

**DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK**

**BRAZIL**

**CAESB ENVIRONMENTAL SANITATION PROGRAM**

**(BR-L1215)**

**LOAN PROPOSAL**

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<b>REQUIRED</b>	
1.	Plan of activities for the first disbursement (in Portuguese) <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38006530">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38006530</a>
2.	Monitoring and evaluation arrangements (in Portuguese) <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38024077">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38024077</a>
3.	Itemized procurement plan (in Portuguese) <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38006530">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38006530</a>
4.	Environmental and Social Management Report (ESMR) (in Portuguese) <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38017776">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38017776</a>
5.	Environmental classification and safeguards <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38028713">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38028713</a>
<b>OPTIONAL</b>	
1.	Socioeconomic viability (in Portuguese – executive summary in Spanish) <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38011076">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38011076</a>
2.	CAESB technical annex; description of the components (in Portuguese) <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37968952">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37968952</a>
3.	Public utilities policy <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38024232">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38024232</a>
4.	Preliminary institutional and financial analysis <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38024710">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38024710</a>
5.	Program Operating Manual <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38033530">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38033530</a>
6.	Progress Monitoring Report (PMR) <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38053129">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38053129</a>

## ABBREVIATIONS

ADASA	Agência Reguladora de Aguas e Saneamiento do Distrito Federal [Federal District Water and Sanitation Regulatory Agency]
CAESB	Companhia de Saneamento Ambiental do Distrito Federal [Federal District Environmental Sanitation Company]
DF	Distrito Federal [Federal District]
GCI-9	Ninth General Increase in the Resources of the Bank
IBGE	Instituto Brasileiro de Geografia e Estatística [Brazilian Institute of Geography and Statistics]
IRR	Internal rate of return
LIBOR	London Interbank Offered Rate
O&M	Operation and maintenance
PUGP	Unidade de Gerenciamento de Programas Internacionais [International programs management unit]
R\$	Brazilian reais
SIMOP	Simulador de Obras Públicas [Public works simulator]
SNIS	Sistema Nacional de Informações sobre Saneamento [National Sanitation Information System]
WTP	Water treatment plant
WWTP	Wastewater treatment plant

## PROJECT SUMMARY

### BRAZIL

### CAESB ENVIRONMENTAL SANITATION PROGRAM (BR-L1215)

Financial Terms and Conditions			
Borrower: Companhia de Saneamento Ambiental do Distrito Federal [Federal District Environmental Sanitation Company] (CAESB) Executing agency: CAESB Guarantor: Federative Republic of Brazil (financial obligations) and the Federal District (implementation obligations and counterpart funding).*		Flexible Financing Facility (FFF)**	
		Amortization period:	25 years
		Original weighted average life	15.25 years
Source	Amount (US\$)	Disbursement period:	5 years
IDB (Ordinary Capital)	170,840,000	Grace period:	5.5 years
Local	115,470,000	Inspection and supervision fee:	**
		Interest rate:	LIBOR-based
Total	286,310,000	Credit fee:	**
		Currency:	U.S. dollars from the Ordinary Capital
Project at a Glance			
<b>Project objective/description:</b> The objective of the operation is to reduce the overload on existing water supply systems, so as to avoid new larger scale investments in the short term. This objective will be achieved by expanding the drinking water and sanitary sewerage network to areas called “condominios” (condominiums) and outlying regions, and by strengthening CAESB management.			
<b>Special conditions precedent to the first disbursement:</b> (i) appointment of specialist staff to the International Programs Management Unit (PUGP) (paragraph 3.2); and (ii) approval by the Bank of the terms of reference for contracting the PUGP management support firm (paragraph 3.2).			
<b>Special execution conditions:</b> (i) prior to contracting program works, the borrower will: (a) obtain the environmental and other applicable permits; and (b) contract the program’s works supervision firm; and (ii) no later than four months from the loan contract signature date, the program’s Operating Regulations will be in force, under the terms agreed upon with the Bank; (iii) no later than six months from the loan contract signature date, the borrower will: (a) contract the management support firm; and (b) create the program’s Special Bidding Committee (paragraph 3.2).			
<b>Special contractual condition:</b> The deadline for the material start of program works will be four years.			
<b>Exceptions to Bank policies:</b> None.			
<b>Project consistent with country strategy:</b>		Yes [ X ]	No [ ]
<b>Project qualifies as:</b>		SEQ [ No ]	PTI [ No ]
		Sector [ ]	Geographic [ ]
			Headcount [ ]

- (\*) Legislative authorization of the Federal District’s guarantee will be approved by the Legislative Assembly of the Federal District prior to signature of the loan contract, as required under Operational Policy OP-303.
- (\*\*) Under the Flexible Financing Facility (document FN-655-1), the borrower has the option of requesting changes to the amortization schedule, and currency and interest rate conversions. When considering such requests, the Bank will take market conditions into account, along with operational and risk-management considerations.
- (\*\*\*) 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 applicable policies.

## I. DESCRIPTION AND RESULTS MONITORING

### A. Background, problems addressed, and rationale

- 1.1 The Federal District (DF) occupies an area of 5,780 km<sup>2</sup> in the center-west region of Brazil (the Cerrados region) and comprises the federal capital (Brasilia) and 30 administrative regions.<sup>1</sup> It contributes 3.9% of Brazil's total gross domestic product (GDP) and has a per capita GDP of US\$25,000<sup>2</sup> (more than twice the national average), a large proportion of which is generated by the services sector.<sup>3</sup> As the national capital, the DF attracts people from other regions, fuelling population growth on the order of 2% to 3% per year. The current DF population is 2.6 million.<sup>4</sup>
- 1.2 **Water and sewerage services** are the responsibility of the Federal District Environmental Sanitation Company (CAESB). The water service coverage rate is 98.1%, and for sewerage services it is 82.2%, and 100% of collected effluents are treated.<sup>5</sup> Although these rates are above the national average<sup>6</sup> and represent virtually universal service, burgeoning population growth calls for immediate measures to meet the growing demand for water and sanitation services in the short, medium, and long terms—particularly in outlying neighborhoods known as condominiums. This will entail extending and consolidating existing systems that are currently operating very close to their nominal capacity.<sup>7</sup> The population of these condominiums, in the DF, is estimated at 600,000,<sup>8</sup> 6% of whom are considered to be low-income.<sup>9,10</sup> At the present time, the condominiums are served by private or community-based water supply and final sewage disposal services. Condominiums that are not served by CAESB draw on ground water and discharge their wastewater into septic tanks. The high population density in these condominiums generates an overexploitation of the aquifer, which in turn becomes polluted by the

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<sup>1</sup> DF statistical data <http://www.codeplan.df.gov.br/areas-tematicas/informacoes-estatisticas.html>

<sup>2</sup> R\$50,000 in 2012, but with a distribution of wealth that is more unequal than in the rest of Brazil (2009 Gini coefficient: 0.62 in Brasilia, compared to a national average of 0.54).

<sup>3</sup> Over 93% according to the Institute of Applied Economic Research (IPEA).

<sup>4</sup> Estimate for 2012 by the Brazilian Institute of Geography and Statistics (IBGE).

<sup>5</sup> Year 2012: information provided by CAESB and the National Sanitation Information System (SNIS) [www.snis.gov.br](http://www.snis.gov.br)

<sup>6</sup> The 2010 averages for Brazil are as follows: water services 81.1%; sewerage 46.2%, with 38% of collected effluents undergoing treatment (Source: SNIS).

<sup>7</sup> CAESB currently operates with a delivery capacity of 11.9 m<sup>3</sup>/s, and has installed capacity to produce 9.1 m<sup>3</sup>/s of drinking water. The 2000 Water and Sewerage Master Plan, revised in 2005, forecasts a maximum demand of 13.9 m<sup>3</sup>/s by 2040.

<sup>8</sup> According to the IBGE, Brasilia has roughly 40,000 homes classified as informal (lack of basic sanitation and precarious housing materials, typical of favelas), with a population of 140,000.

<sup>9</sup> See Economic Analysis link.

<sup>10</sup> In the condominiums benefitting from the works, the low-income population is just 4.5%. Ref.: CODEPLAN/SEPLAN/GDF/PDAP *Pesquisa Distrital por Amostra de Domicílios* [District Survey by Household Sample] (2011).

discharges and overflows from unregulated septic tanks.<sup>11,12</sup> The aim is to serve these outlying population groups through condominial systems, which are recommended for condominiums located adjacent to the urban center, given their lower cost, their efficiency, and their lesser construction impact.<sup>13</sup>

- 1.3 **Water resources.** Given its location near the slopes of the Paraná, Tocantins, and São Francisco river basins, water in the DF is a scarce and limited natural resource.<sup>14</sup> The springs in these river basin headwaters have small-volume flows, which reduces the availability of water for the region. CAESB studies reveal the need to expand current water production capacity by 1 m<sup>3</sup>/s, because in dry “*estiagem*” periods<sup>15</sup> the system operates at the limits of its capacity ([see link](#)). The 2000 DF Water and Sewerage Master Plan, revised and updated in 2005, foresees average and maximum daily demands of 11.6 m<sup>3</sup>/s and 13.9 m<sup>3</sup>/s, respectively, to supply 3.7 million people by 2040.<sup>16</sup> Currently, the systems operated by CAESB can produce 9.1 m<sup>3</sup>/s of potable water. To be able to satisfy this growing demand for drinking water and guarantee the quality of its sources, the DF quality services pilot plan needs to be extended to outlying populations, and adequate treatment of their effluents must be ensured. Part of the DF water infrastructure, and particularly the sewerage component, is now at the end of its 50-year useful life, according to the asset assessment performed in 2012 by CAESB.<sup>17</sup> This therefore requires rehabilitation and/or expansion to avoid contamination of the surface and

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<sup>11</sup> *Consórcio Themagna, para a Complementação e Adequação do Plano Diretor de Água e Esgotos–PLD 2000, Vol. III, Tomo I: Diagnóstico dos sistemas existentes e projetados no DF, 2005.* [Themagna consortium for the complementation and upgrading of the water and sewerage master plan–PLD 2000, Volume III, Section I: Diagnostic study of existing and projected systems in the DF, 2005] ([link](#)).

