

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PANAMA

PANAMA CITY AND BAY SANITATION PROGRAM II

(PN-L1109)

LOAN PROPOSAL

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REQUIRED	
1.	Program Execution Plan and Annual Work Plan http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=39635217
2.	Monitoring and Evaluation Plan http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=39706144
3.	Procurement Plan http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=39706160
4.	Environmental and Social Management Report http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=39633685
OPTIONAL	
1.	Technical Analysis http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=39706184
2.	Socioeconomic Analysis http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=39706193
3.	Institutional Financial Analysis http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=39706197
4.	Institutional Capacity Assessment System analysis of the Program Coordinating Unit (PCU), execution plan, and proposed integrated management system for the PCU http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=39706202
5.	Panama City and Bay Sanitation Project I - (loan 1719/OC-PN) http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=39639057
6.	Panama City and Bay Sanitation Project I - Supplemental Financing (loan 1719/OC-PN-1) http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=39639066
7.	Analysis of compliance with the Bank's Public Utilities Policy http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=39706211
8.	Work breakdown structure for the program http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=39635212

ABBREVIATIONS

AWP	Annual work plan
BOD	Biochemical oxygen demand
CAF	Andean Development Corporation
CONADES	Consejo Nacional de Desarrollo Sostenible [National Council for Sustainable Development]
EIA	Environmental Impact Assessment
EIB	European Investment Bank
EIRR	Economic internal rate of return
ESA	Environmental and Social Analysis
ESMP	Environmental and Social Management Plan
ESMR	Environmental and Social Management Report
ICAS	Institutional Capacity Assessment System
IDAAN	Instituto de Acueductos y Alcantarillados de Panamá [National Water and Sewer Systems Institute]
JAAR	Junta Administradora de Acueductos Rurales [Rural Water Supply Administration Boards]
LIBOR	London Interbank Offered Rate
MINSA	Ministry of Health
O&M	Operation and maintenance
PCU	Program Coordinating Unit
PMC	Plan Maestro Consolidado del sistema de alcantarillado del área Metropolitana de la Ciudad de Panamá [Consolidated master plan for the Panama City metropolitan area sewerage system]
PSCBP	Programa de Saneamiento de la Ciudad y la Bahía de Panamá [Panama City and Bay Sanitation Program]
WWTP	Wastewater treatment plant

PROJECT SUMMARY
PANAMA
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Financial Terms and Conditions				
Borrower: The Republic of Panama, through the Ministry of Economy and Finance			Flexible Financing Facility*	
Executing agency: Ministry of Health (MINSa), through the Program Coordinating Unit (PCU)			Amortization period:	20 years
			Original weighted average life:	12.75 years
	Amount (US\$)	%	Disbursement period:	5 years
IDB (Ordinary Capital):	60,000,000	17.58	Grace period:	5.5 years
China Cofinancing Fund for Latin America and the Caribbean:***	50,000,000	14.65	Inspection and supervision fee:	**
Parallel CAF/EIB financing:	160,000,000	46.87	Interest rate:	LIBOR-based
Local:	71,370,000	20.91	Credit fee:	**
Total:	341,370,000	100.00	Approval currency:	U.S. Dollars from the Ordinary Capital
Project at a glance				
Project Objectives/Description:				
The general objective of the program is to help improve sanitary conditions in the Panama City metropolitan area and Panama Bay. The specific objectives are to: (i) reduce the pollutant load in the bay and the rivers crossing the metropolitan area; (ii) increase the flow of treated wastewater; and (iii) ensure the system's sustainability by building the capacity of MINSa's PCU.				
Special contractual conditions precedent to the first disbursement: (i) Signature of an interagency cooperation agreement between the National Water and Sewer Systems Institute (IDAA) and MINSa, through the PCU, under which the latter is to take over the operation and maintenance of the infrastructure built by the program, in accordance with the terms and conditions of the aforementioned agreement; and (ii) presentation of the program's multiyear execution plan, procurement plan, and financial plan, updated as of the date of the disbursement request (paragraph 3.1).				
Special contractual execution conditions: (i) Signature of an interagency agreement with the Ministry of the Environment prior to the use of the resources allocated to the Ramsar site; (ii) within the first six months of execution, official appointment, by executive order, of the Sector Sustainability Committee, as a special condition precedent to the use of resources under Component III allocated to the activities laid out in paragraph 1.27 (i) to (iv); and (iii) within the first six months of program execution, updating by the PCU of the Operating Regulations for the current program executed by the Bank, including all provisions set forth in the Environment and Social Management Report, under the terms previously agreed on with the Bank (paragraph 3.2).				
Special contractual obligations: (i) Before the end of year one of implementation, the PCU will have commissioned the following studies or work: (a) feasibility of reuse of digested sludge; (b) feasibility of reuse of treated wastewater; and (c) economic and technical evaluation of disinfection alternatives to replace chlorination; (ii) within the first two years of program execution, the strategy for managing the Panama Bay Ramsar site will be commissioned, including a plan for monitoring the mangrove around the wastewater treatment plant; and (iii) within the first year of program execution, implementation of the integrated management system set forth in paragraph 1.27 is to begin (paragraph 3.3).				
Exceptions to Bank policies: For the reasons set out in paragraph 3.7, the project team requests a waiver to the Procurement Policies as regards eligibility (documents GN-2349-9 and GN-2350-9) to allow firms from European Union countries that are not IDB members to be contracted in calls for tender, as the European Investment Bank is providing parallel financing for the program.				
Project qualifies as: SEQ <input type="checkbox"/> PTI <input type="checkbox"/> Sector <input type="checkbox"/> Geographic <input type="checkbox"/> Headcount <input type="checkbox"/>				

- (*) 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 operational and risk management considerations into account.
- (**) The credit fee and inspection and supervision fee will be established periodically by the Board of Executive Directors during its review of the Bank's lending charges, in accordance with the relevant policies.
- (***) This financing segment will be governed by the provisions stipulated in document GN-2686-4. The terms and conditions for this segment will be the same as those applied to the Bank's Ordinary Capital resources, including the applicable provisions of the Flexible Financing Facility.

I. DESCRIPTION AND RESULTS MONITORING

A. Background, problem addressed, and rationale

- 1.1 **Sector indicators.** Panama's population in 2013 totaled 3,850,735 inhabitants. Drinking water coverage is 98.2% in urban areas and 75.5% in rural zones. In terms of access to sanitation, coverage nationwide is 93.4%, with 30.3% of the population connected to the sewerage system, 29.7% using septic tanks, and 33.4% using latrines.
- 1.2 **Sector institutional framework.** Decree-Law 2 of 27 January 1997 established the institutional and regulatory framework for the provision of water and sewer services in Panama, assigning sector oversight and planning functions and responsibilities to the Ministry of Health (MINSa), regulation and supervision to the National Public Utilities Authority (ASEP), and service delivery to settlements with over 1,500 inhabitants to the National Water and Sewer Systems Institute (IDAAN). Settlements with fewer than 1,500 inhabitants are served by Rural Water Management Boards (JAAR) with technical assistance from MINSa. The MINSa Program Coordinating Unit (PCU), created by Executive Order 4 of 20 June 2001, implements and operates the infrastructure of the Panama City and Bay Sanitation Program (PSCBP).
- 1.3 **The Panama and San Miguelito districts** make up the Panama City metropolitan area, with a population of 1,303,552 inhabitants. Almost 20% of the population in these two districts lives under the poverty line. *Corregimientos* (sub-districts) within the San Miguelito district present unfavorable socioeconomic indicators, such as the existence of informal housing (over 50% in this district), high unemployment rates, and citizen security problems. Of this population, 96% have access to drinking water¹ and 66% have access to sanitary sewerage.² Some of the untreated wastewater, which totals around 400,000 m³/day, is discharged into rivers and streams and/or directly into the bay.
- 1.4 The Panama City metropolitan area has grown rapidly over the last decade, accompanied by investments in urban infrastructure including the subway, the north-south corridors, the coastal beltway, and eight grade separations. Considerable investments have been made in the sanitary sewerage system over this period in order to improve sanitation and environmental conditions for area residents, and to reduce pollution of the rivers crossing the city and of the bay's coastal areas. The need for these investments was defined in the 2001 consolidated master plan for the Panama City metropolitan area sewerage system and subsequent studies³ and they target wastewater collection, transport, pressure, and treatment works.
- 1.5 **Panama City and Bay Sanitation Program.** As required by the consolidated master plan for the Panama City metropolitan area sewerage system, over the last

¹ IDAAN. Statistical Bulletin 27 (2011-2013).

² Panama City metropolitan area study.

³ (i) Technical assistance study financed by the U.S. Trade and Development Agency (2003); (ii) studies and designs of networks, collectors, and pumping stations, Hazen and Sawyer, (2004); (iii) design of the Panama City Wastewater Interception, Treatment, and Disposal System, Nippon Koei, 2006; and (iv) reports on demand forecasts, treatment targets, industrial contributions, etc., Nippon Koei, 2008; among others.

