

Document of the Inter-American Development Bank

**SURINAME**

**WATER SUPPLY INFRASTRUCTURE REHABILITATION**

**(SU-L1018)**

**Loan Proposal**

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ELECTRONIC LINKS
<b>Required</b>
<ol style="list-style-type: none"> <li>1. Annual Operations Plan (AOP)  <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35350963">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35350963</a></li> <li>2. Monitoring &amp; Evaluation Arrangements  <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35351011">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35351011</a></li> <li>3. Environmental and Social Management Report (ESMR)*  <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35351022">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35351022</a></li> <li>4. Procurement Plan  <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35351025">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35351025</a></li> </ol>
<b>Optional</b>
<ol style="list-style-type: none"> <li>1. Technical options and design  [Issues Addressed*]  <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35351052">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35351052</a></li> <li>2. Analysis of project cost and economic viability  [Issues Addressed*]  <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35351285">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35351285</a></li> <li>3. Financial management/fiduciary issues and control environment  [Issues Addressed*]  <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35351018">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35351018</a></li> <li>4. Institutional analysis/personnel, procedures other aspects of implementation capacity  (Includes <i>Reglamento Operativo</i>)  [Issues Addressed*]  <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35351015">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35351015</a></li> <li>5. Safeguard and Screening Form for Screening and Classification of projects (SSF)  <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35350992">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35350992</a></li> </ol>

\* If required and as specified in the guidelines for OP-703 and Disaster Risk Management Policy

\* Brief description of content/issues related to design or implementation of project. Include reference to Chapter/paragraph.

## ABBREVIATIONS

AOP	Annual Operating Plan
CSU	Country Office in Suriname
DWV	<i>Dienst Watervoorziening</i> – Department of Water Supply
EA	Environmental Assessment
ERR	Economic Rate of Return
ESA	Environmental and Social Analysis
ESMF	Environmental and Social Management Framework
ESMR	Environmental and Social Management Report
GOS	Government of Suriname
ICAS	Institutional Capacity Assessment System
ICB	International Competitive Bidding
ICT	Information and Communication Technology
IDB	Inter-American Development Bank
IsDB	Islamic Development Bank
MPW	Ministry of Public Works (MPW)
NH	<i>Ministerie van Natuurlijke Hulpbronnen</i> - Ministry of Natural Resources
NIMOS	National Institute for Environment and Research in Suriname
NPV	Net Present Value
NRW	Non Revenue Water
OC	Ordinary Capital
OM	Operations Manual
PAHO	Pan American Health Organization
PEU	Project Execution Unit
PP	Procurement Plan
SSF	Safeguard and Screening Form for Screening and Classification of Projects
SWM	N.V. <i>Surinaamsche Waterleiding Maatschapij</i> - Suriname Water Company
TC	Technical Cooperation

**PROJECT SUMMARY**  
**SURINAME**  
**WATER SUPPLY INFRASTRUCTURE REHABILITATION**  
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Financial Terms and Conditions			OC
<b>Borrower:</b> Republic of Suriname		<b>Amortization Period:</b>	25 years
<b>Executing Agency:</b> Suriname Water Company (SWM)		<b>Grace Period:</b>	5 years
		<b>Disbursement Period:</b>	5 years
<b>Source (US\$)</b>	<b>Amount</b>	<b>Supervision and Inspection Fee:</b>	*
<b>IDB (OC)</b>	US\$ 12,000,000	<b>Interest Rate:</b>	LIBOR-based
<b>Local</b>	US\$ 500,000	<b>Credit Fee:</b>	*
<b>Total</b>	US\$ 12,500,000	<b>Currency (Single Currency Facility):</b>	US Dollar
<b>Project at a Glance</b>			
<p><b>Project Objective/Description:</b> The general objective of the proposed project is to improve efficiency and quality of the potable water services provided in the coastal area of Suriname. The specific objectives are: (i) decrease the level of Non Revenue Water (NRW), through the development and implementation of a NRW program; (ii) improve the water supply distribution system in priority districts of the coastal area through rehabilitation works; and (iii) strengthen SWM performance by improving operations and maintenance, incorporating a management information system and decreasing energy consumption.</p>			
<p><b>Special contractual conditions for the first disbursement</b> will be: (i) evidence that the SWM staff that will be part of the PEU has been selected in accordance with terms and conditions previously agreed upon with the Bank (¶3.5); (ii) evidence that a project manager has been selected (¶3.5); and (iii) evidence that the Operations Manual for the project is approved by the Managing Director of SWM and has entered into effect (¶3.5).</p>			
<p><b>Special contractual conditions for execution</b> will be: (i) compliance with the Environmental and Social Management Framework (ESMF), and IDB Environmental and Social Policies (¶3.5); and (ii) prior to start of the replacement of asbestos pipes, an environmental assessment and hazardous waste management/removal plan will be prepared and disclosed on the NIMOS and IDB webpage (¶3.5).</p>			
<b>Exceptions to Bank policies:</b> None			
<b>Project consistent with Country Strategy:</b>		Yes [ <input checked="" type="checkbox"/> ]	No [ <input type="checkbox"/> ]
<b>Project qualifies for:</b> SEQ[ <input checked="" type="checkbox"/> ] PTI [ <input type="checkbox"/> ] Sector [ <input type="checkbox"/> ] Geographic[ <input type="checkbox"/> ] Headcount [ <input type="checkbox"/> ]			
<p><b>Procurement:</b> The procurement of works, goods and consulting services will be done in accordance with the Bank's new procurement policies and procedures (documents GN-2349-7 and GN-2350-7).</p>			