<sup>12</sup> Year 2012: information provided by CAESB.

<sup>13</sup> Evidence of the effectiveness of this type of solution can be found in: Rissoli, Cesar Augusto; *Sistema Condominial: Otimização de Recursos e Efetividade* [Condominial system: Optimization of resources and effectiveness] ESOA/ESO/DE/CAESB, 2012 ([link](#)).

<sup>14</sup> In the Rio Descoberto geographic unit, CAESB’s largest producer system, demand exceeds supply in the months of January, April, and December. The same is true of other sources in the DF. (Source: *Plano de Gerenciamento Integrado dos Recursos Hídricos do Distrito Federal, 2012* [Integrated management plan for water resources in the Federal District, 2012].

<sup>15</sup> *Estiagem* = drought periods when rainfall is very scarce and river flows are at their minimum.

<sup>16</sup> *Consórcio Themagna, para a Complementação e Adequação do Plano Diretor de Água e Esgotos–PLD 2000.* With the review of the Water and Sewerage Master Plan included in this loan operation, the population projections could change on the basis of current demographic growth rates.

<sup>17</sup> Based on the type of infrastructure and the construction materials used, estimated useful life would be as follows: (i) for the concrete structures of treatment plants, 50 years; (ii) for the mechanical and electrical equipment of treatment plants, 15 to 25 years; and (iii) lines for conveyance under pressure, 25 years. Ref.: “*The International Infrastructure Management Manual*, Version 1.0, Australia,” in the publication by the Environmental Protection Agency (EPA) “*The Clean Water and Drinking Water Infrastructure Gap Analysis*” EPA-816-R02-20, September, 2002 ([see link](#)).

underground springs of Lake Paranoá and the ecosystems of the DF environmental protection areas through which it passes.<sup>18</sup>

- 1.4 **CAESB.** The Brasilia Water and Sewerage Company was created by Decree Law 524 of April 1969 and is governed by the Law on Corporations (*Lei das Sociedades Anônimas*). Law 2416 of July 1999 changed the name to DF Sanitation Company (*Companhia de Saneamento do DF*), expanded its field of action to the entire national territory, and opened up the possibility for it to enter the capital market. Subsequently, Law 3559 of January 2005 changed the name again and created the Federal District Environmental Sanitation Company (*Companhia de Saneamento Ambiental do Distrito Federal*–CAESB), extended its field of action to other countries, and included solid waste management within its activities. In 1999, CAESB became a semipublic enterprise in which the majority shareholder is the DF government.<sup>19</sup> The company supplies treated water to 2.6 million persons and collects wastewater from 2.2 million.<sup>20</sup> It operates five water supply systems and 24 subsystems, producing 9.1 m<sup>3</sup>/s, as well as 16 wastewater collection and treatment systems, generating 3.8 m<sup>3</sup>/s of treated effluents.<sup>21</sup> Studies undertaken during the preparation of this operation ([see link](#)) show that the water treatment plants (WTPs), wastewater treatment plants (WWTPs), pumping stations, water extraction sites, and storage dams (e.g. the Santa Maria reservoir), require refurbishment in relation to: waterproofing of the water catchment canals, strengthening of dam structures, replacement of filter beds, automation of WTP and WWTP operations, change of dosage meters, replacement of inefficient motors and pumps with high consumption and CO<sub>2</sub> emissions, renewal of equipment, etc.
- 1.5 CAESB is one of the Brazilian companies with the highest levels of water and sewerage service coverage (see Table I-1) and relatively low levels of unmetered water.<sup>22</sup> Nonetheless, it faces several challenges owing to its position of leadership in the sector, and also because of the characteristics of the DF, with a pilot plan whose growth is subject to urban development constraints, outlying cities with different levels of consolidation, dispersed condominiums, and limited water resources (see footnote 12). In addition, CAESB is preparing to enter the capital market, which requires adjustments to its corporate governance model to promote greater transparency, and implementation of the environmental management system adopted by the company. In 2010, with support from consulting services financed by the Bank, an audit was performed of the status of corporate governance in

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<sup>18</sup> *Consórcio Themagna, para a Complementação e Adequação do Plano Diretor de Água e Esgotos–PLD 2000, Vol. III, Tomo I: Diagnóstico dos sistemas existentes e projetados no DF, 2005* [Themagna consortium for the complementation and upgrading of the water and sewerage master plan –PLD 2000, Volume III, Section I: Diagnostic study of existing and projected systems in the DF, 2005] ([see link](#)).

<sup>19</sup> Consolidated Articles of Association–CAESB–2012.

<sup>20</sup> Management Information Report–PRP/CAESB), 2012.

<sup>21</sup> Administration Report, SIÁGUA and SIESG 2012.

<sup>22</sup> National Sanitation Information System (SNIS), [www.snis.gov.br](http://www.snis.gov.br)



several Brazilian enterprises, including CAESB. A plan of action comprising 19 activities was generated to modernize CAESB's corporate governance, in relation to: commitments to corporate governance, the functioning of the board of management, the control environment and processes, transparency and disclosure, the treatment of minority shareholders, and financial discipline. The intention is to implement this plan of action using resources from this operation.<sup>23</sup>

- 1.6 Viewing current problems in terms of challenges, CAESB needs to: (i) reduce the pressure on its water production systems, postponing larger scale investments for seven years, to fulfill the targets of the master plan. These include making use of the Corumbá hydroelectric plant's lake (Corumbá IV system), and the São Bartolomeu river system<sup>24</sup> as from 2020; (ii) extend water and sewerage services to the growing outlying population, mainly in the condominiums of Sobradinho I and II, Jardim Botânico, São Bartolomeu, and the Sol Nascente and Por do Sol localities; (iii) refurbish antiquated infrastructure which has now lasted beyond its 50-year useful life;<sup>25</sup> (iv) expand the program for reducing apparent losses, through: sectorization, pressure control, and micro-metering (installation of water meters), which are the most effective ways to reduce losses with direct impact on demand;<sup>26, 27</sup> and (v) implement automated systems in the WTPs, WWTPs, and pumping stations. In addition, preparation of this operation detected the need to develop a communication strategy for the company to facilitate program implementation, internalize its objectives among its staff, facilitate implementation of the corporate governance action plan, and improve coordination with the various stakeholders, mainly the Agência Reguladora de Aguas e Saneamento do DF [Federal District Water and Sanitation Regulatory Agency] (ADASA).
- 1.7 **ADASA.** On 16 June 2004 through Law 3.365, the Government of the Federal District created the Federal District Water and Sanitation Regulatory Agency to regulate, control, and inspect the quality and quantity of surface and ground water, as well as water supply and sanitary sewerage services. In February 2006, acting on behalf of the DF, ADASA signed a service concession contract with CAESB, which runs until 31 January 2032. The contract provides for annual rate adjustments

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<sup>23</sup> *Governança Corporativa em Empresas de Água e Saneamento do Brasil, Relatório 5.5, Avaliação dos Planos de Ação e do Progresso em Governança Corporativa*, 2012 [Corporate governance in water and sanitation firms in Brazil, report 5.5, evaluation of action plans and progress on corporate governance, 2012] ([see link](#)).

<sup>24</sup> See Water and Sewerage Master Plan, Volume IV, Part I (2000, revised in 2005) ([see link](#)).

<sup>25</sup> See footnote 14.

<sup>26</sup> Evidence of the effectiveness of this type of solution can be found in Rizzo, Alex, Pearson, David, Stephenson, Matthew and Harper, Neil; *Apparent Loss Control: A Practical Approach*; International Water Association (IWA), *Water 21 Seventh Article, IWA Task Force, June 2004* ([see link](#)).

<sup>27</sup> Evidence of the effectiveness of this type of solution can be found in Da Silva, Nilce Regina, *Estudo Metodológico para Avaliação de Submedição de Hidrômetros Domiciliares em Sistemas de Água*, [Methodological study for the evaluation of submeasurement of household water meters in water systems] Master's Degree thesis, University of Brasilia, Publication: PTARH-DM-2008 ([see link](#)).

and periodic reviews, the first of which should occur two years after the signing of the concession contract, and subsequently every four years.<sup>28</sup> Having finalized the development of the rate review methodology, ADASA published its approval in March 2009 and entered into negotiations with CAESB, which culminated in January 2013 with the establishment of the water rate to be adopted.