10 years the PCU has been implementing the Panama City and Bay Sanitation Program, with an investment of some US\$900 million, with financing from the Inter-American Development Bank (paragraphs 1.17 and 1.18), Andean Development Corporation (CAF), Japan International Cooperation Agency (JICA), European Investment Bank (EIB), OPEC Fund for International Development (OFID), and national funds. The first stage of that program is almost completed. Under it, sanitary sewerage networks were built in low-income neighborhoods, incorporating over 11,000 home connections, collector and interceptor systems to eliminate most of the discharge into rivers, streams, and the bay,⁴ and the first module of the Juan Díaz Wastewater Treatment Plant (WWTP), which is now receiving an average of 1.9 m³/s of wastewater.

- 1.6 The first module came into operation in 2013 under the management of a private international operator. Through an external consultant, the PCU supervises compliance with the contractual obligations under the WWTP operation and maintenance (O&M) contract, observing that the operator has complied satisfactorily ([link](#)).^{5,6} Environmental issues are also supervised annually by the Bank to ensure all regulations are being complied with and that O&M is satisfactory. The PCU has assumed the management and supervision of O&M contracts until IDAAN has the necessary capacities (see paragraph 2.11).
- 1.7 Given the amount of time that has elapsed since the consolidated master plan was prepared, in 2014 the PCU began studies to update that plan.⁷ As is customary in such cases, those studies include an assessment of the capacity of existing infrastructure to meet the demand resulting from population growth in the area, and to identify infrastructure works for the collection, transport, and treatment needed to adequately meet that demand over a 20-year horizon. The investments identified include works that are necessary in the short and medium term in the catchment area of the Juan Díaz WWTP.
- 1.8 **The current catchment area of the Juan Díaz WWTP** covers a total of 15,230 hectares (46.7% of the Panama City metropolitan area). It collects wastewater from 12 of the 18 drainage systems into which the urban area is divided (Paitilla, Punta Pacífica, Matasnillo, Proyecto hotelero, Curundú, Casco Antiguo-Chorrillo, San Francisco, Río Abajo, Matías Hernández, Tocumen, Tapia, and Juan Díaz) and is home to over 808,000 inhabitants (62% of the metropolitan area's population), 88% of whom are connected to the sewerage network.

⁴ Including the west coast interceptor system which conveys wastewater to the WWTP, running parallel to the coastal beltway and made up of pipes and pumping stations.

⁵ See Chapter 3 of Monthly Report 85 (April 2015) on Support on the Execution, Supervision, and Administration of the Panama City and Bay Sanitation Project, Stage 1, Nippon Koei.

⁶ Along with the evaluation of the operation of the first module of the WWTP, there are numerous studies in the literature demonstrating the effectiveness of activated sludge technology in treating wastewater, such as Oliveira S. and Von Sperling M., "Performance evaluation of different wastewater treatment technologies operating in a developing country," *Journal of Water, Sanitation and Hygiene for Development*, January 2011 ([link](#)).

⁷ Contract in execution, supervised by the PCU, financed with the IDB loan and prepared by the firm Hazen and Sawyer.

- 1.9 The updated master plan identifies that, at year-end 2015, with 42% of the effluent produced by the area's population (around 335,000) transported to the first module of the Juan Díaz WWTP, the average flow for treatment will reach that expected in the design (2.2 m³/s), and thereafter the excess (of around 30% of the capacity of the first module in 2018) has to be diverted to the bay, causing occasional pollution, with the consequent environmental damage and risk to public health. This state of affairs jeopardizes the fundamental goal of the PSCBP.
- 1.10 The foregoing justifies commencing construction of a second module of the WWTP in the near term. The two modules together would achieve a treatment capacity of 5.5 m³/s, which would make it possible to treat the waste of some 752,000 inhabitants that the updated master plan estimates will be arriving at the WWTP by 2024. The study of the basic design for the second module also recommends a methodology incorporating a fixed cost and variable cost component depending on the effluent load, for more efficient and effective infrastructure O&M in future contracts. The program will use this methodology ([see link](#)).
- 1.11 In the collection and transport part of the Juan Díaz WWTP system, the updated master plan states that, although considerable progress is being made with the PSCBP in terms of improving the health and environmental conditions of the rivers and the bay, problems still persist as a result of the continuing haphazard growth of the metropolitan area, which puts the existing infrastructure under pressure. The problems detected are grouped as follows: (i) direct discharge and/or overflow into rivers and/or the bay;⁸ (ii) rights of way occupied by buildings, some standing on the collectors, and sections on private land;⁹ (iii) some sections with inadequate current and/or future capacity or design problems;¹⁰ (iv) nonoperational pumping stations;¹¹ (v) connections crossed with stormwater systems;¹² (vi) blockages and breakage;¹³ and (vii) homes not connected because they do not have the necessary permits.¹⁴ Wastewater discharges and overflows occur into the bay or onto streets in the Paitilla, Punta Pacífica, Calidonia, and Bella Vista drainage systems. The Curundú and Matasnillo river systems crossing the northern and central part of the city receive untreated wastewater discharges from residential buildings, shopping malls, hotels, etc. In these systems some 69,000 m³/day of untreated wastewater, produced by approximately 118,000 inhabitants, is estimated to flow into the bay and rivers, leading to environmental pollution, public health problems, and unpleasant odors, particularly affecting the tourism and the recreational corridor of the metropolitan area's coastal beltway.

⁸ Punta Paitilla, Matasnillo, Curundú collector, Río Abajo, and Juan Díaz systems.

⁹ Matasnillo, Curundú, and Juan Díaz systems.

¹⁰ San Francisco and Río Abajo systems.

¹¹ Punta Paitilla system.

¹² Punta Pacífica system.

¹³ Matasnillo and Curundú systems.

¹⁴ Matasnillo, Curundú, and San Francisco systems.

- 1.12 The updated master plan has identified the works that need to be done on these systems to improve the conveyance, transport, and separation of flows (stormwater and wastewater). This would reduce wastewater discharges, stormwater infiltration, and improper connections to the system, redirecting this water to the Juan Díaz WWTP for treatment. These works will be executed as part of this operation.
- 1.13 The updated master plan also indicates that the sewerage system receives between 491 and 895 liters/person/day—up to 5.2 times higher than the region's average. These volumes affect the WWTP's O&M and shorten infrastructure service life. To address this, the updated master plan proposes a series of studies and interventions aiming to: (i) reduce the inflow of stormwater and infiltration into the system; (ii) separate stormwater from sanitary wastewater in combined systems; and (iii) promote reduced water consumption through an awareness campaign. The studies and their implementation will be part of the operation.
- 1.14 **Sustainability of PSCBP infrastructure.** IDAAN's management indicators reveal major challenges: (i) average operating cost coverage index (last three years) of 84%, receiving State subsidies to cover investments and the operating deficit; (ii) water rates that have not been updated for a long time; (iii) high levels of unaccounted-for water (48%); (iv) inadequate treated water quality control, information, and monitoring system; (v) low levels of micrometering (64%); and (vi) low operational capacity to run its systems.
- 1.15 With Bank support (paragraph 1.16) IDAAN has been implementing a project to improve its operational performance in the framework of a sector reform strategy that proposes institutional and legal changes entailing, *inter alia*: (i) the design of the 2014-2018 National Sector Strategy; (ii) restructuring IDAAN to transform it into an efficient, sustainable enterprise (paragraph 2.10); (iii) strengthening the governing and regulatory bodies; and (iv) creating a subsidy fund. Until these operations achieve their objectives, the Government of Panama has adopted a management model in which MINSA's PCU is responsible for the O&M of the infrastructure built in the PSCBP in the short and medium term. This program envisages actions to strengthen the PCU's management and O&M capacity until IDAAN is able to assume long-term O&M (paragraph 2.10).
- 1.16 **Bank support in the sector.** The Bank has the following operations in execution: (i) Panama City and Bay Sanitation Program, Phase I (loan 1719/OC-PN-1); (ii) Unified Program for Sustainable Development of the Water and Sanitation Sector in the Provinces (loans 2025/OC-PN-1 and 2); and (iii) IDAAN Water and Sanitation Multiphase Investment Program, Phases I and II (loans 2367/OC-PN, 3002/OC-PN); and technical cooperation operations: (i) Strengthening of Energy Efficiency at IDAAN (ATN/OC-13443-PN, ATN/OC-13444-PN); and (ii) Support for the Program for Reform and Modernization of the Sector and IDAAN, Phase I (ATN/OC-14558-PN). Also, the Rural and Indigenous Water and Sanitation Program (GRT/WS-13329-PN) is being executed with funds from the Spanish Cooperation Fund for Water and Sanitation in Latin America and the Caribbean. These operations are helping improve the quality of service delivery to 428,313 persons in urban areas and 43,125 persons in rural and indigenous areas, clean up 48 km of rivers and

streams in the Panama City metropolitan area, and treat wastewater produced by 266,773 persons.