(\*) The credit fee and inspection and supervision fee will be established periodically by the Board of Executive Directors as part of its review of the Bank's lending charges, in accordance with the applicable provision of the Bank's policy on lending rate methodology for ordinary capital loans. In no case will the credit fee exceed 0.75% or the inspection and supervision fee exceed, in a given six-month period, the amount that would result from applying 1% to the loan amount divided by the number of six-month periods included in the original disbursement period

## I. DESCRIPTION AND RESULTS MONITORING

### A. Background, Problem Addressed, Justification

- 1.1 **Institutional and legal framework.** The Government of Suriname (GOS) designated responsibilities for drinking water supply to two entities. Potable water supply in the districts of Paramaribo, Wanica, Para, Nickerie, and Marowijne (Albina and Moengo) is provided by the N.V. *Surinaamsche Waterleiding Maatschappij* (SWM, Suriname Water Company),<sup>1</sup> a government-owned utility that supplies water to approximately 70% of Suriname's population. The Department for Water Supply under the Ministry of Natural Resources (DWV/NH) is responsible for supplying drinking water in the coastal rural areas and in the Interior, which account for approximately 21% of the population of the country. The Ministry of Natural Resources has the overall responsibility for policy direction of both institutions, and for overseeing service provision. In the absence of an independent regulatory body, the Council of Ministers approves tariffs.
- 1.2 Other agencies with responsibilities in the water sector include: (i) the Ministry of Health, which is in charge of monitoring environmental health; (ii) the Ministry of Agriculture, which is in charge of irrigation; and (iii) the Ministry of Public Works (MPW) and the Ministry of Regional Development, which are in charge of drainage systems.
- 1.3 **Sector Indicators.** With an area of 163,800 km<sup>2</sup>, Suriname is divided into three geographical areas: the Coastal Plain, the Savannah Belt, and the Interior Precambrian Shield (the Interior). About 70% of Suriname's 500,000 inhabitants live in Greater Paramaribo on the Coastal Plain, which includes Paramaribo and part of Wanica.<sup>2</sup> Paramaribo, Suriname's capital, has a population of just about 200,000, and is located about 20 kilometers south of the Atlantic coast. The Savannah Belt is sparsely populated while the Interior, which makes up 80 to 85% of the total area, consists of hills, mountains, and tropical rainforests that are inhabited mainly by dispersed tribal people.<sup>3</sup>
- 1.4 According to PAHO,<sup>4</sup> 97% of the urban population and 79% of the rural population in Suriname had access to an improved drinking water source in 2006. This represents an increase of about 20% in the last 30 years. Despite this improvement, the quality of potable water service is precarious in urban areas and inadequate in many rural communities. Overall, the water supply services face

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<sup>1</sup> In the district of Para SWM provides water only in the Republic area.

<sup>2</sup> Water Supply and Sanitation Sector Diagnostic- Klas Ringskog, 2005.

<sup>3</sup> Water Resources Assessment of Suriname – US Army Corps of Engineers, 2001.

<sup>4</sup> Health Situation in the Americas, Basic Indicators 2009, PAHO.

operational, maintenance, financial, and institutional challenges, as described below.

- 1.5 **SWM Indicators.** SWM provides water supply services to the large majority of Suriname's population, equivalent to 76,165 households (approximately 350,000 people), all of which are metered. SWM has 480 staff, with a ratio of just under seven employees per 1,000 connections.<sup>5</sup> Overall production and distribution capacity has been estimated at 86,000 m<sup>3</sup> per day, which is predominantly abstracted from three aquifers: the Zanderij, the Coesewijne, and the A-sand aquifer, with the Zanderij being the largest source of water. The majority of the revenue originates from the districts of Paramaribo, Wanica and Para, where 89% of SWM's customers reside. Collection efficiency has averaged at about 80% and total revenue stood at about US\$14.5 million in 2009.
- 1.6 Tariff is structured based on customer segments and level of consumption. The customer segments include commercial, institutional and domestic.<sup>6</sup> In February 2004 the GOS approved an increase in the water tariffs of 30%, which resulted in increased SWM water sales of 40%. In 2009 another attempt was made by SWM to increase cost recovery, but the proposal for an average tariff increase of approximately 40% was rejected by the Council of Ministers. The reluctance of the GOS to adjust the tariff jeopardizes the long term sustainability of SWM, both financially and operationally and until this issue is addressed, an emphasis must be placed on increasing efficiency in operations to reduce costs and Non Revenue Water (NRW).
- 1.7 **Problems Identified. Water service in the Greater Paramaribo area.** The water supply system in Greater Paramaribo, which relies almost entirely on groundwater extraction, is operating under constant challenges, the main problems including: (i) old pipes, the majority of which were laid more than 40 years ago (including several kilometers of asbestos-cement pipes laid in the 1950s and the 1960s); (ii) insufficient maintenance of the infrastructure, limited rehabilitation activities and inefficient energy use; (iii) ever increasing demand for water, with an average annual population growth in the Greater Paramaribo area estimated at approximately 1.2% (from census data); (iv) lack of an integrated management information system within SWM; (v) lack of financial resources and autonomy (SWM has not had a tariff increase since 2004 and currently operates at a deficit); (vi) uncertainty with respect to the safe yield of its aquifers; and (vii) lack of a comprehensive water quality monitoring system. As a result, these problems have led to: (i) a gradual deterioration of the network, with NRW levels estimated as high as 45%, and the number of malfunctioning micrometers (installed on 100% of SWM connections) surpassing 20%; (ii) electromechanical efficiency of equipments as low as 46%, which combined with the current operation and maintenance practices suggest that significant energy and

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<sup>5</sup> In its 2008 report, the Association of Water and Sanitation Regulatory Entities of the Americas reported an average for the region of 4 staff per 1,000 connections, with a maximum of 10.5 and a minimum of 1.3. A high ratio often indicates inefficient use of staff. A low ratio may indicate high operational efficiency.

