

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

**BOLIVIA**

**STORM DRAINAGE FOR THE CITIES OF LA PAZ AND EL ALTO III**

**(BO-L1114)**

**LOAN PROPOSAL**

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<b>REQUIRED</b>
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2. <a href="#">Annual work plan (AWP)</a>
3. <a href="#">Monitoring and Evaluation Plan</a>
4. <a href="#">Environmental and Social Management Report (ESMR)</a>
5. <a href="#">Procurement Plan</a>
<b>OPTIONAL</b>
1. <a href="#">Socioeconomic Viability</a>
2. <a href="#">Technical Viability</a>
3. <a href="#">Financial Viability</a>
4. <a href="#">Institutional Viability</a>
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9. <a href="#">Draft PMR</a>
10. <a href="#">La Paz Storm Drainage Program (1926/BL-BO) (PDP I)</a>
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## ABBREVIATIONS

AWP	Annual work plan
ESMF	Environmental and Social Management Framework
EWS	Early Warning System
GAMPLP	Autonomous Municipal Government of La Paz
GAMEA	Autonomous Municipal Government of El Alto
INE	National Statistics Institute of Bolivia
MEFP	Ministry of Economy and Public Finance
MEP	Multiyear Execution Plan
PMDP	Plan Maestro de Drenaje Pluvial [Storm Drainage Master Plan]
PMDPEA	Plan Maestro de Drenaje Pluvial de El Alto [Storm Drainage Master Plan of El Alto]
PMDPLP	Plan Maestro de Drenaje Pluvial de La Paz [Storm Drainage Master Plan of La Paz]
POMP	Plan de Operación y Mantenimiento Preventivo [Operation and Preventive Maintenance Plan]
SPP	Social Partnership Plan
SMGIR	Secretaría Municipal de Gestión Integral de Riesgos [Municipal Integrated Risk Management Department]

**PROJECT SUMMARY**

**BOLIVIA  
STORM DRAINAGE FOR THE CITIES OF LA PAZ AND EL ALTO III  
(BO-L1114)**

Financial Terms and Conditions						
<b>Borrower:</b> Plurinational State of Bolivia <b>Executing agencies:</b> Autonomous Municipal Government of La Paz (GAMLP) and Autonomous Municipal Government of El Alto (GAMEA)				<b>Financing</b>	<b>Ordinary Capital (CO)</b>	<b>Fund for Special Operations (FSO)</b>
<b>Source</b>		<b>Amount (US\$)</b>	<b>%</b>	<b>Disbursement period:</b>	5 years	5 years
<b>IDB (Ordinary Capital)</b>	85%	25,500,000	75	<b>Grace period:</b>	6 years	40 years
<b>IDB (FSO)</b>	15%	4,500,000	13	<b>Inspection and supervision fee:</b>	(a)	N/A
<b>Local</b>		3,975,000	12	<b>Interest rate:</b>	SCF-Fixed <sup>(b)</sup>	0.25%
<b>Total</b>		<b>33,975,000</b>	<b>100</b>	<b>Credit fee:</b>	(a)	N/A
				<b>Approval currency:</b>	U.S. dollars.	
Project at a Glance						
<b>Project objective/description:</b>						
<p>The general objective is to help reduce the negative impacts of extreme geodynamic and hydrometeorological events in the cities of La Paz and El Alto, by protecting the population against flood risks and reducing the economic costs associated with such events. This objective will be achieved through actions to improve the storm drainage and management systems.</p>						
<b>Special contractual conditions precedent to the first disbursement of the loan proceeds:</b>						
<p>In accordance with terms and conditions previously agreed upon with the Bank: (i) the borrower will have submitted evidence that a subsidiary agreement has been signed and entered into force with each of the executing agencies, the Ministry of Economy and Public Finance, the Ministry of Planning and Development, and the Ministry of the Environment and Water; (ii) each executing agency will have submitted evidence that an Execution Unit has been formed, including the hiring of the minimum specialized technical personnel for the program (a coordinator, an administrative-financial specialist, a procurement specialist, a technical-environmental specialist, a social specialist, and a planning, monitoring, and control specialist); (iii) program Operating Regulations will have been approved and entered into force for each of the executing agencies, including the program's Environmental and Social Management Framework (ESMF); and (iv) the executing agencies will have submitted an initial report to the Bank that includes updates of the Multiyear Execution Plan (MEP), the Procurement Plan, the Financial Plan, and the updated Results Matrix for the program (3.7).</p>						
<b>Special contractual conditions for execution:</b>						
<p>(i) before starting the processes to contract consulting services or procure goods and before starting the bidding process for each work planned under the program, the borrower agrees, itself or through the executing agencies, to submit to the Bank evidence that it has ownership, possession, and/or usage rights, as applicable, over the lands where each work will be built; (ii) before completion of each work under the program, each of the executing agencies will submit an annual Operation and Preventive Maintenance Plan for each work, identifying the municipal unit responsible for maintaining the work and indicating that it has a budget for the operation and maintenance of the corresponding work; (iii) prior to thirty (30) months following the effective date of the loan contract, the executing agencies will submit financial arrangements for the program's works supporting the sustainability of the investments; (iv) the borrower will itself or through the executing agencies submit to the Bank evidence of compliance with the execution conditions established in the program's Environmental and Social Management Report (ESMR); and (v) prior to six months following the effective date of the loan contract, the executing agencies will submit evidence that a Coordination Committee has been formed, according to the terms and conditions previously agreed upon with the Bank (3.8).</p>						

<b>Exceptions to Bank policies:</b> None			
<b>Strategic Alignment</b>			
Challenges: <sup>(c)</sup>	SI <input type="checkbox"/>	PI <input checked="" type="checkbox"/>	EI <input type="checkbox"/>
Crosscutting themes: <sup>(d)</sup>	GD <input type="checkbox"/>	CC <input checked="" type="checkbox"/>	IC <input checked="" type="checkbox"/>

<sup>(a)</sup> The credit fee and inspection and supervision fee will be established periodically by the Board of Executive Directors as part of its review of the Bank's lending charges, in accordance with the applicable policies.

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

<sup>(c)</sup> GD (Gender Equality and Diversity); CC (Climate Change and Environmental Sustainability); and IC (Institutional Capacity and Rule of Law).

<sup>(d)</sup> The borrower will pay interest on the outstanding balance of the loan portion charged to the Ordinary Capital at a LIBOR-based rate. When the outstanding balance reaches 25% of the approved net amount or US\$3 million, whichever is greater, the base rate will be established on this balance.

## I. PROJECT DESCRIPTION AND RESULTS MONITORING

### A. Background, problem, and rationale

- 1.1 **Background description.** The city of La Paz, with an estimated population of 795,000<sup>1</sup> inhabitants, is located between 2,800 and 4,000 meters above sea level, in a broad topographical depression that makes up the hydrographic basin called the Valley of La Paz. That high mountain basin, covering an area of nearly 500 square kilometers, 88 square kilometers of which correspond to the urban area, consists of five subbasins<sup>2</sup> made up of over 360 rivers. The city of El Alto, which belongs to the same department as the city of La Paz, has an estimated population of 901,823<sup>3</sup> inhabitants and is located in the Andean highlands at an altitude of about 4,000 meters above sea level.
- 1.2 The rainy season for both cities lasts for six months, usually from November to March, with average annual precipitation of approximately 600 millimeters. During this period there are intense storms that significantly affect the population and the urban infrastructure.
- 1.3 **Impacts of geodynamic and hydrometeorological events.** These events result in considerable economic losses and reduced quality of life for the population vulnerable to these natural risks. The Secretaría Municipal de Gestión Integral de Riesgos [Municipal Integrated Risk Management Department] (SMGIR) of the city of La Paz estimates annual economic losses amounting to approximately \$27 million, including expenditures for emergency response, cleanup, public infrastructure recovery, and private sector losses.<sup>4</sup> In El Alto, based on analysis of projects that encompass only districts 1, 2, and 8 of the city,<sup>5</sup> an estimated 13,600 households are affected by flood events each year, with an annual economic cost of approximately US\$2.7 million, including damage to homes, transportation cost, cleanup expenses, and emergency response.
- 1.4 **Identification of the problem and its main determinants.** In this context, during the rainy season, the city of La Paz faces frequent natural risks such as washouts, cave-ins, landslides, *mazamoras*,<sup>6</sup> floods, and flash floods. This is reflected in damaged buildings (according to the SMGIR,<sup>7</sup> between 2012 and 2016, 92 homes collapsed or were at high risk of collapsing, and 724 were damaged), loss of the road bed (14 cases between 2012 and 2016), undermining (52 cases between 2012 and 2016), and landslides (12 cases between 2012 and 2016). There are various determining factors for these problems, among them the geomorphology of the city, which is characterized by high slopes, limited load-bearing capacity of the soil, a large number of rivers and streams, and land consisting mostly of lime and clay. Compounding these natural factors are causal factors such as low

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<sup>1</sup> Projection for 2016 by the National Statistics Institute (INE) based on the 2012 National Census.

<sup>2</sup> The subbasins are those of the Choqueyapu, Orkojahuirá, Irapavi, Achumani, and Huayñajahuira rivers.

<sup>3</sup> Projection for 2016 by the INE based on the 2012 National Census.

<sup>4</sup> Includes damages to home and costs for time lost due to interruptions in transportation.

<sup>5</sup> These districts represent 33% of the population and 17% of the urban area of the city of El Alto.

<sup>6</sup> Local name given to an avalanche of mud and rocks.

