguard risk operations that, in the Bank's opinion raise complex and sensitive environmental, social, or health and safety concerns, the borrower should normally establish an advisory panel of experts to provide guidance for the design and/or execution of the operation on issues relevant to the EA process, including health and safety. However, these operations will also establish safeguard, or monitoring requirements to address environmental and other risks (social, disaster, cultural, health and safety etc.).</p> <p>The Project Team must send to the ESR the PP (or equivalent) containing the Environmental and Social Strategy (the requirements for an ESS are described in the Environment Policy Guideline: Directive B.3) as well as the Safeguard Policy Filter and Safeguard Screening Form Reports.</p>
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	<p><b>Identified Impacts/Risks</b></p>	<p><b>Potential Solutions</b></p>
	<p>Involuntary resettlement of Indigenous Peoples or other ethnic minority communities whose identity is closely tied to their traditional territories, even if the objective of the project is to move these peoples from unhealthy or high risk areas</p>	<p><b>Potential Resettlement Issues Indicate Significant Risk of Non-Compliance with IDB policy OP-710:</b> Discuss with Environmental and/or Social specialist(s), relevant team members and others before proceeding. Borrower is required to develop a RP (as part of the ESMP) that demonstrates the following attributes: (a) detailed socio-economic survey and baseline of the affected households and groups; (b) successful engagement with affected parties via a process of Community Participation culminating; (c) mechanisms for delivery of compensation in a timely and efficient fashion; (d) a livelihoods restoration program; (e) budgeting and internal capacity (within borrower's organization) to monitor and manage resettlement activities as necessary over the course of the project; (f) a grievance mechanism for resettled people; In addition, the borrower is required to demonstrate that: (a) the resettlement component will result in direct benefits to the affected indigenous or minority community relative to their prior situation; (b) customary rights will be fully recognized and fairly compensated; (c) compensation options will include land-based resettlement; and (d) the people affected have given their informed consent to the resettlement and compensation measures. Depending on the financial product, the RP should be referenced in legal documentation (covenants, conditions of disbursement, credit</p>



	and operating regulations, project completion tests, etc.), require regular (quarterly, bi-annual or annual) reporting and independent review of implementation, including participatory monitoring.
Minor or moderate conversion or degradation impacts to natural habitats (such as forests, wetlands or grasslands).	<b>Ensure Proper Management and Monitoring of the Impacts of Natural Habitat Loss:</b> A Biodiversity Management Plan (BMP) should be prepared that defines how impacts will be mitigated (roles and responsibilities, monitoring, budget, etc.) and could be incorporated in the ESMP. Depending on the financial product, the BMP should be referenced in appropriate legal documentation (covenants, conditions of disbursement, etc.). Confirmation should be obtained from competent experts that they are confident that the plan can mitigate impacts and also that the relevant authorities have approved the BMP.
Conversion or degradation of critical natural habitat is minor to moderate in nature, as confirmed by a specific ecological assessment.	<b>Ensure Adequacy of Biodiversity Management Plan (BMP):</b> The borrower should be required to develop a BMP that demonstrates how impacts have been mitigated and what consultation activities are planned. The borrower should confirm that: (a) there are no feasible alternatives acceptable to the Bank; (b) benefits substantially outweigh environmental costs; and (c) mitigation and compensation measures are acceptable by the Bank. In addition this plan should be part of the ESMP. In all situations, impacts to biodiversity should be avoided in first instance (i.e. relocate or reconfigure proposed activities). If avoidance is not possible impacts should be mitigated by restoration, offsetting impacts or other means. Professional support from suitably qualified experts should be sought and confirmation should be obtained that they are confident that the BMP can mitigate impacts and also that relevant authorities have approved the BMP. Require regular (bi-annual or annual) reporting. Require independent audits of BMP implementation and depending on the financial product, the BMP should be referenced in appropriate legal documentation (covenants, conditions of disbursement, project completion tests, etc.).
Negative impacts on ecosystem services (e.g. biodiversity corridors, flood protection) to other users or habitats are minor to moderate in nature.	<b>Ensure Adequate Management Plans:</b> The plans should define how impacts will be mitigated (roles and responsibilities, monitoring, budget, etc.) and how ongoing consultation (including the development of a grievance mechanism) will be implemented which could be part of the ESMP. The ESMP should also include measures to manage these impacts. There should be evidence of effective and timely consultation with local communities, relevant authorities and conservation NGOs and confirmation should be obtained from competent experts that they are confident that the plans can mitigate impacts. Depending on the financial product, the plans should be referenced in appropriate legal documentation (covenants, conditions of disbursement, project completion tests, etc.).
The project is	