<sup>6</sup>Domestic is further distinguished between those with and without swimming pools.

production savings could be achieved through an energy efficiency program, even with the current low energy costs; and (iii) although overall water quality is acceptable, saltwater intrusion has occurred in some wells due to over-pumping.

- 1.8 In 2002, a Coastal Master Plan was prepared for the development of Suriname's coastal areas covering the period from 2003 to 2010. The Coastal Mater Plan estimated a total investment need of approximately US\$80 million for 8 years for the rehabilitation and expansion of the network. To date, only some elements of the 2002 Coastal Master Plan have been implemented with Dutch Government financing, including: (i) a well drilling program (completed); (ii) the expansion of water production facilities (75% complete); and (iii) selected rehabilitation and expansion works to reduce water losses and expand the distribution network (95% complete).
- 1.9 **Water service in the rural areas.** The rural areas served by NH/DWV, most of which are in the Interior, comprise approximately 40 systems. Most of the water supply infrastructure in the regions remote from the capital was damaged in the late 1980s and early 1990s, during the civil war. Since then, little has been done to improve the situation. Some of the problems currently being experienced are: (i) depleted infrastructure, with NRW levels estimated to be over 60% in the peri-urban and rural coastal areas; (ii) difficulties in service large areas with low population density; (iii) absence of a systematic revenue collection mechanism; (iv) lack of data on management and performance and absence of an information collection system; (v) potential mercury pollution from gold-mining processes and untreated wastewater in the Interior, where surface water is the most common source of supply; (vi) absence of a water quality program; and (vii) limited inspection, control and enforcement on the production and distribution systems.
- 1.10 Due to these difficulties, during the last decade the GOS has been implementing a program to hand over water supply responsibilities in the semi-urban and rural coastal areas from NH/DWV to SWM. These systems are often handed over in poor conditions. Apart from the urgent need of rehabilitation, there is the need to connect the existing costumers to SWM supply as well as billing system. It is to be expected that in the future NH/DWV will focus exclusively on the implementation, maintenance and operation of water supply systems in the Interior.
- 1.11 **Wastewater Management.** The responsibilities for the sector are fragmented within a number of ministries, with the MPW being responsible for operating the primary drainage lines and supervising septic tank construction. While 90% of the population in the country has access to sanitation, a large part of it does not have access to adequate facilities, especially in the Interior. In central Paramaribo, a small network of underground pipes was installed in the 1940s. However, most of the population (70 to 80%) uses septic tanks, whose settled solids are reportedly discharged into the Suriname River.



- 1.12 **IDB Assistance.** Apart from a few Technical Cooperation (TC) operations that were implemented in the 1980s and the 1990s, the Bank is fairly new to the water sector in Suriname. The major assistance by the Bank in the sector came through the Community Development Fund approved in 2000 (1246/OC-SU), under which small water projects for communities in the Interior and the Coastal Areas were developed.
- 1.13 Over the last two years the Bank has had more frequent interactions with the GOS to discuss and agree on the steps required to address critical issues in the sector. Under the Water and Sanitation Initiative (GN-2446-2), a Bank financed Sanitation Sector Strategic Plan for Suriname is being finalized to propose solutions to the sanitation's sector challenges. Also, in 2009 a US\$525,000 TC: Water Supply Master Plan for Suriname (ATN/SF-11374-SU) was approved to: (i) develop a Water Supply Master Plan for the country to update and complete the 2002 Coastal Master Plan considering future water demand; and (ii) prepare a sectoral regulatory and institutional framework, including a tariff policy and draft legislation for the formation of a regulatory body. In conjunction with the TC, the proposed operation will be the first step in addressing the most pressing issues in water supply in priority districts of the coastal area and in strengthening the growing institutional and executing capacity. More substantial follow-up operations, presently under discussion with the new Government,<sup>7</sup> will address the potable water challenges in the rural areas and the wastewater management issues in Paramaribo and at country-level, thus making use of the completed Master Plan and of the results of the Sanitation Sector Strategic Plan.
- 1.14 **Link to Country Strategy.** The Bank's Country Strategy for Suriname (2007–2010) recognizes the importance of increasing access to basic services for expanding opportunities of the Surinamese people. As the proposed project will improve efficiency of the public sector entities for delivering services of higher quality, it is aligned with the Public Sector Modernization pillar. Also, the project is consistent with the Water Initiative of the Bank as it contributes to the "Efficient and Transparent Utilities" program through its support to SWM and NH/DWV.
- 1.15 The proposed project is also in line with GOS's priorities and objectives which, according to the Multi-Annual Development Plan for 2006-2011, aim at increasing the percentage of the population with clean drinking water. The sub-goals of the Plan are: (i) increasing water supply and supply sustainability (reducing NRW levels and increasing production); (ii) protecting and guaranteeing a reliable and affordable provision of quality potable water; (iii) improving the efficient use of water; and (iv) regulating the protection, rational management and utilization of the water resources. Though these goals may change with the new administration, water remains among the top priorities for the recently elected Government.