<sup>7</sup> Report of *Red 114* cases and Annual Report of the Special Emergency Response Unit.

coverage of drain and sump services (55%),<sup>8</sup> deficient structural condition of drainage system pipes,<sup>9</sup> insufficient hydraulic capacity in receptors,<sup>10</sup> and the existence of haphazard housing settlements in at-risk areas.<sup>11</sup> Hillside deforestation and removal of material for civil construction have also led to sediment being dragged toward drainage systems.<sup>12</sup> Together with garbage dumped on the banks of rivers,<sup>13</sup> this regularly blocks channels and pipes, causing floods. With respect to response capacity, although the Early Warning System (EWS)<sup>14</sup> performs hydrological, hydraulic, hydrometeorological, and geodynamic monitoring, the early detection of risks due to landslides does not yet cover the 36 “high-risk” areas identified in the city.<sup>15</sup>

- 1.5 In the city of El Alto, floods are due to certain urban and cultural characteristics and deficiencies in the infrastructure and management of the storm drainage system such as: rapid population growth without comprehensive planning;<sup>16</sup> nearly flat topography, causing storm runoff problems; impermeable soil in conjunction with expansion of the urban area, increasing the flows to be transported; insufficient and poorly operating micro drainage systems, including insufficient maintenance;<sup>17</sup> capacity and deterioration problems in the macro drainage system; and solid waste dumped in open chambers and channels.<sup>18</sup>
- 1.6 **Rationale and proposed interventions.** Investing in storm drainage to reduce negative impacts in areas susceptible to hydrometeorological effects is essential.

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- <sup>8</sup> Coverage estimated by the Execution Unit of the Storm Drainage Program and the SMGIR.
- <sup>9</sup> The structural condition of the pipe was evaluated in the stages preceding this program, concluding that 69% of the length of the pipes is in good condition and 31% is in fair condition.
- <sup>10</sup> The main pipes from the Choqueyapu and Achumani rivers have insufficient hydraulic capacity over more than 50% of their length. The secondary lines have sufficient hydraulic capacity except for the section located on tributaries of the lowland basins (Irpavi, Achumani, and Huayñajahuira rivers).
- <sup>11</sup> The risks refer to both floods and landslides. In 2011, GAMLP developed a Risks Map indicating that 31% of the city’s urban footprint is located in “high” and “very high” risk zones.
- <sup>12</sup> Due to as yet uncontrolled and intense erosion at the headwaters of the basins, large volumes of solid material being dragged is one of the main problems in the pipes in the lowland basins. This material causes obstructions in the channels and, therefore, overflows and floods.
- <sup>13</sup> An estimated 30 tons of garbage and debris end up in the storm drainage system each day, clogging the vaults and compromising the proper operation of the drains. Causes include the lack of containers at some points and civil society’s ignorance of the problems generated by improper waste disposal.
- <sup>14</sup> The EWS consists of a network of observation stations, communication systems, data reception centers, and data generating applications designed to prevent and protect the population from extreme climate events.
- <sup>15</sup> Although the EWS is fully operational, it has coverage area limitations (implemented only in the city’s most important rivers and basins), and its equipment and software are not updated to the necessary technological level.
- <sup>16</sup> In recent years, the population of El Alto has grown by 4% per year.
- <sup>17</sup> Limited number and inefficient collection capacity of drains, insufficient operation and maintenance for surface drainage, etc. According to a survey done in 2016 as part of the Operation and Preventive Maintenance Plan (POMP) for the drainage system, more than 90% of the drains in districts 1 to 6, 8 and 14 are in fair or poor condition. In addition, the city has limited equipment for maintaining the drainage system (according to the POMP, the equipment includes a caterpillar tractor, a backhoe, and a power shovel).
- <sup>18</sup> Although there are no official data, the diagnostic done by the PMDPEA identified the presence of solid waste in the storm drainage infrastructure as one of the main problems causing improper operation. According to the 2012 census, 13% of the population stated that it throws waste into the street or rivers.

The Bolivian government and the cities have been engaged in this effort for the last 10 years, with support from the Bank. In this regard, in 2007, with IDB financing, the city of La Paz developed the Storm Drainage Master Plan of La Paz (PMDPLP) ([optional electronic link 7](#)). This plan proposes short-, medium, and long-term structural and nonstructural interventions, while the La Paz Storm Drainage Program (PDP I) (1926/BL-BO) ([optional electronic link 10](#)) approved in 2007 for an amount of US\$22 million, financed interventions identified as urgent in the PMDPLP.<sup>19</sup> In 2010, the program Drainage in the Municipios of La Paz and El Alto (2440/BL-BO), PDP II ([optional electronic link 11](#)), in the amount of US\$33 million,<sup>20</sup> financed works for the cities of La Paz<sup>21</sup> and El Alto,<sup>22</sup> as well as the preparation of the Storm Drainage Master Plan of El Alto (PMDPEA) ([optional electronic link 8](#)). The operations also strengthened risk management capacity in both cities. In La Paz, the Autonomous Municipal Government of La Paz (GAMLP) has made progress in this area, e.g., by maintaining a record of infrastructure damage and loss of human life, preparing new plans and studies, implementing the EWS (2009), creating the first risk map (2011), incorporating professional teams and rescue groups, and generally strengthening the Integrated Risk Management Office that was later elevated to the rank of Municipal Department. In El Alto, a new approach to the city's risk management is being initiated based on preparation of the PMDPEA and implementation of the measures provided therein.<sup>23</sup>

- 1.7 Based on these interventions, this operation seeks to protect the population at risk of floods and to reduce the costs caused by such events through the execution of infrastructure projects,<sup>24</sup> including civil works to control hillside erosion and retain sediment, stabilization and hydraulic control structures, and actions to improve systems management. Specifically in La Paz, works to control hillside erosion and retain sediment are planned for the upper portions of the Huayllani and Kellumani rivers, helping to reduce overflows downstream.<sup>25</sup> The intervention along 1,300 meters of the Irpavi river will also be included, including the area where it meets the Achumani river (a densely urbanized, highly trafficked area), with the construction of hillside stabilization and hydraulic control structures. These works will help to reduce erosion and collapsing slope risks, including in the vicinity of

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<sup>19</sup> The most notable interventions were: vaulting on a section of the Choqueyapu river, channelization of the Huaynajahuira river, erosion control works in the basins of the Jake and Charapaya rivers, implementation of nonstructural measures (EWS, environmental education, etc.), and institutional strengthening.

<sup>20</sup> Current execution status of more than 90%.

<sup>21</sup> Financing provided for: erosion control works and repairs in the basin of the Huayllani and Kellumani rivers, vaulting of the Apumalla, Jancokollo, and Gringojahuira rivers, and institutional strengthening activities.

<sup>22</sup> The most important interventions were: construction of storm sewers in Villa Ingenio and Nueva Asunción, channelization of sections of the Seco and Seke rivers, vaulting of outfalls, and implementation of environmental education and institutional strengthening measures.

<sup>23</sup> Given the city's topography, El Alto does not require implementation of a sophisticated EWS like the one for the city of La Paz.

<sup>24</sup> The interventions to be financed under this program were identified in the drainage master plans and continue execution stages initiated earlier. Works pending execution will cost about US\$300 million for the city of La Paz and US\$380 million for the city of El Alto (in the latter case considering only short-term interventions).

<sup>25</sup> According to design reports contracted by GAMLP, these works will result in an estimated reduction of 2,200 m<sup>3</sup> per year in sediment.

- one of the only bridges providing access to the southern area of the city. The work will reduce problems associated with floods and will limit the number of interventions required for cleanup and sediment extraction. Financing will also be provided to: (i) strengthen the EWS, with the acquisition of equipment to increase coverage of hydro-meteorological and geodynamic monitoring, i.e., the periodic measurement of movements of masses exposed to landslide threats and at risk of floods; and (ii) provide training in environmental education (solid waste disposal) and building social partnerships, intended to ensure the correct performance of the works and the prevention of risks.
- 1.8 For the city of El Alto, the projects (northern segment of Avenida 6 de Marzo sewers and Avenida Arica outfall) are located in the southeastern part of the city in a rapidly growing area crossed by the La Paz-Oruro highway. They consist of the construction of vaults, formation of slopes for lateral runoff, construction of storm water catchment structures and accesses for extracting waste in order to prevent accumulation in the pipes. These works will make it possible to drain storm water accumulated in the adjacent routes, prevent overflows caused by obstructions and insufficient runoff areas, and improve aesthetic and health conditions in the area of activity. Machinery will be purchased for proper maintenance, and an environmental education and social partnership campaign will be included as a supplement to the works to prevent solid waste from being disposed of in the drainage infrastructure.
- 1.9 **Program beneficiaries.** The direct beneficiaries of the projects in the sample are households affected by erosion and overflows in the channels that will be subject to intervention. For La Paz, the projects in the sample will benefit more than 2,000 households (equivalent to about 7,100 people), and in El Alto they will benefit 13,600 households (equivalent to about 47,600 people).
- 1.10 The program will also benefit people who travel along routes affected by floods. In La Paz, it will benefit about 34,000 people who, on a daily basis, pass over the Calacoto Bridge connecting the southern part of the city to the rest of the urban area. This bridge is affected by overflows from the Irpavi river at least three times a year. In El Alto, the program will benefit about 45,000 people who travel the La Paz-Oruro route (a major Bolivian highway because it is the corridor from which traffic is diverted toward Cochabamba, Santa Cruz, Sucre, Potosí, and Tarija) where flooding affects the flow of traffic.<sup>26</sup>
- 1.11 **Effectiveness of interventions.** There is evidence in the literature regarding the negative impact of urban floods both on the population's income and on health conditions.<sup>27</sup> There are also various case studies and other evaluations that demonstrate the effectiveness of structural and nonstructural interventions such

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<sup>26</sup> Source: TESA studies for the La Paz projects and identification studies for the El Alto projects.