<p>likely to negatively change the use of the land but the related negative impacts will be minor to moderate in nature.</p>	<p><b>Land use:</b> A Plan should be prepared that defines how land use change will be mitigated (roles and responsibilities, monitoring, budget, etc.) and could be incorporated in the ESMP. Proper consultation should be foreseen. Confirmation should be obtained from experts that the plan can mitigate impacts and also that relevant authorities have approved the Plan. Examples of mitigation include reforestation, GHG offsetting, nutrient fixation in soils, conservation of biodiversity.</p>
<p>Potential to introduce unequal requirements for access to benefits and economic opportunities based on gender</p>	<p><b>Incorporation of gender analysis into its social impact and risk assessments:</b> Where project impacts will potentially introduce unequal requirements for access to benefits and economic opportunities based on gender, project preparation and implementation should include specific analysis and consultation/agreements regarding these issues and the social impact and risk assessment and associated mitigation framework must address them specifically. The mitigation framework will be referenced in the legal documentation (covenants, conditions of disbursement, etc.), require regular reporting, frequent and independent monitoring, and independent review of implementation, including participatory monitoring.</p>
<p>Generation of solid waste is moderate in volume, does not include hazardous materials and follows standards recognized by multilateral development banks.</p>	<p><b>Solid Waste Management:</b> The borrower should monitor and report on waste reduction, management and disposal and may also need to develop a Waste Management Plan (which could be included in the ESMP). Effort should be placed on reducing and re-cycling solid wastes. Specifically (if applicable) in the case that national legislations have no provisions for the disposal and destruction of hazardous materials, the applicable procedures established within the Rotterdam Convention, the Stockholm Convention, the Basel Convention, the WHO List on Banned Pesticides, and the Pollution Prevention and Abatement Handbook (PPAH), should be taken into consideration.</p>
<p>Likely to have significant emissions or discharges that would negatively affect ambient environmental conditions.</p>	<p><b>Management of Ambient Environmental Conditions:</b> The borrower should be required to prepare an action plan (and include it in the ESMP) that indicates how risks and impacts to ambient environmental conditions can be managed and mitigated consistent with relevant national and/or international standards. The borrower should (a) consider a number of factors, including the finite assimilative capacity of the environment, existing and future land use, existing ambient conditions, the project's proximity to ecologically sensitive or protected areas, and the potential for cumulative impacts with uncertain and irreversible consequences; and (b) promote strategies that avoid or, where avoidance is not feasible, minimize or reduce the release of pollutants, including strategies that contribute to the improvement of ambient conditions when the project has the potential to constitute a significant source of emissions in an already degraded area. The plan should be subject to review by qualified independent experts. Depending on the financial</p>



**SUMMARY OF IMPACTS/RISKS AND POTENTIAL SOLUTIONS**

	<p>product, this information should be referenced in appropriate legal documentation (covenants, conditions of disbursement, etc.).</p>
<p>Likely to have minor to moderate emission or discharges that would negatively affect ambient environmental conditions.</p>	<p><b>Management of Ambient Environmental Conditions:</b> The borrower should be required to prepare an action plan (and include it in the ESMP) that indicates how risks and impacts to ambient environmental conditions can be managed and mitigated consistent with relevant national and/or international standards. The borrower should (a) consider a number of factors, including the finite assimilative capacity of the environment, existing and future land use, existing ambient conditions, the project's proximity to ecologically sensitive or protected areas, and the potential for cumulative impacts with uncertain and irreversible consequences; and (b) promote strategies that avoid or, where avoidance is not feasible, minimize or reduce the release of pollutants, including strategies that contribute to the improvement of ambient conditions when the project has the potential to constitute a significant source of emissions in an already degraded area. The plan should be subject to review by qualified independent experts. Depending on the financial product, this information should be referenced in appropriate legal documentation (covenants, conditions of disbursement, etc.).</p>
<p>Safety issues associated with structural elements of the project (e.g. dams, public buildings etc), or road transport activities (heavy vehicle movement, transport of hazardous materials, etc.) exist which could result in moderate health and safety risks to local communities.</p>	<p><b>Address Community Health Risks:</b> The borrower should be required to provide a plan for managing risks which could be part of the ESMP; (including details of grievances and any independent audits undertaken during the year). Compliance with the plan should be monitored and reported. Requirements for independent audits should be considered if there are questions over borrower commitment or potential outstanding community concerns.</p>