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<sup>7</sup> A legislative election was held in Suriname on May 25, 2010.

- 1.16 **Donor Coordination.** Most of the development in the water sector in Suriname has thus far been funded by the PARWAT program (Basic Infrastructure Water Supply; Dutch Guilder - NLG 60 million, approximately €27 mil), the KTID program (Short-term Water Supply Investment Project; €16 mil) and the Crash program (€14.5 mil), all funded by the Dutch government. The project team is coordinating closely with the Dutch funding agency on all the necessary actions to take advantage of synergies between these programs (including hydrological studies presently underway) and this proposed operation. The Islamic Development Bank (IsDB) has also recently financed a grant to carry out the Feasibility Study for the Wanica Water Supply System, and coordination will be ensured in the event a follow up operation is to be financed.
- 1.17 **Project rationale and alternatives considered.** The need for investments in the Surinamese water sector is extensive. The ongoing program to hand over water supply systems in the peri-urban and rural coastal areas from NH/DWV to SWM has resulted in additional urgent needs for investments due to the dilapidated state of the networks. In consultation with the GOS, it was decided to address this situation with a much needed rehabilitation intervention in the coastal area, focusing on those areas where, according to the condition assessment being carried out through ATN/SF-11374-SU, the transferred systems are in poor conditions. At the same time, the project will start creating capacity within NH/DVW, with the implementation of a water quality program for the Interior that includes capacity building. All civil works were selected after consideration of a range of alternative investment possibilities, as specified in the Technical Annex. The institutional and regulatory issues mentioned above, including SWM lack of resources and autonomy, are being addressed by ATN/SF-11374-SU. Recommendations stemming from the analysis will be discussed with the GOS at the beginning of 2011.
- 1.18 While wastewater management has been contemplated as part of the proposed project, it was decided that a more effective intervention can be designed once the ongoing Sanitation Sector Strategic Plan for Suriname is finalized and discussed with the MPW.

## **B. Objective, Components and Cost**

- 1.19 **Project objective.** The general objective of the proposed project is to improve efficiency and quality of the potable water services provided in the coastal area of Suriname. The specific objectives are: (i) decrease the level of NRW, through the development and implementation of a NRW program; (ii) improve the water supply distribution system in priority districts of the coastal area through rehabilitation works; and (iii) strengthen SWM performance by improving operations and maintenance, incorporating a management information system and decreasing energy consumption. It is proposed that the program be comprised of four components as outlined below.

- a. **Component 1: Non-Revenue Water Program.** This component will finance a management plan on NRW in Paramaribo and Wanica to minimize losses through the optimized operation of the distribution system. It will be based on the recommendations of the on-going Water Supply Master Plan and will include the following activities: (i) development of a NRW management program to address and monitor the issue of commercial and physical losses; (ii) preparation of final designs and Environmental Assessment (EA) for civil works; (iii) implementation of a network simulation model; (iv) installation of flow and pressure meters in the network; (v) implementation of the NRW program in priority areas; and (vi) analysis and improvement of the revenue collection system.
- b. **Component 2: Water Supply System Rehabilitation.** This component complements component 1, and will finance rehabilitation of secondary and tertiary networks in areas of Wanica and Para where the distribution system is being handed over from NH/DVW to SWM. It is also structured to utilize the preliminary findings of the on-going Water Supply Master Plan and will include: (i) replacement of approximately 16 km of asbestos-cement pipes; (ii) replacement of 35 km of secondary distribution network and installation of 3,000 household meters; (iii) deeper re-laying of 70 km of secondary distribution network; (iv) replacement of 5,000 household connections, including water meters and piping, in Leidingen, an area within the Wanica district; and (v) replacement of seven km of an old cast-iron pipeline.
- c. **Component 3: Energy Efficiency Pilot Project.** This component is based on the results of the recently completed energy audit financed through the regional TC “Energy Efficiency for Caribbean Water and Sanitation Companies” (ATN/OC-11286-RG), and will address the need to improve energy use within SWM facilities. It will include: (i) purchase of portable measuring equipment and improvement of measuring procedures and practices; and (ii) replacement of inefficient pumping equipment and operational improvements of electric motors in eight locations selected in the most populated project area.
- d. **Component 4: Institutional strengthening.** This component will address the need to strengthen SWM’s capacity of operating and maintaining its systems, as well as the need to facilitate the handing-over of facilities from NH/DWV to SWM. It will include: (i) capacity building activities on operation and maintenance; (ii) management information system integration and upgrade of the major Information and Communication Technology (ICT) servers; (iii) evaluation of water quality standards and assessment of SWM and NH/DWV needs in water quality monitoring activities and services; and (iv) public awareness campaigns.

## C. Key Results Indicators

1.20 The indicators are described in more details in the Result Framework of the project in Annex II. The main outcomes, extracted from the complete result framework, are presented in Table I-1.