<sup>27</sup> For example, Cancado et al. ([Economic consequences of the flood: modelling the impacts in an urban space](#), 2010), perform multisystem modeling calibrated for Brazilian cities to capture the effects of floods on vulnerable areas and, among other variables, on household income. Ahern et al. ([Global Health Impacts of Floods: Epidemiologic Evidence](#), *Epidemiologic Reviews*, Johns Hopkins Bloomberg School of Public Health, Vol. 27, 2005), based on data from 200 urban floods in more than 20 countries, observe that the greatest impacts on mortality and morbidity occur where the infrastructure is precarious or nonexistent and the population at risk has limited economic resources.

as those proposed.<sup>28</sup> In the specific case of this program, the evaluation reports from the previous stages indicate that approximately 35,000 households were protected from flood risks and economic damages were reduced by approximately US\$550,000 per year for the city of El Alto and US\$4.8 million per year for the city of La Paz.

- 1.12 **Sector institutions.** Bolivia's new Constitution establishes the legal framework whereby jurisdictions governing the territorial organization of the state are distributed between the central government (the "Plurinational State") and the municipios. It establishes the municipios' jurisdiction over the administration, execution, operation, and supervision of basic sanitation services (drinking water, storm drainage, sewers, street cleaning, and solid waste management and treatment), assigning them authority for building infrastructure, municipal works, and urban development. The Framework Law on Autonomous Areas and Decentralization establishes oversight and control mechanisms for the regulation of watersheds. In the GAMLP, the PMDPLP, the Municipal Development Plan, the Land Use Intensity Regulations, and the Urban Management Plan are key sources for storm drainage planning. The GAMLP municipal structure includes the SMGIR, which is responsible for the planning, execution, and control as well as the operation and maintenance of storm drainage systems. The Autonomous Municipal Government of El Alto (GAMEA) includes the Municipal Secretariat for Municipal Services, which is responsible for the same tasks with respect to storm drainage systems.
- 1.13 **Bank support for the sector.** In addition to specific interventions in the storm drainage sector (paragraph 1.6), this program is supported by two technical cooperation operations.<sup>29</sup> The Bank is also satisfactorily executing nine programs<sup>30</sup> in the water resources and water and sanitation sectors. Within this program's area of intervention, the Multipurpose Water Supply and Irrigation Program for the Municipios of Batallas, Pucarani, and El Alto (3599/BL-BO), approved in December 2015, will increase the availability of this resource in a sustainable and climate change resilient manner, and the main component of the recently approved Lake Titicaca Cleanup Program (3730/BL-BO and 3731/OC-BO) is improving and expanding wastewater treatment in the city of El Alto.
- 1.14 **Lessons learned.** Notable lessons learned from execution of the earlier stages of the program (PDI I and II) are as follows: (i) the importance of defining preventive actions (e.g., sediment containment) in higher watershed areas in order to reduce loads in the urban drainage system. In this regard, in La Paz this operation plans to execute preventive works to control erosion in the higher areas of the watersheds, supplementing work done in the lower watersheds, such as intervention in the Irpavi river; (ii) the need to follow the technical guidelines of the PMDPs in order to make appropriate decisions on rehabilitating and expanding

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<sup>28</sup> A comprehensive compendium is included in [Jha et al. \(2012, World Bank\)](#), presenting more than 50 case studies of interventions that have been implemented in a variety of urban contexts.

<sup>29</sup> ATN/OC-15545-BO, for strengthening of both executing agencies and operation preparation and preinvestment studies. Another operation is being processed for development of Drainage Master Plans in the cities of Riberalta and Trinidad.

<sup>30</sup> GRT/WS-11830-BO, 2597/BL-BO and GRT/WS-12956-BO, 3091/BL-BO, 2880/BL-BO, 2440/BL-BO, 3599/BL-BO, 3060/BL-BO, and 3536/BL-BO.

- systems; this program was designed and its action strategy was defined on the basis of the PMDPs; (iii) raising community awareness of the need to protect drainage systems to keep garbage from being dumped and storm drains from being blocked; the program plans environmental training and citizen education activities to inform communities of the importance of proper disposal of solid waste; this training will be supplemented with incentives for participating in actions of this kind and training for organizations to promote concrete actions and optimize results; (iv) the importance of having advanced designs to streamline execution and avoid uncertainties in terms of costs; for this operation, resources from the previous operation and technical cooperation projects were used to finance the preparation of technical (detailed designs), economic, social, and environmental studies of a sample of projects prioritized based on the respective PMDPs; the program will also finance technical, economic, environmental, and social studies for other interventions identified as having priority in order to streamline implementation in the future; and (v) social/environmental conflicts are latent in the storm drainage works, so investing time and resources on these issues brings greater certainty to the execution of projects; along these lines, a social partnership plan will be implemented with this operation, to include an information and consultation process during execution of the works and a mechanism for acceptance, handling, and timely resolution of complaints; a consultation process was carried out during preparation to gather recommendations for mitigating/avoiding impacts and the baseline was developed as a reference for addressing possible complaints ([optional electronic link 10](#)).
- 1.15 **Government strategy.** The storm drainage program is part of the country's development strategies targeting fulfillment of the social policies included in the 2016-2020 National Social and Economic Development Plan, Pillar 2 of which seeks to achieve a substantial increase in access to drinking water and basic sanitation services, within a context of comprehensive management of water resources and responsible, participatory management of provider institutions. In the case of the GAML P, the program is framed by the guidelines of the La Paz 2040 Plan, which establishes that land use planning must respond to territorial configuration, using the watershed as the planning unit within a comprehensive vision of risk management, so as to reduce vulnerability and improve the population's living conditions. In the case of GAMEA, the program is framed by the 2016 PMDPEA, the general objective of which is to propose planning mechanisms for urban management, related to the control, use, preservation, and safe piping of storm water in urban drains, rivers, and streams, so as to improve the population's living conditions in accordance with the criteria of sustainable development and environmental recovery.
- 1.16 **IDB strategy with the country.** The program is aligned with the IDB Country Strategy with Bolivia (2016-2020) (document GN-2843) in that it contributes to the priority area of "increasing productivity and diversification in the economy" based on the strategic objective of "reducing vulnerability to natural disasters and climate change." The loan is also included in the 2016 Operational Program Report (document GN-2849).
- 1.17 **Strategic alignment.** The program is consistent with the Update to the Institutional Strategy 2010-2020 (document AB-3008) and is strategically aligned with the development challenge of productivity and innovation, based on measures that will

improve urban planning and reduce the impact of extreme events, particularly those related to the population's mobility costs. The program is also aligned with the crosscutting area of climate change and environmental sustainability, under the climate change criterion, in that it helps to mitigate the impacts of climate change on the cities' drainage systems, adapting infrastructures to respond to increasing threats from extreme events (such as floods, erosion, and landslides) through measures that reduce the risk to the population and to urban infrastructure. The operation contributes to the climate change objective given that the operation satisfies the three criteria for being classified as financing for adaptation: (i) establishes the analytical context of climate vulnerability; (ii) provides a specific response to address the conditions of vulnerability; and (iii) links specific activities/investments to the reduction of vulnerability. It is also aligned with the crosscutting area of institutional capacity and the rule of law, in that it helps to build the management capacity of municipal government agencies to reduce climate risks. In addition, the program is aligned with the Corporate Results Framework (CRF) 2016-2019 (document GN-2727-6) based on the indicator of households protected from the risk of floods. Lastly, the program's additionality includes women's participation activities are included in the Social Partnership Plan (SPP) (paragraph 1.22).

- 1.18 The program is also aligned with the IDB Infrastructure Strategy, Sustainable Infrastructure for Competitiveness and Inclusive Growth (document GN-2710-5) because it helps to: (i) promote access to infrastructure services and to ongoing improvements in their governance; and (ii) support the construction and maintenance of a socially and environmentally sustainable structure, and is consistent with the dimensions of success and lines of action of the Water and Sanitation Sector Framework Document (document GN-2781-3) of universal access and improved quality of services, strengthened sector governance and prioritization of investments, efficient and sustainable management, and social and environmental sustainability. The program is also aligned with the "Integrated Strategy for Climate Change Adaptation and Mitigation and Sustainable and Renewable Energy" and (document GN-2609-3) and the dimensions of success and lines of action and activities established in the Climate Change Sector Framework Document (document GN-2835-3) relevant for the water and sanitation sector. The operation will be part of the Bank's climate change related portfolio, in accordance with the classification methodology adopted by the Bank and standardized with the other of international financial institutions.

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

- 1.19 **Objectives.** The general objective of this operation is to help reduce the negative impacts caused by extreme geodynamic and hydrometeorological events on the cities of La Paz and El Alto, by protecting the population from flood risks and reducing the economic costs associated with those events. This objective will be achieved by taking actions to improve storm drainage and management systems.
- 1.20 **Components.** To achieve its objective, the program will be structured in two components:
- 1.21 **Component I.** Flood control and stabilization works (US\$27.1 million). For both cities, this will include the construction, rehabilitation, and expansion of structural storm drainage works such as storm water channels and vaults in riverbeds and

creeks, and erosion control in watersheds, such as sedimentation areas, defensive processes (weirs), reforestation, and slope control works. In general, the objective of the proposed works is to reduce the vulnerability and risks arising during the rainy season, by improving the hydraulic capacity of channels and pipes, mitigating the risk in inhabited areas with geological instability problems. In addition, the works will help to mitigate the impacts of climate change on the drainage systems of both cities, responding to increasing threats of extreme events (floods, erosion, landslides, etc.) through measures to reduce risks to the population and urban infrastructure. The program will include investments to increase the adaptive capacity of the urban watersheds where the structural and drainage improvement interventions are being performed. Lastly, these works will lay the foundation for future improvement and urban development projects.