- 1.17 **State of execution of Bank loans 1719/OC-PN and 1719/OC/PN-1.** In March 2006 the Bank approved loan 1719/OC-PN ([see link](#)) so as to undertake the first stage of the consolidated master plan (PMC) and the PSCBP executed by MINSA through the PCU. This US\$45 million loan financed the construction of 32 km of sanitary sewerage networks in low-income neighborhoods, construction of 47.8 km of collector lines and the Matías Hernandez interconnections. Institutional strengthening actions were also taken to support IDAAN and to conduct additional studies for the second phase of the consolidated master plan. Program execution was completed in 2014.
- 1.18 In 2011 it was eligible for US\$30 million in supplemental financing (loan 1719/OC-PN-1), as a result of cost overruns, ([see link](#) and paragraph 1.20) in order to complete the scheduled works. With these resources, plus a national counterpart contribution, the construction and supervision of 19 km of the Curundú and Juan Díaz II collectors and their interconnections, the long interconnections of the Río Abajo/Monte Oscuro collectors, and 50 km of the San Miguelito Phase II networks are being executed. All the operation's resources are committed and the works are underway, some set for completion in 2015 and others in 2017.
- 1.19 **Program design.** The Government of Panama has asked the Bank for a loan of US\$110 million to continue expanding and refurbishing the Panama City metropolitan area sanitary sewerage system, and to build the PCU's institutional capacity. The measures to be implemented are geared towards: (i) increasing the system's treatment capacity; (ii) reducing discharges of crude wastewater spilling into rivers or the bay; (iii) ensuring that treated wastewater is discharged into receiving waters in compliance with the quality standards in force; (iv) financing studies to reduce inappropriate stormwater inflows and connections to the system; (v) promoting actions to reduce water consumption; and (vi) supporting the PCU's management capacity so it can cope with current and future challenges. These interventions should double wastewater treatment capacity, allowing a total of 130,140 homes to be included in the treatment system in the Juan Díaz WWTP's catchment area. This will improve water quality in the receiving waters, in terms of a reduction in fecal coliforms, with a positive impact on the environment and public health in the Panama City metropolitan area. This operation continues the support the Bank has been giving to the PSCBP over the course of three government administrations.
- 1.20 **Lessons learned.** This operation draws upon the lessons learned in loans 1719/OC-PN and 1719/OC-PN-1, which include: (i) the fact that the high management and technical capacity of the PCU has been made possible by the stability of the staff, despite three government terms having elapsed since 2006. In that regard, the support of multilateral agencies and the technical assistance of the Bank, in particular, have been key factors; (ii) the difficulties building the collectors, due to considerable changes needed to adapt to urban growth during the time between when the designs were drawn up and the works implemented, were contributing factors in the cost overruns that arose. These aspects were mitigated by incorporating the design-build contract modality in certain cases;

and (iii) the execution of a communication and citizen participation strategy minimized the population's resistance to building the works.

- 1.21 **Country strategy.** In its 2015-2019 five-year strategic plan the Government of Panama has identified the water and sanitation sector as a priority area, implementing the Plan de Sanidad Básica 100/0 to expand coverage and improve service delivery management and quality.
- 1.22 **Strategic alignment.** This is a year of transition toward a new Bank strategy with Panama. A Policy Note and a Water and Sanitation Sector Note have been prepared as inputs for the Bank's new Country Strategy with Panama 2015-2019, which prioritizes the collection and treatment of wastewater in the sector priority areas. This program is consistent with the objectives set out in the Water and Sanitation Sector Framework Document (document GN-2781-3) under dimension of success 1 "Countries achieve universal access to water and sanitation while improving service quality." Additionally, the program is aligned with two of the lending priorities of the Ninth General Increase in the Resources of the Inter-American Development Bank (document AB-2764): (i) lending to small and vulnerable countries; and (ii) climate change, sustainable energy, and environmental sustainability initiatives, given that it envisages the performance of works and institutional strengthening geared to increasing wastewater treatment capacity. It also dovetails with the regional development objective of "infrastructure for competitiveness and social welfare" and the regional target for the "incidence of water-borne diseases." Furthermore, the program is aligned with the Sustainable Infrastructure for Competitiveness and Inclusive Growth Strategy (document GN-2710-5), as it contributes to: (i) promoting access to infrastructure services; and (ii) supporting construction and maintenance of an environmentally and socially sustainable infrastructure.
- 1.23 **Consistency with Bank policies.** This operation and country sector objectives are consistent with the principles of the Public Utilities Policy (document GN-2716-6), and satisfy its financial sustainability and economic evaluation conditions insofar as the sustainability of the program's investments will be guaranteed for the PCU by means of budgetary allocations by the national government, made in a transparent way, in order to expand the country's wastewater treatment capacity (paragraph 2.11); in parallel, there is a plan in the sector to enhance IDAAN's operational and financial performance over the coming years (paragraph 2.10). The works to be financed with the project are also viable from a socioeconomic standpoint (paragraph 2.9) ([see link](#)).

B. Objectives, components, and cost

- 1.24 **Objectives.** The general objective of the program is to help improve sanitary conditions in the Panama City metropolitan area and Panama Bay. The specific objectives are to: (i) reduce the pollutant load in the bay and the rivers crossing the metropolitan area; (ii) increase the flow of treated wastewater; and (iii) ensure the system's sustainability by building the capacity of MINSA's PCU. The program's components are:
- 1.25 **Component I. Construction of the second treatment module of the Juan Díaz WWTP (US\$207.2 million).** This component will finance the studies and designs, civil works, electromechanical equipment, monitoring and control

systems, etc. of the second module of the Juan Díaz WWTP. An Environmental Management Plan will be implemented covering the WWTP's construction and operation phases and to protect the surrounding environment. The WWTP's O&M will be financed from the local contribution.

- 1.26 **Component II. Complementary works to the sanitary sewerage system (US\$98.4 million).** Studies, designs, supervision, and works will be financed to improve the wastewater collection and transport service to the Juan Díaz WWTP in the Punta Paitilla, Punta Pacífica, Matasnillo, Curundú, Chanis, and Calidonia/Bella Vista drainage systems. These works include the construction or refurbishment of 105 km of collectors and storm drainage and sanitary sewerage separated networks, together with the necessary interconnections.
- 1.27 **Component III. Institution strengthening (US\$11.6 million).** The following activities will be financed: (i) support for implementing the integrated management system for the PCU; (ii) strengthening the PCU's O&M, project management, and other capacities, including technical equipment and analysis of contract models for infrastructure O&M; (iii) development of a strategy to promote reduced water consumption and protect rivers and streams that includes, *inter alia*, a public communication and awareness-raising program; (iv) monitoring of water quality in rivers, streams, and Panama Bay; and (v) development of a strategy for managing the Panama Bay Ramsar site.
- 1.28 **Cost and financing modality.** The total cost of the program is estimated at US\$341.37 million. The financing structure, by category and source, is set out in the table below. The Bank's US\$110 million loan is from two sources: US\$60 million from the Ordinary Capital and US\$50 million from the China Fund. CAF is expected to approve its financing in July 2015 and the EIB in the last quarter of the year.

**Table I-1. Cost Table (US\$)
Cost and Financing PN-L1109**

Category or Component	IDB-Ordinary Capital	IDB-China Fund	CAF	EIB	Local counterpart	Total
1. Project administration	1,000,000	0	12,000,000	0	950,000	13,950,000
1.1 Administration and monitoring	400,000	0	12,000,000	0	900,000	13,300,000
1.2 Audits and evaluation	600,000	0	0	0	50,000	650,000
2. Direct costs						
Component I - Second treatment module of the WWTP	25,000,000	25,000,000	50,000,000	46,915,000	60,285,000	207,200,000
2.1 Design and construction of wastewater treatment plant	25,000,000	25,000,000	50,000,000	46,915,000	10,285,000	157,200,000
2.2 Operation and maintenance of wastewater treatment plant*	0	0	0	0	50,000,000	50,000,000
Component II - Complementary works to the sanitary sewerage system	23,872,500	25,000,000	40,442,000	0	9,085,000	98,400,000
2.3 Sanitary collectors and sewerage system refurbishment works	19,902,500	25,000,000	34,968,500	0	8,229,000	88,100,000
2.4 Studies, designs, and works supervision	3,970,000	0	5,474,000	0	856,000	10,300,000
Component III - Institutional strengthening and sustainability	6,450,000	0	4,100,000	0	1,050,000	11,600,000
3. Contingencies	3,677,500	0	3,457,500	3,085,000	0	10,220,000
4. Total cost	60,000,000	50,000,000	110,000,000	50,000,000	71,370,000	341,370,000

(*) WWTP: WWTP 1 O&M (18 months); WWTP 2 (2 years). However, the contract will include simultaneous O&M of the two modules for 10 years plus 18 months for module 1.

C. Results framework and key indicators

1.29 The table below gives the project's key indicators.

Table I-2. Key Indicators

Outcome Indicators	Baseline	Project end
Fecal coliforms (in colony forming units (CFU)/100 ml)	6,200	200
Homes in Panama City metropolitan area whose wastewater is treated	104,878	235,018
Homes benefiting from new or improved access to drinking water, sanitation, and/or wastewater treatment	N/A	130,140

II. FINANCING STRUCTURE AND MAIN RISKS

A. Lending instruments

2.1 The program has a cost of US\$341.37 million and will be financed with contributions from the IDB/China Fund (US\$110 million) through a specific investment loan and from the CAF (US\$110 million), the EIB (US\$50 million), and a local counterpart contribution of US\$71.37 million.