**Table I-1: CAESB Management Indicators**<sup>29</sup>

Management indicators	2012		2013		2014		2015		2016	
	Water	WW <sup>1</sup>	Water	WW	Water	WW	Water	WW	Water	WW
Connections (thousand)	600	481	602	484	613	516	641	551	660	572
Coverage (%)	98.04	81.97	98.22	82.16	99.03	84.41	99.25	86.9	99.43	87
Treatment (%)	100	100	100	100	100	100	100	100	100	100
Water produced (m <sup>3</sup> million)	236		240		244		249		253	
Water invoiced (m <sup>3</sup> million)	184		189		194		199		204	
Water not invoiced (m <sup>3</sup> million)	52		51		50		49		49	
Water not invoiced (%)	24.1		24.7		23.5		23		22.5	
Network (thousand km)	8.9	5.1	8.91		8.92	5.77	8.95	6.01	8.96	6.2
Apparent losses (%)	10.3		10.6		10.1		9.9		9.7	
Continuity of water supply (hours/day)	24		24		24		24		24	
No. of workers per 1,000 water connections	2.38	-	2.36	-	2.26	-	2.15	-	2.08	

WW = Wastewater

- 1.8 The Bank's action:** The Bank has been supporting the DF government and CAESB in their endeavors to improve the supply of water and sanitation services in the DF since the 1980s, through two loan operations: the Program to Expand and Upgrade the Water Supply and Sewerage System of Brasilia (loans 526/OC-BR and 814/SF-BR) for US\$100 million; and the Federal District Basic Sanitation Program (loan 1288/OC-BR), approved in 2000 for US\$130 million. The first loan operation, implemented between September 1989 and October 1997, supported consolidation of the Rio Descoberto supply system, protection of the lake of the same name, expansion of the sanitary sewerage network in the Lake Paranoá region, the main source of recreation in the DF, and updating of the Water and Sewerage Master Plan. It also financed a program to reduce losses within the operational development component. The second loan, implemented between 2001 and 2009, financed the expansion of the Brasilia water treatment plant; construction

<sup>28</sup> Law 3365/2004 and Contract 001/2006-ADASA/CAESB.

<sup>29</sup> Management information report-PRP/CAESB, 2012.

of the pipeline networks in Sobradinho, Planaltina, and Mestre d'Armas; improvement of the Melchior sanitary sewerage and effluent treatment system; construction of the Gama wastewater treatment plant (WWTP); expansion of the sanitary sewerage system in the south and north zones of Lake Paranoá; preparation of the CAESB strategic plan; and revision of the Water and Sanitary Sewerage Master Plan.

- 1.9 The World Bank's Sustainable Brasilia Program (CT-7326-BR), which concluded in March 2011, supported CAESB with US\$8.9 million (out of total financing of US\$58 million) to implement the sanitary sewerage system in Villa Estructural. The IDB's current pipeline of operations with Brazil includes the Federal District Environmental Sanitation Program (BR-L1383) which is expected to receive financing of US\$100 million and will represent a second phase of the Sustainable Brasilia Program. That program's actions are aimed at urban development of the Por do Sol condominium and solving solid waste problems in the DF. They complement the CAESB Environmental Sanitation Program in the DF.
- 1.10 **Lessons learned.** The implementation of the Federal District Basic Sanitation Program (loan 1288/OC-BR) surpassed the targets on water supply and sewerage coverage, which rose from 91% to 99.4%, and from 88% to 93.72%,<sup>30</sup> respectively. Wastewater treatment rates rose from 62% to 100% of the volume collected, and there was a significant improvement in quality of surface water (levels of dissolved oxygen in the Melchior River and the Ponte Alta Creek rose from 0 mg/l to 4.7 mg/l, and from 6 mg/l to 6.8 mg/l, respectively). The number of employees per 1,000 connections dropped from 5.71 to 2.43. Nonetheless, less success was achieved in meeting management targets, namely: reduction of loss indices from 24% to 20% (current index=29%); borrowing index below 35% (current index=53.5%); and ISO 14001 certification of the Brasilia WTP and the Descoberto River drinking water plant, which has not yet occurred owing to discrepancies that need to be corrected.<sup>31</sup> CAESB had to invest in consumer education,<sup>32</sup> technology, and human resources before launching a robust program for reducing losses. These initial steps were implemented with the previous loan, and the subsequent actions will be undertaken with support from the present operation.
- 1.11 The most serious operational problem identified in the lessons learned relates to works delays and cost overruns. On this point, agreement was reached on the need to: (i) undertake wider-ranging studies during individual project preparation: field surveys and prospecting to identify interferences, and to prevent or resolve any lack of clarity on urban land use; (ii) provide resources in the program budget to cover potential exchange rate losses; (iii) before publishing the call to tender, review the

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<sup>30</sup> In 2012, the method used to calculate coverage rates was altered by including condominiums and unregularized areas, causing coverage levels to drop to those reported in Table I-1.

<sup>31</sup> Project completion report (PCR), loan 1288/OC-BR, November 2009 ([link](#)).

<sup>32</sup> Joint environmental education programs between the Department of the Environment and CAESB. [www.gdfdiaadia.df.gov.br](http://www.gdfdiaadia.df.gov.br)

- projects and their budgets, verify the need to upgrade equipment available on the market, deploy special methods to mitigate difficulties in executing services, and obtain installation permits before publishing the bidding documents; (iv) review the final schedule before issuing the service order, to take account of expected rainfall periods; and (v) resolve outstanding land tenure issues, for which purpose CAESB has set up a special management unit.
- 1.12 There is also a need to: (i) foster stakeholder participation in all phases of the project, to facilitate its implementation; (ii) improve integration with other DF agencies executing works; (iii) clear the area and obtain the environmental permits in advance to avoid delays; (iv) use the company's staff in project coordination; (v) maintain close contact with the company's environmental team and undertake archeological studies in the project area; and (vi) select precise indicators that are easily associated with the project. These mitigating actions have been incorporated by CAESB, through the environmental and social and land tenure management units; and they have been included in the design of this operation.
- 1.13 **Operation strategy.** The operation is designed to: (i) meet the demand for drinking water from the growing population of Brasilia, the condominiums, and adjacent localities, through actions to make water supply more secure, mainly in drought periods; (ii) increase the coverage of sewerage services, restoring and improving the operation of wastewater transportation and treatment systems; and (iii) strengthen the weakest aspects of the company's operational management and governance. With these aims, and bearing in mind lessons learned and the company's strategic targets, the operation was designed in two lines of action: (i) continued support for CAESB in working toward its goals of universalizing water and sewerage services and achieving operational excellence, by increasing water production capacity and reducing the risk of rationing, without the need to construct new systems in the short term; and (ii) improve the firm's corporate governance, including its environmental, financial, and economic management. Following the guidelines of the policy on multiple works programs (Operations Processing Manual, Section PR-202), the operation was structured as a multiple works program, since it includes similar but independent works. A representative sample was prepared, representing 30% of the program's value.
- 1.14 **Country strategy and GCI-9.** This operation is consistent with the following priority areas of the Bank's country strategy with Brazil (document GN-2662-1): (i) "Improve the country's infrastructure conditions" in the priority sector of water and sanitation, "Increase the coverage and quality of sanitation services"; and (ii) "Promote the development of sustainable cities" in the priority sector of urban development (improve the urban habitat, giving priority to the poorest areas). This operation is also consistent with the priority area of support for infrastructure for competitiveness and social welfare, and it contributes to the GCI-9 lending targets.<sup>33</sup>

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<sup>33</sup> Three of the indicators of the regional development targets are included in the program's Results Matrix.

The operation aims to increase the number of residences connected to the sanitary sewerage network, and to upgrade the conditions of water and sanitation services in the DF. This operation is aligned with the GCI-9 priority area, “Lending to support climate change initiatives, renewable energy, and environmental sustainability.”

- 1.15 **Consistency with Bank policies.** This program is consistent and coherent with the objectives and conditions of the Bank’s Public Utilities Policy (Operational Policy OP-708) and abides by the guidelines set in the operational guide for the application of that policy ([see link](#)). There is separation of functions between policymaking, regulation, and service provision (paragraph 1.15-1.8). CAESB’s operating income covers its operation and maintenance costs (O&M) and its capital costs. CAESB has a reduced rate for low-income customers and a program giving service access to low-income population groups<sup>34</sup> (paragraph 2.12), which will be revised with funding from this operation, in the framework of updating the Water and Sewerage Master Plan. This replaces the agreement which the company had with the DF government until 2011, in which the government subsidized the account of low-income population groups. The program also fulfills the provisions of the Bank’s Basic Environmental Sanitation Policy (Operational Policy OP-745) by providing treatment for wastewater generated as a result of the expansion of the drinking water network.

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

- 1.16 The objective of the operation is to reduce the overload on existing water supply systems, so as to avoid new larger scale investments in the short term. This objective will be achieved by expanding the drinking water and sanitary sewerage network to condominiums and outlying regions, and by strengthening CAESB management. The specific objectives include: (i) expansion and recovery of water production systems; (ii) restoration and expansion of the sanitary sewerage network; (iii) reduction of losses in water production, distribution, and invoicing; (iv) reduction of the utilization index of the water production capacity of the systems operated by CAESB; and (v) strengthening of specific aspects of CAESB’s corporate governance. To achieve these objectives, two components will be implemented.
- 1.17 **Component I. Works and equipment** (US\$149.51 million), which will finance works to refurbish and expand the water supply and sanitary sewerage systems. Water supply works include actions relating to: (i) implementation, expansion, and rehabilitation of water supply systems, including the systems of Bananal, the Santa Maria dam, Engenho Lages, and the Cabeça do Veado Canal; (ii) rehabilitation of WTPs (Planaltina, Lago Sul, Paranoá, and Vale do Amanhecer);

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<sup>34</sup> ADASA establishes the rate structure, however, Decree 26.590 of 23 February 2006 lays out the classification of water and sewerage rates and links the amount to the type of housing (which are classified as rustic, fair, standard, and special). If the residence is rustic, the rate is multiplied by a reduction coefficient.