- 1.22 **Component II.** Institutional development and environmental management (US\$1.5 million). The program will build the capacity of the agencies responsible for managing drainage systems and risk reduction, contributing to their sustainability. Specifically, nonstructural interventions will be financed, such as: (i) in the case of GAMLP, strengthening of the EWS (equipment for analyzing the spatial and temporal behavior of precipitation and the behavior and physiographic and hydraulic characteristics of the watersheds to identify areas of risk, increasing the system's current coverage) to refine reporting instruments in the area of risk management and emergency response; (ii) expansion of environmental education campaigns and implementation of the SPP, establishing a direct relationship beneficiaries, including: (a) a process of consultation on key stages (which began during preparation); (b) involvement in activities to support the proposed works; and (c) a mechanism for the timely management of complaints and claims;<sup>31</sup> (iii) in the case of GAMEA, the procurement of machinery and equipment for maintaining the drainage system; and (iv) development of final designs for continued implementation of works given priority in the PMDPs.
- 1.23 **Cost and financing.** The total cost of the program amounts to US\$33,975,000, of which US\$30 million will be financed by the Bank and US\$3,975,000 will be financed with the local contribution. The consolidated budget by component is shown in Table I. The expenditure categories to be covered by the program include procurement of goods, works, services, and consulting assignments. The loan proceeds will finance all inherent program costs.

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<sup>31</sup> During preparation, organizations were identified within the project area, primarily neighborhood councils and trade organizations. Solid waste cleanup was identified as a priority activity and it is expected that campaigns will be carried out for this purpose with neighborhood councils that have agreed to collaborate. Environmental education programs target key groups such as schools and civil society organizations. Lastly, the SPP includes a gender approach to ensure women's participation in various activities (consultations, priority activities, training), and information will be broken down by gender to maintain a record of their participation. Consultations have also taken into account the viewpoints of indigenous populations, the majority in El Alto, and those who live at the headwaters of the watersheds where works will be carried out in La Paz.

**Table I-1. Program Cost (in US\$)**

	IDB		Local Contribution		TOTAL	
	GAMLP	GAMEA	GAMLP	GAMEA	GAMLP	GAMEA
Component 1: Flood control and stabilization works	12,822,540	12,266,000	1,500,000	500,000	14,322,540	12,766,000
Component 2: Institutional development and environmental management	630,000	712,521	-	125,447	630,000	837,968
Administration and management	1,547,460	1,271,479	125,000	774,553	1,672,460	2,046,032
Financial costs	-	750,000	850,000	100,000	850,000	850,000
<b>Program total</b>	<b>15,000,000</b>	<b>15,000,000</b>	<b>2,475,000</b>	<b>1,500,000</b>	<b>17,475,000</b>	<b>16,500,000</b>

### C. Key results indicators

1.24 The Results Matrix (Annex II) contains the outcome and output level indicators. Table I-2 presents the principal results indicators.

**Table I-2. Key indicators<sup>32</sup>**

Outcome Indicator	Baseline	Outcome target
Households protected against flood risks in the area of influence of the works financed by the program in El Alto	0	13,612
Households protected against flood risks or landslides in the area of influence of the works financed by the program in La Paz	0	2,029
Economic damages due to floods in the municipio of El Alto.	2,176,595	0
Economic damages due to floods in the municipio of La Paz	4,611,964	3,299,086

1.25 **Technical viability.** The program's technical viability is based on a review of the technical proposals and costs estimates for the works that make up the program sample ([optional electronic link 2](#)). These interventions were identified and programmed in the drainage master plans of the respective cities. The proposed technical solutions have previously been used in drainage works in the area and were structured in accordance with generally accepted engineering standards and principles. The technical viability of the remaining projects that have not been analyzed as part of the sample will be verified based on properly prepared feasibility and design studies, following the requirements established in the program Operating Regulations, which will include the Bank's no objection to the detailed engineering designs for bidding on the works (paragraph 2.3).

1.26 **Economic viability.** A cost-benefit analysis was done for the sample of projects, which prove to be socioeconomically viable, with internal economic rates of return (IERR) of 18% for Kellumani, 20% for Huayllani, 13% for Irpavi, 13% for Avenida Arica, and 65% for Avenida 6 de Marzo. Using a discount rate of 12%, the corresponding net present values are US\$1.9 million, US\$3.1 million, US\$300,000, US\$800,000, and US\$8.4 million ([optional electronic link 1](#)). The evaluations were supplemented by the corresponding sensitivity analyses indicating that the results are robust. For the projects not evaluated because they

<sup>32</sup> The Results Matrix also includes a midterm result indicator related to raising the population's awareness of solid waste management.

do not have the corresponding studies, a cost-benefit analysis will be done, and only projects with IERRs greater than 12% may be financed by the program.

- 1.27 **Financial viability.** The historical and projected financial analyses were based on budgetary and indebtedness analyses for the last four years, indicating that both GAMLP and GAMEA have sufficient borrowing capacity to meet the principal and interest payment obligations under the program and to make the local contribution. To ensure that both GAMLP and GAMEA maintain their financial stability, two indicators will be used to monitor their liquidity and solvency. These indicators are set out in the “Budgetary Administration Law,”<sup>33</sup> are required by the Ministry of Economy and Public Finance (MEFP) for accessing external financing, and measure: (i) liquidity: proportion of current revenues earmarked for debt service; and (ii) solvency: ratio of net debt (long-term plus floating debt less liquid assets) to current revenues. It should be noted that both municipal governments have current Registro de Inicio de Operaciones de Crédito Público [Registry of Initiation of Public Credit Operations] (RIOCP) debt certificates, which are issued by the MEFP for accessing financing under this program ([optional electronic link 3](#)). An annually verifiable contractual condition of the program’s financial sustainability will be for GAMLP and GAMEA to maintain liquidity indicators below 0.20 and solvency indicators below 2.00.<sup>34</sup> In addition, in order to promote sustainability of the storm drainage infrastructure in both municipios, it was agreed that two contractual conditions for execution would be included (paragraph 3.8).
- 1.28 **Institutional viability.** The evaluation of the program’s institutional viability was based on analysis of the institutional capacity assessments (ICAS) of GAMLP and GAMEA done during program preparation. The results of these analyses reflect satisfactory development and low risk for both executing agencies in the respective municipal governments, as already established for earlier stages of the program, and indicate that they have sufficient autonomy in the areas under their jurisdiction and the necessary legal powers to execute the program’s components. This is consistent with the satisfactory execution of the earlier stages of the program by these executing agencies (paragraph 1.6), which also have experience with and knowledge of the Bank’s procurement and financial policies. The administration component includes resources for contracting the staff needed for proper program execution.<sup>35</sup> The update of the ICAS for each municipal government is provided in [optional electronic link 4](#).

## II. FINANCING STRUCTURE AND MAIN RISKS

### A. Financing instruments

- 2.1 **Modality.** This operation is structured as a multiple works program, which will be governed by the respective program Operating Regulations, given that independent and physically similar projects are financed under this modality based on eligibility criteria, and includes a representative sample for evaluation and

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<sup>33</sup> Law 2042, of 21 December 1999 ([link](#)).

<sup>34</sup> Both values are required by the MEFP under Law 2042 on Budgetary Administration.

<sup>35</sup> In addition, funds from ATN/OC-15545-BO will be used to hire the key positions for both executing agencies, before this program’s funds are eligible, to streamline execution and provide continuity for those key positions.

execution. An execution period of five years following the effective date of the loan contract is considered. The disbursement schedule is presented in Table II-1.

**Table II-1. Disbursement Schedule (in US\$)**

Source	2017	2018	2019	2020	2021	Total
IDB	602,716	7,005,377	8,038,991	7,292,092	7,060,824	30,000,000
GAMLP local contribution	110,000	431,550	809,250	716,500	425,700	2,475,000
GAMEA local contribution	119,812	551,718	454,959	172,173	201,339	1,500,000
%	2%	23%	27%	24%	23%	100%

2.2 **Representative sample.** The project sample consists of the interventions in Huayllani, Kellumani, and Irpavi, for the city of La Paz, and Avenida Arica and Avenida 6 de Marzo, for the city of El Alto, totaling approximately US\$15.6 million (equivalent to 43% of direct costs) ([optional electronic link 1](#)). The designs for projects that are not part of the sample will be contracted and developed during the first 36 months of execution, and therefore, all works in the program are expected to begin no later than 48 months after the eligibility date.

2.3 **Eligibility criteria and prioritization of projects.** The following eligibility criteria have been established for the remaining projects to be financed and will be included in the program Operating Regulations: (i) the work has been given priority in the corresponding PMDP; (ii) the designs included a study of alternative works, and the selection reflects a least cost and specific technical viability analysis of the work to be financed; (iii) the design of the work has considered the technical criteria corresponding to each municipio, and includes in particular the evaluation and resolution of constraints now in existence or that the work may create downstream; (iv) the municipal unit responsible for maintaining the work is identified; (v) if necessary, there is a plan to document ownership, possession, or usage rights on the property where the works will be performed, in the name of the beneficiary jurisdictions; (vi) the cost-benefit analysis shows that the work is economically viable (IERR greater than or equal to 12%); (vii) the population in the intervention area has been consulted, is aware of the scope of the work and its environmental and social impacts, and is in agreement with it; (viii) all applicable environmental and social studies and documentation are available, pursuant to national legislation and Bank policies; (ix) the work complies with the environmental and social management plan and its instruments as well as the SPP, and the specific resettlement plan is submitted, when applicable for the project in question; and (x) there is a national level environmental license for the work. For purposes of prioritizing the projects, in the case of La Paz, prioritization will be given to the works identified as higher priority by the SMGIR, and in the case of El Alto the order of priority of the PMDP will be followed, which has used technical, environmental, social, and economic criteria.