2.2 **Disbursement schedule.** Disbursements from the China Fund and the Ordinary Capital will take the form of advances depending on the program's liquidity needs, over a period of up to 180 days, and reimbursements of payments made or direct payments to suppliers. Program implementation will take five years.

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

Financing	Year 1	Year 2	Year 3	Year 4	Year 5	Total
IDB (Ordinary Capital)	13,601,566	16,410,335	12,393,142	8,625,148	8,969,809	60,000,000
IDB (China Fund)	7,092,500	12,955,515	23,133,882	6,037,158	780,946	50,000,000
Total	20,694,066	29,365,850	35,527,024	14,662,306	9,750,755	110,000,000

B. Environmental and social risks

- 2.3 Following the procedures of the Environment and Safeguards Compliance Policy (OP-703), an Environmental and Social Strategy was prepared for the program. This was approved at the Eligibility Review Meeting on 9 March 2015, confirming the operation's proposed category "B" classification. As envisaged in the Environmental and Social Strategy, an Environmental and Social Analysis (ESA) was conducted, including a review of the Environmental Impact Assessment (EIA) ([link](#) and [link](#)) prepared in 2006 for the three phases of the WWTP (Resolution IAR-021-97), which was included in a document posted on the Bank's and the executing agency's websites. Public consultations took place on 14 April and 5 May 2015 with the participation of representatives of the interested institutions and the local population. An Environmental and Social Management Report (ESMR) ([link](#)) was prepared drawing on the ESA. This report included impact mitigation actions and proposals to ensure the operation's environmental sustainability. The ESA found that the 2006 EIA's Environmental and Social Management Plan (ESMP) has been correctly implemented and the environmental and social impacts identified duly managed. It also confirmed that the PCU has the financial and technical resources to implement the ESMP for the two phases. These conclusions are shared with the personnel providing project supervision, which has been carried out by the IDB's Environmental Safeguards Unit.¹⁵
- 2.4 The impacts identified were the same as those included in the Environmental Management Plan of the EIA approved in 2006, for the construction (C) and operation (O) phases. The main positive impacts are: (i) job creation (C and O), estimated at 355 direct and more than 1,000 indirect jobs; (ii) improved water quality in the bay (O), as the two modules will avoid the discharge of around 34 t/day of BOD₅ with positive impacts on the Ramsar site and the adjacent ecosystem; and (iii) reduction in pathogens (O) and unpleasant odors in Panama City and Panama Bay (O). The main adverse impacts will be: (i) high levels of noise and dust (C); (ii) pollution due to poor handling of solid waste (C); (iii) loss of plant cover (C) with habitat loss (C); (iv) change of land use (C and O); (v) risk of unpleasant odors from the WWTP; and (vi) increased sewage sludge volumes associated with the expansion. On this latter point, the program includes an analysis of sludge utilization alternatives. During operation of the first module, an area of mangrove was found to be indirectly affected by the WWTP's implementation, and actions were proposed to identify the causes and propose solutions. These will be incorporated into the design of the new module (see paragraph 3.3). It was also determined that the WWTP expansion project would not have a direct impact on the Ramsar site.

¹⁵ Environmental and Social Supervision Report, IDB/ESG, November 2014.

- 2.5 The cost of the Environmental Management Plan is part of the cost of the design, construction, and O&M of the second module and was estimated at US\$2 million. Component III (paragraph 1.27) includes strategic actions for the sustainability of the operation that strengthen its environmental and social dimensions.

C. Fiduciary risks

- 2.6 The financial management and procurement risk is low as the PCU's staff have ample experience managing projects with multilateral agencies ([Annex III](#)).

D. Other project risks

- 2.7 **Other risks.** The risk analysis identified some of the potential medium risks relating to public management and governability (insufficient resources for executing the operation and O&M, delays in approval from the comptroller general, and poor coordination between sector entities such as MINSA, IDAAN, CONADES and the Executive Secretariat of Presidential Targets), development (inadequate O&M of the works built), and environmental sustainability (external physical damage and inappropriate discharges into the system). The proposed mitigation measures include: (i) appropriate management of the budget items and funds with the relevant authorities; (ii) a contract for the second module that includes the design, construction, and O&M for a period of not less than five years, and strengthening the PCU's technical and operational management; (iii) promoting the adaptation of discharge standards; and (iv) official appointment, by executive order, of the Sustainability Committee made up of sector agencies (paragraph 3.1).
- 2.8 **Technical feasibility.** Technical feasibility is supported by the review of the proposed expansion of the WWTP and final designs of sewerage network projects ([Technical Annex](#)), representing almost 70% of the program's total investment. The studies reviewed by the Bank's team were conducted by specialized consulting firms and, like the other infrastructure components, correspond to projects identified and selected as part of the study for the updated consolidated master plan. The works will be done by qualified firms, to be selected in accordance with the Bank's procurement policies and procedures. The implementation of the projects in the framework of the PSCBP made it possible to confirm that the practices of the PCU and its contractors for the engineering, works supervision, and studies were appropriate. Counterpart resources will be used in the program to hire specialized firms to operate and maintain the infrastructure to be built in the first few years.
- 2.9 **Socioeconomic feasibility.** A cost/benefit analysis was performed including construction of the second module of the WWTP and the complementary sanitation projects that form an integral part of the wastewater treatment project. To estimate the benefits, a contingent valuation methodology was used, utilizing updates to willingness to pay (WTP) estimates calculated in the consolidated master plan. Using a 12% discount rate, the project is socioeconomically viable, with an economic internal rate of return (EIRR) of 13.7% and a net present value of US\$36.9 million ([Socioeconomic analysis](#)). For complementary sanitation projects not yet evaluated because the designs have not been finalized, a cost/benefit analysis will be conducted, and only projects with EIRRs of over 12% can be financed by the program.

- 2.10 **Institutional and financial viability.** Given the somewhat inefficient levels of IDAAN's main management indicators (see paragraph 1.14), the PCU has been satisfactorily assuming the O&M responsibilities for the PSCBP infrastructure over the last few years. In the long term, IDAAN is expected to be able to take on responsibility for O&M of the PSCBP once it has improved its operational and financial performance. In this regard, with Bank support, a Transformation and Modernization Unit has been set up and a business plan prepared for IDAAN that includes operational and financial actions geared to improving income (installation of household meters, updating the user register, rate studies, etc.) and reducing expenses (reducing unaccounted-for water, optimizing system O&M, energy efficiency plan, etc.) in order to enhance the institution's performance in the coming years. This will be monitored annually in accordance with the contractual conditions established in the loans currently in execution (paragraph 1.16) ([Financial Analysis](#)).
- 2.11 This operation will follow the management scheme of the first WWTP module, in which the PCU supervises and manages a contract for the design, construction, and O&M with international contractors. This public-private partnership model worked satisfactorily for the first WWTP module, where, for example, the operator's implementation of modern and effective O&M plans for the WWTP, and O&M knowledge transfer to PCU staff were observed. The budgetary resources for implementing PSCBP activities are assigned to the PCU on an ad hoc basis in a transparent way through MINSA, which receives them from the national budget, as shown in the budgetary analysis ([Financial Analysis](#)). The annual MINSA and PCU budgets are published each year in the country's Official Gazette. The PCU's financial management has been satisfactory, including levels of budget execution of over 92%. The 2015-2019 Five-year Budget Plan includes the resources for this operation's construction and O&M.
- 2.12 In order to ensure the sustainability of program works, a contractual condition to this effect has been included (paragraph 3.10). During the disbursement period and until the fifth year thereafter, the executing agency and MINSA undertake to submit their annual budget to the Bank in the first 120 days following the close of each fiscal year. They will show the budgetary provisions relating to the activities financed through the program components, and the previous fiscal year's budget execution.
- 2.13 **Viability of program execution.** As the program executing agency, the PCU underwent an Institutional Capacity Assessment System (ICAS) analysis. This yielded satisfactory development with low risk, which is consistent with the experience and technical and operational capacity that it has shown in executing the PSCBP (paragraph 1.5). Various institutional strengthening activities were also defined with the PCU and have been included in Component III ([see ICAS Analysis](#)).
- 2.14 Cost overruns should be minimized (paragraph 1.18) as: (i) the second module of the WWTP will be built on the same site as module I, meaning that the technical information is known and the costs are up-to-date; (ii) the works will not be affected by the growth of the urban area or changes in zoning; (iii) the PCU has an experienced project management department (having supervised module I and undertaken the studies for module II); (iv) Punta Pacífica and Paitilla,

Calidonia/Nueva Vista and Matasnillo are consolidated urban areas; (v) the works to be built are targeted, and no changes in land use are expected; and (vi) the technologies due to be used are known.