(iii) interconnection between the Arapoanga and Vale do Amanhecer supply system; and (iv) rehabilitation of approximately seven urban water reservoirs. Sanitary sewerage works include actions involving: (i) the implementation of sanitary sewerage networks in Grande Colorado, Lago Sul, Incra 8, Jardim Botânico, São Bartolomeu, Nova Colina, and Sobradinho; (ii) the installation of emergency generators in approximately 24 wastewater pumping stations and the implementation of security systems in the Norte, Sul, Planaltina, São Sebastião, Paranoá, and Vale do Amanhecer WWTPs; (iii) the replacement of sluice gates in stabilization ponds; (iv) the procurement of automated decantation systems; (vi) the rehabilitation of the pumping pipelines in the Areal, Planaltina Sul, Metropolitana, Gama II, Lago Norte, and Taguatinga pumping stations; (vii) interconnection of the Torto sewerage system with the Norte WWTP; and (viii) implementation of the operational requirements for future ISO-14001 certification in the Norte WWTP.

- 1.18 **Component II. Operational improvement and institutional strengthening** (US\$105.30 million), which will finance operational improvement and institutional strengthening actions. The operational improvement includes actions related to: (i) reduction and control of apparent and real losses through the sectorization of the distribution networks, macro- and micro-metering, including the purchase of water meters; (ii) diagnostic of energy consumption in the WWTPs and consequent replacement of motors to reduce consumption; (iii) implementation of automated systems and software to control the operation of the WTPs and WWTPs; (iv) operational instruments to manage the multiple uses of the Paranoá Lake, including updating of the monitoring network and implementation of pilot studies to design WTPs and WWTPs; and (v) restructuring of the firm's industrial maintenance sector. Institutional strengthening actions include: (i) modernization of the information technology area, involving the purchase of specific hardware and software; (ii) implementation of the annual corporate governance plan; (iii) updating of the Water and Sewerage Master Plan; and (iv) environmental actions, including the implementation of the company's Environmental Management System, adaptation of the Descoberto drinking water plant and the Norte WWTP for ISO-14001 certification; and ISO 17025 certification of the water monitoring and quality division laboratory (PHIQ), reforestation to offset CO<sub>2</sub> emissions in the WWTPs.
- 1.19 The program's administration and management cost is estimated at US\$12.1 million, which includes contingency funds for possible cost overruns and exchange rate fluctuations.

**Table I-2: Table of costs (US\$ thousand)**

CATEGORIES	US\$ million			Percentages		
	Total	Counter-part (CP)	IDB	CP	IDB	Total
<b>I Engineering and administration</b>	<b>12.10</b>	<b>-</b>	<b>12.10</b>	<b>0</b>	<b>100</b>	<b>4.2</b>
1.1 Program administration	4.72	-	4.72	0	100	1.6
1.2 Works inspection	2.95	-	2.95	0	100	1.0
1.3 Preparation of technical projects	4.43	-	4.43	0	100	1.5
<b>II Direct costs</b>	<b>257.02</b>	<b>100.54</b>	<b>154.26</b>	<b>39</b>	<b>61</b>	<b>89.0</b>
2.1 Improvements and expansion of water supply and sanitary sewerage systems	149.51	68.58	80.94	46	54	52.2
2.2 Operational and institutional improvement	107.51	31.97	73.33	30	70	36.8
<b>III Associated costs</b>	<b>0.40</b>	<b>-</b>	<b>0.15</b>	<b>0</b>	<b>100</b>	<b>0.1</b>
3.1 Audit, evaluation, and monitoring	0.40	-	0.15	0	100	0.1
<b>IV Contingencies</b>	<b>16.79</b>	<b>14.93</b>	<b>41.86</b>	<b>78</b>	<b>22</b>	<b>6.7</b>
4.1 Contingencies	16.79	14.93	1.86	78	22	6.7
<b>Total</b>	<b>286.31</b>	<b>115.47</b>	<b>170.84</b>	<b>40</b>	<b>60</b>	<b>100</b>

### C. Key indicators of the Results Matrix

- 1.20 The expected results include: (i) the connection of 13,498 residences to the drinking water network; (ii) the recovery of five water supply systems; (iii) the refurbishment of four drinking water plants; (iv) the interconnection of three water supply systems; (v) the rehabilitation of seven urban water reservoirs; (vi) the connection of 17,118 residences and the rehabilitation of 45.8 km of sanitary sewerage network; (vii) the rehabilitation of 12 operational units (WTPs and wastewater pumping stations); (viii) the procurement and installation of 418,000 water meters; (ix) the forestation of 150 ha of a conservation unit to offset the emission of 49,000 ton/year of CO<sub>2</sub> in WWTPs; and (x) the implementation of the environmental management system developed by CAESB, and ISO certification processes in specific units of the company. The project is expected to directly benefit the entire population of the DF, in particular 274,000 people living in Sobradinho I and II, Jardim Botânico, Lago Sul, Incra 8, and Brazlandia. The specific results are set out in the Results Matrix (Annex II).

## II. FINANCING STRUCTURE AND RISKS

### A. Financing instruments and conditions

- 2.1 The Bank financing for this operation will be provided through an investment loan under the Flexible Financing Facility (document FN-655-1) and the multiple works modality. The planned disbursement period is five years, and there is a four-year deadline for the material start of the works.

**B. Environmental and social risks and mitigation measures**

- 2.2 Following the procedures of the Bank's Environment and Safeguards Compliance Policy (Operational Policy OP-703), the project team prepared an environmental and social strategy and proposed that this be classified as a category "B" operation, which was approved on 12 April 2010. Fulfilling the directives of that strategy, an environmental and social assessment was made of the operation, and an environmental and social management report ([ESMR](#)) was prepared. A consultation meeting was held with the DF Water Resource Council on 13 June 2013, and a second one with the DF Environment Council (CONAM) on 24 September 2013. Given the nature of the works, which involve the expansion and restoration of water supply and sanitary sewerage systems and recuperation of wastewater treatment plants, the project's impacts are mostly positive, including: (i) improvement of sanitary and environmental conditions in the program's action area; (ii) job creation during the works period; (iii) a rise in real estate property values; and (iv) the attraction of investments into the benefited areas.
- 2.3 The negative environmental and social impacts are related to the works, which will generate dust, interrupt traffic flows, and cause the disturbances that are typical of works undertaken in urban environments. There could be interference with preservation areas as well as the felling of trees. The first of these are specific short-term impacts that can easily be mitigated by adhering to the good works practices described in the CAESB works environmental manual. In relation to interference with preservation and conservation areas, specific permits have been obtained, and the impacts will be mitigated through adequate works planning and appropriate construction methods and procedures, and recovery of degraded areas. It will be necessary to remove 132 trees, but this will be offset by the planting of 3,970 trees of native species. The licensed works have a works environmental control plan, as required under Brazilian legislation, which specifies measures to mitigate the impacts of the program's works at the execution level. In addition, CAESB has an environmental and social management plan in place, which will be implemented with program resources. To facilitate implementation of the Environmental Management System and loan execution, a communication strategy will be prepared, using the loan proceeds, before the end of the first year of execution starting on the loan contract signature date.

**C. Other key issues and risks**

- 2.4 **Institutional and fiduciary viability.** The institutional capacity assessment system (ICAS) analysis found that CAESB has adequate institutional capacity and a low level of institutional risk on fiduciary matters. The project preparation activities identified a lack of direct experience among CAESB technical staff, both in executing projects with the Bank and in terms of their knowledge of fiduciary policies, which could hinder the efficient execution of the program. This will be mitigated through: (i) the existence of an International Programs Management Unit (PUGP) assigned full-time to the project; (ii) the contracting of a firm specialized in



- project management to support the PUGP in management and administration, which will add specialists to the team and provide administrative support and specific consulting services; (iii) the creation of a specific committee to support the preparation and processing of the project's procurement processes, pursuant to the Bank's policies and/or national ones; (iv) implementation of the program financial/management system that ensures that the financial functions meet the Bank's accountability requirements; (v) the preparation of Operating Regulations that describe the detailed flow of fiduciary processes; and (vi) training and monitoring by the Bank's fiduciary team.
- 2.5 **Technical viability.** The program's technical viability is founded on the review made of the technical proposals and works cost estimates, for an amount corresponding to over 27% of the program's direct costs. The reviewed projects fulfill the standards of the Brazilian Technical Standards Association ([see link](#)).
- 2.6 **Financial guarantee.** To guarantee the borrower's financial obligations, the Federative Republic of Brazil requires compliance with the Fiscal Responsibility Law and the Fiscal Restructuring and Adjustment Program, as well as a counterguarantee from the DF. The analysis of the latter's accounts shows compliance with all the required conditions, and capacity to provide the counterguarantees.
- 2.7 **Operation and maintenance.** CAESB will be responsible for the operation and maintenance of the works financed by the program ([see link](#)). In the first quarter of each of the five years following the conclusion of each of the program's systems, CAESB will report to the Bank on the status of the works and equipment in question and its annual maintenance plan.
- 2.8 **Socioeconomic viability.** A socioeconomic viability evaluation was performed on the projects in the program sample, using a base date of December 2012 for the benefits and costs presented. The drinking water interventions were analyzed using the SIMOP public works simulator.<sup>35</sup> The economic benefits were calculated in terms of the gross benefits generated by changes in supply and/or price, taking into consideration the aggregate demand curve of each consumer group over the project evaluation horizon. The economic value of the sanitary sewerage benefits was obtained through a nonparametric estimation of willingness to pay, which was compared to the willingness to pay obtained for similar projects in other comparable cities in Brazil. This was updated at December 2012 by applying monetary corrections in respect of average family income and the consumer price index. The costs considered for the evaluation were the incremental investment and operation and maintenance (O&M) costs valued at efficiency prices. All projects were subjected to an analysis of alternatives, to identify the least-cost alternative

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<sup>35</sup> The SIMOP is a Bank-developed computer model that simulates the consumption, distribution, and production of drinking water in the public system, for the purpose of calculating the economic benefits obtained by expanding production capacity, or replacing individual private sources with public network systems.

