

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

**ECUADOR**

**NATIONAL INVESTMENT PROGRAM IN WATER, SANITATION,  
AND SOLID WASTE (PROSANEAMIENTO)**

**(EC-L1122)**

**LOAN PROPOSAL**

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ELECTRONIC LINKS	
<b>Required electronic links</b>	
1. Annual work plan (AWP) and Program Execution Plan (PEP)	<a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38750645">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38750645</a>
2. Monitoring and Evaluation Plan	<a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38792340">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38792340</a>
3. Complete procurement plan	<a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38750643">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38750643</a>
4. Environmental and Social Management Report (ESMR)	<a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38792246">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38792246</a>
<b>Optional electronic links</b>	
1. Technical analysis	<a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38753011">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38753011</a>
2. Socioeconomic analysis	<a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38752570">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38752570</a>
3. Institutional capacity assessment of Banco del Estado	<a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38752746">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38752746</a>
4. Financial viability analysis	<a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38746943">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38746943</a>
5. Operating Regulations	<a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38751850">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38751850</a>
6. Analysis of compliance with the Public Utilities Policy	<a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38746951">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38746951</a>
7. Methodological note on subsidies	<a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38746946">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38746946</a>
8. Plan Nacional para el Buen Vivir (2013-2017)	<a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38746950">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38746950</a>
9. National Macroprogram for Environmental Sanitation	<a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38746948">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38746948</a>
10. List of beneficiary Decentralized Autonomous Governments	<a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38796554">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38796554</a>
11. Progress Monitoring Report (PMR)	<a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38793208">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38793208</a>
12. Environmental and Social Evaluation	<a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38745821">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38745821</a>
13. Preinvestment subprojects eligible for PROSANEAMIENTO financing	<a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38808090">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38808090</a>
14. Environmental and Safeguards Classification	<a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38752870">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38752870</a>

## ABBREVIATIONS

BdE	Banco del Estado
CAF	Andean Development Corporation
CCF	China Cofinancing Fund for Latin America and the Caribbean
DAG	Decentralized Autonomous Governments
EIRR	Economic internal rate of return
EMP	Environmental management plan
ESA	Environmental and social assessment
GPP	Products and Programs Division Management Unit
KfW	Kreditanstalt für Wiederaufbau
MAE	Ministry of the Environment of Ecuador
MIDUVI	Ministry of Urban Development and Housing
MPSAN	National Macro Program for Environmental Sanitation
O&M	Operation and maintenance
PAHO	Pan American Health Organization
PATGES	Technical assistance program for utilities management
PIRSA	Rural sanitation and water infrastructure program
PNBV	Plan Nacional para el Buen Vivir [“National Plan for Good Living”]
PU	Public utility companies
SENAGUA	Water Secretariat
WTP	Willingness to pay

## PROJECT SUMMARY

### ECUADOR

## NATIONAL INVESTMENT PROGRAM IN WATER, SANITATION, AND SOLID WASTE (PROSANEAMIENTO) (EC-L1122)

Financial Terms and Conditions					
Borrower: Republic of Ecuador			Flexible Financing Facility <sup>(a)</sup>		
			Amortization period:		25 years
Executing agency: Banco del Estado (BdE) and Water Secretariat (SENAGUA)			Original weighted average life:		15.25 years <sup>(b)</sup>
			Disbursement period:		4 years
Source	Amount (US\$ 000)		Grace period		14 years
IDB (OC)	120,000	59.5%	Inspection and supervision fee:		<sup>(c)</sup>
China Cofinancing Fund for Latin America and the Caribbean (CCF) <sup>(d)</sup>	30,000	14.9%	Interest rate:		LIBOR-based
			Credit fee:		<sup>(c)</sup>
Local	51,600	25.6%	Currency:	U.S. Dollars from the Bank's Ordinary Capital	
Total	201,600	100.0%			
Project at a Glance					
<b>Objective:</b> The general objective of the program is to expand and improve access to drinking water, sewer, wastewater, and solid waste treatment services, with emphasis on medium-sized municipios, while strengthening water and sanitation service providers in the program's beneficiary localities, within the National Macro Program for Environmental Sanitation (MPSAN) framework.					
<b>Special conditions precedent to the first disbursement:</b> (i) both the BdE and SENAGUA will have approved the program's Operating Regulations, under terms previously agreed with the Bank, including the Environmental Management Framework (paragraph 3.7); (ii) conditions applicable to the components under the BdE's responsibility: (a) the borrower will have signed with the BdE the necessary subsidiary agreement for managing program resources and executing the program activities under its responsibility, and that agreement will be in force (paragraph 3.1); (b) the BdE will have established the fiduciary team with the minimum staffing agreed with the Bank (paragraph 3.3); and (c) the BdE will submit its institutional strengthening plan, with defined activities, timetable, responsibilities, and budget (paragraph 3.1); (iii) conditions applicable to the components under SENAGUA's responsibility: (a) the borrower will have signed with SENAGUA the necessary subsidiary agreement for managing program resources and executing the activities for the subcomponents under its responsibility, and that agreement will be in force (paragraph 3.1); and (b) SENAGUA will submit its institutional strengthening plan, with defined activities, schedule, responsibilities, and budget (paragraph 3.1).					
<b>Special execution conditions:</b> (i) before transferring the loan proceeds to any of the Decentralized Autonomous Governments (DAGs) and/or Public Utilities (PUs) for activities within the program's framework, the BdE or SENAGUA, as the case may be, will have signed the respective financing agreement and/or contract (paragraph 3.5); (ii) the Operating Regulations will include frameworks for involuntary resettlement and indigenous peoples, to the Bank's satisfaction, prior to the financing of projects involving such issues (paragraph 2.11).					
<b>Exceptions to Bank policies:</b> None					
Project qualifies as:		SEQ [X]	PTI [X]	Sector [X]	Geographic [ ] Headcount [ ]

<sup>(a)</sup> Under the terms of the Flexible Financing Facility, (document FN-655-1), the borrower has the option of requesting changes to the amortization schedule as well as currency and interest rate conversions, in all cases subject to the final amortization date and the original weighted average life (WAL). In considering such requests, the Bank will take into account market conditions and operational and risk management considerations.

<sup>(b)</sup> The original weighted average life (WAL) will be determined on the date the loan contract is signed.

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

<sup>(d)</sup> This segment of the financing will be governed by the provisions set forth in document GN-2686-4. The terms and conditions for this segment of the financing will match those applicable for the segment of the Bank's Ordinary Capital resources, including the applicable provisions of the Flexible Financing Facility.

## I. PROGRAM DESCRIPTION AND RESULTS MONITORING

### A. Problems affecting services

- 1.1 **Current status of water and sanitation services.** According to the 2010 national census,<sup>1</sup> 72% of dwellings in Ecuador are connected to the public drinking water system. The highest rate of coverage is in urban areas, at around 87%, while in rural areas it is only about 46%. The national coverage rate for sewage service is approximately 54%: 71% in urban areas, and 23% in rural areas. These overall values, however, conceal enormous geographic differences: coverage is lower in the eastern part of the country and along the coast, and higher in the highlands. There are also differences in the service provided for poor people and those with higher incomes.<sup>2</sup> The Ministry of Urban Development and Housing (MIDUVI) estimates that 92% of wastewater is discharged without any treatment. In Ecuador, nearly 6 million people are living without water service, and more than 8 million without sanitation. Urban utility services are delivered by the municipios: 181 decentralized autonomous governments (DAGs) and 38 public utility companies (PU). Nearly 30% of the population lives in the cities of Quito, Guayaquil, and Cuenca, where service delivery is adequate. Another 34% live in 217 municipios (of which only 35 have a formally organized utility company), and 36% in rural areas. In rural areas, the most widely used delivery model is the community-based water board, which operates independently of the municipal government and is responsible for managing its systems. There are estimated to be some 5,000 boards of this kind throughout the country. This institutional model is creating problems for development of the necessary infrastructure in the sector because of the institutional weakness of the DAGs (paragraph 1.3), the shortage of investment funding for the sector, the low number of utility companies, and the inadequate capacity of most of the existing ones, including their inability to generate studies and investment projects.
- 1.2 **Current status of solid waste services.** According to estimates from the Ministry of the Environment of Ecuador (MAE), the average coverage of solid waste collection services is 84% in the cities and 54% in rural areas.<sup>3</sup> Most of the municipios manage their own solid waste collection, although the medium and larger-sized municipalities have negotiated service contracts with the private sector or with community-based microenterprises. Only 28% of solid waste is ultimately disposed of in sanitary landfills,<sup>4</sup> while 72% is deposited in open-air dumps,

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<sup>1</sup> National Statistics Institute, Population and Housing Census 2010, December 2011.

<sup>2</sup> An assessment conducted in 2001 by the Pan American Health Organization (PAHO) showed that, for the highest income urban quintile, more than 95% of dwellings had connections to water and sewage services, while for the lowest quintile the figures were only 66% for water and 40% for sewage.

<sup>3</sup> "Regional Evaluation on Urban Solid Waste Management in Latin America and the Caribbean: 2010 Report," financed by the IDB together with PAHO, AIDIS, and the Association of Municipios of Ecuador.

<sup>4</sup> Source: MAE. This refers to waste covered with earth at the final disposal site. With a few exceptions, there is no treatment of leaching and no capture of biogas. "Sanitary landfills" may be dump sites that are initially controlled but that, over time and with a lack of administrative and financial stability, can become uncontrolled open-air dumps.

incinerated, or dumped into ravines and rivers, posing a threat to health and the environment through the pollution of water sources (surface and underground), the blocking of water courses and drains, landslides, and the proliferation of insects and rodents.