III. IMPLEMENTATION AND MANAGEMENT PLAN

A. Summary of implementation arrangements

- 3.1 **Borrower and executing agency.** The borrower will be the Republic of Panama through the Ministry of Economy and Finance. The executing agency is MINSA through the PCU, which is currently executing the PSCBP. The PCU will be responsible for technical, social, and fiduciary management, and for O&M of the infrastructure financed by the program, until IDAAN has the capacity required in the long term. The approach also envisages the participation of a Sector Sustainability Committee comprising high-level representatives of MINSA, the PCU, IDAAN, the National Council for Sustainable Development (CONADES), and the Executive Secretariat of Presidential Targets. The Sector Sustainability Committee will support the PCU in coordinating the actions required to promote the program's strategy for reducing water consumption and protecting rivers and streams, and it will serve as a vehicle for boosting the sustainability of the sector's institutions over the medium and long term, coordinating, planning, and monitoring the actions of the sector reform and modernization strategy (paragraph 1.15). **The following will be special contractual conditions precedent to the first disbursement: (i) an interagency cooperation agreement is signed between IDAAN and MINSA, through the PCU, under which the latter is to assume the O&M of the infrastructure built by the program under the terms and conditions set forth in that agreement; and (ii) the program's multiyear execution plan, procurement plan, and financial plan, updated as of the date of the disbursement request, are presented.**
- 3.2 **Special contractual execution conditions.** (i) Signature of an interagency agreement with the Ministry of the Environment prior to the use of the resources allocated to the Ramsar site; (ii) within the first six months of execution, official appointment, by executive order, of the Sector Sustainability Committee, as a special condition precedent to the use of resources under Component III allocated to the activities laid out in paragraph 1.27 (i) to (iv); and (iii) within the first six months of program execution, updating by the PCU of the Operating Regulations for the current program executed by the Bank, including all provisions set forth in the Environment and Social Management Report, under the terms previously agreed on with the Bank.
- 3.3 **Special contractual obligations.** (i) Before the end of year one of implementation, the PCU will have commissioned the following studies or work: (a) feasibility of reuse of digested sludge; (b) feasibility of reuse of treated wastewater; and (c) economic and technical evaluation of disinfection alternatives to replace chlorination; (ii) within the first two years of program execution, the strategy for managing the Panama Bay Ramsar site will be commissioned, including a plan for monitoring the mangrove around the wastewater treatment plant; and (iii) within the first year of program execution, implementation of the integrated management system set forth in paragraph 1.27 is to begin.

- 3.4 **Financial and accounting management.** The PCU will be in charge of managing the resources and will submit audited financial statements¹⁶ for the program within 120 days of the close of each fiscal year or of the date of the last disbursement at program completion. The PCU will have an external audit firm acceptable to the Bank. This may be the same firm contracted by the PCU for other projects, based on the terms of reference previously approved by the Bank in line with the Financial Management Guide for IDB-financed Projects (document OP-273-6) and the IDB's Financial Reporting and Audit Handbook.
- 3.5 **Operating Regulations.** The PCU has Operating Regulations for the projects executed with the Bank and so must include the new operation in them and include all the provisions envisaged in the ESMR.
- 3.6 **Procurement.** Works and goods will be procured, and consulting services selected, in accordance with the Policies for the Procurement of Goods and Works Financed by the Inter-American Development Bank (document GN-2349-9) and the Policies for the Selection and Contracting of Consulting Services (document GN-2350-9); both approved in March 2011.
- 3.7 **Exceptions to Bank policies.** Given that the EIB will participate with parallel financing, a waiver to the Procurement Policies as regards eligibility (documents GN-2349-9 and GN-2350-9) is requested from the Board so as to allow firms from European Union countries that are not IDB members to be contracted in calls for tender, in view of the impossibility of separating and/or dividing the processes.
- 3.8 **Advance procurement, retroactive financing, and recognition of expenditures.** The Bank may finance, retroactively from the loan proceeds up to US\$22 million (20% of the proposed loan amount), and recognize such expenditures against the local contribution, up to US\$14,274,000 (20% of the estimated local contribution amount), eligible expenditures made by the borrower before the date of approval of the loan for the procurement of works, goods, and consulting services for the works for the second module of the WWTP and the Punta Paitilla and Punta Pacífica collectors, the consulting services for supervising the Punta Pacífica collector, and consulting services for Component III, provided that requirements substantially similar to those established in the loan contract have been satisfied. These expenses must have been made no earlier than 24 March 2015, and under no circumstances may they have been made more than 18 months before the loan approval date.
- 3.9 **Single-source selection.** Proyeco has been providing technical assistance and consulting services to PCU/MINSA since 2011 and its performance has been highly satisfactory. As part of these activities, it assisted the PCU in reviewing the structure and dimensioning of needs for management optimization in the light of increased O&M competencies resulting in a proposal for an integrated management system. To guarantee the correct implementation of the system by the PCU/MINSA, and ensure technical consistency in implementation, and as established in document GN-2350-9 paragraph 3.10 (a) and (d), the firm Proyeco

¹⁶ In the audited financial reports the resources of the China Fund and the Ordinary Capital must be identified separately, without this entailing the presentation of two separate reports with separate opinions from the auditors.

may be contracted directly for up to US\$950,000 to support PCU/MINSA's implementation of the integrated management system. Also, under Contract SBCC-CC-SCBP-02-2012 the consortium INFRAECO/DENGA/CPD CIENCIA/EES INTERNATIONAL was selected to prepare the baseline and the water quality monitoring program for the rivers and streams of Panama City and the seawater quality of Panama Bay. Its performance was highly satisfactory. Given the experience gained by the consortium, and its knowledge of the target region, as it drew up the baseline and monitored the program, together with the need to ensure technical consistency and unity of responsibility over the proper measurement of the project's impact, and as established in document GN-2350-9 paragraph 3.10 (a) and (d), the consortium may be contracted directly for up to US\$1.95 million.

B. Summary of results monitoring plan

- 3.10 **Operation and maintenance (O&M).** The borrower undertakes to: (i) ensure that project works and equipment are properly maintained in accordance with generally accepted technical standards; and (ii) submit to the Bank: (a) an annual preventive O&M plan for the project works and equipment containing a description of the main activities to be carried out during this period; a calculation of the financing required for O&M and evidence that sufficient funds have been budgeted for the following fiscal year; and (b) an annual maintenance report on the state of the project works and equipment over the course of the first quarter of each calendar year, until the fifth year after the end of the disbursement period.
- 3.11 **Monitoring and evaluation.** The PCU will present the following instruments as part of its monitoring system: (i) the procurement plan; (ii) the annual work plans (AWPs) and project execution plans; (iii) financial plans; (iv) audited financial statements; (v) environmental audits; and (vi) semiannual reports, including progress of the AWPs, the results obtained from execution of the activities, and a plan of action for the following six months on those aspects requiring corrective actions to enhance program performance. The proposed evaluation system will include: (i) verification of compliance with the targets agreed on in the results matrix ([Annex II](#)); and (ii) a performance monitoring report and its supervision plan geared to achieving its outcomes and evaluating program performance. Additionally, a midterm evaluation is planned 36 months after disbursement eligibility or when 50% of the proceeds from the Bank's loan have been disbursed, whichever occurs first, and a final evaluation once 90% of the loan proceeds have been disbursed. The initial and final evaluations will include: (i) financial execution results; (ii) fulfillment of output and outcome targets and progress on expected impacts; (iii) the degree of compliance with the environmental requirements and specifications for works, in accordance with the project's ESMP guidelines; (iv) the degree of fulfillment of the O&M tasks on the completed works; (v) the degree of fulfillment of the works plans; and (vi) the degree of fulfillment of the contractual commitments. The final evaluation will also include the ex post socioeconomic evaluation.

C. Significant post-approval design activities

- 3.12 The program includes financing for studies and final designs for improvement projects in Matasnillo, Curundú, Bella Vista, and Calidonia.

Development Effectiveness Matrix				
Summary				
I. Strategic Alignment				
1. IDB Strategic Development Objectives		Aligned		
Lending Program	-Lending to small and vulnerable countries -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)				
2. Country Strategy Development Objectives		Not Aligned		
Country Strategy Results Matrix				
Country Program Results Matrix		The Intervention Is not Included in the 2015 Operational Program.		
Relevance of this project to country development challenges (If not aligned to country strategy or country program)				
II. Development Outcomes - Evaluability		Evaluable	Weight	Maximum Score
		8.4		10
3. Evidence-based Assessment & Solution		7.6	33.33%	10
3.1 Program Diagnosis		3.0		
3.2 Proposed Interventions or Solutions		2.4		
3.3 Results Matrix Quality		2.2		
4. Ex ante Economic Analysis		10.0	33.33%	10
4.1 The program has an ERR/NPV, a Cost-Effectiveness Analysis or a General Economic Analysis		4.0		
4.2 Identified and Quantified Benefits		1.5		
4.3 Identified and Quantified Costs		1.5		
4.4 Reasonable Assumptions		1.5		
4.5 Sensitivity Analysis		1.5		
5. Monitoring and Evaluation		7.5	33.33%	10
5.1 Monitoring Mechanisms		2.5		
5.2 Evaluation Plan		5.0		
III. Risks & Mitigation Monitoring Matrix				
Overall risks rate = magnitude of risks*likelihood		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/FMP Criteria)	Yes	Financial Management: Budget. Procurement: Information System, Shopping Method.		
Non-Fiduciary				
The IDB's involvement promotes additional 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 objective of the project is to improve the sanitary conditions of the metropolitan area of Panama City and its bay, by reducing the amount of untreated sewerage that discharges directly into the rivers and the bay. The project will increase the capacity to treat the sewage generated by the sewage system of Panama City.