(cost effectiveness). A cost-benefit analysis was performed for the chosen alternative (cost-efficiency).

- 2.9 The cost-benefit analysis was performed for each intervention by river basin, when technically possible to separate the benefits generated by each sewerage work, together with a global analysis for all interventions by river basin. The analysis found that the projects in the water supply and sanitary sewerage sample are economically viable, with internal rates of return (IRRs) in excess of 12% per year, and benefit-cost ratios above 1, except for the Jardim Botânico and São Bartolomeu sanitary sewerage project, which posted a rate of return below 12% per year. Nonetheless, the inclusion of that project in the program is recommended, since the technical solution chosen is the least-cost alternative (condominial system), and its implementation will generate specific, but unquantifiable, positive indirect environmental and social benefits, such as the protection of water supply sources and lake water quality (thereby making it possible to preserve the lake's recreational uses). Table II-1 summarizes the main parameters of the viability analysis. The details are presented in the [Economic Analysis](#).

**Table II-1: Results of the Socioeconomic Viability Assessment**

Components evaluated	Net present value (R\$ million)				IRR (%)	B/C
	Benefits	Investments	O&M	Net benefits		
Water supply system	274.6	157.5	19.4	97.7	16.5	1.6
Expansion of the sewerage collection system in Sobradinho	69.4	41.4	2.2	25.8	19.8	1.6
Expansion of the sewerage collection system in Jardim Botânico and São Bartolomeu	16.4	18.2	1.1	-2.9	9.8	0.6
Expansion of the sewerage collection system in Lago Sul	32.1	12.8	0.9	18.4	32.4	2.4
Expansion of the sewerage collection and treatment system in INCRA 8	3.1	2.5	0.2	0.5	14.6	1.2

Source: Author's calculations.

- 2.10 **Sensitivity analysis.** The sensitivity analysis included variations in the values obtained for elasticity of demand, higher costs for the water projects, and changes in willingness to pay, as well as cost increases for the sanitation projects. The analysis found that the viability results are robust. The water projects admit cost increases of up to 50%, a reduction in expected benefits of up to 30%, and a rate increase of up to 100%. The sewerage projects accept a cost increase of up to 20% and a reduction in benefits of up to 15%.
- 2.11 **Risk analysis.** A risk analysis was performed for the drinking water and the sanitation actions, using the Monte Carlo method to analyze the following variables: (i) separate investment costs for the sanitation and water components;

(ii) O&M costs; (iii) value of willingness to pay for the individual sanitary sewerage components (collectors and networks separately); and (iv) the cost of drinking water per m<sup>3</sup>. The drinking water supply actions in the DF and the sanitary sewerage actions in Sobradinho, Lago Sul, and Incra 8 are unlikely to prove unviable (probability of less than 10%). For the works to be undertaken in Jardim Botânico and São Bartolomeu, however, the likelihood of not being viable is 80%,<sup>36</sup> so steps must be taken to ensure that the costs are kept below the works viability threshold.

- 2.12 **Payment capacity.** Calculation of beneficiaries' payment capacity found that the monthly bill for the service was less than 5% of family income among the program beneficiary population. IBGE data were used to estimate the monthly average income of families living in the program's area of influence, which in 2012 was R\$5,632.29.<sup>37</sup> CAESB data were used to calculate that the average monthly rate for the water and sanitary sewerage service was R\$59.78 per household per month in 2012. Thus, the average rate charged for the service represents 1.16% of average family income. Nonetheless, of the total number of persons living in the Federal District, 6% are in the low-income bracket.<sup>38</sup> Information provided by CAESB also made it possible to ascertain that the average amount of the water bill applying the current special rate for low-income customers,<sup>39</sup> for water and sewerage, was R\$24.80 per household at December 2012. Taking R\$429.57 as average monthly income, the average monthly bill represents 5.07% of family income for a consumption of up to 10m<sup>3</sup>, and 8.09% of income for average metered consumption of 14.47 m<sup>3</sup>. These figures indicate the need to review the special rate for this group. CAESB is working with ADASA to add to the rate structure elements of a special rate for low-income customers,<sup>40</sup> in the framework of Decree 26.590/2006. This study forms part of the strengthening actions included in the revision of the Water and Sewerage Master Plan (paragraph 1.18).

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<sup>36</sup> These are priority works from an environmental standpoint, because their purpose is to eliminate septic tanks from two important environmental conservation areas in the DF. The population in those areas uses septic tanks, often without the necessary controls. Leaking has been contaminating the water table and streams in the reserves (see paragraph 1.2).

<sup>37</sup> Weighted-average income: R\$811.66/person. Family size 3.11 persons. Source: Census 2010-IBGE and minimum wage of 2012.

<sup>38</sup> Weighted-average income up to the minimum wage. Source: Census 2010-IBGE and minimum wage for 2012.

<sup>39</sup> [http://www.adasa.df.gov.br/images/stories/anexos/legislacao/resolucoes/2013/RESOLUCAO-IRT13-CAESB\\_2013.pdf](http://www.adasa.df.gov.br/images/stories/anexos/legislacao/resolucoes/2013/RESOLUCAO-IRT13-CAESB_2013.pdf). Although the DF government paid the full amount of the subsidy until 2011, CAESB now subsidizes minimum consumption (10m<sup>3</sup>/month) through a structure of cross-subsidies between consumers.

<sup>40</sup> ADASA sets the rate structure. CAESB can conduct studies to suggest any necessary changes.

### III. IMPLEMENTATION AND MANAGEMENT PLAN

- 3.1 **Borrower, executing agency, and guarantors.** The borrower is the Federal District Environmental Sanitation Company (CAESB). The Federal District (DF) will be the guarantor for the borrower's contractual obligations on execution under the program, including obligations related to the local counterpart due by the borrower. Legislative authorization of the Federal District's guarantee will be approved by the Legislative Assembly of the Federal District prior to signature of the loan contract. The Federative Republic of Brazil will stand as guarantor for the borrower's financial obligations arising from the loan contract to be signed between the borrower and the Bank. CAESB will implement the program through the PUGP, which is embedded in the planning department, reporting directly to the office of the president of CAESB.
- 3.2 **Implementation arrangements.** CAESB, through the PUGP, will be responsible for the program's coordination, execution, evaluation, and monitoring, as well as for fulfillment of the agreed-upon deadlines and targets, and compliance with the Bank's policies. The PUGP consists of a manager, a specialist, a technical officer, and an executive coordinator working full-time on the program. The unit will also be supported by a project management firm, which will add specialists to the team and provide administrative support and specific consulting services as needed. The PUGP team will have specialists in engineering, finance-accounting, planning and control, environment, and procurement. For procurement processes, a Specific Bidding Committee will be set up for the project; and works inspection support services will also be contracted. Project Operating Regulations will be defined for the execution of the operation. **The following will be special contractual conditions precedent to the first disbursement: (i) the appointment of the PUGP specialists; and (ii) approval by the Bank of the terms of reference for contracting the PUGP management support firm.** The following special contractual conditions will apply for execution: (i) entry into force of the Operating Regulations approved by the Bank, within four months following the loan contract signature date; (ii) within six months from the loan contract signature date, the borrower will: (a) contract the program management support firm; and (b) create a Special Bidding Committee; and (iii) prior to the contracting of program works, the borrower will: (a) obtain the environmental and other applicable permits; and (b) contract the program works supervision firm.
- 3.3 **Implementation of the components.** CAESB will be responsible for the development of the engineering plans; the tendering and contracting of works, goods and services; and the supervision and monitoring of the works and consulting services.
- 3.4 **Disbursements and execution period.** The estimated disbursement schedule is as shown in Table III-1.

**Table III-1. Disbursement schedule**

Source	Year 1		Year 2		Year 3		Year 4		Year 5		TOTAL	
	US\$ million	%	US\$ million	%	US\$ million	%	US\$ million	%	US\$ million	%	US\$ million	%
IDB-Ordinary Capital	19.17	44.6	61.43	57.7	43.53	63.4	32.44	73.0	14.26	59.6	170.84	60
CAESB-Counterpart	23.78	55.4	44.96	42.3	25.10	36.6	11.98	27.0	9.66	40.4	115.48	40
Total	43.0	15.0	106.4	37.2	68.6	24.0	44.4	15.5	23.9	8.4	286.3	100
Cumulative	43.0	15.0	149.4	52.2	218.0	76.1	262.4	91.6	286.3	100.0		

- 3.5 **Procurement.** The procurement of goods and the contracting of works and consulting services will abide by the Bank's policies as defined in documents GN-2349-9 and GN-2350-9, respectively, of March 2011. All procurement processes involving international competitive bidding, direct contracting, or consulting service selection, costing an estimated US\$1 million or more will be reviewed by the Bank ex ante. In view of the project's characteristics and the PUGP's operating capacity, other procurement processes will be reviewed annually ex post. Based on the annual audit reviews, the Bank can modify the review method indicated in the Procurement Plan.
- 3.6 **Advances of funds.** Disbursements will be made under the advance of funds modality to a special bank account in the name of the project, for the exclusive use of the loan proceeds. The sum advanced will be based on actual liquidity needs for a maximum of six months, according to the investment schedule and flow of resources needed for those purposes, as specified in the Financial Management Policy for IDB-financed Projects (document OP-273-2) and described in the Fiduciary Agreements and Requirements.
- 3.7 **External audit.** The financial statements and eligibility of project expenses will be audited annually by an independent firm of auditors acceptable to the Bank, to be contracted by the executing agency. Consideration will be given to the possibility of using the DF Audit Department (*Tribunal de Contas*) to perform that audit. The audit services will be financed out of the loan proceeds. The project's audited financial statements will be filed with the Bank no later than 120 days following the end of the entity's fiscal year, pursuant to the procedures and terms of reference previously agreed upon with the Bank. The project audit will include a review of procurement processes, in addition to the Bank's actions and reviews. The audit of this operation will require an independent private firm of auditors, eligible with the Bank, as specified in the Financial Management Policy for IDB-financed Projects (document OP-273-2). The auditors could be the same as the firm that audited the company's financial statements, provided it is eligible with the Bank. In addition, during the loan implementation period, audited financial statements will be requested for the borrowing entity, which will be sent to the Bank no later than four

months following the end of the entity's fiscal year, starting in the year in which project execution begins.