## **B. Institutional framework**

- 1.3 The national Constitution of 2008 defined the framework for decentralization in Ecuador, establishing a new territorial organization and recognizing the political, administrative, and financial autonomy of the DAGs at the various levels (region, province, canton, and parish).<sup>5</sup> In addition, the Organic Code of Territorial Planning, Autonomy, and Decentralization (COOTAD)<sup>6</sup> defined the sector responsibilities at each DAG level. To fund those responsibilities, tax sharing arrangements were established, and the DAGs were given the power to raise their own revenues.
- 1.4 The DAGs are responsible for providing water and sanitation services and for the collection and final disposal of solid waste. However, the DAGs face funding shortfalls—their low capacity to generate tax revenues<sup>7</sup> makes them highly dependent on transfers from the central government, a situation compounded by their institutional weaknesses (including utility rates inadequate to cover costs, low collection rates, a shortage of training for personnel, and inadequate quality of preinvestment projects). As a result, service delivery is unstable, with growing delays in coverage, high levels of inefficiency, and poor quality.<sup>8</sup>
- 1.5 In the water and sanitation sector, the Water Secretariat (SENAGUA) is the lead agency responsible for establishing national policies and programs, providing technical assistance, defining technical and regulatory standards, and monitoring and evaluating the sector's development. It took over policy responsibility for the sector from the MIDUVI in 2013, together with the powers of regulation and control, previously exercised by the DAGs, and it is still in the process of organization and adaptation. In this context, SENAGUA faces major challenges and needs support and strengthening in order to ensure the technical viability of projects that are funded by the Government of Ecuador (paragraph 1.18). The MAE is the sector authority that establishes national policies and programs in the solid waste sector, issues environmental licenses for works, and regulates the discharge of domestic wastewater. Banco del Estado (BdE) is the principal financial institution for subnational development, and it channels cofinancing resources from the national government to the DAGs and their public utility companies (PUs). This has greatly increased its work load, without any commensurate increases in its operating budget and staffing levels (paragraphs 1.9 and 1.18).

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<sup>5</sup> The Republic of Ecuador has 24 provincial DAGs, 224 municipal DAGs, and 814 parish DAGs.

<sup>6</sup> Enacted in 2010.

<sup>7</sup> Below 20% in the municipal DAGs, and around 10% in the provincial DAGs, according to the Central Bank of Ecuador (Economic Note 59).

<sup>8</sup> Document CP-3465 presents detailed evidence of the limitations of the DAGs.

**C. Consistency with country and Bank strategies**

- 1.6 **Government strategy: Plan Nacional para el Buen Vivir [National Plan for Good Living] (PNBV) 2013-2017.** The PNBV constitutes the government's strategic vision for the next four years. Its objective 3, "improving the population's quality of life," makes it a government policy to guarantee decent, safe, and healthful housing, with equity, efficiency, and sustainability. It also defines measures to "guarantee universal, permanent, sustainable and high-quality access to safe water and basic sanitation services, of territorial, environmental, social, and cultural relevance." In addition, objective 7 seeks "to guarantee the rights of nature and to promote environmental sustainability at the territorial and global levels," through measures to prevent, control, and mitigate environmental pollution, with adequate management and disposal of solid waste, and the creation of community-based associations for the integrated management of solid and liquid wastes. To implement these policies, the government has undertaken to support the DAGs through the National Macro Program for Environmental Sanitation (MPSAN), which will channel US\$5.1 billion<sup>9</sup> into infrastructure and institution-strengthening investments in drinking water, sanitary sewers, wastewater treatment, storm drainage, and solid waste facilities to achieve coverage targets of 95%. This will be financed from the government's own resources and loans from multilateral sources (World Bank, Kreditanstalt für Wiederaufbau (KfW), Andean Development Corporation (CAF), and the IDB). The CAF has approved an operation for this program and the World Bank is preparing its operation.
- 1.7 **Consistency with the Country Strategy and GCI-9.** This program is consistent with the IDB Country Strategy with Ecuador 2012-2017 (document GN-2680-2), which, under the heading of urban sustainability, calls for supporting investments to expand the coverage of water, sanitation, and solid waste management services, and it is consistent with the objectives of the PNBV. It is also consistent with the lending program priorities of the Report on the Ninth General Increase in the Resources of the Inter-American Development Bank (GCI-9) (document AB-2764), including: (i) small and vulnerable countries; (ii) poverty reduction and equity enhancement (access to drinking water and sanitation services is considered in the calculation of unmet basic needs, used to measure poverty); and (iii) climate change, energy efficiency, and environmental sustainability (it qualifies automatically, as projects will benefit populations in periurban areas). It will also contribute to the regional target of reducing the incidence of waterborne diseases per 100,000 inhabitants. Lastly, the program is aligned with the IDB Infrastructure Strategy: Sustainable Infrastructure for Competitiveness and Inclusive Growth (document GN-2710-5).
- 1.8 **Bank policies.** This program is consistent with the conditions of financial sustainability (paragraph 2.9) and economic evaluation (paragraph 2.4) and the

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<sup>9</sup> Figure reported by the Ministry of Finance and Banco del Estado on the basis of estimates by the National Planning and Development Secretariat (SENPLADES).



principles of the Bank's Public Utilities Policy (document GN-2716-6) ([optional electronic link 6](#)), inasmuch as Ecuador's regulatory and sector policy framework incorporates these principles. However, given that some DAGs do not completely fulfill them, the program includes measures to help them do so (paragraphs 1.18 and 2.9). It is also consistent with the Basic Environmental Sanitation Policy (Operational Policy OP-745), as it seeks to ensure the sustainability of services and to improve infrastructure conditions and decentralized management capabilities for the delivery of water, sanitation, and solid waste services.

- 1.9 **Bank involvement and lessons learned.** This project's preparation considered good practices and lessons learned from projects to expand the coverage of drinking water and sanitation services in Ecuador, such as the Environmental Sanitation Program for the Metropolitan District of Quito (loan 1424/OC-EC), which supported infrastructure investments with institutional strengthening activities for the public utilities, achieving good results in terms of management and sustainability.<sup>10</sup> It also incorporates lessons from three projects approved since 2009, in which BdE was the executing agency (PROPESCAR, PIRSA, and PRODESARROLLO).<sup>11</sup> The analysis performed during preparation of the operation concluded that the execution plan for these operations relied too heavily on the general structure of the BdE and did not provide adequate support to the DAGs as subexecuting agencies, in terms of their responsibilities for contracting works. For this program, the execution plan has been redefined, so as to assign the program administration and coordination function to a fiduciary group in the BdE. To strengthen the execution capacities of the DAGs and the utilities, the program will help to finance the Technical Assistance Program for Utilities Management (PATGES) in the BdE. To streamline the approval of technical viability assessments, it will support SENAGUA with funding for a technical team. In addition, the program contains components and investments for strengthening management, as well as special conditions and conditions precedent for resolving problems.
- 1.10 The evaluation and experience obtained from the project monitoring reports and midterm evaluations of the programs mentioned in the preceding paragraph revealed some best practices that were applied in the design of this operation, including: (i) a comprehensive approach to projects, considering institutional infrastructure and strengthening needs (paragraph 1.10); (ii) establishment of a rate system that will, at a minimum, cover operation and maintenance (O&M) costs, in

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<sup>10</sup> See the Report on Evaluation of Progress and Fulfillment of Performance Indicators, Environmental Sanitation Program for the Metropolitan District of Quito (loan 1424/OC-EC).

<sup>11</sup> Of these resources, to date the Bank has disbursed US\$30.7 million, of which nearly 9% (US\$17.5 million) has actually been executed. With the PROPESCAR project (loan 2113/OC-EC), approved in January 2009, an undisbursed amount of US\$35.7 million had to be canceled because of a change of executing agency. Under PIRSA (loan 2577/OC-EC), approved on 8 September 2010, 6.5% of the funding has been effectively executed. PRODESARROLLO (loan 2839/OC-EC) was signed in September 2013. This loan supplements activities under PRODESARROLLO, as it finances the upgrading of water and sanitation systems.

line with the conditions of Operational Policy OP-708 with respect to financial sustainability (paragraph 1.8); and (iii) designing the project in a comprehensive manner,<sup>12</sup> incorporating environmental and social considerations and encouraging public participation in all phases of the project.

- 1.11 **Coordination with other multilateral lending agencies.** The program has been developed in coordination with officials of the World Bank and the CAF, whose institutions will be cofinancing the MPSAN. An agreed framework for program execution will be defined, including standardized Operating Regulations, an environmental management framework, development and implementation of an environmental and social management system, and development of a technical assistance program for utilities management.

#### **D. Program rationale**

- 1.12 To address the regional inequities in access to these services, the program will give priority to the urban areas of a group of 100 medium-sized DAGs<sup>13</sup> located in special geographic zones (Amazonia, border areas, and DAGs with the widest coverage gaps ([optional electronic link 10](#)), which are the municipios with the greatest needs in terms of water and sanitation services, and municipal DAGs that require only minor investments to achieve the 95% target of the MPSAN. With respect to solid waste services, the program will address interventions at the national level, based on efficiency criteria relating to the collection and final disposal services, and the potential for regionalizing such services.
- 1.13 **Current status of services in the program's area of influence.** In the target group of DAGs to receive program support, coverage of water and sanitation services<sup>14</sup> is lower than the national average: 51.9% for drinking water (20 percentage points below the average) and 30.0% for sewage service (more than 24 percentage points below). In this context, there are 2.8 million residents without access to drinking water, and 4.2 million lack sanitation services. In the urban area, estimated coverage rates are 63% for drinking water and 39% for sewage, while in the rural zone, the estimated figures are 33% and 13%, respectively. With respect to management of these services, the picture is similar to the national average, with more than 60% of water unaccounted for, and billing and collection rates below 60%. This situation reflects historically low investment levels, the fact that many DAGs have no utility companies, staffing shortages and inadequate professional profiles, dependency on the municipal budget, and the lack of master plans for investment planning.
- 1.14 **Program strategy.** To expand the coverage of these services, improve their quality, and boost the efficiency of their management so as to improve the population's

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<sup>12</sup> Sanitation is viewed as a set of activities, involving at least the following: water supply, sewage, street cleaning, drainage, and vector control.