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<p>Transport of hazardous materials (e.g. fuel) with minor to moderate potential to cause impacts on community health and safety.</p>	<p><b>Hazardous Materials Management:</b> The borrower should be required develop a hazardous materials management plan; details of grievances and any independent health and safety audits undertaken during the year should also be provided. Compliance with the plan should be monitored and reported. Depending on the financial product, this information should be referenced in appropriate legal documentation (covenants, conditions of disbursement etc). Consider requirements for independent audits if there are concerns about commitment of borrower or potential outstanding community concerns.</p>
<p>Project construction activities are likely to lead to localized and temporary impacts (such as dust, noise, traffic etc) that will affect local communities and workers but these are minor to moderate in nature.</p>	<p><b>Construction:</b> The borrower should demonstrate how the construction impacts will be mitigated. Appropriate management plans and procedures should be incorporated into the ESMP. Review of implementation as well as reporting on the plan should be part of the legal documentation (covenants, conditions of disbursement, etc).</p>
<p>The project has or will have moderate negative impacts on Indigenous Peoples.</p>	<p><b>Mitigation Framework:</b> In situations where Indigenous Peoples (IPs) will be directly or indirectly affected by a project, the borrower should conduct an evaluation including a socio-cultural assessment to identify the impacts and determine their level of significance in order to: (a) consider all realistic and cost-effective options that avoid impacts with adverse effects (sites, technologies, supply chains etc.); and (b) if impacts cannot be avoided: (i) conduct culturally appropriate consultation and good faith negotiations, consistent with affected IP legitimate decision-making processes and (ii) minimize, mitigate or compensate for these impacts in a culturally appropriate manner. Specialist advice should be sought. The project's proposed action should be developed with the informed participation of affected IPs through a process of good faith negotiations, and contained in a time-bound Mitigation Framework. The borrower will be required to seek professional advice in the development of a Mitigation Framework and the necessary consultation and good faith negotiation activities. The Mitigation Framework should be referenced in the legal documentation (covenants, conditions of disbursement, project completion tests, credit and operation regulations, etc.) and require monitoring, regular reporting and independent review of implementation, including participatory monitoring.</p>
	<p><b>Mitigation Framework:</b> Impacts are considered moderate if the</p>





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	<p>Potential to directly or indirectly adversely and moderately impact the rights of Indigenous Peoples.</p>	<p>rights affected do not include land or other fundamental rights or the impacts are not adverse. Consult Indigenous Peoples legislation database at <a href="http://www.iadb.org/Research/legislacionindigena/leyn/index.cfm">http://www.iadb.org/Research/legislacionindigena/leyn/index.cfm</a>. Where project impacts affect the legal rights of indigenous peoples project preparation and implementation should include specific analysis and consultation/good faith negotiations regarding these issues and the Mitigation Framework must address them specifically. The Mitigation Framework will be referenced in the legal documentation (covenants, conditions of disbursement, etc.), require regular reporting, frequent and independent monitoring, and independent review of implementation, including participatory monitoring.</p>
	<p>Project activities will moderately in a negative way affect availability and/or quality of water supplies to local communities or ecosystems (e.g. as a result of increased volumes of flow as a result of clearance of large areas of vegetation, increased water demand in locations with potable and surface water deficit, or as a result of reduced water quality from industrial activities, infrastructure or land development).</p>	<p><b>Water Resources:</b>The borrower should demonstrate via a plan (part of the ESMP) how project activities (and any associated facilities) will be developed and operated so as to avoid impacts to water supply and quality. Depending on the scale, type and significance of risk, this might involve relocation/reduction of project activities, erosion and sediment control measures during construction, water conservation initiatives or more comprehensive waste water treatment Evidence of appropriate consultation with local communities should be apparent. Review of implementation as well as reporting on the plan should be part of the legal documentation (covenants, conditions of disbursement, etc.).</p>