- 3.8 **Recognition of expenditures.** Pursuant to document GN-2259-1 (Operational Policy OP-507), the Bank may recognize against the local contribution, eligible expenses made by the borrower before the loan approval date, in respect of studies, equipment, works implementation, and program supervision, for up to US\$8 million (6.9%), provided requirements substantially analogous to those defined in the loan contract have been fulfilled. Such expenses must have been incurred on or after 27 May 2010, the project profile approval date, but in no circumstances more than 18 months before the loan approval date.
- 3.9 **Evaluation and monitoring.** CAESB will file six-monthly status reports with the Bank, indicating achievements in each of the components and in terms of the program's overall performance, based on the indicators agreed upon under the Results Matrix. The executing agency will also submit a progress report, prepared by an independent consultant, 24 months after the loan disbursement eligibility date. The final program evaluation will be made by an independent consulting service no later than 90 days after 90% of the loan proceeds have been disbursed, and will include: (i) the results of financial execution by component; (ii) fulfillment of the established targets, according to the agreed-upon outcome and impact indicators; (iii) an ex post economic evaluation; and (iv) compliance with contractual conditions, among other issues.

Development Effectiveness Matrix				
Summary				
I. Strategic Alignment				
1. IDB Strategic Development Objectives		Aligned		
Lending Program		Lending to support climate change initiatives, renewable energy and environmental sustainability.		
Regional Development Goals		i) Incidence of waterborne diseases (per 100,000 inhabitants), and ii) CO2 emissions (kilograms) per \$1 GDP (PPP).		
Bank Output Contribution (as defined in Results Framework of IDB-9)		i) Households with new or upgraded water supply, ii) Households with new or upgraded sanitary connections, iii) Climate change pilot projects in agriculture, energy, health, water and sanitation, transport, and housing, and iv) Number of projects with components contributing to improved management of terrestrial and marine protected areas.		
2. Country Strategy Development Objectives		Aligned		
Country Strategy Results Matrix		GN-2662-1	i) Support the implementation of an institutional framework to make service delivery more efficient, and ii) Increase the coverage and quality of sanitation services with emphasis on urban areas.	
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		Highly Evaluable	Weight	Maximum Score
		9.1		10
3. Evidence-based Assessment & Solution		10.0	33.33%	10
3.1 Program Diagnosis		3.0		
3.2 Proposed Interventions or Solutions		4.0		
3.3 Results Matrix Quality		3.0		
4. Ex ante Economic Analysis		10.0	33.33%	10
4.1 The program has an ERR/NPV, a Cost-Effectiveness Analysis or a General Economic Analysis		4.0		
4.2 Identified and Quantified Benefits		1.5		
4.3 Identified and Quantified Costs		1.5		
4.4 Reasonable Assumptions		1.5		
4.5 Sensitivity Analysis		1.5		
5. Monitoring and Evaluation		7.2	33.33%	10
5.1 Monitoring Mechanisms		2.3		
5.2 Evaluation Plan		5.0		
III. Risks & Mitigation Monitoring Matrix				
Overall risks rate = magnitude of risks*likelihood		Low		
Identified risks have been rated for magnitude and likelihood		Yes		
Mitigation measures have been identified for major risks		Yes		
Mitigation measures have indicators for tracking their implementation		Yes		
Environmental & social risk classification		B		
IV. IDB's Role - Additionality				
The project relies on the use of country systems				
Fiduciary (VPC/PDP Criteria)	Yes	Financial Management: i) External control, and ii) Internal Audit. Procurement: Advanced use of national public bidding (electronic public bidding system).		
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	Yes	Improving watershed water quality, reducing contamination and strengthening the operational capacity of CAESB to manage the collection and treatment of wastewater. In addition, improving the use of water resources minimizing "water losses" in the water system and consolidating he implementation of the Environmental Management System(ESG) to attain the ISO-14000 certification.		
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 objective of the operation is to reduce the overload of existing water supply systems thereby delaying investment in new larger and costlier systems, while meeting: i) drinking water demand of the growing population of Brasilia in condominiums and adjacent localities through actions that increase the safety of the water supply, especially during periods of drought, ii) demand for sewerage coverage, restoring and improving the operation of piping systems and wastewater treatment, and iii) the need to strengthen weak aspects of operational management and governance of the company.

Overall, the project documentation provides a proper diagnosis of the problem and the discussion and supporting evidence of the factors contributing to the problem is adequate. Evidence on the effectiveness of the proposed interventions is properly discussed. The structure of the results matrix and its indicators is satisfactory.

The economic analysis is complete and meets the requirements of the DEM. The analysis for drinking water interventions uses the computational model SIMOP, commonly used in the sector, and for the sanitary sewer interventions nonparametric estimates of willingness to pay WTP are used. The Monitoring and Evaluation Plan meets the requirements. The proposed evaluation includes an ex-post cost-benefit analysis using methodologies to estimate the demand curve and WTP to capture the expected benefit of individual projects implemented.

The risks identified seem reasonable and include mitigation measures and related metrics.

Results Matrix											
Name of Project	CAESB Environmental Sanitation Program- BR-L1215										
Objective	The objective of the operation is to reduce the overload on existing water supply systems, postponing the incorporation of larger scale and more expensive systems. This objective will be achieved by expanding the drinking water and sanitary sewerage network to areas called "condominios" (condominiums) and outlying regions, and by strengthening CAESB management.										
Impact indicators (Includes the country strategy indicators to which this operation contributes)											
Indicator	Unit of measurement	Baseline	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	End of project	Comments / Means of verification
Extension of the period of service without rationing, with no immediate need for investment in new water sources	Years	0	2013							7	The Federal District Environmental Sanitation Company (CAESB) is conducting studies to fulfill the targets of the 2000 Water and Sewerage Master Plan, revised in 2005, to expand water supply sources, using Corumbá IV and Rio São Bartolomeu. The current project will enable these investments to be completed in a seven-year period.
Outcomes											
Indicator	Unit of measurement	Baseline	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	End of project	Comments / Means of verification
Flow of water produced	L/s	9,912	2013	...	...	10,325.70	10,412	...	...	10,412	Source of verification: SINOPSE (PPA) Calculation formula: Volume of water produced
Index of losses per connection	L /day /connection	261	2013	...	259.56	259.42	258.99	256	246	246	Source of verification: SINOPSE (PPA)/ RCADA (SICOC) Calculation formula: <u>Volume of water consumed</u> No. of active water connections
Index of utilization of installed water production capacity	%	69.06%	2013	...	...	73.00%	74.06%	...	...	74.06%	Source of verification: SINOPSE (PPA) Calculation formula: <u>Flow of water entering the drinking water treatment plants (WTPs)</u> Flow from the project's WTPs
Percentage of the population with household access to the drinking water network	%	98.04%	2013	...	...	98.34	...	99.24	...	99.24%	Source of verification: RIG (PRP) Calculation formula: <u>Total population served with water supply</u> Urban population of the município
Percentage of the population with access to the sanitary sewerage network	%	81.97%	2013	...	...	82.02	83.49	...	84.97	84.97%	Source of verification: RIG (PRP) Calculation formula: <u>Total population served by the sewerage network</u> Total population of the município
Percentage of samples of effluents from wastewater treatment plants (WWTPs) that fulfill the ANA wastewater treatment quality standards	%	85.19%	2013	...	86.39	87.19	...	87.67	88.17	88.17%	Source of verification: POE Calculation formula: <u>Sum total of changes to parameters meeting the standards</u> Sum total of all changes to parameters analyzed
Indicator of operational reliability of the sanitary sewerage system	Discharges/Year	235	2013	...	225	160	109	55	...	55	Source of verification: POE Calculation formula: No. of times wastewater is discharged into water bodies owing to power outages or operational problems/Year
Energy efficiency index	kWh/m³	0.684	2013	...	...	0.083	0.011	...	...	0.653	Source of verification: GCEN Calculation formula: <u>Electric energy consumption</u> Flow (water produced + wastewater collected)
No. of consultations addressed to the environmental management system	Hits	0	2013	...	...	...	...	...	2,000	2,000	Source of verification: Calculation formula: No. of system consultations