<sup>13</sup> These are municipios with populations of between 10,000 and 100,000.

<sup>14</sup> Water service reliability, Ecuadorian Association of Health and Environmental Engineering, MIDUVI. September, 2010.

living conditions, the program will support the DAGs and/or their utilities in implementing water and sanitation and solid waste projects, through a comprehensive approach that combines infrastructure financing with the strengthening of operational and financial management for the efficient and sustainable delivery of services.<sup>15,16</sup> In order to access financing under the program, the DAGs/PUs will submit applications to the BdE. Projects will receive, on average, a contribution of 74.4% in nonreimbursable funding, covered by the proceeds of the IDB loan. The local contribution, averaging 25.6%, may come from contributions of the DAGs/PUs (reimbursable loans granted by the BdE, or their own funds). The capacities of the BdE and SENAGUA will be strengthened so they can handle the increased workload demanded by the program.

#### **E. Objective, components, and costs**

- 1.15 **Objective.** The general objective of the program is to expand and improve access to drinking water, sewer, wastewater, and solid waste treatment services, with emphasis on medium-sized municipios, while strengthening water and sanitation service providers in the program's beneficiary localities, within the MPSAN framework.
- 1.16 **Component 1. Studies, preinvestment, and supervision of water and sanitation and solid waste projects.** To generate projects with technical, environmental, socioeconomic, and financial quality in line with the MPSAN's requirements, the program will finance the preparation and adjustment of master plans, up to the level of final design of projects, as well as their supervision and environmental studies. The expectation is to have a sustained flow of high-quality projects during execution.
- 1.17 **Component 2. Infrastructure works.** To expand the coverage and improve the quality of services, the program will finance projects presented by the DAGs in accordance with the Operating Regulations (paragraph 3.7) and the eligibility criteria (paragraph 3.8), which could include the expansion, rehabilitation, and/or supplementing of infrastructure for: (i) capture, conveyance, treatment plants, underground wells, pumping stations, distribution networks, water tanks, home drinking water connections; (ii) wastewater collection networks, collectors, interceptors, treatment plants and outfalls for wastewater systems; (iii) closing of dumps, construction of temporary disposal cells and sanitary landfills, and

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<sup>15</sup> Empirical evidence of the effectiveness of sewer and drainage systems for improving the environment and health. *Avaliação do Projeto Belém-Pará. Estudo Longitudinal da Bacia do UNA*, 2004 (see [link](#)); Ampla. 2006. Ex post evaluation of project 649/OC-BR (see [link A](#) and [link B](#)).

<sup>16</sup> Evidence of the effectiveness of these interventions in reducing the incidence of waterborne diseases: Mascarini, M. L., et al. *Impacto de um programa de saneamento ambiental na prevalência e na incidência de parasitoses intestinais na população de idade escolar de Salvador*. Revista VeraCidade. Ano IV. Nº 14. March 2009 (see [link](#)). Moraes, L.R., et al., *Impact of drainage and sewerage on diarrhea in Salvador, Brazil. Transactions of the Royal Society of Tropical Medicine and Hygiene*. 2003 Mar-Apr; 97(2):153-8 (see [link](#)).

equipment for solid waste projects; (iv) works supervision; and (v) implementation of environmental management plans.

- 1.18 **Component 3. Institutional strengthening.** To improve program execution and the sustainability of services, the following subcomponents will be financed: (i) the PATGES, geared to the implementation of instruments and/or actions to achieve sustainable models that will improve the operational, commercial, and financial management of the DAGs/PUs; (ii) strengthening the capacities of the BdE for planning, evaluation, and monitoring of the physical and financial progress of MPSAN investment projects, as well as its capacity to support the DAGs/PUs in systematizing and managing procurement and contract administration, as well as project monitoring and environmental management; (iii) strengthening SENAGUA, with a view to streamlining technical viability approval processes; and (iv) providing technical assistance to the DAGs to improvement project management and technical and environmental monitoring by SENAGUA.
- 1.19 The program will also include a line item for program administration, audit, and monitoring (see Table I-1).

**Table I-1. Costs and financing**

COMPONENTS	IDB		Chinese Fund	LOCAL	TOTAL	
	BdE	SENAGUA	BdE		\$	%
<b>1 Project preinvestment studies</b>	<b>20,000,000</b>			<b>1,800,000</b>	<b>21,800,000</b>	<b>10.8%</b>
1.1 Preinvestment studies	19,042,283			1,713,806	20,756,089	
1.2 Supervision of studies	957,717			86,194	1,043,911	
<b>2. Infrastructure works</b>	<b>89,250,000</b>		<b>30,000,000</b>	<b>48,250,000</b>	<b>167,250,000</b>	<b>83.1%</b>
2.1 Execution of infrastructure works	85,004,257		28,570,726	45,954,682	159,281,798	
2.2 Supervision of works	4,245,743		1,429,274	2,295,318	7,968,202	
<b>3. Institutional strengthening</b>	<b>8,000,000</b>	<b>2,500,000</b>			<b>10,500,000</b>	<b>5.2%</b>
3.1 Technical assistance program for utilities management	7,000,000				7,000,000	
3.2 Strengthening the BdE	1,000,000				1,000,000	
3.3 Strengthening SENAGUA		1,250,000			1,250,000	
3.4 Technical assistance for DAGs		1,250,000			1,250,000	
<b>4. Program administration</b>	<b>250,000</b>			<b>1,550,000</b>	<b>1,800,000</b>	<b>0.9%</b>
4.1 Audits	250,000				250,000	
4.2 Program monitoring				800,000	800,000	
4.3 Evaluations				750,000	750,000	
<b>TOTAL</b>	<b>117,500,000</b>	<b>2,500,000</b>	<b>30,000,000</b>	<b>51,600,000</b>	<b>201,600,000</b>	<b>100.0%</b>
<b>Percentage</b>	<b>59.5%</b>		<b>14.9%</b>	<b>25.6%</b>	<b>100.0%</b>	

## F. Key results indicators

- 1.20 Program outcomes will be measured on the basis of the indicators in the Results Matrix. The target values have been defined, and the baseline for those indicators will be established for each project financed. To measure the outcomes of the projects prioritized by the DAGs, the Operating Regulations will include a record with key indicators for measuring the baseline values and the expected targets. For water and sanitation services, data are available for the entire intervention area on the number of households with connections to new, improved, or expanded drinking water systems, with connections to the sanitation system via networks or individual solutions, and, in the case of solid waste, the number of tons disposed of daily in the temporary disposal cells and/or dumps.
- 1.21 **Beneficiaries.** The program is expected to benefit 21,000 households with new water connections and 35,000 with new sanitation connections (network or individual), and to dispose of 165 tons of garbage per day in an appropriate manner. The program's benefits relate to improving the quality of services and the urban environmental quality, which have an impact on people's quality of life and health, and the pollution of water bodies.

## II. FINANCING STRUCTURE, VIABILITY ANALYSIS, AND RISKS

### A. Financing instruments

- 2.1 The operation is designed as a multiple works program, as it will finance various projects that are physically similar but independent, which the IDB could not address individually. The operation will be coordinated under the Ecuadorian government's MPSAN, executed through the BdE. The MPSAN establishes that the DAGs may access a nonreimbursable component as part of their strategy for generating and redistributing wealth to enhance the quality of life. The government has decided that the nonreimbursable component within PROSANEAMIENTO will correspond to the portion of this operation's funding borne by the Ministry of Finance. The local contribution will be provided by the DAGs and/or the entities responsible for management of the services, and may come from loans from the BdE.

- 2.2 The disbursement period will be four years, and the repayment period will be 25 years, including a grace period of 14 years. Disbursements will be made in the form of advances, based on the program's financial plan and the estimated cash flow for a rolling six-month period, which the executing agency will submit to the Bank with each disbursement request. The estimated disbursement timetable is shown in Table II-1.

**Table II-1 Disbursement timetable (US\$ millions)**

Source/ year	1	2	3	4	TOTAL	%
<b>IDB</b>	2.4	21.6	60.0	36.0	<b>120.0</b>	<b>59.5</b>
<b>CCF</b>			15.0	15.0	<b>30.0</b>	<b>14.9</b>
<b>Local</b>	1.0	9.3	25.8	15.5	<b>51.6</b>	<b>25.6</b>
<b>Total</b>	<b>3.4</b>	<b>30.9</b>	<b>100.8</b>	<b>66.5</b>	<b>201.6</b>	<b>100.0</b>
<b>%</b>	<b>1.7</b>	<b>15.3</b>	<b>50.0</b>	<b>33.0</b>	<b>100.0</b>	

## **B. Viability analysis**

- 2.3 **Program sample and readiness.** The program's viability was analyzed on the basis of a sample of 17 projects, equivalent to 28% of the loan amount. Those projects were previously approved by the BdE under the MPSAN, and they are representative of the type of interventions that will be financed. The economic and financial analysis was based on 14 of those projects for which sufficient information was available, and 17 projects underwent technical and environmental analysis, with visits to six of them for the environmental analysis. The projects are in the sectors of drinking water (six projects for a total of US\$10.5 million), sanitary sewers (six projects for US\$28.1 million), drinking water and sanitary sewers (one project for US\$300,000), storm sewers (one project for US\$1.6 million), solid waste (two projects for US\$1.1 million), and basic sanitation units (one project for US\$700,000). Based on the Operating Regulations, the BdE is preparing studies and designs for a basket of projects ([optional electronic link 12](#)) to be financed using program resources and other sources, and final designs are expected to be in hand during 2015.
- 2.4 **Socioeconomic viability.** A cost-benefit analysis was prepared on a sample of seven drinking water projects totaling US\$10 million, and seven sanitation projects (sewers, wastewater treatment plants, or both) amounting to US\$26.5 million. Details of the methodology and results of the analysis of the sample are contained in [optional electronic link 2](#). For the project analysis, a cost-benefit analysis was prepared for the best alternative, comparing the scenarios with and without the project, in order to obtain the series of net benefits. The costs considered for the evaluation were the increases in investment and O&M, valued at efficiency prices. The benefits considered in the drinking water projects are: (i) savings of resources in terms of water purchase and haulage, purification, and health costs; and (ii) increased water consumption thanks to piped service to dwellings, and lower consumer costs or water rates. The benefits considered for the sanitation projects relate to health and the environment, through cleaner water bodies, and general well-being, through the evacuation of household wastewater, as reflected in "willingness to pay" (WTP). The parameters for measuring the benefits were adopted from models used in Ecuador or elsewhere in the region.
- 2.5 The outcomes show that most of the drinking water projects are viable, with an average economic internal rate of return (EIRR) of 18.3%, and individual rates varying between 7% and 40%. The sanitation projects have an average EIRR of 10%, varying between 1% and 19%, using as a benchmark a benefit of US\$15 per month per family. A sensitivity analysis of the net present value and the EIRR for each project was performed for the assumed variables, and it was found that the economic viability of the water projects varies with respect to the alternative cost of water (economic value of water without the project). The sanitation projects are highly sensitive to WTP: if the benefit rises to just US\$18 per month per family, most of the projects would be viable. For program execution, in order to facilitate project evaluation, national benefit models will be prepared and applied to each