**B. Environmental and social risks**

2.4 According to the eligibility criteria defined for the program, the environmental and social risks are limited. Therefore, the program has been classified as a category “B” operation in accordance with the Bank’s Environment and Safeguards Compliance Policy (Operational Policy OP-703). In the case of the selected sample, the negative environmental impacts are temporary, associated with the

construction process, and are readily mitigated. For this purpose, the guidelines of the program's Environmental and Social Management Framework (ESMF)<sup>36</sup> and the corresponding Prevention and Mitigation Plan and Environmental Applications and Monitoring Plan documents for each of the projects will be used to guide the environmental and social mitigation process in the works. No involuntary resettlements are anticipated and for that eventuality the ESMF includes a Resettlement Framework to guide the preparation of resettlement plans within the program, if necessary. A Mitigation Plan has been incorporated in the sample to cover income lost by sand workers who are temporarily operating in the Irpavi river, in the municipio of La Paz. Temporary relocation plans have also been agreed upon for merchants, placing them close to their current location near the Avenida Arica outfall in El Alto. The program's Risk Management Workshop identified the community's opposition or additional demands as a "medium" risk. To mitigate this risk, the program includes execution of an SPP to facilitate relations with the population in the project area and to address complaints and claims on a timely basis.<sup>37</sup>

- 2.5 Submission of the corresponding environmental permits for each of the projects to be financed will be a condition precedent to initiating the program works. In addition, since this is a multiple works program, the program's Operating Regulations will establish as an eligibility criterion for new projects that the projects have an impact category equal to or less than that of the sample (Category B with respect to the IDB's safeguards policies and Category 3 of Title II of the Law on the Environment, Law 1333 of 1992).

**C. Fiduciary risks**

- 2.6 The institutional capacity assessment of the executing agencies for GAMLP and GAMEA concluded that both agencies have the capacity to perform financial and procurement management, as well as the respective monitoring thereof. In the context of the Program Risk Management workshop, in the case of GAMEA, a "medium" risk was identified for the possibility of greater costs and time for program implementation. To mitigate this risk, it was determined that the program Operating Regulations should establish procedures for budgetary and payments management between the executing agencies and other internal municipal agencies and targeted workshops should be conducted for both executing agencies on the Bank's fiduciary management ([Annex III](#) and [optional electronic link 4](#)).

**D. Other risks and key issues**

- 2.7 In addition to the risks mentioned in the preceding paragraphs, the program's main risks are as follows: for GAMEA, difficulties in coordinating management of maintenance by the municipal government of El Alto; and for both executing

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<sup>36</sup> The program's environmental and social analysis and environmental management framework were duly disseminated among the population in the project's area of influence through a public consultation process, in accordance with Bank policies (see the environmental and social management report for further details).

<sup>37</sup> The SPP has been adopted by the municipios of La Paz and El Alto as an integral part of the program and will include a specialist responsible for its execution in order to maintain an ongoing relationship with the communities and thus identify problems on a timely basis and take pertinent measures to avoid the development of disputes.

agencies, changes in municipal government authorities following the elections in 2019. The following measures are proposed to mitigate these risks: (i) implementation of the Plan de Operación y Mantenimiento Preventivo [Operation and Preventive Maintenance Plan] (POMP) approved by municipal decree and using program funds, as well as resources from the previous stage to purchase maintenance equipment; and (ii) hiring executing agency staff for multiyear periods, under transparent competitive procedures.

- 2.8 **Sustainability of investments.** In both municipios, the execution and operation and maintenance of the storm drainage works depend on a higher strategic level within the municipal secretariat (paragraph 1.11), which receive funds from the municipal budget on a transparent and prompt basis for adequate operation and maintenance. GAML P already has a POMP for the city's storm drainage infrastructure (financed under PDP I), and in GAMEA the PDP II financed the respective annual POMP that will improve the coordination of preventive maintenance tasks on the works; in addition, support will be provided with the procurement of machinery and equipment for maintenance (paragraph 1.22). Each work in the program will have a preventive operation and maintenance plan (paragraph 3.8), including a clause on the proper operation and maintenance of the infrastructure to be constructed (paragraph 3.9).

### III. IMPLEMENTATION AND MANAGEMENT PLAN

#### A. Summary of implementation arrangements

- 3.1 **Borrower and executing agency.** The borrower will be the Plurinational State of Bolivia, which is responsible to the Bank for repaying the loan and ensuring, by signing subsidiary agreements, that GAML P and GAMEA meet the obligation to provide the corresponding local contribution. The executing agencies for the program will be GAML P and GAMEA, which are responsible to the borrower for repaying the loan in the proportion corresponding to each of them, as well as for providing the local contribution on a timely basis and for fulfilling all obligations for the program execution of the program (paragraph 3.7).
- 3.2 **Execution arrangements.** The program's executing agencies will be GAML P and GAMEA, through the respective execution units formed within their municipal structures (paragraph 1.28). The governance arrangements also include the Coordination Committee<sup>38</sup> created for the previous phase of the program,<sup>39</sup> which will continue for this program (paragraph 3.8). This committee meets periodically and its functions are to coordinate actions for effective achievement of the program's purpose and conditions as well as for jointly reviewing the annual work plans (AWPs) for each execution unit. The execution units will be responsible for the technical, administrative, and operational execution of the program, including general coordination and resource management, and will include the following staff: general coordinators, group of technical and environmental specialists, administrative-financial specialists, procurement specialists, social management specialists, and planning, monitoring, and control specialists. The job profiles for

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<sup>38</sup> Consisting of coordinators and planning specialists in each executing agency.

<sup>39</sup> Instrument creating the Coordination Committee for PDP II ([link](#)).

each of these specialists will be set forth in the program Operating Regulations and contracting will be undertaken with the Bank's prior no objection. The execution units will have functions including the following: (i) preparing and periodically updating the Multiyear Execution Plan (MEP), the AWP, and the procurement plan; (ii) conducting selection processes for works, goods, and consulting services; (iii) carrying out works supervision activities, monitoring of execution, and evaluation; (iv) financial management and submission of financial reports required by the Bank; and (v) preparation and updating of semiannual program reports and risk matrices for project risk management ([optional electronic link 4](#)).

- 3.3 **Program Operating Regulations.** Execution of the program will be governed by the provisions of the program Operating Regulations for each executing agency, including the following: (i) detailed execution arrangements; (ii) institutional roles and responsibilities of the entities involved; (iii) intervention strategy in the different phases of the project cycle; (iv) rules and procedures for the selection and contracting of works, goods, and services; (v) rules and procedures for administrative and financial management; (vi) application of environmental and social risk mitigation measures; (vii) monitoring procedures; (viii) specific environmental and social management plans for the projects; (ix) the guidelines for environmental and social management analysis and the ESMF; and (x) the environmental eligibility criteria for the selection of projects planned under the program ([optional electronic link 5](#) and [optional electronic link 6](#)).
- 3.4 **Program execution plan.** The development of program activities will follow scheduling based on the MEP and its annual review, which will be incorporated into the respective AWP. The MEP contains detail equivalent to the AWP for each year of execution. However, it will be amended every year taking into account program's actual progress. The annual reviews of the MEP will be submitted to the Bank ([required electronic link 1](#) and [required electronic link 2](#)).
- 3.5 **Fiduciary agreements and requirements.** The fiduciary agreements and requirements (Annex III) reflect the guidelines for the financial management and execution of procurement to be applied to program execution. They have been developed based on analysis of the fiduciary context of the country and the executing agencies, the institutional analysis of the executing agencies, the risk workshop with staff from all participating entities, meetings held with executing agency staff, and ongoing meetings with the project team and key staff from the participating entities.
- 3.6 **Procurement plan.** The procurement plan contains details on program procurement to be carried out in accordance with the policies set forth in documents GN-2349-9 and GN-2350-9, indicating: (i) contracts for works, goods, and consulting services required to carry out the program; (ii) methods proposed for procuring goods and selecting consultants; and (iii) procedures used by the Bank to examine procurement. The executing agency will update the procurement plan annually or as the program requires. All proposed changes to the procurement plan will be submitted to the Bank for approval.
- 3.7 **Conditions for the first disbursement.** In accordance with the terms and conditions previously agreed upon with the Bank, the following will be special contractual conditions precedent to the first disbursement of the