Outputs											
Component 1:											
Output	Unit of measurement	Associated outcomes	Cost	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	End of project	Comments / Means of verification
Household drinking water systems constructed, new or expanded	No. of connections (*)		29,115,544.44	...	3,608	5,934	3,956	...	...	13,498	Source of verification: PUGP
Drinking water supply systems refurbished	No. of systems (**)		6,889,833.06	1	2	2	...	...	...	5	Source of verification: PUGP
Drinking water treatment plants refurbished	No. of WTPs		2,389,863.40	1	2	1	...	...	...	4	Source of verification: PUGP
Drinking water supply systems interconnected	No. of interconnected systems		5,578,761.20	...	2	1	...	...	...	3	Source of verification: PUGP
Rehabilitation of water storage reservoirs	No. of reservoirs refurbished (***)		19,385,682.34	...	1	3	2	1	...	7	Source of verification: PUGP
Households newly connected to the sanitation network system: Grande Colorado, Lago Sul, Ingra 8, Jardim Botânico, Nova Colina, and Sobradinho)	No. of connections		49,305,170.29	3,423	3,423	3,424	3,424	3,424	...	17,118	Source of verification: PUGP
Collectors and/or interceptors refurbished	Km		15,741,833.92	...	18.32	18.32	18.32	...	...	45.8	Source of verification: PUGP
Wastewater treatment plants (WWTPs) and pumping stations rehabilitated	No. of units refurbished		10,207,595.43	...	5	6	1	...	...	12	Source of verification: PUGP
Component 2:											
Output	Unit of measurement	Associated outcomes	Cost	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	End of project	Comments / Means of verification
New micro-meters installed (measurement of commercial losses)	No. of water meters installed		50,544,273.91	...	178000	80000	80000	80000	...	418000	Source of verification: PUGP
Leaks repaired (control of physical losses)	Km of networks		12,043,486.82	...	...	...	250	250	...	500	Source of verification: PUGP
Reduction in energy consumption (energy efficiency program), inefficient motors replaced by efficient ones	No. of motors		6,155,057.06	...	212	212	...	...	...	424	Source of verification: PUGP
WWTPs with chemical application system refurbished	No. of WWTPs		787,091.70	...	1	1	2	...	...	4	Source of verification: PUGP
Laboratories implemented to monitor water quality	No. of laboratories		1,930,834.32	...	1	1	...	...	...	2	Source of verification: PUGP
Pilot-scale WWTPs and WTPs constructed to obtain design parameters for real-size plants	No. of pilots implemented		1,549,586.78	...	2	...	...	...	...	2	Source of verification: PUGP
Remodeling of the industrial maintenance area	Remodeling completed		3,444,190.28	...	1	...	...	...	...	1	Source of verification: PUGP
Strengthening of the information technology (IT) area (purchase of hardware, licenses, and back-up system)	CAESB IT area strengthened		6,547,274.70	...	...	...	...	1	...	1	Source of verification: PUGP
Plan of action to modernize corporate governance	Plan of action implemented		6,509,198.65	...	...	1	...	...	...	1	Source of verification: PUGP
Water and sewerage master plan revised	Revised plan		2,120,259.97	...	1	...	...	...	...	1	Source of verification: PUGP
Upgrading of the Descoberto WTP to obtain ISO 14.000 WTP certification	WTP		5,946,723.73	...	...	...	...	1	...	1	Source of verification: PUGP
Upgrading of the Norte WWTP to obtain future ISO 14.000 certification	WWTP		3,482,880.76	...	...	...	1	...	...	1	Source of verification: PUGP
Upgrading of the PHIQ laboratory to obtain ISO 1725 certification	Laboratory		983,864.62	...	...	...	...	1	...	1	Source of verification: PUGP
Offsetting of CO <sub>2</sub> in the WWTPs: reforestation and revitalization of UC	Hectares		983,864.62	...	50	50	50	...	...	150	Source of verification: PUGP
Communication strategy prepared and approved	Document		200,000	1	...	...	...	...	...	1	Source of verification: PUGP

**Description:** (\*) No. of connections planned as a result of the implementation of water supply systems in the Jardim Botânico and Bartolomeu neighborhoods and the Sobradinho I and II condominiums. (\*\*) Systems restored: water capture reservoir Santa Maria, Canal Cabeça do Veadó, SAA Engenho das Lages, Rio Descoberto raw water pumping station, and Cabeça do Veadó raw and treated water pumping stations; (\*\*\*) restoration of water reservoirs in Brasília (2), Gama (2), Brazlândia, Santa Maria, and Taguatinga.

## FIDUCIARY AGREEMENTS AND REQUIREMENTS

**Country:** Brazil  
**Project number:** BR-L1215  
**Name:** CAESB Environmental Sanitation Program  
**Prepared by:** Carlos Lago (Fiduciary Specialist-FMP/CBR)  
Santiago Schneider (Fiduciary Specialist-FMP/CBR)

### I. EXECUTIVE SUMMARY

- 1.1 The institutional evaluation for the project's fiduciary management and execution was based on: (i) the country's fiduciary context; (ii) the results of the fiduciary risks evaluation; (iii) the analysis of the institutional capacity of the Federal District Environmental Sanitation Company (CAESB); and (iv) working meetings held with the government and the project team. As a result, the following procurement- and financial management-related fiduciary agreements have been prepared for project execution.

### II. FIDUCIARY CONTEXT

- 2.1 Brazil has a solid and transparent regulatory and institutional framework, with robust country fiduciary systems that allow for proper management of administrative, financial, internal control and procurement processes, in line with the principles of transparency, economy, and efficiency. These systems require continuous improvement and strengthening, to adapt still further to the new fiduciary requirements. Accordingly, the Bank's fiduciary strategy for Brazil aims at making progressive and sustainable use of the country's fiduciary systems.
- 2.2 The executing agency for the proposed operation will be CAESB, a semipublic company, governed by the Law on Corporations (*Lei de Sociedades Anónimas*), and controlled by the Federal District (DF) government. It is organized according to the criteria of the Law on Corporations, and its top-level governance body is the general shareholders meeting.
- 2.3 In terms of fiduciary management, CAESB operates as a private enterprise with its own management systems; nonetheless it is governed by Law 8.666/93 (tenders) for the contracting of services and procurement of materials and equipment related to the service.
- 2.4 CAESB was coexecuting agency of the Basic Sanitation Program in the Federal District, partly financed by the Bank (loan contract 1288/OC-BR), in which the borrower was the DF government, and the executing agency was the State

Infrastructure and Works Department. The company was responsible for implementing subprogram 1, “Increasing coverage and improving management of water and sewerage services,” for US\$121.9 million. To execute this subprogram, a Local International Resources Management Unit was set up in the planning office, reporting directly to the president of the company. This unit coordinated CAESB activities and reported directly to the program’s executing unit, attached to the DF government. The Engineering Division’s Projects and Works Superintendencies participated directly in the preparation of projects and designs, and also in works execution. Procurement processes were executed by a special committee, attached to the Tendering Office, reporting to the Office of the President.

- 2.5 With the proceeds of the aforementioned loan, the company received institutional strengthening in the form of support from the Bank in a process to improve administrative efficiency in several of its areas. In the execution of this operation, the Bank validated the company’s adequate institutional, technical, and financial capacity to implement the program and ensure its sustainability.

### **III. FIDUCIARY RISK EVALUATION AND MITIGATION ACTIONS**

- 3.1 The current capacity of CAESB to implement the program was evaluated through the institutional capacity assessment system (ICAS). The results of that exercise show that it has adequate institutional capacity and a low level of institutional risk in the fiduciary area. In that area, the project preparation activities identified a lack of direct experience among the permanent CAESB technical staff in executing projects with the Bank and in terms of their knowledge of fiduciary policies, which could impair efficient execution of the program. The following actions are envisaged to mitigate this risk: (i) the creation of a full-time program management unit (PUGP); (ii) the contracting of a firm specializing in project management to support the PUGP in management and administration, which will complement the team with specialists, and provide administrative support and specific consulting services; (iii) the creation of a specific committee to provide support in the preparation and processing of the project’s procurement processes, following Bank and/or country policies; (iv) the implementation of the program’s management/financial system that will ensure that the financial functions fulfill the Bank’s accountability requirements; (v) the preparation of Operating Regulations describing the detailed flow of fiduciary processes; and (vi) training actions and support by the Bank’s fiduciary team.

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

- 4.1 The fiduciary aspects to be considered in terms of special fiduciary conditions are as follows: Conditions precedent to the first disbursement: (i) appointment of the PUGP’s staff; (ii) approval by the Bank of the terms of reference for contracting the firm to support the work of the PUGP. Special execution conditions: (i) the

entry into force of the program's Operating Regulations approved by the Bank within four months following signature of the loan contract; and (ii) the contracting of the management firm and creation of the Special Bidding Committee for the program no later than six months following the loan contract signature date.

## V. AGREEMENTS AND REQUIREMENTS FOR PROCUREMENT EXECUTION

- 5.1 The procurement-related fiduciary agreements and requirements establish the applicable provisions when executing any procurement under the project.

### A. Procurement execution

- 5.2 The PUGP will carry out procurements in conjunction with the project's Special Bidding Committee. Works, goods, and nonconsulting services will be procured in accordance with the Policies for the Procurement of Goods and Works Financed by the Inter-American Development Bank (document GN-2349-9). Consultants will be selected and contracted pursuant to the Policies for the Selection and Contracting of Consultants Financed by the Inter-American Development Bank (document GN-2350-9), in both cases the March 2011 version. Procurement processes will be reviewed by the Bank as indicated in the procurement plan ([see link](#)).
- 5.3 **Procurement of works, goods, and nonconsulting services.** Contracting for works, goods, and nonconsulting services<sup>1</sup> generated under the program and subject to international competitive bidding (ICB) will be executed using the standard bidding documents (SBD) issued by the Bank. Procurements subject to national competitive bidding (NCB) will be executed using national bidding documents agreed upon with the Bank (or satisfactory to the Bank if not agreed upon to date). For purchases of technical goods or services, the Bank has accepted the ComprasNet and Banco do Brasil online tendering systems up to the ICB amount.
- 5.4 **Selection and contracting of consultants.** Consulting service contracts generated under the program will be executed using Standard Requests for Proposals (SRFP) issued by the Bank. The program's sector specialist will be responsible for reviewing the terms of reference for the contracting of consulting services.
- 5.5 **Individual consultants' selection.** Individual consultants will be selected on the strength of their qualifications for the work, after comparing the qualifications of at least three candidates. When circumstances allow, announcements may be placed in the local or international press in order to obtain background information on qualified consultants.
- 5.6 **Recognition of expenditures:** The Bank may recognize, against the local counterpart funding, up to US\$8 million (6.9%) in eligible expenses incurred by

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<sup>1</sup> In accordance with the Bank's procurement policies, nonconsulting services are treated similarly to goods.