**Table I-1**

Key Results	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Target
Households benefitting from the improved water supply network (#)	0	500	2,360	3,700	3,560	1,480	11,600
Volume of potable water billed (mill m3/year)	18.64	18.83	19.22	19.79	20.37	20.56	20.56
Energy Consumption in 8 pilot facilities (MWh/year)	13,000	-	12,500	12,000	11,000	10,000	10,000
Time response to complains (# days)	10	-	9	8	7	5	5

## II. FINANCING STRUCTURE AND MAIN RISK

### A. Financing Instruments

2.1 The total cost for the project is US\$12.5 million, of which US\$12 million will be drawn from the Single Currency Facility of the Bank's ordinary capital resources (OC) and US\$0.5 million from local counterpart contributions. The following table provides a breakdown by investment category in US dollars.

**Table II-1**

Category	IDB	Local Contribution	TOT	%
1. Project Administration				
1.1 Project Management	791,000		791,000	6.3%
2. Direct Costs				
2.1 Non Revenue Water Program	2,190,000		2,190,000	17.5%
2.2 Water Supply System Rehabilitation	6,250,000		6,250,000	50.0%
2.3 Energy efficiency pilot project	490,000		490,000	3.9%
2.4 Institutional strengthening	719,000		719,000	5.8%
3. Concurrent Costs				
3.1 Auditing	120,000		120,000	1.0%
3.2 Monitoring and Evaluation	60,000		60,000	0.5%
4. Unallocated				
4.1 Contingencies <sup>8</sup>	1,380,000	320,000	1,700,000	13.6%
4.2 Financing charges		180,000	180,000	1.4%
<b>Total</b>	<b>12,000,000</b>	<b>500,000</b>	<b>12,500,000</b>	<b>100%</b>

<sup>8</sup> At this stage, the contingencies are deliberately set fairly high to provide room for unexpected higher cost estimates emerging during the final designs of the civil works planned.

## **B. Environmental and Social Safeguard Risks**

- 2.2 By improving water supply and energy efficiency, this operation will contribute to the health and well being of Suriname's population, and particularly its capital Paramaribo. Also, the energy efficiency component will decrease SWM energy consumption (for a total of approximately 3,000 MWh/yr) and contribute to greenhouse gas reduction. The project is not expected to have any major large scale, significant and/or irreversible negative environmental or social impacts.
- 2.3 Negative expected impacts and risks during construction are mainly related to water supply construction works under Components 1 and 2, including construction noise, dust, waste generation, traffic interferences and occupational risks. These impacts are likely to be local, short term, and not significant for which effective mitigation measures can be designed. One risk is the handling and disposal of asbestos-cement pipes. The project is not expected to significantly increase current water consumption rates during operation and hence will not impact negatively on the existing sanitary system. Another risk identified is the weak institutional capacity of SWM for managing environmental and social issues.
- 2.4 Because of the potential impacts, which are considered minor to moderate, the project has been classified as category "B" under IDB's Environmental Policy (OP-703). Specific IDB Policies and Directives applicable to the project include OP-703, especially B.4 "Other Risk Factors", B.6 "Consultation", B.10 "Hazardous Material"; B.11 "Pollution Prevention and Abatement", OP-102 "Disclosure Policy", and OP-704 "Disaster Risk Management".
- 2.5 A draft Environmental and Social Assessment and Environmental and Social Management Framework (ESA/ESMF) has been prepared during project preparation. A consultation process on the draft ESA/ESMF took place (B.6). To address the weak institutional capacity for managing environmental and social issues (B.4), the project will finance a capacity building training program for SWM. An SWM staff member will be appointed to follow-up on environmental and social issues. To address the handling and disposal of hazardous material (B.10), a hazardous waste management plan will be developed prior to the start of activities and will follow international best practices in coordination with the National Institute for Environment and Research in Suriname (NIMOS). Pollution issues (B.11) (e.g. dust, waste) during construction will be addressed through construction contractual obligations. Suriname is not prone to earthquakes and hurricanes; however flooding occurs regularly, therefore actions will be taken to ensure compliance with IDB's Disaster Risk Management Policy (OP-704).
- 2.6 In compliance with OP-102 a draft ESA/ESMF was disclosed on the IDB website prior to the analysis mission. NIMOS also disclosed the draft ESA/ESMF on its website, where it will be posted for 30 days, during which the document can be reviewed. The ESMF defines the basic environmental and social considerations to

be addressed during the detailed design phases, as well as during construction activities, including the preparation of Environmental Assessment (EAs), e.g. for handling of asbestos-cement pipes and site specific Environmental Management Plan (EMPs), supervision, capacity building and monitoring arrangements. The draft ESA/ESMF will be updated to include more detailed information on (i) implementation arrangements; (ii) supervision and reporting; and (iii) capacity strengthening activities. The updated version will be disclosed prior to submission of the project for Board Approval. For further information see the Environmental and Social Management Report (ESMR).

### **C. Fiduciary Risk**

- 2.7 The Bank conducted the Institutional Capacity Assessment System (ICAS) analysis on SWM, whereby all areas of the SWM's operations, including human resource management, fiduciary and financial management, internal and external controls were evaluated and analyzed. No notable fiduciary issues are foreseen with respect to the accounting system and procurement mechanisms. However the control systems, which comprise of internal and external controls, need to be strengthened. An action plan will be developed and implemented to improve effectiveness of the internal audit functions; better understanding of risk assessment practices as well as address the absence of external audits. This will be initiated during project preparation, with the support of the Bank's representation in Suriname.