	<p>Details</p>	<p>Actions</p>
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<b>DISASTER SUMMARY</b>	<p>The Project should include the necessary measures to reduce disaster risk to acceptable levels as determined by the Bank on the basis of generally accepted standards and practices. Alternative prevention and mitigation measures that decrease vulnerability must be analyzed and included in project design and implementation as applicable. These measures should include safety and contingency planning to protect human health and economic assets. Expert opinion and adherence to international standards should be sought, where reasonably necessary.</p>	<p>A Disaster Risk Assessment (DRA), is required, as established under Directive A-2 of the DRM Policy OP-704). Please contact a Natural Disaster Specialist in VPS/ESG or INE/RND for guidance.</p> <p>Also: if the project needs to be modified to increase resilience to climate change, consider the (i) possibility of classification as adaptation project and (ii) additional financing options. Please contact a INE/CCS adaptation specialist for guidance.</p> <p>The project triggered the Other Risks policy (B.04): climate risk.Please include sections on how climate risk will be dealt with in the ESS as well as client documents (EIA, EA, etc);Recommend addressing risks from gradual changes in climate for the project in cost/benefit and credit risk analyses as well as TORs for engineering studies.</p>
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<b>ASSESSOR DETAILS</b>	<b>Name of person who completed screening:</b>	Collins, Steven Charles (STEVENC@iadb.org)
	<b>Title:</b>	
	<b>Date:</b>	2013-05-02

## SAFEGUARD POLICY FILTER REPORT

This Report provides guidance for project teams on safeguard policy triggers and should be attached as an annex to the PP (or equivalent) together with the Safeguard Screening Form, and sent to ESR.

1. Save as a Word document. 2. Enter additional information in the spaces provided, where applicable.
3. Save new changes.

<b>PROJECT DETAILS</b>	<b>IDB Sector</b>	ENVIRONMENT AND NATURAL DISASTERS- CLIMATE CHANGE ADAPTATION POLICY
	<b>Type of Operation</b>	Other Lending or Financing Instrument
	<b>Additional Operation Details</b>	
	<b>Investment Checklist</b>	Generic Checklist
	<b>Team Leader</b>	Grunwaldt, Alfred Hans (ALFREDG@iadb.org)
	<b>Project Title</b>	The Multipurpose Water Resources Project for La Paz and El Alto
	<b>Project Number</b>	BO-L1080
	<b>Safeguard Screening Assessor(s)</b>	Collins, Steven Charles (STEVENC@iadb.org)
	<b>Assessment Date</b>	2013-05-02
	<b>Additional Comments</b>	

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Type of Operation	Loan Operation	
<b>Safeguard Policy Items Identified (Yes)</b>	Potential disruption to people's livelihoods living in the project's area of influence (not limited to involuntary displacement, also see Resettlement Policy.)	(B.01) Resettlement Policy– OP-710
	Potential to negatively affect Indigenous People (also see Indigenous Peoples Policy.).	(B.01) Indigenous People Policy– OP-765
	Is this project specifically designed to address indigenous peoples issues?	(B.01) Indigenous People Policy– OP-765
	Does this project offer opportunities for indigenous peoples through its project components?	(B.01) Indigenous People Policy– OP-765
	Activities to be financed in the project area are located within a geographical area or sector exposed to natural hazards* (Type 1 Disaster Risk Scenario).	(B.01) Disaster Risk Management Policy– OP-704
	The Bank will make available to the public the relevant Project documents.	(B.01) Access to Information Policy– OP-102
	Potential to negatively affect women or gender equality ( <a href="#">See Gender Equality Policy</a> )	(B.01) Gender Equality Policy– OP-270
	The operation is in compliance with environmental, specific women's rights, gender, and indigenous laws and regulations of the country where the operation is being implemented (including national obligations established under ratified Multilateral Environmental Agreements).	(B.02)
	The operation (including associated facilities) is screened and classified according to their potential	(B.03)