The POD presents the problems to be addressed by the project as well as the factors causing them. The magnitudes of the problems are provided and the proposed interventions are linked to the problems identified in the diagnosis.

The matrix has vertical logic. Not all outcome indicators are SMART since some are not specific. For example the indicator "quality of the Panama Bay improved." It is not clear whether the unit of measurement measures the improvement or the total number of coliforms before and after the project. All outcomes indicators have baselines, targets and sources of information. Not all output indicators are SMART given that some are not specific. For example, for the indicator "manuals, procedures and guidelines for the UCP developed and implemented", it is not specified how it will be known that it has been implemented. All output indicators have targets and sources of information. Three of the output indicators do not have baselines.

The project was analyzed using a cost-benefit analysis. The economic benefits correspond to the willingness to pay of the beneficiary families to improve the sanitation of the Panama City bay. This value was estimated using contingent valuation. 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 that follows the DEM guidelines. The operation will be evaluated using a reflexive methodology and an ex-post cost-benefit analysis and resources have been allocated to implement the plan.

Results Matrix	
Project name	Panama City and Bay Sanitation Program II
Project objective	The general objective of the program is to help improve sanitary conditions in the Panama City metropolitan area and Panama Bay. The specific objectives are to: (i) reduce the pollutant load in the bay and the rivers crossing the metropolitan area; (ii) increase the flow of treated wastewater; and (iii) ensure the system's sustainability by building the capacity of MINSA's PCU.

Indicator	Unit of measure	Baseline	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	Project end	Comments/Mean of verification
Outcomes										
Outcome 1: Wastewater treatment capacity in the Panama City metropolitan area increased										
Flow of treated wastewater in the Panama City metropolitan area	m ³ /sec	1.9	2015					5.1	5.1	PCU operational management report Final evaluation report
Households in the Panama City metropolitan area whose wastewater is treated by the Juan Díaz WWTP	Household	104,878 ¹	2015					235,018 ²	235,018	PCU operational management report Final evaluation report
Households in the Panama City metropolitan area whose wastewater is treated by the Juan Díaz WWTP ³	Percentage	25.7	2015					57.7	57.7	PCU operational management report Final evaluation report
Quality of water in Panama Bay improved	Fecal coliforms (in CFU/ 100 ml)	6,200	2015					200	200 ⁴	Values based on sampling point S-3 (Paitilla) baseline (Infraeco) PCU operational management report Final evaluation report
Outcome 2: Water quality in rivers and streams improved										
Quality of the water in the Matasnillo river improved, according to national standards	WQI ⁵	< 15	2015					>70	>70	Values based on sampling point E-7 baseline (Infraeco) PCU operational management report Final evaluation report
Quality of the water in the Curundú river improved, according to national standards	WQI	< 25	2015					>70	>70	Values based on sampling point E-6 baseline (Infraeco) PCU operational management report Final evaluation report

¹ Corresponding to a total population of 335,610 inhabitants and an average size of 3.2 persons per household.

² Corresponds to a total population of 752,056 inhabitants.

³ The total population of the Panama City metropolitan area is 1,303,552, while 808,404 inhabitants (62% of the metropolitan area's population) live within the catchment area of the Juan Díaz WWTP.

⁴ International standard for primary contact in recreational/bathing use. World Health Organization.

⁵ Water quality index - Infraeco baseline.

Indicator	Unit of measure	Baseline	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	Project end	Comments/Mean of verification
Outcome 3: Sanitation systems under the PCU's management operating and being maintained according to technical design specifications										
Complementary works of second module operating and being maintained according to technical design specifications	%	0	2015					100%	100%	PCU annual operational management report Final evaluation report
Second module of the Juan Díaz wastewater treatment plant operating and being maintained according to technical design specifications	Plant	0	2015					1	1	PCU annual operational management report Final evaluation report
Main management processes certified to international quality standards	Processes	0	2015					3	3	Standards ISO 9001:2008, 14001:2004 and OHSAS 18001:2007
Outcome 4: Effluent at WWTP intake with higher organic load										
Average organic load of effluent at WWTP intake increased	BOD (mg/liter)	104	2015					114	114	PCU annual operational management report Final evaluation report
Outcome 5: Database of water quality data available										
Database of water quality data on Panama Bay available on the MINSA website (MINSA)	Database	0	2015				1		1	PCU annual operational management report Final evaluation report
Outcome 6: Management strategy for Ramsar site complies with national legislation										
Strategy for management of Panama Bay Ramsar site approved by Panama's Ministry of the Environment	Strategy	0	2015					1	1	PCU annual operational management report Final evaluation report

Indicator	Unit of measure	Associated outcomes	Cost (US\$ million)	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Project end	Comments/Mean of verification (MV)
Outputs											
Component 1: Construction of second WWTP treatment module											
Output 1: Juan Díaz WWTP expanded - Module II	Plant	1	157.2	0	0	0	1	0	0	1	MV: Certificate of acceptance of the plant, issued by the consulting firm supervising the works and approved by the PCU's general coordination unit
Output 2: WWTP operating (Note: includes annual cost of operation and maintenance of both modules in years 4 and 5)	US\$ million	2	50.	0				25 0	25	50	MV: PCU annual operational management report
Households benefiting from new or improved access to drinking water, sanitation and/or wastewater treatment	Household			N/A					130,140	130,140	Corresponds to the sector indicator reflecting the number of households whose wastewater is treated by the second module of the Juan Díaz WWTP.

Indicator	Unit of measure	Associated outcomes	Cost (US\$ million)	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Project end	Comments/Mean of verification (MV)
Component 2: Complementary works to the sanitary sewerage system											
Output 3: Punta Paitilla and Pacifica collector systems built. (Note: the systems will include, among other works, the construction or refurbishment of collectors, stormwater and sanitary drainage separated networks, and interconnections)	System	1 and 2	19.6	0		2				2	MV: Certificate of acceptance of the plant, issued by the consulting firm supervising the works and approved by the PCU's general coordination unit Means of verification
Output 4: Matasnillo collector system built. (Note: the systems will include, among other works, the construction or refurbishment of collectors, stormwater and sanitary drainage separated networks, and interconnections)	System	1 and 2	36.3	0			1			1	MV: Certificate of acceptance of the plant, issued by the consulting firm supervising the works and approved by the PCU's general coordination unit
Output 5: Bella Vista and Calidonia collector systems built. (Note: the systems will include, among other works, the construction or refurbishment of collectors, stormwater and sanitary drainage separated networks, and interconnections)	System	1 and 2	36.2	0					2	2	MV: Certificate of acceptance of the plant, issued by the consulting firm supervising the works and approved by the PCU's general coordination unit
Output 6: Chanis collector system built. (Note: the systems will include, among other works, the construction or refurbishment of collectors, stormwater and sanitary drainage separated networks, and interconnections)	System	1 and 2	1.6	0					1	1	MV: Certificate of acceptance of the plant, issued by the consulting firm supervising the works and approved by the PCU's general coordination unit

Indicator	Unit of measure	Associated outcomes	Cost (US\$ million)	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Project end	Comments/Mean of verification (MV)
Output 7: Curundú collector system built. (Note: the systems will include, among other works, the construction or refurbishment of collectors, stormwater and sanitary drainage separated networks, and interconnections)	System	1 and 2	4.7	0					1	1	MV: Certificate of acceptance of the plant, issued by the consulting firm supervising the works and approved by the PCU's general coordination unit
Component 3: Institutional strengthening											
Output 8: Manuals, procedures and instructions for the PCU developed and implemented	Document	3	1.5	0		59				59	MV: Manuals, procedures, and technical instructions approved by the PCU. PCU training plan report including the needs diagnostic and program of studies. The planned outputs are: (i) General Quality, Environment, and Safety Manual (1); (ii) Planning Manual (1); (iii) Manuals for each section ⁶ (7); (iv) Procedures, applicable to the whole PCU (31); (v) Technical Instructions (18); and (vi) PCU training plan that includes the diagnostic of needs, plan and program of studies for building capacity in the PCU team on project management, leadership, technical capacity, O&M, supervision, etc. (1)
Output 9: Training activities and implementation of IMS ⁷ developed.	Activity	3	2.0	0		3	2	1		6	MV: List of participants and reports on execution of training and implementation activities Implementation means the following milestones have been met: Milestone 1: Support to management and the management support system Milestone 2: Executive training program Milestone 3: Engineering management training program Milestone 4: Specialized consulting

⁶ The Planning, Administration Section, Finance and Services, and Legal/Contracts Section manuals and other relevant manuals will take into account the recommendations laid down in the institutional diagnostic assessment report (ICAS) prepared during the operation design stage.

⁷ Integrated Management System.