### **D. Other Key Issues and Risks**

- 2.8 **Institutional Viability.** The ICAS evaluation indicates that while SWM has, through a series of decentralizations and reorganizations since 1999, improved in terms of operational performance and administrative consistency, it still suffers from a series of institutional deficiencies ranging from (i) lack of integrated operational management framework, information systems and appropriate backups; (ii) inconsistent allocation of staff by operational areas; and (iii) insufficient financial resources for effective control of the physical network and administrative oversight. A series of strengthening activities have been proposed to and agreed with SWM, including: (i) manage an off-site data backup system to ensure the integrity and completeness of data in case of data loss on the main premises; (ii) create an internal team and provide necessary training for the oversight of the maintenance program to be established within SWM; (iii) develop an integrated management information system to ensure seamless interface between the front and back office activities undertaken; and (iv) better gauge front office activities such as customer service, response time and efficiency of billing and collections. These activities will be implemented as part of Component 4.
- 2.9 **Technical Viability.** The proposed technical solutions fully meet the needs for the improvement of SWM water distribution system in the most critical areas of

operation. The works defined fully meet the technical requirements for this type of works which is supported by the following reasons:

- a. A detailed diagnosis was carried out within the Water Supply Master Plan preparation exercise. The diagnosis contemplated different options for rehabilitation;
- b. The options were costed considering local unit prices, technologies, SWM practices and civil works currently being implemented. The final designs for the civil works to be financed through the following operation will provide more detailed cost estimates;
- c. The materials and technology proposed are known in Suriname and have been used in other projects by SWM;
- d. SWM has already knowledge on how to operate and maintain the new assets but are also improving this knowledge with the institutional strengthening component.

2.10 **Financial Viability.** 95% of SWM's revenue is generated from water sales, while the remainder comes through meter rentals and other miscellaneous activities. While revenue has increased marginally over the past three years (average increase of 3%), costs have increased at a higher rate (average increase of 6.8%). However, since 2005 SWM has managed to cover its operations and maintenance costs and to turn the historical operational loss into operational profitability. Earnings before interest, depreciation and amortization, or EBITDA,<sup>9</sup> have improved from representing (-9.6%) of revenue in 2001 to more than 10% in 2007. Notwithstanding these improvements, it remains necessary for SWM to improve its financial position in the medium to long term. The overall profitability is affected, as mentioned above, by the increase in costs that surpasses the gains in revenue on a year-on-year basis. On the cost side, it is important to note that personnel cost – including annual gross salaries, wages, fringe benefits (including medical costs), as well as pension obligations for retirees and widows – accounts for the majority of SWM's operational costs. In 2007, personnel costs represented the 78.8% of total operational costs, far exceeding the 7.5% represented by energy costs. While this might be explained by the low cost of energy (Specific Energy Cost: US\$0.03/m<sup>3</sup>), what is more concerning is that personnel costs have been rising annually, averaging 16.8% over the past eight years.<sup>10</sup> Under the proposed project, a significant effort will be made under components 1 and 4 to: (i) improve the revenue stream for SWM based on improvements with billing and collection; (ii) expand revenue generation through a metering program; and (iii) implement energy and operational efficiency programs to provide cost reduction. The proposed activities

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<sup>9</sup> Earnings Before Interest, Taxes, Depreciation and Amortization.

<sup>10</sup> Though a combination of both, the increased personnel costs are due more to salary increases than to an increase in the number of employees.

will be initiated during the preparation of the project, with the support of the Bank's representation in Suriname.

- 2.11 **Socio-economic Viability.** To perform the socio-economic assessment, the proposed operation was divided into three sub-projects that were separately evaluated, namely: (i) the NRW and rehabilitation program (that includes Component 1 and most of Component 2); (ii) a water meter project (part of Component 2); and (iii) the energy efficiency project (Component 3). For all of them a cost-benefit analysis was carried-out. The NRW and rehabilitation program is economically viable, showing an Economic Rate of Return (ERR) of 19.4% and a Net Present Value (NPV) of US\$3,123,000 (see [electronic link](#)). The water meter project is also economically viable, with an ERR of 56.7% and a NPV of US\$978,000 (see [electronic link](#)). Both analyses were complemented by appropriate sensitivity assessment, which confirmed the robustness of the projects. It is estimated that the average charge for water services will be approximately US\$10.2 per month. Based on data obtained from a socioeconomic survey conducted in the project area, this charge represents about 2.5% of the average household income, which is an acceptable value. For the energy efficiency component, each individual project was evaluated separately. All the proposed projects were economically feasible. The aggregate NPV, using a discount rate of 12%, was US\$ 652,800, with and ERR of 40.3% (see [electronic link](#)).
- 2.12 **Poverty Reduction and Equity Enhancement.** The project is classified as a Poverty Reduction and Equity Enhancement operation, as described in the Report on the Ninth General Increase in Resources of the Inter-American Development Bank (document AB-2764 of May 2010).
- 2.13 **Bank Policies compliance.** A number of Bank's Sector Policies are particularly relevant for this project, including: OP-708 (Public Utilities); OP-745 (Basic Environmental Sanitation). The proposed operation is in compliance with these policies. It is worth noting that within ATN/SF-11374-SU an international consultancy firm is preparing a regulatory and institutional framework for the water sector, including a tariff policy with a proposal for the rationalization of the tariff structure and draft legislation for the formation of a regulatory body. Upon GOS request, a follow-up operation will address other challenges in the water and sanitation sectors in urban and rural areas.