- loan proceeds: (i) the borrower will have submitted evidence that a subsidiary agreement has been signed and entered into force with each of the executing agencies, the Ministry of Economy and Public Finance, the Ministry of Planning and Development, and the Ministry of the Environment and Water; (ii) each executing agency will have submitted evidence of the formation of an execution unit, including the hiring of minimum specialized technical personnel for the program (a coordinator, an administrative-financial specialist, a procurement specialist, a technical-environmental specialist, a social specialist, and a planning, monitoring, and control specialist); (iii) program Operating Regulations for each of the executing agencies will have been approved and entered into force, including the program's ESMF; and (iv) the executing agencies will have submitted an initial report to the Bank that includes the update of the program's MEP, procurement plan, financial plan, and update of the Results Matrix.
- 3.8 **Special conditions for execution.** (i) prior to starting the process for contracting consulting services or procuring goods and before initiating the bidding process for each work planned under the program, the borrower agrees, itself or through the executing agencies, to submit to the Bank evidence that it has ownership, possession, and/or usage rights, as applicable, over the lands where each work will be built; (ii) before the completion of each of the program's works, each of the executing agencies will submit an annual POMP for each work identifying the municipal unit responsible for maintaining the work and indicate that it has the budget for the operation and maintenance of the respective work; (iii) prior to thirty (30) months following the effective date of the loan contract, the executing agencies will submit financial arrangements for the program's works to support the sustainability of the investments; (iv) the borrower will, itself or through the executing agencies, submit to the Bank evidence of compliance with the conditions for execution established in the program's environmental and social management report (ESMR); and (v) within six months following the effective date of the contract, the executing agencies will submit evidence of the formation of a Coordination Committee, under the terms and conditions previously agreed upon with the Bank.
- 3.9 **Operation and maintenance.** The borrower, through the executing agencies, agrees: (i) that the works and equipment included in the program will be properly maintained in accordance with generally accepted technical standards; and (ii) to submit to the Bank during the 10 years following termination of the first of the program works and within the first quarter of each calendar year a report on the status of those works and equipment, and the annual maintenance plan for that year. If the inspections conducted by the Bank, or the reports it receives, indicate that the maintenance being done is below the agreed upon levels, the borrower and the executing agencies will adopt the measures necessary to fully correct the deficiencies.
- 3.10 **Audit.** During the loan disbursement period and within 120 days following the close of both executing agencies' fiscal year, the audited annual financial statements of the program will be submitted to the Bank. The audit will be performed by independent auditors acceptable to the Bank. The determination of the scope and other related considerations will be governed by the Financial Management Policy for IDB-Financed Projects (document OP-273-6) and the

guidelines for the preparation of financial statements and external audits. Audit costs will be financed from program funds. Each executing agency will be responsible for contracting the audit firm.

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

- 3.11 **Monitoring.** The executing agencies will prepare reports on progress made and results achieved in activities for which they are responsible. The monitoring arrangements will include: (i) the procurement plan (ii) the MEP; (iii) AWP; (iv) annual verification of fulfillment of targets established in the Results Matrix; and (v) semiannual reports containing: (a) activities carried out, progress made in execution, problems that have come up, and solutions adopted; (b) evaluation of the Results Matrix, procurement plan, AWP, and Risks Analysis; and (c) analysis of the project monitoring report, for which fulfillment of the indicator targets and planning for the next six-month period will be evaluated.
- 3.12 **Evaluation.** The following program evaluations will be contracted: (i) midterm evaluation to be submitted within 90 days following the date on which 50% of the loan proceeds have been disbursed; and (ii) final evaluation, within 90 days following the date on which 90% of the loan proceeds have been disbursed. The evaluation methodology proposed will be a before and after evaluation, which will consist of measuring the outcome indicators for the project's baseline and after the interventions have been implemented in each municipio, and a comparison of the measurements to verify the fulfillment of the targets. In addition, an ex post economic evaluation will be performed, taking into account the model developed on an ex ante basis, but with possible adjustments, as detailed in the monitoring and evaluation plan ([required electronic link 3](#)). The evaluation report will be part of the project completion report.

Development Effectiveness Matrix			
Summary			
<b>I. Strategic Alignment</b>			
<b>1. IDB Strategic Development Objectives</b>		Aligned	
Development Challenges & Cross-cutting Themes	-Productivity and Innovation -Climate Change and Environmental Sustainability -Institutional Capacity and the Rule of Law		
Regional Context Indicators			
Country Development Results Indicators			
<b>2. Country Strategy Development Objectives</b>		Aligned	
Country Strategy Results Matrix	GN-2843	Reduce vulnerability to natural disasters and climate change	
Country Program Results Matrix	GN-2849	The intervention is included in the 2016 Operational Program.	
Relevance of this project to country development challenges (If not aligned to country strategy or country program)			
<b>II. Development Outcomes - Evaluability</b>		Highly Evaluable	Weight
		9.0	10
<b>3. Evidence-based Assessment &amp; Solution</b>		9.6	33.33%
3.1 Program Diagnosis		3.0	
3.2 Proposed Interventions or Solutions		3.6	
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>		7.5	33.33%
5.1 Monitoring Mechanisms		2.5	
5.2 Evaluation Plan		5.0	
<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		B	
<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	The project has a gender approach to ensure the participation of women in various activities: consultations, priority activities and training. All information is disaggregate by gender to keep track of their participation. It also takes into account the views of indigenous people, the majority from El Alto and living in the basins headwaters of La Paz, during the consultation. The Plan for Social Dialogue includes aspects of diversity and gender equity through the relationship with these populations.	
Labor			
Environment			
Additional (to project preparation) technical assistance was provided to the public sector entity prior to approval to increase the likelihood of success of the project	Yes	The preparation of the project has been supported by the Technical Cooperation BO-T1235.	
The ex-post impact evaluation of the project will produce evidence to close knowledge gaps in the sector that were identified in the project document and/or in the evaluation plan			

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

The main objective of the program is to contribute to the reduction of the negative impacts of geo-dynamic and hydrometeorological extreme events in the cities of La Paz and El Alto, through the protection of the population that is at risk of flooding and by reducing the economic costs associated with such events. The project will achieve this through the implementation of actions to improve storm drainage systems and management.

The POD presents the problems being addressed by the project and its dimensions. Project beneficiaries are identified. The interventions proposed are linked to the problems identified in the diagnosis. The POD makes reference to studies that show the negative impacts of flooding on income and living conditions of the population. In addition, it makes reference to the largest compendium of studies in developing countries presenting the experience of multiple countries implementing structural and non-structural interventions similar to those proposed by the program.

The results matrix has a clear vertical logic. Indicators presented are SMART, and have baselines, targets, and means of verification. The project was analyzed using a cost-benefit analysis, which clearly outlines all assumptions made and performs a detailed sensitivity analysis, showing that the project is economically viable under different scenarios. As economic benefits the analysis quantifies: avoided damages caused by flooding events including housing damage, transport time costs caused by disruptions due to flooding, cleaning and emergency care fees.

The monitoring and evaluation plan is solid. The evaluation plan is based on an ex-post economic analysis and a before and after analysis. The risk matrix of the operation presents reasonable risks and mitigation measures with associated monitoring indicators.

Results Matrix										
Project Objective	The general objective is to help reduce the negative impacts of extreme geodynamic and hydrometeorological events in the cities of La Paz and El Alto, by protecting the population against flood risks and reducing the economic costs associated with such events. This objective will be achieved through actions to improve the storm drainage and management systems.									
Outcomes										
Indicator <sup>1</sup>	Unit of measure	Baseline	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	End of project	Comments/Mean of verification
<b>Outcome 1: Population protected from hydrometeorological risk</b>										
Households protected against risks of flood or landslides in the area of influence of the works financed by the program in the city of La Paz <sup>2</sup>	Households	0	2016					2,029	2,029	GAMLP report and validation with surveys taken from ex post evaluation.
Households protected against risks of flood or landslides in the area of influence of the works financed by the program in the city of El Alto <sup>3</sup>	Households	0	2016					13,612	13,612	GAMEA report and validation with surveys taken from ex post evaluation.
<b>Outcome 2: Reduced costs associated with hydrometeorological events</b>										
Economic damages <sup>4</sup> due to floods in the municipio of El Alto	US\$/year	2,176,595	2016					0	0	GAMEA report that includes budget executed in cleanup and emergency response. Validation with surveys taken from ex post evaluation
Economic damages <sup>5</sup> due to floods in the municipio of La Paz	US\$/year	4,611,964	2016					3,299,086	3,299,086	GAMLP report that includes budget executed in cleanup and emergency response. Validation with surveys taken from ex post evaluation

<sup>1</sup> The baseline and targets established are for the project sample; they will be recalculated with the inclusion of new projects.

<sup>2</sup> Households included in the 50-year recurrence interval flood area, which means that achieving the target will depend on the occurrence and intensity of geodynamic and hydrometeorological events that occur during the project execution period.

<sup>3</sup> Ibid.

<sup>4</sup> Economic damages: damages to homes, costs of time in transportation due to interruptions caused by floods, cleanup and emergency response expenses. Achieving this outcome will depend on performance of the works and use of additional maintenance equipment purchased by the program.

<sup>5</sup> Ibid.