**SAFEGUARD  
POLICY  
FILTER  
RESULTS**

environmental impacts.	
The Borrower/Executing Agency exhibits weak institutional capacity for managing environmental and social issues.	(B.04)
The operation may be of higher risk due to controversial environmental and associated social issues or liabilities.	(B.04)
Other environmental and social sustainability issues that the Project Team considers to be a risk for this operation. (e.g. wood sourced from Amazon rainforest).	(B.04)
The operation is sensitive to slow onset changes in climatic variables, weather patterns and the consequences incl. sea level rise, glacier run off. (Type 1 Gradual Climate Change Risk Scenario).	(B.04)
The operation could increase exposure to risk for ecosystems, communities, etc. from slow onset changes in climatic variables, weather patterns and the consequences incl. sea level rise, glacier run off. (Type 2 Gradual Climate Change Risk Scenario).	(B.04)
The project is specifically designed to increase the capacity of human and natural systems to adapt to a changing climate.	(B.04)
The project includes activities to close current “adaptation deficits” or to increase the capacity of human and natural systems to adapt to a changing climate.	(B.04)
An Environmental Assessment is required.	(B.05)
Consultations with affected parties will be performed equitably and inclusively with the views of all stakeholders taken	(B.06)

<p>into account, including in particular: (a) equal participation of women and men, (b) socio-culturally appropriate participation of indigenous peoples and (c) mechanisms for equitable participation by vulnerable groups.</p>	
<p>The Bank will monitor the executing agency/borrower's compliance with all safeguard requirements stipulated in the loan agreement and project operating or credit regulations.</p>	(B.07)
<p>Environmental or culturally sensitive areas, defined in the Policy as critical natural habitats or critical cultural sites in project area of influence (please refer to the <a href="#">Decision Support System</a> for more information).</p>	(B.09)
<p>Conversion of Natural Habitats in project area of influence (please refer to the <a href="#">Decision Support System</a> for more information).</p>	(B.09)
<p>The operation has the potential to impact the environment and human health and safety from the production, procurement, use, and disposal of hazardous material, including organic and inorganic toxic substances, pesticides and Persistent Organic Pollutants (POPs).</p>	(B.10)
<p>The operation has the potential to pollute the environment (e.g. air, soil, water, greenhouse gases...).</p>	(B.11)
<p>Any part of the investment or component (s) is being co-financed.</p>	(B.15)
<p>Suitable safeguard provisions for procurement of goods and services in Bank financed projects may be incorporated into project-specific loan agreements, operating regulations and bidding documents, as appropriate, to ensure environmentally responsible procurement.</p>	(B.17)



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<p><b>Potential Safeguard Policy Items(?)</b></p>	<p>No potential issues identified</p>	
<p><b>Recommended Action:</b></p>	<p>Operation has triggered 1 or more Policy Directives; please refer to appropriate Directive(s). Complete Project Classification Tool. Submit Safeguard Policy Filter Report, PP (or equivalent) and Safeguard Screening Form to ESR.</p> <p>The project triggered the Disaster Risk Management policy (OP-704).</p> <p>A Disaster Risk Assessment (DRA), is required, as established under Directive A-2 of the DRM Policy OP-704). Please contact a Natural Disaster Specialist in VPS/ESG or INE/RND for guidance.</p> <p>Also: if the project needs to be modified to increase resilience to climate change, consider the (i) possibility of classification as adaptation project and (ii) additional financing options. Please contact a INE/CCS adaptation specialist for guidance.</p> <p>The project triggered the Other Risks policy (B.04): climate risk.Please include sections on how climate risk will be dealt with in the ESS as well as client documents (EIA, EA, etc);Recommend addressing risks from gradual changes in climate for the project in cost/benefit and credit risk analyses as well as TORs for engineering studies.</p>	
<p><b>Additional Comments:</b></p>		

<p><b>ASSESSOR DETAILS</b></p>	<p><b>Name of person who completed screening:</b></p>	<p>Collins, Steven Charles (STEVENC@iadb.org)</p>
	<p><b>Title:</b></p>	
	<p><b>Date:</b></p>	<p>2013-05-02</p>

<p>COMMENTS</p>
<p>No Comments</p>