### III. IMPLEMENTATION AND MANAGEMENT PLAN

#### A. Summary Implementation Arrangements

- 3.1 The borrower for the proposed project is the Republic of Suriname, who will be legally responsible to the Bank for the loan repayment, while SWM will be responsible for execution. Appropriate staff will be designated by SWM and assigned to a Project Executing Unit (PEU), which will include at a minimum a



- project manager, two engineers (including a distribution specialist), a financial/accounting officer, a procurement officer and a secretary. Only the project manager, a distribution specialist engineer and a secretary will be financed with loan resources. SWM will appoint internally the other members of the PEU, including a deputy project manager, as well as a person with the responsibility to follow-up on the implementation of the ESMF.
- 3.2 SWM is becoming knowledgeable of the Bank's procurement and financial policies and procedures as it is currently executing ATN/SF-11374-SU. The PEU will coordinate project planning and operation with the SWM Managing Director, to whom the PEU will report to directly.
- 3.3 Specific responsibilities of the PEU will include: (i) preparation, implementation and coordination of the Annual Operating Plans (AOPs); (ii) preparation of budgets and disbursement projections, chart of accounts for project accounting, and requests to advance project funds; (iii) preparation of the project's Annual Procurement Plan and the procurement of goods and services for the project; (iv) coordination of the preparation of technical reports, periodic (semi-annual) and end-of-year financial reports; (v) monitoring of the progress of project activities and analysis of variances of actual results against plans; (vi) contracting and execution of the external audit and ensuring, in coordination with the SWM Managing Director, that the relevant recommendations are implemented; (vii) facilitation of external evaluations and ensuring, in coordination with the Managing Director of the SWM, that the recommendations are implemented; (viii) serving as a liaison for the project with the Bank; (ix) organizing semi-annual stakeholders meetings with the participation of representatives from the Ministry of Natural Resources; (x) implementation of the project ESMF; and (xi) preparation of the Operations Manual (OM) that will detail these arrangements.
- 3.4 The project will be executed following the AOP that will include for each programmed annual activity: (i) its goals, (ii) terms of reference, (iii) budget, (iv) source of funding, and (v) responsibility for its execution. The AOPs will be prepared according to guidelines established in the project's OM, which will set forth the details regarding project execution, including coordination of activities amongst the different offices. Changes to the AOP will require the non-objection of the Bank. The overall need to update the OM will be assessed yearly during project implementation.
- 3.5 Special contractual conditions for the first disbursement will be: **(i) evidence that the SWM staff that will be part of the PEU has been selected in accordance with terms and conditions previously agreed upon with the Bank;** **(ii) evidence that a project manager has been selected; and (iii) evidence that the Operations Manual for the project is approved by the Managing Director of SWM and has entered into effect.** Special contractual conditions for execution will be: (i) compliance with the Environmental and Social Management Framework (ESMF), and IDB Environmental and Social Policies; and (ii) prior to

start of the replacement of asbestos pipes, an environmental assessment and hazardous waste management/removal plan will be prepared and disclosed on the NIMOS and IDB webpage.

- 3.6 During project execution, SWM will deliver the project's audited financial statements on an annual basis as described in paragraph 3.10.
- 3.7 **Procurement.** The procurement of works, goods and consulting services will be conducted in accordance with the Bank's procurement policies and procedures for the Procurement of Goods and Works (GN-2349-7) and for the Selection and Contracting of Consultants (GN-2350-7). The thresholds for international competitive bidding (ICB) will be US\$100,000 for goods contracts, US\$1 million for civil works, and US\$100,000 for consulting services. Procurement of goods, works and consulting services will be reviewed using ex-ante methodology. This review methodology will be periodically assessed through procurement inspection visits and performance reviews and procurement plan activities may be amended accordingly, by agreement between the executing agency and the Bank's Country Office in Suriname, provided the executing agency is in compliance with the Bank's requirements for the specific review methods. Annex III includes details on project procurement. The executing agency will update the procurement plan in the course of its semiannual reports and its annual operating plan.

#### **B. Summary of Arrangements for Monitoring Results**

- 3.8 The PEU will be in charge of monitoring the project performance and progress throughout the execution period, as described in [electronic link](#). Project monitoring will be based on the Results Framework, the Progress Monitoring Report (PMR), and the AOP. The PEU will submit two semi-annual progress reports throughout project execution, within 90 days after the end of the calendar year or half year. Detailed activities, including a detailed description of data collection mechanisms, will be described in the OM.
- 3.9 Using loan's resources, independent evaluators will be hired to conduct: i) a midterm evaluation at the end of 30 months from the date of the loan contract or after 50% commitment of the resources, whichever comes first, and ii) a final evaluation of the project, after 90% of loan resources have been committed. The evaluations will include reporting on environment and social issues and on safeguards compliance.
- 3.10 An external audit of the project will be performed by a firm of independent auditors acceptable to the Bank. The cost of the audits will be financed with project resources. Standard financial reporting requirements of the Bank will apply, including: (i) the annual financial audit report within 120 days of the end of each calendar year; and (ii) a final financial audit report of the project within 120 days after the date of the last disbursement.