Indicator	Unit of measure	Associated outcomes	Cost (US\$ million)	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Project end	Comments/Mean of verification (MV)
Output 10: Water consumption reduction strategy ⁸ developed	Strategy	4	0.2	0	1					1	MV: Semiannual progress reports. Strategy report prepared. Sustainability Committee strategy approval document The number of actions may vary according to the results of the study of the strategy and the decisions adopted by the committee
Output 11: Implementation activities executed for the water consumption reduction strategy and protection of rivers and streams for which the PCU is responsible	Activity	4	2.0	0			1	1	1	3	MV: Semiannual progress reports. Strategy implementation activity execution reports. The number of actions may vary according to the results of the study of strategy P3.3
Output 12: Program of monitoring water quality in the rivers, streams and Panama Bay implemented	Program	5	2.0	0				1		1	MV: Semiannual progress reports. Final implementation report on the monitoring program drawn up by the PCU Implementation means the following milestones have been met: Milestone 1: Monitoring campaigns Milestone 2: Technology transfer program (Ministry of the Environment and related institutions) Milestone 3: Proposed regulation establishing water quality parameters for various uses
Output 13: Strategy for management of the Panama Bay Ramsar site implemented	Plan	6	1.7	0					1	1	MV: Semiannual progress reports. Final report on implementation of the strategy drawn up by the PCU. Implementation means the following milestones have been met: Milestone 1: Signage and demarcation of 25 km of WR ⁹ in the Panama Bay wetlands Milestone 2: Construction of 3 control and monitoring posts (guards huts, Juan Díaz Sector and West Sector of the Wetland) Milestone 3: Monitoring migratory bird species Milestone 4: Construction of visitors center,

⁸ Includes action plan and terms of reference.

⁹ Wildlife refuge.

Indicator	Unit of measure	Associated outcomes	Cost (US\$ million)	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Project end	Comments/Mean of verification (MV)
											equipment, design, and erection of exhibition Milestone 5: Preparation of wetland wildlife refuge management plan Milestone 6: Design, construction, and interpretation of path
Output 14: Communication and awareness-raising program for rational water use, implemented	Program	4	2.2	0		1				1	MV: Semiannual progress reports. Final report on implementation of the communication and awareness-raising program Implementation means execution of the planned activities in the program to be designed

FIDUCIARY AGREEMENTS AND REQUIREMENTS

Country: Panama

Project No.: PN-L1109

Name: Panama City and Bay Sanitation Program II

Executing agency: Ministry of Health (MINSA) through the Panama City and Bay Sanitation Program Coordinating Unit (PCU)

Fiduciary team: Ezequiel Cambiasso and Juan Carlos Dugand (FMP/CPN)

I. EXECUTING AGENCY'S FIDUCIARY CONTEXT

A. Program Coordinating Unit

- 1.1 A similar structure will be used to that established in projects PN0062 (loan 1719/OC-PN) and PN-L1053 (loan 1719/OC-PN-1), which financed the first phase of the Panama City and Bay Sanitation Program, currently in execution. However, the government is weighing the possibility of again appointing a trustee or fund administrator¹ to streamline administrative and financial processes. MINSA has a Program Coordinating Unit (PCU), which was created by Executive Order 144 of 20 June 2001. It reports to MINSA, which in addition to coordinating the program is currently responsible for operation of the first module of the Juan Díaz Wastewater Treatment Plant (WWTP), until IDAAN is able to take over and operate the infrastructure constructed by the Panama City and Bay Sanitation Program (PSCBP).
- 1.2 The PCU is in the process of implementing an integrated management system that will operate with a matrix structure so as to allow more efficient operation, with managers in charge of the main components of the projects for which it is responsible. This should be implemented by mid-2016.
- 1.3 All selection, contracting, and payment processes will be managed by the PCU, but if a trustee is appointed, he or she will sign and execute these processes according to MINSA's instructions, thereby simplifying them, as the Comptroller General of the Republic's participation in contracts and their payments will not be required. The program budget is included in that of MINSA, and the PCU is responsible for reporting budget execution, based on the payments made by the PCU or reported by the fund administrator, if one is appointed.
- 1.4 The audit reports on the financial statements and the visits made during execution of the loans mentioned above show that the PCU has the organizational structure and experience necessary to execute the program. Additionally, the Institutional Capacity Assessment System (ICAS) was updated, showing a satisfactory level of development and low risk.

¹ During design of the operation, MINSA asked the IDB to allow a fund administrator or trustee to be hired, as was done when starting execution of project PN0062. If an agreement is not reached within the government on this mechanism, the mechanisms used for execution of project PN-L1053, which did not include a fund administrator, will continue to be used.

II. FIDUCIARY RISK EVALUATION AND MITIGATION ACTIONS

- 2.1 Procurement risk is low as the PCU's staff have considerable experience managing projects with multilateral agencies.
- 2.2 Financial risk is low in view of the PCU's experience and the low probability of significant deficiencies in the program's financial management.
- 2.3 If a consensus is not reached within the government, including the Comptroller General of the Republic, on the use of a fund administrator, the signing and endorsement of this contract might lead to delays in program start-up, as it is the administrator who signs the contracts. A prompt decision as to whether or not this mechanism is to be used, in consensus with the Comptroller General, would mitigate this risk.
- 2.4 There is a risk of an insufficient budgetary allocation being made. Experience shows this risk to have materialized in the past, and that if the spending limits set in the Social and Fiscal Responsibility Law² are exceeded, budgetary allocations may be cut. This risk will be mitigated by keeping the planning instruments up to date in order to manage budget allocations in a timely way and include them in the country dialogue.

III. CONSIDERATIONS FOR THE SPECIAL PROVISIONS OF CONTRACTS

- 3.1 In order to streamline the project team's contract negotiations, and in particular those of the Legal Department, the following agreements and requirements should be included in the special conditions:
 - a. Policies for the procurement of works and goods financed by the IDB (document GN-2349-9) and Policies for the selection and contracting of consultants financed by the IDB (document GN-2350-9) will apply. The Bank's Board of Executive Directors also approved (document GN-2538-11) use of the framework agreement subsystems up to the threshold established for NCB and the mechanism for small purchases up to US\$50,000. This may vary as the Bank approves higher levels of use.
 - b. Exceptions to Bank Policies: Given that the European Investment Bank will provide parallel financing and the Bank's Procurement Policies will be used, a waiver to the Procurement Policies as regards eligibility (documents GN-2349-9 and GN-2350-9) is requested from the Board so as to allow firms from European Union countries that are not IDB members to be contracted in calls for tender, in view of the impossibility of separating and/or dividing the processes.
 - c. Advance procurement, retroactive financing, and recognition of expenditures. The Bank may finance eligible expenditures made by the borrower before the date of approval of the loan for the procurement of works, goods, and consulting services, retroactively from the loan resources, up to the sum of US\$22 million (20% of the proposed loan amount), and recognize such expenditures against the local contribution, up to the sum of US\$14,274,000 (20% of the estimated local contribution amount), provided that requirements

² Law 34 of 2008 and its subsequent amendments.

substantially similar to those established in the loan contract have been satisfied. These expenditures must have been made no earlier than 24 March 2015, and under no circumstances may they include expenditures made more than 18 months before the loan approval date.

- d. The provisions of document OP-273-6 will apply, in accordance with which:
 - (i) project financial statements will be required annually, audited by an independent audit firm acceptable to the Bank, and they must be delivered within 120 days after the end of each fiscal year or the date of the last disbursement;³ (ii) advances will be requested for a financial plan of up to 180 days; and (iii) a fresh advance may be requested when 80% of the unsubstantiated balance of earlier advances has been accounted for.
- e. Panama's currency, the balbao, is pegged at parity to the dollar, making the exchange rate irrelevant.

IV. AGREEMENTS AND REQUIREMENTS FOR PROCUREMENT EXECUTION

- 4.1 The fiduciary agreements and requirements on procurement establish the provisions that apply to the execution of all of the program's planned procurement.

B. Procurement execution

- 4.2 Calls for tender will be run in accordance with document GN-2349-9 of March 2011, and consultants will be selected and hired in accordance with document GN-2350-9 of March 2011.
 - a. **Procurement of works, goods, and nonconsulting services.** International competitive bidding (ICB) will be executed using the standard bidding documents issued by the Bank. Contracting subject to national competitive bidding (NCB) and shopping will use the models defined by the Bank for this operation. The Bank's Board of Executive Directors also approved (document GN-2538-11) use of the framework agreement subsystems up to the threshold established for NCB and the mechanism for small purchases up to US\$30,000, which may vary as the Bank approves higher levels of use.
 - b. **Selection and contracting of consultants.** The consulting services required for the project will be contracted using the standard request for proposals issued by the Bank.
 - c. **Selection of individual consultants.** This will take into account the consultants' qualifications to perform the work, based on a comparison of at least three candidates' qualifications.
 - d. **Domestic preference.** Not applicable.
 - e. **Single-source selection.** Proyeco has been providing technical assistance and advisory services to PCU/MINSA since 2011, and its performance has been highly satisfactory. As part of these activities it assisted the PCU on the review of the structure and dimensioning of needs for management optimization in light of increased operation and maintenance (O&M)

³ The firm contracted by the PCU to audit its projects financed by other international agencies may be accepted, provided it is acceptable to the Bank.

competencies. This resulted in a proposal for an integrated management system. To guarantee proper implementation of that system by PCU/MINSA, while ensuring technical consistency during implementation, and as established in document GN-2350-9 paragraph 3.10 (a) and (d), Proyecó may be contracted directly for up to US\$950,000 to support PCU/MINSA's implementation of the integrated management system. Also, under Contract SBCC-CC-SCBP-02-2012 the consortium INFRAECO/DENGA/CPD CIENCIA/EES INTERNATIONAL was selected to prepare the baseline and the water quality monitoring program for the rivers and streams of Panama City and the seawater quality of Panama Bay. Its performance was highly satisfactory. Given the consortium's experience, and its knowledge of the target region, since they drew up the baseline and developed the monitoring program, the need to ensure technical consistency and unify responsibility for the correct measurement of the project's impact, the INFRAECO/DENGA/CPD CIENCIA/EES INTERNATIONAL consortium may be contracted directly for up to US\$1.95 million, as established in document GN-2350-9 paragraph 3.10 (a) and (d).