- the borrower prior to the loan approval date for studies, equipment, works implementation, and program supervision, provided requirements substantially similar to those established in the loan contract were met. To be eligible, such expenses will have been incurred as from the project profile approval date of 27 May 2010, but in no circumstances more than 18 months before the loan approval date.
- 5.7 **Direct contracting:** No direct contracting is envisaged.
- 5.8 **Procurement thresholds.** The borrower or the executing agency, as the case may be, will be informed of the threshold for using international competitive bidding at [www.iadb.org/procurement](http://www.iadb.org/procurement). Below such threshold, the selection method will be determined on the basis of the complexity and characteristics of the procurement or contract in question, which will be reflected in the Bank-approved procurement plan.
- 5.9 **Recurring expenses.** Operation and maintenance expenses required during the project's useful life, including: communication expenses, translations, office supplies, photocopies, postage, and other expenses required for proper project administration and incurred within the PUGP, will be paid with loan proceeds as part of the annual budget approved by the Bank and will be incurred in keeping with the PUGP's administrative procedures. These expenses will be reviewed and accepted by the Bank, provided they abide by the basic principles of economy, efficiency, competition, and transparency. However, operating expenses do not include the salaries of civil servants.
- 5.10 **Domestic preference.** Domestic preference margins will not be applicable.
- 5.11 **Initial procurement plan.** Attached hereto is the current proposal. The version to be agreed upon may be adjusted during project execution based on the circumstances (procurement plan link).
- 5.12 **Procurement supervision.** All procurement processes involving international competitive bidding, direct contracting, or consulting service selection, costing an estimated US\$1 million or more, will be reviewed by the Bank ex ante. In view of the project's characteristics and the PUGP's operating capacity, other procurement processes will be reviewed annually ex post. Based on the annual audit reviews, the Bank can modify the review method indicated in the Procurement Plan.
- 5.13 **Records and files.** The files must be kept in the PUGP offices under appropriate security conditions.

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

### **A. Budget, accounting, and information system**

- 6.1 CAESB is a semipublic company, governed by the Law on Corporations, whereby financial provisions and statements are prepared pursuant to the accounting policies adopted in Brazil, with opinions, interpretations, and

guidelines issued by the Accounting Procedures Standardization Committee (Comité de Pronunciamentos Contábeis–CPC), following approval by the Federal Accountancy Council (CFC).

- 6.2 CAESB operates an integrated financial management system that integrates budgetary, financial, and accounting data and issues the financial reports. At the present time, CAESB's information technology (IT) team is implementing a management/financial reporting system for project administration, which will make it possible to issue the information required by the project. This system will be linked directly to the company's other systems.
- 6.3 In view of the above, the Bank's fiduciary team will check that the system in question is fully operational (100%) and that it can extract the minimum financial information required from the project under Bank requirements. If this is not the case, CAESB will need to purchase a financial system that makes it possible to present this information on a reliable and timely basis.

**B. Disbursements and cash flows**

- 6.4 The program will operate with funds advanced by the Bank to meet the project's actual liquidity needs for a maximum 180-day period. With each disbursement, CAESB will submit real financial planning (cash flow) reflecting the monthly need for resources from the Bank and the local counterpart covering a minimum period of 180 days. In addition to the cash-flow projection, each disbursement request will be supported by a statement on implementation of the technical and fiduciary performance commitments. For future advances of funds, at least 80% of funds already advanced will need to be accounted for.
- 6.5 Documentation in support of expenses incurred will be reviewed ex post at the time of the annual audits or whenever the Bank so requests. The ex post review will be duly documented in a report structured according to the Bank's auditing requirements.
- 6.6 Expenses considered ineligible by the Bank will be reimbursed from the local counterpart or from other resources, at the Bank's discretion, depending on the nature of the ineligibility.

**C. Internal control and internal audit**

- 6.7 The environment and procedures for internal control, communication, information, and monitoring of the company's activities, comply with Brazilian state and federal standards applicable to a semipublic enterprise.
- 6.8 CAESB's internal control procedures are the responsibility of its oversight area (PRA), which is mandated to exercise internal control within the firm and is responsible for the analysis and inspection of budgetary, financial, and asset accounting matters, as well as operational procedures and staff actions, on issues of legality, legitimacy, economy, efficacy, and management efficiency.
- 6.9 This control unit is subordinated to the office of the president and the board of directors, and is attached to the management board. Its current structure consists

- of three coordination units, two of which are specifically audit-related (accounting, financial, and budgetary auditing (PRAA) and administrative, human resources, and works auditing (PRAD)), and one relating to corporate governance and external control (PRAG).
- 6.10 The oversight area performs audit activities in the widest variety of areas of the company (accounting, financial, budgetary, tenders, property, contracts, among others), and is also responsible for advising the collegiate bodies (collegiate board, administration and supervision board, general shareholder meeting), pursuant to the annual internal audit plan of the oversight area (PAAAI), which is approved by the chair of the management board and by the State Transparency and Oversight Department (STC).
- D. External control and reports**
- 6.11 In addition to the activities undertaken by national control bodies (the Federal District Audit Department (*Tribunal de Contas*), the STC, the Office of the Comptroller General of the Union), external control and the annual external audits of CAESB's financial statements are performed by an independent firm of external auditors, currently KPMG.
- 6.12 The project's financial statements and expenditure eligibility will be audited each year by an independent firm of auditors acceptable to the Bank, which will be contracted by CAESB, or else by the DF Audit Department, which is eligible with the Bank to perform such audits.
- 6.13 Should an external audit firm be used for the program, it could be the same firm that audits CAESB's financial statements, provided it is eligible with the Bank. This would make it possible to optimize costs and have an integrated view of control for the executing agency and its management of the program. The project's audited financial statements will be filed annually with the Bank no later than four months following the end of the executing agency's fiscal year, pursuant to the procedures and terms of reference previously agreed upon with the Bank.
- 6.14 The contents of the reports and the opinions to be issued will abide by the terms of reference prepared by the executing agency and accepted by the Bank, in accordance with current international auditing standards and other regulations, and pursuant to the procedures observed by the Bank. The audit services will be financed out of the loan proceeds.
- 6.15 The Bank will request audited financial statements from the borrower, along with financial information to complement those statements, during the project implementation period, until all project resources have been disbursed. These statements will be sent to the Bank annually no later than four months after the end of the executing agency's fiscal year, starting in the year in which project implementation begins.

## E. Supervision plan

- 6.16 The supervision plan is designed for a low-risk operation. This plan may be modified during program execution based on the observed risk circumstances or to satisfy any additional control needs decided on by the Bank.

SUPERVISION ACTIVITY	SUPERVISION PLAN			
	NATURE-SCOPE	FREQUENCY	ENTITY IN CHARGE	
			BANK	EXECUTING AGENCY
PROCUREMENT	Review of processes for the procurement and contracting of works and consulting services	As indicated in the procurement plan	Sector and procurement specialist	PUGP
	Review of processes above the ICB and direct contracting thresholds	Throughout the implementation period	Sector and procurement specialist	PUGP
	Supervision visit	Annual	Sector and procurement specialist	
FINANCIAL	Ex post review of disbursements and procurements	Annual	Fiduciary team	PUGP-external auditors
	Annual audit	Annual	Fiduciary team	External auditors
	Review of disbursement requests	Periodic	Fiduciary team	
	Supervision visit	Annual	Sector specialist and fiduciary team	

## F. Execution mechanism

- 6.17 CAESB, acting through the PUGP, will be responsible for the coordination, execution, evaluation and monitoring, and fulfillment of the deadlines and targets agreed upon for it, as well as compliance with the Bank's policies. The PUGP consists of a manager, a specialist, and a technical officer; and it will be supported by a project management firm, which will complement the team with specialists and provide administrative support and specific consulting services when necessary. The team will have specialists in: engineering, financial-accounting, planning and control, environment, and procurement. A Special Bidding Committee will be set up for the project's procurement processes; and works inspection support services can also be contracted. Operating Regulations will be established for the execution of the operation.



DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

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

Brazil. Loan \_\_\_\_/OC-BR to *Companhia de Saneamento Ambiental do Distrito Federal (CAESB)*. CAESB Environmental Sanitation Program

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such contract or contracts as may be necessary with *Companhia de Saneamento Ambiental do Distrito Federal (CAESB)*, as Borrower, and with the Federative Republic of Brazil and the Federal District, as Guarantors, for the purpose of granting the former a financing to cooperate in the execution of the CAESB Environmental Sanitation Program. Such financing will be for an amount of up to US\$170,840,000 from the Ordinary Capital resources of the Bank, and will be subject to the Financial Terms and Conditions and the Special Contractual Conditions of the Project Summary of the Loan Proposal.

(Adopted on \_\_\_\_ 2014)