- project. In applying them, specific population information will be gathered for each project (independent variables in the model and a baseline for ex post evaluations) using acceptable methodologies such as focus groups or surveys, so as to reduce the risk of approving projects that are not viable, or rejecting those that are.
- 2.6 **Technical viability.** The solutions correspond to conventional water systems, mainly gravity systems, and sewer systems (including individual solutions). The water systems call for installation of water disinfection systems. The DAGs have followed appropriate technical specifications in the design of the systems, and national design standards have been observed. Those standards use criteria that will be reviewed to avoid any over-dimensioning of the various components of the water and sanitation systems, in the context of the MPSAN. The analysis of dimensioning, costs, and engineering practices followed by the sector was done using this sample, as shown in the Technical Analysis ([optional electronic link 1](#)), which includes information on costs, population, dwellings, type of system and location for new systems, expansions, and reconstructions.
- 2.7 Component 3 (institutional strengthening) will finance specific actions to strengthen SENAGUA (the executing agency for this component) so as to reinforce its lead role and facilitate the work of granting technical viability approval for the projects. For this last component, SENAGUA may contract with specialized firms to oversee the quality of the designs delivered by the DAGs to SENAGUA. The management capacities of SENAGUA will also be strengthened so that it can deal efficiently with the challenges posed by PROSANEAMIENTO. Thus, financing will be provided for projects for which (i) studies and designs have been prepared in accordance with generally accepted engineering practices; (ii) the proposed solutions correspond to technically appropriate options; (iii) the execution schedules have been formulated with due regard to the characteristics of the works and experience gained in similar works; and (iv) once constructed, they will be operated and maintained appropriately by the service operators or the municipios.
- 2.8 **Institutional viability.** As part of the design of loan 2839/OC-EC,<sup>17</sup> the evaluation of the institutional and fiduciary capacity of the BdE was updated using the Institutional Capacity Assessment System (ICAS) (see [optional electronic link 3](#)). This resulted in an overall rating of 83.7%, posing a low institutional risk. The areas of greatest relative strength are the personnel administration system (94.4%), the financial management system (92.3%), and the external control system (91.7%). The management systems with the greatest weaknesses are those for activity programming (54.6%) and goods and services management (72.2%). These values are associated with the transfer of these responsibilities to the DAGs, which have limitations in applying IDB procurement processes and policies. The BdE's execution capacity and experience is supported by various programs in different sectors, particularly those covered by this program, with financing from the IDB,

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<sup>17</sup> Loan 2839/OC-EC, "Investment Program for the Development of Decentralized Autonomous Governments and/or their State-owned Enterprises (PRODESARROLLO) - Phase I," declared eligible on 17 March 2014.



other donors such as KfW, the CAF, and the Government of Ecuador. It has a strong equity position, as reflected by its AA rating from Bank Watch Ratings in 2013, an improvement over the AA- rating awarded by Fitch Ratings in previous years, its positive track record with the Office of the Superintendent of Banks and Insurance on compliance with the national legislation, and its highly favorable performance on financial, regulatory, and operating indexes. The BdE has also implemented a quality management system and continuous process improvement, and has obtained and maintained ISO-9001-2008 certification.

- 2.9 **Financial viability.** The financial analysis of the projects comprising the sample concluded that, in six cases, the rates charged would be sufficient to cover the systems' O&M costs, and would in this way ensure their financial sustainability. In five projects, the rate structure would cover a portion of the systems' O&M costs, while the remainder would have to be provided by the DAG through a funding transfer. During program execution, projects will have financial viability studies demonstrating that they will generate or receive sufficient funds to meet their financial commitments and to cover the O&M costs of the systems. If this is not the case, because of the socioeconomic situation of community residents, the Bank will require evidence of progress in the design and implementation of targeted subsidies for the most vulnerable, lowest-income groups. For further details, see the financial viability analysis ([optional electronic link 4](#)).

### C. Environmental and social safeguards

- 2.10 An environmental and social assessment (ESA) of the program was performed ([optional electronic link 12](#)). Six of the 17 projects in the sample were visited. The environmental and social status was analyzed on the basis of compliance with the new national environmental standard.<sup>18</sup> It was concluded that the majority of projects to be financed would fall under environmental category II, as established by the MAE. The projects evaluated are located in or close to built-up urban areas, and are generally far from protected natural areas or ecologically sensitive sites. No resettlement was required. In some cases, lands have been expropriated.
- 2.11 While the impacts identified for the projects evaluated are neither significant nor permanent, the ESA did identify some weaknesses. Three of the six projects visited did not have an environmental license, which means that their compliance with the Environmental Management Plan (EMP) has not been properly monitored. In some projects, social outreach activities had been carried out, but there was no mechanism for handling complaints. In general, the projects evaluated did not take into account the costs of purchasing or expropriating lands, or the costs involved in meeting environmental conditions. In order to support environmental and social management, an Environmental and Social Management Framework was agreed, and a specific framework will be included for solid waste projects. Prior to the launch of each works project, projects must have viability studies, EMPs, the corresponding licenses, and a social consultation process completed, and the

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<sup>18</sup> Ministerial Resolution 006 of 18 February 2014.



bidding documents for the works must contain the applicable conditions, including the obligation of the contractor to apply an EMP. If necessary, an involuntary resettlement and/or indigenous peoples framework will be agreed with the IDB in advance. As a special execution condition, the Operating Regulations will include frameworks for involuntary resettlement and indigenous peoples, to the Bank's satisfaction, prior to the financing of projects involving such issues. The program has been classified as a category B operation (Operational Policy OP-703). It should be noted that the program will finance projects which, according to the MAE, are in categories I to IV. However, category A projects, according to the IDB classification (Operational Policy OP-703), will not be financed.

- 2.12 **Risks.** The risk workshop conducted with the principal stakeholders identified the following as high risks: (i) the contracting of works and procurement could be delayed or rendered impossible as a result of inappropriate bidding or contract management processes, due to lack of knowledge of Bank policies and procedures; (ii) inadequate monitoring, control, and supervision in the execution of works, and delays in providing the Bank with supporting documentation for advances,<sup>19</sup> thereby diminishing the program's capacity to commit funding for new projects; (iii) inadequate operational structures within the executing agencies for the size of the undertaking, and the BdE's difficulties in providing timely advisory support to the DAGs; (iv) project technical designs that are erroneous, inadequate, and/or have insufficient studies, and the need to complement and update the project feasibility studies; and (v) inefficiencies in the management, operation, and maintenance of the water and sanitation systems. These risks will be mitigated by the following measures: (i) enhanced supervision, support, and technical assistance to the DAGs from the BdE, through the support team to be appointed; (ii) funds will be disbursed to the DAGs just prior to the payment for works; (iii) preparation and implementation of institutional strengthening plans for the DAG-PUs; (iv) allocation of resources to carry out additional studies; and (v) O&M advisory services through the PATGES. Annex III, Fiduciary Agreements and Requirements, identifies the main fiduciary risks and measures for mitigating them.

### III. PROGRAM IMPLEMENTATION AND MANAGEMENT PLAN

#### A. Execution framework

- 3.1 **Execution structure.** The borrower will be the Republic of Ecuador, and the executing agencies will be the BdE and SENAGUA, which will execute their respective subcomponents. The BdE will be supported by its entire structure, with the coordination of its Products and Programs Division Management Unit (GPP). SENAGUA, through the Office of the Undersecretary of Water and Sanitation, will serve as executing agency for subcomponents 3.3 and 3.4 in Table I-1 (institutional strengthening of SENAGUA and technical assistance for the DAGs). The

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<sup>19</sup> The difficulties the DAGs face regarding IDB procurement procedures could delay bidding processes and consequently the justification of advances made by the IDB.

contracting and supervision of works as well as certain project-related activities will be carried out by the beneficiary DAGs or PUs. They will also coordinate with SENAGUA and with the MAE, respectively, to ensure timely availability of the technical viability and environmental permits required by the projects, for which they may be supported by the BdE and SENAGUA. IDB-financed procurement processes will comply with Bank procurement policies (documents GN-2349-9 and GN-2350-9), and these will be spelled out in detail in the Operating Regulations.<sup>20</sup>

**As special contractual conditions precedent to the first disbursement, (i) the borrower will have signed with the BdE and with SENAGUA the necessary subsidiary agreements for managing program resources and executing its activities, and those agreements will be in force; and (ii) the BdE and SENAGUA will submit their institutional strengthening plans, with defined activities, schedule, responsibilities, and budget.**