<b>Outcome 3: Enhanced awareness of the population regarding solid waste management for proper operation of the works</b>											
<b>Indicator<sup>6</sup></b>	<b>Unit of measure</b>	<b>Baseline</b>	<b>Baseline year</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>End of project</b>	<b>Comments/Means of verification</b>	
Days per year that social organizations <sup>7</sup> participate in cleanup of solid waste from drainage systems in the municipio of El Alto	Days/year	0	2016					10	10	Program final evaluation report	
Days per year that social organizations participate in cleanup of solid waste from drainage systems in the municipio of La Paz	Days/year	0	2016					10	10	Program final evaluation report	
<b>Outputs</b>											
<b>Component 1: Flood control and stabilization works</b>											
<b>Output</b>	<b>Unit of measure</b>	<b>Associated outcomes</b>	<b>Cost (US\$)</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 project</b>	<b>Comments/Means of verification</b>
Avda. 6 de Marzo outfall, East (North section) constructed in the city of El Alto	km	1 and 2	1,946,000	0	0	0.50	0.80	0	0	1.30	Acknowledgment of final receipt approved by works supervision, oversight, and PEU General Coordinator and Works Completion Certificate.
Avda. Arica outfall vault constructed in the city of El Alto	km	1 and 2	7,090,000	0	0	1.00	1.80	0	0	2.80	Same as above
Drainage works constructed in the city of El Alto	Work	1 and 2	3,730,000	0	0	0	0	2	2	4	Same as above
Hydraulic works constructed on the Huayllani river in the city of La Paz	Work	1 and 2	56,825	0	0	0	1	0	0	1	Same as above
Hydraulic works constructed on the Kellumani river in the city of La Paz	Work	1 and 2	912,625	0	0	0	1	0	0	1	Same as above
Hydraulic works constructed on the Irpavi and Achumani rivers in the city of La Paz	Work	1 and 2	5,089,565	0	0	0	0	0	1	1	Same as above
Hydraulic works constructed in the city of La Paz	Work	1 and 2	7,757,527	0	0	0	0	0	1	1	Same as above

<sup>6</sup> The baseline and targets established are for the project sample; they will be recalculated with the inclusion of new projects.

<sup>7</sup> Social organizations: those officially recognized by the respective municipios and that have legal status (e.g., neighborhood councils, trade organizations, etc.).

Component 2: Institutional development and environmental management											
Output	Unit of measure	Associated outcomes	Cost	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	End of project	Comments/Mean of verification
Operation and maintenance plan implemented for works constructed in the city of El Alto	Plan	1 and 2 5	333,968	0	0	1	0	0	0	1	Actions prioritized in the POMP will be implemented Implementation report from the Risk Prevention and Emergencies Office (DIPRE). Acknowledgment of receipt of goods.
Final designs prepared at PTDS <sup>8</sup> level for projects in the city of El Alto	Designs	1 and 2	242,000	0	0	0	0	2	2	4	PTDS revised and approved by the technical area of the GAMEA PEU
Final designs prepared at PTDS level for drainage projects in the city of La Paz	Designs	1 and 2	180,000	0	0	0	0	1	1	2	Compliance certificate approved by supervision.
Social Partnership and Environmental Education Plan implemented in the city of La Paz Milestones:	Plan	1, 2 and 3	150,000	0	0	0	0	0	1	1	PEU report
a) Equipment installed for Casa Zebra	Equipment		144,000	0	0	0	0	1	0	1	
b) Training of key groups <sup>9</sup> in environmental education completed	Event		3,200	0	3	3	3	3	3	15	
c) Social organizations' participation program for cleanup of solid waste in program areas of intervention conducted	Program		1,400	0	3	3	3	3	3	15	
d) Complaints management and resolution system implemented	System		700	0	1	0	0	0	0	1	
e) Consultations with beneficiaries on benefits and impacts of program conducted	Consultations		700	0	2	2	2	2	2	10	

<sup>8</sup> Preinvestment technical design study; replaces the TESA.

<sup>9</sup> Key groups: schools, population, and small businesses located in projects' areas of intervention, etc.

Output	Unit of measure	Associated outcomes	Cost	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	End of project	Comments/Mean of verification
Milestones:	Event		112,800	0	3	3	3	3	3	15	
a) Training for key groups <sup>10</sup> on environmental education conducted	Program		58,190	0	3	3	3	3	3	15	
b) Social organizations' participation program for cleanup of solid waste in program areas of intervention conducted	System		58,190	0	1	0	0	0	0	1	
c) Complaints management and resolution system implemented	Consultations		32,820	0	2	2	2	2	2	10	
d) Consultations with beneficiaries on benefits and impacts of the program conducted											
Early Warning System strengthened in the city of La Paz <sup>11</sup>	System	1 and 2	300,000	0	0	0	0	0	1	1	PEU compliance report

<sup>10</sup> Ibid.

<sup>11</sup> The Early Warning System will be considered strengthened when equipment has been purchased to expand hydrometeorological and geodynamic monitoring and the risk maps have been updated.

## FIDUCIARY AGREEMENTS AND REQUIREMENTS

<b>Country:</b>	Plurinational State of Bolivia
<b>Project:</b>	BO-L1114: Storm Drainage Program, Phase III
<b>Co-Executing Agencies:</b>	Autonomous Municipal Government of La Paz (GAMLP) and Autonomous Municipal Government of El Alto (GAMEA)
<b>Prepared by:</b>	Carolina Escudero and Abel Cuba (FMP/CBO)

### I. EXECUTIVE SUMMARY

- 1.1 The preparation of this annex took into account the Institutional Capacity Assessment System (ICAS) results applicable to GAMLP and GAMEA, as coexecuting agencies of this program, and the results of the FMP/CBO team's fiduciary supervision in the context of the execution of loan 2440/BL-BO (PDP II),<sup>1</sup> executed by both entities.
- 1.2 Execution of Phase III of the Storm Drainage Program considers the continuity of the execution arrangements adopted for the previous phase, maintaining independent administration of the fiduciary management of the components assigned to each executing agency.
- 1.3 Accounting, budgetary, and cash flow management will be maintained in the Integrated Public Management System (SIGEP). The Integrated Project Management System-IDB (SIAP-IDB) will be used for the financial reports required by the Bank.<sup>2</sup> The Bank's standard bidding documents or those agreed upon with the Vice Ministry of Public Investment and External Financing (VIPFE) will be used for bidding processes and made available through the State Procurement System (SICOES)<sup>3</sup> where bid solicitations and results from national competitive bidding processes will be published.
- 1.4 The Government of Bolivia and the Bank are currently preparing an agreement whereby partial use of the Basic Standards of the Goods and Services Administration System (NB-SABS) would be adopted for Bank-financed operations in Bolivia. This program could apply that agreement once it is signed and in force.

### II. THE EXECUTING AGENCY'S FIDUCIARY CONTEXT

- 2.1 GAMLP and GAMEA are entities established under public law, with legal status and their own assets, autonomy in administrative, economic/financial, legal, and technical management, and an indefinite duration. They are governed by

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<sup>1</sup> Storm Drainage Program, Phase II.

<sup>2</sup> The Banks' Project Administration System, developed by CAN/CBO.

<sup>3</sup> [State Procurement System](#). Package of bidding documents agreed upon between the Bank and the VIPFE for application in processes below the thresholds for ICB.

- Law 1178 on Government Administration and Control (SAFCO)<sup>4</sup> approved on 20 July 1990.
- 2.2 In procurement execution, both GAMLP and GAMEA use the NB-SABS or the provisions indicated in external financing agreements.
  - 2.3 Financial transactions are processed in the SIGEP, which reliably presents information on budget execution. This system provides financial information in the official currency and according to the expenditure item accounting classifier. Accounting records are maintained in accordance with the government accounting system. The financial reports required by the Bank will be based on the SIAP-IDB pending the entry into effect of the SIGEP accounting module for external resources.
  - 2.4 Program procurement and payment activities will be performed by GAMLP and GAMEA, through the execution units set up exclusively for program execution and formally created within the organizational structures of both agencies.

### III. FIDUCIARY RISK EVALUATION AND MITIGATION ACTIONS

- 3.1 The assessment using the ICAS methodology applied to GAMLP and GAMEA indicates adequate levels of development and institutional capacity, with fiduciary risk defined as low for the program.
- 3.2 Although the risk associated with fiduciary management is low, a determination has been made in the case of GAMEA to: (i) strengthen the team with professional staff specializing in financial management and procurement management, (ii) develop training sessions for staff on fiduciary processes; and (iii) incorporate in the Operating Regulations the changes needed in the operational flows of administrative processes in order to optimize times so the program execution period will not be affected.

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

- 4.1 **Operating Regulations.** The Operating Regulations will include the execution arrangements, procedures, and relationship, coordination, and information flows, as previously agreed between the executing agency and the Bank.
- 4.2 **Exchange rate agreed upon with the executing agencies for reendering of accounts.** The exchange rate in effect on the date when foreign currency funds are effectively converted to local currency will be used in the executing agencies' accounts.
- 4.3 **Financial statements and other audited reports.** Within 120 days following the close of each fiscal year of the executing agencies and throughout the disbursement period, audited program financial statements will be submitted to the Bank, duly certified by an independent audit firm acceptable to the Bank. The final report will be submitted within 120 days following the date agreed upon for the final disbursement.

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<sup>4</sup> Regulates the resource administration and control systems of the Plurinational State and their relationship with national planning and public investment systems.

- 4.4 The terms of reference for contracting the independent audit firm will have the prior approval of the Bank and may include outputs framed within the International Standards on Auditing relating to financial audit of the program and other tasks. The scope will be governed by the Financial Management Policy for IDB-Financed Projects (document OP-273-6) and the guidelines for the preparation of financial statements and external audits.
- 4.5 **Procurement.** Will be carried out in accordance with the policies set forth in documents GN-2349-9 and GN-2350-9, and the agreement on partial use of the NB-SABS (paragraph 1.3).