- f. **Advance procurement, retroactive financing, and recognition of expenditures.** The Bank may finance eligible expenditures made by the borrower before the date of approval of the loan, for the procurement of works, goods, and consulting services, retroactively from the loan proceeds, up to US\$22 million (20% of the proposed loan amount), and recognize such expenditures against the local contribution, up to US\$14,274,000 (20% of the estimated local contribution amount), provided that requirements substantially similar to those established in the loan contract have been satisfied. These expenditures must have been made no earlier than 24 March 2015, and under no circumstances may they include expenditures made more than 18 months before the loan approval date.
- g. **Recurring expenses.** These will be financed from the local contribution.
- h. **Call for tender for the design, construction, and O&M of Juan Díaz WWTP Module II.** In order to eliminate any advantage the consortium that designed, built, and is operating WWTP I may have, all the technical and financial documentation for WWTP I will be made available to bidders during the call for tender for WWTP II. This will ensure that all bidders have the same level of knowledge with which to draw up their proposals.
- i. **Procurement plan.** The Procurement Plan Execution System (SEPA) or the updated version superseding it as the electronic procurement monitoring system will be used.

C. Table of thresholds (US\$)

Works			Goods			Consulting services	
International competitive bidding	National competitive bidding/ shopping	Shopping for complex works	International competitive bidding	National competitive bidding/ shopping	Shopping for complex goods	International advertising for consulting services	Shortlist 100% National
Greater than or equal to US\$3,000,000	Greater than US\$250,000 and less than US\$3,000,000	Less than US\$250,000	Greater than or equal to US\$250,000	Greater than US\$50,000 and less than US\$250,000	Less than US\$50,000	Greater than US\$200,000	Less than or equal to US\$200,000

D. Main procurement items

	Description of envisaged procurement	Estimated amount (US\$ thousands)	Procurement method
PCU/MINSA	Design, construction, and operation and maintenance of Juan Díaz WWTP Module II.	340,000	ICB
PCU/MINSA	Construction of Puntas Paitilla and Pacífica sanitary collectors	18,000	ICB
PCU/MINSA	Construction of Matasnillos sanitary collectors	32,100	ICB
PCU/MINSA	Construction of sanitary collectors for flow separation at Bella Vista and Calidonia	32,100	ICB

E. Procurement supervision

- 4.3 All ICB and direct contracting of goods, services, and nonconsulting services will be reviewed ex ante. The selection of consulting firms for more than US\$200,000 and direct selections will be reviewed ex ante. For all other contracts, the type of review used will be determined in the procurement plan on a case-by-case basis.

F. Special provisions

None.

G. Records and files

- 4.4 The executing agency must keep the records up to date and the files duly organized so that they may be reviewed by the Bank. The following guidelines should therefore be adhered to:
- (i) The file with procurement documentation must be kept in a single file or folder, clearly distinguishable from processes financed with local contribution funds or nonprogram resources.
 - (ii) Documents are to be kept and conserved duly ordered and page numbered so as to allow clear and immediate location and identification, and must be available at all times for Bank review and audit purposes.

V. FINANCIAL MANAGEMENT

A. Programming and budget

- 5.1 The Ministry of Economy and Finance is responsible for formulating and controlling the budget. A proposal, and any increment thereto, must be submitted to the National Assembly, as the body responsible for its approval, before 31 July of each fiscal year. The budget is annual and includes all public sector investments, income and expenditures. The budget bill for the 2016 fiscal year was submitted on 30 April to the government and included US\$29 million in resources from the IDB for this program.

B. Accounting and information systems

- 5.2 The government began gradual implementation of the new financial information system, ISTMO,⁴ in January 2015. This system has been developed on the SAP platform and replaces SIAFPA. However, it needs a maturation period in order to overcome the initial shortcomings, so has not yet been evaluated⁵ for use on Bank-financed projects, necessitating use of a parallel system. If a fund administrator is appointed, the resources will be taken out of the country's budget cycle, meaning that it will not be possible to use ISTMO.
- 5.3 The PCU uses the PENTAGON system, which it is using for loan 1719/OC-PN-1 and will continue to use in this program, adequately separating the China Fund's income and expenditures from those of the Ordinary Capital. This system includes planning, contracts, budget, and accounting modules and is used on various Bank-financed projects in Panama.
- 5.4 Accounting will comply with the standards issued by Comptroller General of the Republic, which are not in line with International Public Sector Accounting Standards.

C. Disbursements and cash flow

- 5.5 In the second half of 2013 the law establishing the use of a treasury master account was passed, and implementation of the account began. This was completed in 2014 with it being used for the accounts of the Ministry of Economy and Finance and certain other ministries. As the treasury master account is recent and is closely tied in with the implementation of ISTMO, it will need to have been in operation for a period before its use in Bank-financed projects can be evaluated. If a fund administrator is appointed, the resources will be taken out of the country's treasury cycle.
- 5.6 The IDB will transfer the resources to an exclusive account for the program held with a financial institution. This account must be opened by the fund administrator (if used) or MINSA, and the resources from both the China Fund and the Ordinary Capital will be deposited in it. Disbursements will be based on

⁴ Integración y Soluciones Tecnológicas del Modelo de Gestión Operativa [Operations management model integration and technology solutions].

⁵ The budget, treasury, accounting, and reporting systems were evaluated in 2011 and only accepted for financial management of Bank-financed projects if carried out via the SIAFPA-PRO project module. With the switch to ISTMO this module ceased to operate. ISTMO will be evaluated once the system has been running for at least a full fiscal year.

advances⁶ covering resource needs, according to the respective financial plan, for a period of up to 180 days.

- 5.7 Under the conditions of the China Fund, it should be borne in mind that the cumulative disbursements from the Fund may not exceed those of the Ordinary Capital.
- 5.8 The initial financial plan indicates that in 2015 no disbursements are required from the IDB and that US\$20 million of IDB funding will be needed in 2016 (China Fund and Ordinary Capital).

D. Internal control and internal auditing

- 5.9 The Comptroller General of the Republic's (CGR) prior checks found the government institutions' internal control and internal audit systems to be weak, as they rely on the Comptroller's checks, rather than having effective processes and controls. These systems are therefore not considered adequate for the control tasks required in the projects.

E. External control and reports

- 5.10 The CGR has targeted its activities on ex ante checks on disposal of state property, its audit function being weak. Moreover, as it participates in administrative processes through its ex ante control, it does not have the necessary independence to perform audits, so cannot be considered to have the capacity to perform external program control.
- 5.11 The program is required to hire an independent audit firm acceptable to the Bank. The cost of audits will be covered by the loan. An annual opinion will be required on the program's financial statements within 120 days following the end of each fiscal year or the date of the last disbursement.

F. Financial supervision plan

- 5.12 Financial supervision will focus on the auditors' reports mentioned in paragraph 5.11 and the supporting documentation for disbursements will be reviewed ex post by the auditors when conducting audits or during financial inspection visits.

⁶ As established in document OP-273-6.

PANAMA CITY AND BAY SANITATION PROGRAM II

PN-L1109

CERTIFICATION

The Grants and Co-Financing Management Unit (ORP/GCM) certifies receipt of the non-objection from Xintong Liu, State Administration of Foreign Exchange (SAFE) dated April 29, 2015 for project “Panama City and Bay Sanitation Program II” for the amount of **US\$50,000,000** chargeable against the China Co-Financing Fund for Latin America and the Caribbean (CHC).

(original signed)

6/17/2015

Sonia M. Rivera

Date

Chief

Grants and Co-Financing Management Unit

ORP/GCM

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-___/15

Panama. Loan ____/OC-PN to the Republic of Panama
Panama City and Bay Sanitation Program II

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 Panama, as Borrower, for the purpose of granting it a financing to cooperate in the execution of the Panama City and Bay Sanitation Program II. Such financing will be for the amount of up to US\$60,000,000 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 __ _____ 2015)

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-___/15

Panama. Loan ____/CH-PN to the Republic of Panama
Panama City and Bay Sanitation Program II

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 Panama, as Borrower, for the purpose of granting it a financing to cooperate in the execution of the Panama City and Bay Sanitation Program II. Such financing will be for the amount of up to US\$50,000,000 from the resources of the China Cofinancing 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 __ _____ 2015)