- 3.2 **Banco del Estado** will be responsible for program coordination and resource management, including budgetary, accounting, and financial management. It will therefore: (i) prepare and submit program disbursement requests (with supporting documentation for eligible expenses) and audited financial statements to the Bank for the components under its responsibility; (ii) verify that projects comply with the eligibility and comprehensive viability criteria (technical, economic, socioenvironmental, and financial in its operation and maintenance phase), as provided in the Operating Regulations; (iii) allocate IDB resources to the beneficiary DAGs/PUs, with which it will sign agreements; (iv) review, prior to publication on the Public Procurement Portal, the procurement and contracting processes for the construction and supervision of works under the DAGs' responsibility, and provide them with the necessary technical assistance to ensure application of relevant IDB policies; (v) review compliance with national environmental legislation and IDB policies during project execution; (vi) periodically monitor project progress and payments during execution, using a monitoring and evaluation system allowing the program's impact and outcomes to be measured; and (vii) prepare the consolidated monitoring reports and evaluation reports required and submit them to the IDB.
- 3.3 The BdE will discharge its responsibilities through its entire structure, with the coordination of its GPP. The GPP will appoint a program leader who will be in charge of the program's operational/financial planning and monitoring, and drafting reports. The GPP will designate or contract for technical assistance to support the DAGs in fiduciary matters (procurement and contract management under IDB procedures), as well as project monitoring and environmental management. This team will be financed with resources from the loan proceeds, and its roles and duties will be defined in the Operating Regulations. As applicable, the BdE will coordinate with SENAGUA and the MAE for project technical viability or

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<sup>20</sup> The Operating Regulations will include the aspects agreed between the Bank and the executing agency in the Manual of Fiduciary Management for Programs Administered by the BdE, in recognition of the executing agency's express request to improve the efficiency of its management.

environmental licenses. **As a condition precedent to the first disbursement, the BdE will have established the fiduciary team with the minimum staffing agreed with the Bank.**

- 3.4 **The DAGs and/or PUs** will be in charge of procurement and other obligations for project execution and delegated administration of resources, in the context of the agreements to be signed with the BdE. Their responsibilities will include: (i) requesting project funding from the BdE, as required by the Operating Regulations; (ii) contracting works and implementing institutional strengthening plans, and supervising them (in accordance with Bank procurement policies); (iii) obtaining environmental licenses for the projects and supervising implementation of environmental management; (iv) budgetary, accounting, and financial administration of contracts, in accordance with national legislation and the terms established in the agreements; (v) keeping supporting documentation on precontractual, contractual, technical, and financial and accounting processes; (vi) reporting to the BdE periodically on progress and maintenance of works; and (vii) transferring O&M of the services to the operators, once the works have been completed. As a special execution condition, prior to transferring loan proceeds to any of the DAGs and/or PUs for the performance of activities under the program, the BdE or SENAGUA will have signed the respective financing agreement or contract (paragraph 3.5).
- 3.5 **The DAG/PU financing agreement and/or contract.** This will establish, inter alia, the commitment of the DAG and/or PU to: (i) operate and maintain the works and goods financed by the program, in accordance with current technical standards; (ii) submit annual maintenance plans and reports to the BdE during the program execution period; (iii) provide the technical and financial resources necessary for the execution of the respective project, including independent supervision for the works; (iv) include in the bidding documents for the works the applicable environmental conditions defined in the Operating Regulations, including the obligation of the contractor to apply an EMP; (v) carry out the social consultation process as defined by law; (vi) ensure that the required environmental licenses, EMP and technical viability certificates are in hand before works begin; (vii) submit the technical, financial, and environmental reports; and (viii) in the exceptional case of resettlement or where indigenous communities are affected, apply an involuntary resettlement and/or indigenous peoples framework previously agreed with the IDB, pursuant to the Involuntary Resettlement Policy (Operational Policy OP-710) and the Indigenous Peoples Policy (Operational Policy OP-765).
- 3.6 **Project cycle.** This will be divided into three stages: (i) preinvestment and feasibility, comprising the selection of eligible projects, contracting, preparation, comprehensive evaluation, approval, and declaration of viability of the project studies (which will include the designs, management and financial sustainability models, and business plans); (ii) execution, which includes the construction of works and implementation of institutional strengthening plans; and (iii) post-

investment, which includes transfer of the works to the DAGs and/or their PUs, and the establishment of mechanisms for charging for services, as appropriate.

- 3.7 **Operating Regulations.** Program administration will be governed by Operating Regulations, which will include: (i) a description of the program (eligible investments, Results Matrix, and financing structure; (ii) the execution plan, including the responsibilities and roles of the BdE and the DAGs/PUs; (iii) the project cycle, with eligibility and comprehensive viability criteria for the projects; (iv) criteria for the allocation of nonreimbursable resources; (v) rules and procedures for the procurement of goods, works, and consulting services; (vi) administrative and financial procedures for financial and accounting management and audits; (vii) mechanisms and responsibilities for planning, monitoring, and evaluation of the program in order to achieve the envisaged outcomes; and (viii) the technical annexes, including the environmental and social management frameworks (resettlement and indigenous peoples) and the environmental and social management report. Advances of IDB resources will be requested on the basis of actual liquidity needs, supported according to a percentage established in the agreements to be signed with the DAGs and contracts signed with suppliers. This mechanism will be defined in the Operating Regulations and may be modified with the agreement of the parties in light of program performance. As regards gender equity, the program will encourage women's participation and their complementary vision in the project cycle, considering and respecting the existence of different potentials, needs, and interests based on gender and ethnic group. To this end, each project will apply consultative and/or participatory processes as part of its social strategy. **As a special contractual condition precedent to the first disbursement, both the BdE and SENAGUA will have approved the program Operating Regulations, under terms previously agreed with the Bank, containing the Environmental Management Framework.**
- 3.8 **General eligibility and allocation criteria for nonreimbursable resources.** To be eligible, projects must: (i) pertain to PROSANEAMIENTO eligible sectors; (ii) be designed to expand the coverage of services, or to renew systems that are at the end of their useful life, those that involve the rehabilitation of works, and those that enhance the integrity of the systems; (iii) comply with the usual BdE requirements for the granting of financing (economic, financial, management, etc.); (iv) be deemed technically viable by the competent government bodies for the sector, and have the relevant environmental certification; and (v) have the DAGs' and/or PUs' commitment to establish a financing mechanism, and a management and service delivery model for O&M. The percentage of the subsidy for each project will be determined in light of the following variables: chronic malnutrition, consumption poverty, gap with respect to drinking water/sewer service or solid waste removal ([optional electronic link 7](#)).
- 3.9 **Financial management** will comply with the Financial Management Policy for IDB-financed Projects (document OP-273-1). The Fiduciary Agreements and Requirements set out the program's guidelines for fiduciary management,

supervision, and the fiduciary risks identified during program preparation. The Fiduciary Agreements and Requirements have been drawn up based on an analysis of the fiduciary context of the country and the executing agency, the inputs from the risk workshop conducted with staff from the entities participating in the program, and meetings between the project team and executing agency staff and other key stakeholders. Disbursements will be made as described in Annex III.

- 3.10 **Audits.** The program's external audit services will be provided as established in the attached Fiduciary Agreements and Requirements. Within 120 days after the close of the executing agency's fiscal year, the BdE, through its Project Risk Management Unit, will submit the program's audited annual financial statements to the Bank. The last audited financial statement will be submitted within 120 days following the date stipulated for the last disbursement under the operation.

**B. Procurement of works, goods, and consulting services**

- 3.11 Procurement financed in whole or in part with loan proceeds will be carried out in accordance with the Policies for the procurement of works and goods financed by the IDB (document GN-2349-9) and the Policies for the selection and contracting of consultants financed by the IDB (document GN-2350-9). Procurement processes whose budgets exceed the thresholds for international competitive bidding established for the country will use standard bidding documents and requests for proposals. For amounts below the thresholds, the Bank will agree with the executing agency on documents compatible with the policies. The Operating Regulations will set out the specifications and coordination mechanisms between the BdE and the executing agencies. The mode of supervision of program procurement is described in the procurement plan, which will include procurement initially identified, and which will be approved by the Bank using the Procurement Plan Execution System (SEPA).

Table IV-1 Thresholds for International Competitive Bidding		
Works	Greater than or equal to	US\$3,000,000
Goods	Greater than or equal to	US\$250,000
Consulting services	Greater than or equal to	US\$200,000

**C. Program monitoring and evaluation**

- 3.12 **Monitoring and evaluation plan.** Monitoring and evaluation will use the IDB's supervision instruments, which include the results matrix, the program execution plan, the annual work plan, and the procurement plan. The BdE will report on the progress of the program's operational and financial programming, and fulfillment of the Results Matrix targets, to the Bank via semiannual reports, which will include the results of environmental monitoring of the works, analysis of the occurrence of the risks identified, problems encountered, corrective measures taken, and an action plan for the next six-month period. This system will also allow verification of the fulfillment of the milestones triggering the program's second phase.

- 3.13 Midterm and final program evaluations will be carried out when 50% and 95% of the loan proceeds have been disbursed, respectively. These evaluations will include: (i) measurement of the outputs and outcomes achieved, according to the Results Matrix indicators; (ii) compliance with the Operating Regulations; and (iii) the management and financial sustainability of the approved projects. The evaluations will be carried out by specialized consulting firms.
- 3.14 **Ex post evaluation.** The BdE will compile the data necessary to analyze the fulfillment of the program's targets, in order to evaluate its efficiency and effectiveness in attaining the objectives, and to document any lessons learned. To facilitate these tasks, a matrix of targets, including baselines, will be agreed for each project. The BdE will prepare a record for each project with the information stated in the Results Matrix, and the indicators used to measure the management performance of the service providers, which will be included in the agreements with the DAGs ([optional electronic link 3](#)).