## V. AGREEMENTS AND REQUIREMENTS FOR PROCUREMENT EXECUTION

- 5.1 **Procurement execution.** Procurement for the program will be detailed in the procurement plan approved by the Bank and will be carried out in accordance with the policies set forth in documents GN-2349-9 and GN-2350-9, or the agreement on partial use of the NB-SABS.
- 5.2 **Procurement of works, goods, and nonconsulting services.** When international competitive bidding (ICB) applies, the current standard bidding document issued by the Bank will be used. Other processes will use the documents available in the SICOES. Changes to these documents will require the Bank's prior no objection.
- 5.3 **Selection and contracting of consultants.** Contracts for consulting services will be executed considering the following:
- (i) **Selection of consulting firms.** The current Standard Request for Proposals issued by the Bank will be used. The documents available in the SICOES will be used in processes involving amounts below US\$200,000. Changes to these documents will require the Bank's prior no objection.
  - (ii) **Shortlist of consulting firms.** The shortlist may consist of local firms for contracts below the US\$200,000 threshold amount established for Bolivia.
  - (iii) **Selection of individual consultants.** This selection will consider qualifications for the work, comparing the resumes of at least three candidates, and as a rule interviews will not be conducted. Consulting firms should be used when the works involve linkage with other individual consulting assignments, except when individual consulting with additional support is appropriate, which will be analyzed on a case by case basis.
- 5.4 **Procurement planning.** The program will be executed using two procurement plans administered by GAMEA and GAMLP, which will be published in the respective procurement plan in the Procurement Plans Execution System and updated annually or as required.
- 5.5 **Advance procurement/Retroactive financing.** Advance procurement requiring the retroactive recognition of financing is not anticipated.
- 5.6 **National preference.** The inclusion of national preference in contracting processes will not be considered.

5.7 **Terms of reference and technical specifications.** The Project Team Leader is responsible for review of the selection criteria for shortlists, terms of reference, or technical specifications, which must be agreed upon with the executing agency on an ex ante basis prior to the execution of the processes.

5.8 **Table of threshold amounts.** Detailed in Table 1:

**Table 1. Thresholds (thousands of US\$)**

Works			Goods			Consulting Firms	
ICB	NCB	Shopping	ICB	NCB	Shopping	International Advertising*	National Advertising**
Greater than US\$3,000	Less than or equal to US\$3,000	Less than or equal to US\$250	Greater than US\$200	Less than or equal to US\$200	Less than or equal to US\$50	Greater than US\$200	Less than or equal to US\$200

\* Maximum shortlist, two firms with the same nationality.

\*\* Shortlist may be 100% national.

5.9 **Main procurement items.** Detailed in Table 2:

**Table 2. Planning of Main Procurement Items**

Description	Selection Method	Estimated Date	Estimated Amount (thousands of US\$)
<b>Consulting firm contracts</b>			
Seven QCBS selection processes: (1) preparation of four final project designs at the preinvestment technical design study level, (2) supervision of works at the Avda. Arica outfall (Sample), (3) supervision of drainage works in the city of El Alto, (4) supervision of hydraulic works on the Irapavi and Achumani rivers (Sample), (5) supervision of hydraulic works in the city of La Paz, (6) External auditing firm for execution of GAMEA, and (7) External auditing firm for execution of GAMLP.	QCBS	TBD	1,554
Six CQS selection processes: (1) preparation of final design at preinvestment technical design study level-Project 1, (2) preparation of final design at preinvestment technical design study level –Project 2, (3) supervision of works at Avda. 6 de Marzo outfall, east (North section) (Sample), (4) supervision of hydraulic works on Huayllani river (Sample), (5) supervision of hydraulic works on Kellumani river (Sample), and (6) midterm evaluation of the program.	CQS	TBD	427
<b>Contracting of works</b>			
Four ICB processes: (1) Avda. Arica outfall (Sample), (2) Outfalls in the city of El Alto, (3) Hydraulic works on the Irapavi and Achumani rivers (Sample), and (4) Hydraulic works in the city of La Paz	ICB	TBD	22,553
Three shopping processes: (1) Avda. 6 de Marzo outfall, East (North section) (Sample), (2) Hydraulic works on Huayllani river (Sample), and (3) Hydraulic works on the Kellumani river (Sample)	Shopping	TBD	2,816
<b>Procurement of goods</b>			
Purchase of equipment for implementation of operation and maintenance plan	NCB	TBD	304
Purchase of equipment for (1) Strengthening the EWS 1, (2) Strengthening of the EWS 2, and (3) Training for the city of La Paz. (3 contracts)	Shopping	TBD	450
<b>Individual consulting contracts</b>			
Contracting of 21 professionals for executing units and specific subject specialists.	NICQ	TBD	2,833
<b>Nonconsulting services</b>			
Implementation of Environmental Education Plan (PEAPAC II)	NCB	TBD	262

\* [Link to procurement plan.](#)

- 5.10 **Procurement supervision. Annual supervision visits will be conducted; if applicable, annual ex post review visits will be conducted.**
- 5.11 The thresholds for ex post review are presented in Tables 3 and 4 (direct contracting and procurement not indicated in those tables will be subject to ex ante review). The external auditing firm will perform the ex post review.

**Table 3. Thresholds for ex post review of procurement (thousands of US\$) of GAMLP**

<b>Works</b>	<b>Goods and nonconsulting services</b>	<b>Services from consulting firms</b>	<b>Services from individual consultants</b>
Contracts for amounts equal to or less than US\$3,000	Contracts for amounts equal to or less than US\$200	Contracts for amounts equal to or less than US\$200	Those that are not part of the execution units

**Table 4. Thresholds for ex post review of procurement (thousands of US\$) of GAMEA**

<b>Works</b>	<b>Goods and nonconsulting services</b>	<b>Services from consulting firms</b>	<b>Services from individual consultants</b>
Contracts for amounts equal to or less than US\$1.500	Contracts for amounts equal to or less than US\$200	Contracts for amounts equal to or less than US\$80	Those that are not part of the execution units

- 5.12 **Operating or recurrent expenses.**<sup>5</sup> These expenses will be agreed upon with the Project Team Leader, entered in the project budget, and included in the procurement plan. They will be contracted in accordance with the NB-SABS. The Bank may refrain from financing these expenditures if it determines that they have violated the fundamental principles of competition, efficiency, and economy. The external audit firm will review the supporting documentation for these expenses.
- 5.13 **Records and files.** GAMEA and GAMLP will be responsible for establishing supporting documents, procedures, and controls needed to safeguard the documentation generated by the program. The Bank may, at any time, verify the standards for the organization, control, and safety of files.

## **VI. FINANCIAL MANAGEMENT**

- 6.1 **Programming and budget.** Each executing agency will process both budget entry and future budget amendments based on the approved AWP and will handle booking of the program as an investment budget recorded in the SIGEP. An administrative department<sup>6</sup> will be used for this purpose, thus allowing in budgetary terms the existence of a record and individual identification of sources of financing and resources used in the execution thereof.
- 6.2 **Accounting and information systems.** The program's transactions will be recorded in the SIGEP. This incorporates the different accounting moments in a single record and complies with the budgetary requirements (budget execution),

<sup>5</sup> Operating or recurrent expenses cover items referring to: rental of premises, notices, announcements, or radio, written, or televised communications, translations, bank fees, basic office supplies, photocopies, mail, fuel, maintenance, short courses, travel by operational staff.

<sup>6</sup> In the SIGEP's programmatic budget structure, it is possible for an administrative department to incorporate various projects that are independently recorded and controlled.

- accounting requirements (affecting assets, liabilities, equity, and earnings), and cash flow requirements (transfer of cash), on an accrual basis. In addition, for program accounting, a chart of accounts will be prepared for identification of expenses incurred in each period on a cash basis, standardizing the program's investment categories with the budgetary headings and respective accounts. On a temporary basis, the executing agencies will use the SIAP-IDB system, as a supplement for issuing the program's financial reports, pending the entry into effect of the SIGEP Accounting Module.
- 6.3 **Disbursements and cash flow.** The loan will be disbursed under the advance of funds and direct payments modalities, based on the financial programming, to be periodically updated by each executing agency. The Bank will issue a new advance of funds when at least 80% of the cumulative balance of disbursed advances has been justified. The loan proceeds will be deposited in an independent account in U.S. dollars, and subsequently transferred to another account in domestic currency, both in the GTA.<sup>7</sup>
- 6.4 The reimbursement of payments modality may be used to recognize expenses incurred by the executing agencies prior to eligibility for disbursements under the operation.
- 6.5 **Internal control and internal audit.** Each year, the financial management of the executing agencies is subject to reliability reviews by the Internal Audit Unit (UAI); it is anticipated that the program will be included in this type of review. The Bank, in turn, as a strategic activity within its mandate, will hold annual coordinating meetings with the respective audit units to identify program monitoring actions.
- 6.6 **External control and reports.** Each executing agency will contract an independent audit firm acceptable to the Bank annually, following Bank policies. The contracting will be for multiple years (minimum of three fiscal years) to avoid transaction costs and maintain continuity in the auditors' work, in addition to ensuring timely interventions facilitating preliminary review with semiannual cutoffs.
- 6.7 The terms of reference for contracting the independent audit firm will have the Bank's no objection.
- 6.8 **Financial supervision plan.** Activities may be adjusted according to the assessment of the program's risks performed by the fiduciary team with the executing agencies and the external audit reports. Expenses will be supervised on an ex post basis. Nonetheless, the annual supervision plan will provide for at least one comprehensive (procurement and financial) visit by the Bank.

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<sup>7</sup> General treasury account.

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-\_\_/\_

Bolivia. Loan \_\_\_\_/BL-BO to the Plurinational State of Bolivia  
Storm Drainage for the Cities of La Paz and El Alto III

The Board of Executive Directors

RESOLVES:

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

(Adopted on \_\_ \_\_\_\_\_ 201\_\_)

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-\_\_/\_

Bolivia. Loan \_\_\_\_/BL-BO to the Plurinational State of Bolivia  
Storm Drainage for the Cities of La Paz and El Alto III

The Board of Executive Directors

RESOLVES:

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

(Adopted on \_\_ \_\_\_\_\_ 201\_\_