Development Effectiveness Matrix				
Summary				
I. Strategic Alignment				
1. IDB Strategic Development Objectives		Aligned		
Lending Program	i) Lending to small and vulnerable countries; ii) Lending for poverty reduction and equity enhancement; and iii) Lending to support climate change initiatives, renewable energy and environmental sustainability.			
Regional Development Goals	Incidence of waterborne diseases (per 100,000 inhabitants).			
Bank Output Contribution (as defined in Results Framework of IDB-9)	i) Households with new or upgraded water supply; and ii) Households with new or upgraded sanitary connections.			
2. Country Strategy Development Objectives		Aligned		
Country Strategy Results Matrix	GN-2680	Increase the coverage of water, sanitation and solid waste management services.		
Country Program Results Matrix	GN-2756	The intervention is included in the 2014 Country Program Document.		
Relevance of this project to country development challenges (If not aligned to country strategy or country program)				
II. Development Outcomes - Evaluability		Evaluable	Weight	Maximum Score
		7.9		10
3. Evidence-based Assessment & Solution		8.2	33.33%	10
3.1 Program Diagnosis		2.6		
3.2 Proposed Interventions or Solutions		3.6		
3.3 Results Matrix Quality		2.0		
4. Ex ante Economic Analysis		10.0	33.33%	10
4.1 The program has an ERR/NPV, a Cost-Effectiveness Analysis or a General Economic Analysis		4.0		
4.2 Identified and Quantified Benefits		1.5		
4.3 Identified and Quantified Costs		1.5		
4.4 Reasonable Assumptions		1.5		
4.5 Sensitivity Analysis		1.5		
5. Monitoring and Evaluation		5.5	33.33%	10
5.1 Monitoring Mechanisms		2.5		
5.2 Evaluation Plan		3.0		
III. Risks & Mitigation Monitoring Matrix				
Overall risks rate = magnitude of risks*likelihood		Medium		
Identified risks have been rated for magnitude and likelihood		Yes		
Mitigation measures have been identified for major risks		Yes		
Mitigation measures have indicators for tracking their implementation		Yes		
Environmental & social risk classification		B		
IV. IDB's Role - Additionality				
The project relies on the use of country systems				
Fiduciary (VPC/PDP Criteria)				
Non-Fiduciary				
The IDB's involvement promotes improvements of the intended beneficiaries and/or public sector entity in the following dimensions:				
Gender Equality				
Labor				
Environment				
Additional (to project preparation) technical assistance was provided to the public sector entity prior to approval to increase the likelihood of success of the project				
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				

The POD presents the problems facing the water, sanitation and solid wastes services as well as the magnitude of the problems. The factors that generate the deficiencies in the water and sanitation services are presented but those factors that generate the solid waste problems are not. The proposed interventions are linked to the problems identified in the diagnosis.

The results matrix has vertical logic. Not all outcome indicators are SMART since some are not specific. The outcome indicators have targets. Some indicators do not have means of verification or baselines, which is to be expected in a multiple works program in which the exact GADs where the project will intervene are not known. With respect to the output indicators, not all indicators are SMART since some are not specific. The indicators have baselines, targets and sources of information.

The project was analyzed using a cost-benefit analysis. The economic benefits were adequately quantified and the costs reflect real resource costs to the economy. The assumptions used were presented and a sensitivity analysis was performed.

The project has a monitoring and evaluation plan. The evaluation plan does not follow the DEM guidelines for the following reasons: although the results matrix includes an indicator to measure the result of the solid waste interventions, there are no evaluation questions for this intervention; the plan does not specify how the ex-post economic analysis of the sanitation project will be undertaken; the section on "data collection" includes information that is not included as indicator in the results matrix; there is no work plan specifying when the data for each of the output indicators will be collected. The operation will be evaluated using a reflexive methodology and an ex-post cost-benefit analysis.

## RESULTS MATRIX

General objective		The general objective of the program is to expand and improve access to drinking water, sewer, wastewater, and solid waste treatment services, with emphasis on medium-sized municipios, while strengthening water and sanitation service providers in the program’s beneficiary localities, within the National Macro Program for Environmental Sanitation (MPSAN) framework.									
Indicators	Unit of measurement	Baseline		Intermediate measurements				Final target		Source/means of verification	Observations
		Value	Year	2015	2016	2017	2018	Value	Year		
EXPECTED OUTCOME 1: Increase in access to water, sanitation and solid waste services											
Households with access to drinking water through new or expanded systems in 100 DAGs. DAG 1 DAG 2 : DAG n	Household	807,164	2014	807,164	807,164	807,261	828,164	828,164	2018	Certificates of delivery of works	
Households with a new sewer system connection through networks or individual solutions in 100 DAGs. DAG 1 DAG 2 : DAG n	Household	524,782	2014	524,782	524,782	524,945	559,782	559,782	2018	Certificates of delivery of works	
Households served by systems covered under the program with a functioning drinking water connection. DAG 1 DAG 2 : DAG n	%	* see note	2014	59.2%	59.2%	59.2%	59.4%	60.7%	2018		Drinking water means that the physical, chemical, and biological analyses of the distributed water meet national standards for water to be consumed without risk of illness.



Indicators	Unit of measurement	Baseline		Intermediate measurements				Final target		Source/means of verification	Observations
		Value	Year	2015	2016	2017	2018	Value	Year		
EXPECTED OUTCOME 1: Increase in access to water, sanitation and solid waste services											
Households with operating sanitary sewer systems or individual solutions in 100 DAGs. DAG 1 DAG 2 ⋮ DAG n	%	38.5%	2014	38.5%	38.5%	38.9%	41.0%	41.0%	2018	Certificates of delivery of works	Functioning means that it prevents human contact with wastewater.
Increased consumption of water in households served by the program. DAG 1 DAG 2 ⋮ DAG n	m <sup>3</sup> /month	*  5**	2014					15	2018	Accounting information of the DAGs' water divisions	A survey or an estimate without the project and a sample with the project will be prepared to determine increased consumption.
Reduced economic value per m <sup>3</sup> paid by households. DAG 1 DAG 2 ⋮ DAG n	\$/m <sup>3</sup>	*  3.75**						<0.5	2018	Accounting information of the DAGs' water divisions	A survey or an estimate without the project will be prepared
Tons of solid waste disposed of in operating sanitary landfills. DAG 1 DAG 2 ⋮ DAG n	Tons/day	*	2014						2018	Certificates of delivery of works	For each DAG, the amount of solid waste produced will be estimated, which will be the target value to be disposed of in the sanitary landfill.

Indicators	Unit of measurement	Baseline		Intermediate measurements				Final target		Source/means of verification	Observations
		Value	Year	2015	2016	2017	2018	Value	Year		
EXPECTED OUTCOME 2: Better access to water services											
Percentage of households with adequate service continuity at the end of the program. DAG 1 DAG 2 ⋮ DAG n	%	*	2014					100%	2019	Certificates of delivery of works	Continuity is defined as more than 18 hours of service per day in the systems of the program intervention area.
Households served with systems supported under the program with water pressure greater than 5 mts. DAG 1 DAG 2 ⋮ DAG n	%	*						100%	2018		
EXPECTED OUTCOME 3: Institutional Strengthening											
Systems are financially sustainable (revenues > O&M costs)	Number of DAGs	*	2014	0	0	0	15	15	2018	Financial assessment of the entity.	
Billing efficiency (% of billings paid). DAG 1 DAG 2 ⋮ DAG n	Annual %	*	2014	0	65	70	75	75	2018	Financial assessment of the entity	

Indicators	Unit of measurement	Component cost	Baseline year 2014	Intermediate measurements				Final target		Source/means of verification	Remarks
				2015	2016	2017	2018	Value	Year		
OUTPUTS											
COMPONENT 1: Preparation of studies for infrastructure projects in the DAGs											
Master plans and/or preinvestment studies prepared for water, sanitation and solid waste systems in 100 DAGs.	Study	\$20.8 million	0		4	8		12	2018	Program records	
Milestone 1: Supervision of master plans and/or preinvestment studies for water, sanitation and solid waste systems in 100 DAGs.	Report	\$1.0 million	0		4	8		12	2018	Program records	
COMPONENT 2: Execution of infrastructure works in the DAGs											
New drinking water connections constructed.	Connections/year	\$45.4 million	0 DAG 1 DAG 2 : DAG n			3,150	17,850	21,000	2018	Certificate of delivery of works	The estimated connection cost includes investments in networks, connections, drinking water treatment plants, storage tanks, pumping stations, etc. Each individual project supported will define milestones with the principal components.
Improved water and sewer connections constructed	Connections/year	\$35.3 million	0 DAG 1 DAG 2 : DAG n		300	1,490	6,610	8,400	2018	Certificate of delivery of works	The estimated connection cost includes investments in water and sewer networks, connections, drinking water and wastewater treatment plants, storage tanks, collectors, pumping

Indicators	Unit of measurement	Component cost	Baseline year 2014	Intermediate measurements				Final target		Source/means of verification	Remarks
				2015	2016	2017	2018	Value	Year		
OUTPUTS											
											stations, etc. Each individual project supported will define milestones with the principal components.
New sewer connections constructed	Connections/year	\$67.5 million	0 DAG 1 DAG 2 : DAG n			5,250	29,750	35,000	2018	Certificate of delivery of works	The estimated connection cost includes investments in networks, connections, drinking water plants, storage tanks, pumping stations, etc. Each individual project supported will define milestones with the principal components.
New temporary disposal cells operating	Number of cells per year	\$11.0 million	0		15	18		33	2018	Certificate of delivery of works	Cells refer to temporary sanitary landfills implemented when open-air dumps are closed.
Milestone 1: Supervision of infrastructure works for water, sanitation, and solid waste systems in the DAGs	Report	\$8.0 million	0		5	8	15	28	2019	Certificate of delivery of works	
COMPONENT 3: Institutional Strengthening											
Institutional strengthening programs developed and implemented in the DAGs and the utilities	Project	\$7.0 million	0		9	6	15	30	2018	Program records	The programs will vary according to the needs of each DAG and will cover the diagnostic assessment, design, and implementation of management models, rate studies, software, process improvement

Indicators	Unit of measurement	Component cost	Baseline year 2014	Intermediate measurements				Final target		Source/means of verification	Remarks
				2015	2016	2017	2018	Value	Year		
OUTPUTS											
											plans, procedural manuals, etc. Each individual project supported will define milestones with the principal components.
Workshops/training activities on administrative, financial, commercial, and operational aspects of water and sanitation service management for the BdE	Workshop	\$1.0 million	0	4	4	4	4	16	2018	Program records	
Institutional strengthening plan implemented for the SENAGUA	Plan	\$1.25 million	0				1	1	2018	Program records	SENAGUA will submit the plan for the Bank's no objection. Milestones with the principal components will be defined.
Investment project management plan implemented in DAGs (SENAGUA)	Plan	\$1.25 million	0				1	1	2018	Program records	SENAGUA will submit the plan for the Bank's no objection. Milestones with the principal components will be defined.

\* The baseline will be determined for each project.

\*\* Estimated based on the sample.

## FIDUCIARY AGREEMENTS AND REQUIREMENTS

**Project number:** EC-L1122, National Investment Program in Water, Sanitation, and Solid Waste (PROSANEAMIENTO)

**Executing agency:** Banco del Estado (BdE), and the Water Secretariat (SENAGUA)

**Prepared by:** Gumersindo Velázquez and Gustavo Palmerio(FMP/CEC)

### I. EXECUTIVE SUMMARY

- 1.1 The coexecuting agencies for this program will be the Banco del Estado (BdE) and the Water Secretariat (SENAGUA). The Decentralized Autonomous Governments (DAGs) and Public Utilities (PUs) will be the subexecuting agencies and will be responsible for the contracting and the technical and fiduciary management of the works to be financed. The coexecuting and subexecuting agencies have the capacity and the means to carry out their responsibilities under the program, and the overall fiduciary risk is assessed as medium. The proposed supervision plan is consistent with that assessment.

### II. FIDUCIARY CONTEXT OF THE COUNTRY

- 2.1 **Procurement system.** The National Public Procurement System (SNCP) was created by the Law Establishing the SNCP in August 2008. The substantial changes introduced include the creation of the National Public Procurement Secretariat (SERCOP) as the lead agency for public procurement. With Bank support, the SERCOP performed a diagnostic assessment of the SNCP using the OECD/DAC methodology, and that assessment found an advanced level of development for the SNCP. On 25 February 2013, the Bank's Board of Executive Directors approved the use of the SNCP for procurement in amounts below the international competitive bidding threshold. Work is now underway with the SERCOP to prepare and update the bidding documents that will be applied to the various procurement methods for goods, services, works, and consulting services, and an agreement between the parties to begin implementation in seven pilot projects is now awaiting signature.
- 2.2 **Financial management system.** Since January 2008 central government bodies have used the e-SIGEF financial management system. This enables effective integration of budgeting, accounting, cash management, electronic payments, and a centralized IT system using web-based technology. Central government bodies are subject to supervision and auditing by the country's supreme audit institution, the Office of the Comptroller General. In general terms, national financial management systems have an adequate level of development, but for the purposes

of execution of Bank-financed projects, they currently need to be supplemented in terms of specific financial reporting and external audits (to be carried out by a firm acceptable to the Bank).

### III. FIDUCIARY CONTEXT OF THE EXECUTING AGENCY

- 3.1 The program will be coexecuted by the BdE and SENAGUA. The BdE will act as administrative executing-coordinating agency. Its Products and Programs Division Management Unit (GPP) will be responsible for coordinating all aspects of the cycle of the loans granted to the DAGs and PUs using loan proceeds, for which purpose it will draw support from other units of the BdE such as the Credit Unit, Operations Unit, Branches Unit, and Systems Unit. The institution has received various ISO 9000 process quality certifications and it has the necessary systems for program management and reporting.
- 3.2 Considering the lessons learned from the projects now in execution by the BdE,<sup>1</sup> the fiduciary capacity of the GPP will be strengthened by providing it a team of consultants, comprising two public financial management specialists and two procurement specialists (a senior and a junior consultant in each case), whose functions will be to provide technical assistance in their respective fields, both within the BdE and for the DAGs participating in the program.
- 3.3 As for the coexecuting agency, SENAGUA, it has an organizational structure that includes financial administration, public procurement, planning, and technical advisory areas. In light of experience with executing loan 2377/OC-EC, PIRSA, the institution will be strengthened by contacting a team of consultants, whose principal responsibility will be to advise the participating DAGs and the PUs and to streamline technical viability approval processes.
- 3.4 The DAGs were reorganized upon entry into force of the Organic Code of Territorial Organization, Autonomy, and Decentralization (COOTAD) under a standard organizational structure that includes the areas of planning, financial management, public procurement, public works, and environmental and social management. In addition, they will prepare financial and monitoring reports on their respective projects, using standard formats to be defined by the BdE and agreed with the IDB.

### IV. FIDUCIARY RISK EVALUATION AND MITIGATION MEASURES

- 4.1 Based on the evaluations performed and using the available information on the program, the following fiduciary risks were identified, and are included in the risk matrix:
  - a. **Potential noncompliance with procurement policies by the DAGs or PUs receiving financing.**

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<sup>1</sup> Loans 2113/OC-EC, PROPESCAR, 2377/OC-EC, PIRSA, and 2839/OC-EC, PRODESARROLLO.

**Factors:** Lack of experience among the beneficiaries in the application of the Bank's procurement policies. **Impact:** Delays in procurement execution. Ineligibility of expenses and nonfulfillment of contractual clauses. **Mitigation measures:** (i) technical assistance and on-the-job training for the DAGs and PUs involved; (ii) strengthening of the fiduciary team with specialized consultants; (iii) application of procedures defined in the fiduciary management manual; and (iv) definition of a strategy to supplement the limited supply of specialized services.

**b. Lack of coordination between participants in program management.**

**Factors:** There are many stakeholders involved (executing agency, coexecuting agency, subexecuting agencies, and various funding sources). Communication among the parties involved is not very effective. There is no integrated project management and monitoring platform at the subnational level. **Impact:** Delays and/or stoppage of works. Duplication of efforts and work. **Mitigation measures:** (i) standardized Operating Regulations for all stakeholders and financing sources; and (ii) entry into effect and use of the fiduciary management manual will be mandatory for all stakeholders.

**c. Inadequate monitoring and supervision of works execution**

**Factors:** Limited information systems. Low technical capacity of the DAGs and PUs. Limitations in the monitoring and support activities for the DAGs and PUs by the BdE and SENAGUA. **Impact:** Delays in execution. Ineligibility of expenditures. Increased costs. **Mitigation measures:** (i) standardized Operating Regulations for all stakeholders and financing sources; (ii) entry into effect and use of the fiduciary management manual will be mandatory for all stakeholders; and (iii) strengthening of the fiduciary team with specialized consultants.

**V. CONSIDERATIONS FOR THE SPECIAL CONDITIONS OF THE CONTRACT**

- 5.1 (i) Contracting of the consulting team to support the BdE's GPP in the program's fiduciary management; and (ii) entry into effect of the Operating Regulations in the two coexecuting agencies, and inclusion of the Fiduciary Management Manual as an annex.

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

**6.1 Procurement execution**

- a. **Procurement of goods, works, and nonconsulting services (Procurement Policy set forth in document GN-2349-9).** Contracts for goods, works, and nonconsulting services<sup>2</sup> arising under the program will be included in the initial procurement plan, and those subject to international competitive bidding (ICB)

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<sup>2</sup> Policies for the Procurement of Goods and Works financed by the Inter-American Development Bank (document GN-2349-9), paragraph 1.1. Nonconsulting services are treated in the same way as goods.



will be executed using the standard bidding documents (SBDs) issued by the Bank. The project's sector specialist will be responsible for reviewing the technical specifications for procurement items during preparation of the selection processes. The executing agency is expected to use the online SEPA system to strengthen the planning of procurement activities. The procurement plan will cover the first 18 months and will be updated annually or as necessary, using the SEPA. Selection processes for direct contracting will also be identified.<sup>3</sup>

In ICB processes, the time period indicated by the policies for the submission of bids for works, goods, and nonconsulting services may be reduced to four weeks in the case of uncomplicated procurement processes, and the time limit established by local regulations for national competitive bidding (NCB) will be accepted.

In the case of simple works and off-the-shelf goods where the value is below the ICB threshold, as published at the IDB portal (thresholds), the shopping mechanism may be used.

- b. **Selection and contracting of consultants (Procurement Policy set forth in document GN-2350-9).** Contracts for consulting services arising under the project will be included in the initial procurement plan, and will be executed using the standard request for proposals (SRP) issued by the Bank. The project's sector specialist will be responsible for reviewing the terms of reference for the contracting of consulting services. Each requesting area of the executing agency will be responsible for establishing the technical viability of the terms of reference, while the unit responsible for managing the processes will verify their consistency with the SRP. The executing agency will also use the SEPA for planning and managing the methods for selecting and contracting consulting services.

For consulting services with an estimated budget of up to US\$200,000, the executing agency will promote use of selection methods based on consultants' qualifications, as provided in paragraph 3.7 of the policies.

- c. **Selection of individual consultants.** In the cases identified in the approved procurement plans, the contracting of individual consultants may be handled by publishing announcements locally or internationally in order to establish a shortlist of qualified individuals, pursuant to document GN-2350-9, section V, paragraphs 5.1. to 5.4.
- d. **Training.** The procurement plan provides details on the items that relate to the training components of the project, and that will be contracted as consulting services and nonconsulting services.
- e. **Advanced procurement/retroactive financing.** Retroactive recognition of expenses related to the program is not anticipated. A list of principal procurement items is found in the attached link (see [link](#)).

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<sup>3</sup> Direct contracting will be duly justified.

**Table of threshold amounts (US\$)**

Works			Grids			Consulting services	
ICB	NCB	Shopping	ICB	NCB	Shopping	International publicity	Short list 100% national
≥ 3,000,000	< 3,000,000 ≥ 250,000	< 250,000	≥ 250,000	< 250,000 ≥ 50,000	< 50,000	> 200,000	< 200,000

- 6.2 **Procurement supervision.** In principle, reviews will be conducted on an ex ante basis. However, the type of review may be analyzed once the use of country systems is applied for projects considered under the “Agreement for the use of the Republic of Ecuador’s National Public Procurement System in projects financed by the Inter-American Development Bank,” signed on 13 May 2014 between the borrower, the National Public Procurement Service, and the IDB, and has yielded favorable results in the opinion of the Bank. For that to occur, there must be agreement by the borrower and the executing agencies, and it must be accepted in writing. It may also be reviewed when the executing and subexecuting agencies acquire the technical capacity that enables the type of supervision to be changed from ex ante to ex post by mutual agreement.
- 6.3 When supervision is changed to ex post reviews, the Bank or an independent auditor will conduct the reviews at least once every 12 months. Ex post review reports will include at least one physical inspection visit, as appropriate. It is important to note that no less than 10% of the contracts reviewed will be physically inspected during the program. The thresholds for ex post review will be based on the following categories and amounts:

Works	Goods	Consulting services	Individual consultants
< 3,000,000	< 250,000	< 200,000	< 50,000

Note: The threshold amounts established for ex post review are based on the fiduciary execution capacity of the executing agency, and may be modified by the Bank as that capacity changes.

- 6.4 **Special provisions.** Measures to reduce the likelihood of corruption: The provisions of documents GN-2349-9 and GN-2350-9 concerning prohibited practices (multilateral agency lists of ineligible firms and individuals) will be observed.
- 6.5 **Records and files.** The executing agency will maintain up-to-date records and properly organized files, with documentation on program procurement and contracting contained in a single file or folder that is readily distinguishable from the processes financed with the local contribution or nonprogram resources.

## **VII. FINANCIAL MANAGEMENT AGREEMENTS AND REQUIREMENTS**

- 7.1 As part of the lessons learned from Bank projects that the BdE is currently executing and that have characteristics similar to those of this operation, the FMP/CEC team prepared a Fiduciary Management Manual, which will be applied for all operations financed by the IDB and executed by the BdE. The manual includes details on applicable processes and policies governing procurement and financial management, and will constitute an annex to the program Operating Regulations.
- 7.2 Some of the significant aspects of that manual are summarized below:
- 7.3 Programming and budget. The program execution plan, annual work plan, and procurement plan are the basis for preparing the pro forma budgets for the operation. The BdE will consolidate the budgetary information with the participation of the coexecuting agency and the DAGs. The annual budget process will coincide with that of the participating entities, and will follow applicable national standards. The pro forma budgets will be included in the institutional budget of the executing, coexecuting, and subexecuting agencies, each of which will comply with its own formalities and obtain the necessary internal authorizations to ensure the budget contains the necessary items for effective and timely execution of the activities and projects.
- 7.4 Accounting and information systems. The accounting and recording of transactions under the operation at the level of the BdE, the coexecuting agency, and the DAGs will be done on the basis of the National Government Accounting Standards and their respective catalogues of accounts, by the Superintendency of Banks and Insurance for the BdE and by the Ministry of Finance for the other entities. The information that the coexecuting agency and the DAGs must provide to the BdE for preparing the financial reports required by the IDB, in order to reflect operations under the components of the loan contract, will be presented on a “cash” basis, i.e. they will report transactions for which payment has actually been made to the contractors.
- 7.5 The economic events relating to the projects that comprise the operation will be recorded on the date they occur, within each monthly period, and their recording will be neither advanced nor postponed, nor will they be recorded in accounts other than those established in the General Catalog of Public Sector Accounts issued by the Ministry of Finance.
- 7.6 The IT systems used by the BdE, the coexecuting agency, and the DAGs will guarantee the integrity of the information obtained at the end of each monthly period, i.e. they must ensure that the information cannot be altered or modified and that any correction of errors or omissions must be recorded in the following period.
- 7.7 Disbursements and cash flow. The Bank will make disbursements to each coexecuting agency using the advance of funds modality. The monetary value of

each advance will be based on the estimated cash flow necessary for executing planned program activities for periods of three months (four advances per year). This frequency may be amended, at the Bank's discretion, to two advances per year as of the second year of program execution. Cash flow programming will be consistent with the annual work plan and the procurement plan approved by the Bank, and will cover a rolling horizon of 12 months. The BdE and SENAGUA, in consultation with the participating provincial DAGs, will prepare and keep up-to-date the cash flow schedule for the program, and will prepare their respective disbursement requests for the IDB.

- 7.8 Internal control and internal audit. As regards internal control systems, the Constitution of the Republic of Ecuador establishes that the Office of the Comptroller General (CGE) is in charge of directing the control system for the public sector. The BdE and SENAGUA, as part of that sector, have their own internal audit unit which reports directly to the CGE. However, the Bank will not use their services because they do not include review of the project in their audit plans. The Operating Regulations will include the principal processes of internal control needed to ensure that such controls are functioning properly. During execution, the fiduciary team will assess the compliance and quality of those processes.
- 7.9 External control and reports. Because the CGE does not currently have sufficient capacity to exercise external control over projects financed through foreign borrowing, the external audit of the project will be done by first-tier independent auditors (international audit firms) acceptable to the Bank, in accordance with IDB requirements. During execution, the BdE will submit audited annual financial statements for the project, as well as the report on the integrated ex post review of procurement and disbursements. The aforementioned audit services will be contracted by the IDB and charged against the loan proceeds.

Supervision activity	Supervision plan			
	Nature and scope	FREQUENCY	Party responsible	
			Bank	Third party
<b>OPERATIONAL</b>	Review of progress report	SEMIANNUAL	Fiduciary and sector team	
	Review of portfolio with executing agency and Ministry of Finance	According to Ministry of Finance requirements	Fiduciary and sector team	
<b>FINANCIAL</b>	Inspection visits	SEMIANNUAL	Fiduciary specialist	
	Financial audit	ANNUAL	Fiduciary specialist	BdE
	Ex post review of disbursements	ANNUAL	Fiduciary specialist/Independent Audit Firm	BdE/ SENAGUA
	Review of disbursement requests	Periodic	Fiduciary specialist/Project Team Leader	BdE/ SENAGUA
<b>PROCUREMENT</b>	Ex ante procurement review	During program execution for procurement items exceeding the established thresholds	Project Team Leader/with procurement specialist's support	BdE/ SENAGUA
	Procurement Plan update	Annual or when appropriate	Project Team Leader/with procurement specialist's support	BdE/ SENAGUA
<b>COMPLIANCE</b>	Fulfillment of conditions precedent	ONCE	Fiduciary team	
	Budgetary allocation	ANNUAL	Fiduciary specialist	BdE/ SENAGUA
	Submission of audited financial statements	ANNUAL	Fiduciary specialist	BdE

## VIII. EXECUTION MECHANISM

- 8.1 The borrower will be the Republic of Ecuador and the executing agencies will be the BdE (through the Products and Programs Division Management Unit) and SENAGUA (through the Office of the Undersecretary of Water and Sanitation).
- 8.2 The BdE will execute all components except the subcomponent for strengthening SENAGUA, which SENAGUA will execute independently.
- 8.3 The projects to be financed under the program will be carried out by the DAGs and/or PUs as subexecuting agencies, and execution of the financing will be

monitored by the BdE. The DAGs and/or PUs will submit financing applications to the BdE, which will perform a comprehensive evaluation (technical, economic, environmental, and financial) of the viability of the projects, in accordance with the evaluation criteria stipulated in the program Operating Regulations. The BdE will approve the projects and sign the agreements with the DAGs and/or PUs, as applicable. The beneficiary entities will be responsible for the procurement of works and goods for the projects, and for contracting their supervision. The BdE, through its regional branches, will monitor the various aspects of the program.

- 8.4 The program Operating Regulations will spell out the program execution mechanism in detail.

#### **IX. PROCUREMENT TABLE**

- 9.1 This table is found at the attached link (see [link](#)).

**NATIONAL INVESTMENT PROGRAM IN WATER, SANITATION AND SOLID WASTE  
(PROSANEAMIENTO)**

**EC-L1122**

**CERTIFICATION**

The Grants and Co-financing Management Unit (ORP/GCM) certifies receipt of the non-objection from Ying Zhang, People's Bank of China dated April 28, 2014 for project "National Investment Program in Water, Sanitation and Solid Waste (PROSANEAMIENTO)" for US\$30,000,000, chargeable against the China Co-financing Fund for LAC.

*(original signed)*

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*May 23, 2014*

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Sonia M. Rivera

Date

Chief

Grants and Co-financing Management Unit

ORP/GCM

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-\_\_\_/14

Ecuador. Loan \_\_\_/OC-EC to the Republic of Ecuador  
National Investment Program in Water, Sanitation,  
and Solid Waste (PROSANEAMIENTO)

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 Republic of Ecuador, as Borrower, for the purpose of granting it a financing to cooperate in the execution of a national investment program in water, sanitation and solid waste (PROSANEAMIENTO). Such financing will be for an amount of up to US\$120,000,000, from the resources of the Bank's Ordinary Capital, 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 \_\_ \_\_\_\_ 2014)

LEG/SGO-38832973  
EC-L1122



DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-\_\_\_/14

Ecuador. Loan \_\_\_/CH-EC to the Republic of Ecuador  
National Investment Program in Water, Sanitation,  
and Solid Waste (PROSANEAMIENTO)

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, acting as Administrator of the China Cofinancing Fund for Latin America and the Caribbean, to enter into such contract or contracts as may be necessary with the Republic of Ecuador, as Borrower, for the purpose of granting it a financing to cooperate in the execution of a national investment program in water, sanitation and solid waste (PROSANEAMIENTO). Such financing will be for an amount of up to US\$30,000,000, from the resources of the China Co-financing Fund for Latin America and the Caribbean, 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 \_\_ \_\_\_\_\_ 2014)

LEG/SGO-38832958  
EC-L1122