- 3.11 **Disbursement Timetable.** The disbursement period for the project is five years. The contemplated disbursement schedule is as follows:

**Table III-1 Disbursement Schedule (US\$ millions)**

<b>Year</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>Total</b>
<b>IDB</b>	0.625	2.5	3.75	3.5	1.625	<b>12</b>
<b>Local</b>				0.25	0.25	<b>0.5</b>
<b>TOTAL</b>	<b>0.625</b>	<b>2.5</b>	<b>3.75</b>	<b>3.75</b>	<b>1.875</b>	<b>12.5</b>
<b>%</b>	5%	20%	30%	30%	15%	100%

- 3.12 **Advance of Funds.** SWM will prepare and periodically update the project financial plan which estimates the timing and amount of project's resources, as well as the anticipated expenses for the life of the project. The Bank will advance funds based on the project's true liquidity needs, supported by signed commitments or anticipated with a high level of certainty for a period agreed upon with SWM. Such liquidity needs arise from the project's financial plan, which should be coordinated with the project execution plan, and the AOP, which includes the procurement plan (PP). Each advance must be justified, once the amount of the project expense reaches 80% of the amount advanced. The funds will be transferred to SWM and be managed in a separate bank account in the project's name. The funds will be used as per Bank policy, for the procurement of goods and services and will be based on the terms agreed for each individual contract. The frequency of advances and justification of expenses, will be based on the project's financial execution and the level of project risk and/or the level of fiduciary capacity of the Executing Agency and should be agreed upon in advance with the Executing Agency as part of the disbursement agreements, and evaluated during project execution. Disbursement process will be done in accordance to the IDB project Disbursement Guide approved in December 2009.

### **C. Significant Design Activities Post Approval**

- 3.13 As mentioned above, the Bank is currently financing the "Water Supply Master Plan for Suriname" (ATN/SF-11374-SU). Besides providing the technical and institutional framework to develop an improved and sustainable supply of potable water to urban and rural communities, the TC will provide conceptual designs for selected priority interventions to be financed through the proposed operation, as well as plan/programs for institutional strengthening and the NRW program. All these products will be completed after the approval of the proposed operation, and will be made available for execution and future planning. The final designs of all civil works, to be financed using loan's resources, will greatly benefit from these inputs.

Development Effectiveness Matrix  
Summary

Indicator	Score	Maximum Score
<b>I. Strategic Relevance</b>	High-Low	
<b>1. IDB Strategic Development Objectives</b>	5.5	10
Country Diversification	2.0	2
Corporate Initiatives	2.5	2.5
Harmonization and Alignment	0.0	3.5
Beneficiary Target Population	1.0	2
<b>2. Country Strategy Development Objectives</b>	3.6	10
Country Strategy Sector Diagnosis	2.4	6
Country Strategy sector objective & indicator	1.2	4
<b>II. Development Outcomes - Evaluability</b>	Satisfactory	
<b>3. Evidence-based Assessment &amp; Solution</b>	8.8	10
<b>4. Evaluation &amp; Monitoring Plan</b>	4.6	10
<b>5. Cost-Benefit or Cost-Effectiveness</b>	7.0	10
<b>6. Risks &amp; Mitigation Monitoring Matrix</b>	7.5	10
<b>III. IDB's Role - Additionality</b>		
<b>7. Additionality</b>	7.0	10
Technical Assistance provided prior the project	3.0	3
Improvements in management of financial, procurement, monitoring or statistics internal controls	4.0	4
Improvements in environmental, health and labor performance	0.0	3

**I. Strategic Relevance:** This is an investment program that will take place in Suriname, classified as a C country. The program falls under the corporate initiative related to water and sanitation. The program is aligned with the Country Strategy and is classified as a SEQ operation.

**II. Evaluability:** The problems being addressed through the program are clearly defined and its diagnosis is empirically based. The main factors that contribute to these problems are clearly specified, as are the interrelationship among factors and the magnitudes of their deficiencies.

The program's outcomes and outputs are clearly stated and show vertical logic. The overall outcome of the program corresponding to "improve efficiency and quality of the potable water services provided in the coastal area of Suriname" does not have indicators. All other outcomes and outputs present indicators with baselines, targets and sources of information. Not all indicators are SMART given that some of the indicators are not specific enough to be measurable. The program has a monitoring and evaluation plan, but there is no separate budget allotted for each activity. The program will be evaluated using a reflexive methodology. Some of the components of the program were analyzed using a cost-benefit analysis which generated rates of return above 12%. The risks of the operation are identified and classified and present mitigation measures, however, no indicators, baselines or targets are included to monitor these measures.

**III. Additionality:** Technical assistance was provided to increase the likelihood of success of the program. It is foreseen that the program will generate externalities in the auditing area.

Results Framework								
Objective	The general objective of the proposed project is to improve efficiency and quality of the potable water services provided in the coastal area of Suriname. The specific objectives are: (i) decrease the level of NRW, through the development and implementation of a NRW program; (ii) improve the water supply distribution system in priority districts of the coastal area through rehabilitation works; and (iii) strengthen SWM performance by improving operations and maintenance, incorporating a management information system and decreasing energy consumption.							
Component 1. Water Supply System Rehabilitation								
	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Target	Comments/ Means of verification
Outputs								
Final Designs completed (#)	0	-	1	-	-	-	1	Consultant report; Project Monitoring and Evaluation System (Progress Reports, Supervision Missions, External Supervision)
Asbestos pipes replaced (Km)	0	-	6	10	-	-	16	Contractor monthly reports; External Supervision; Project Progress Reports
Secondary distribution network’s pipes replaced (Km)	0	-	6	15	14	-	35	Contractor monthly reports; External Supervision; Project Progress Reports
Secondary distribution network’ pipes re-laid (Km)	0	-	5	15	20	30	70	Contractor monthly reports; External Supervision; Project Progress Reports
Micro meters purchased and installed in Wanica and Para	0	-	300	900	900	900	3,000	Contractor monthly reports; External Supervision; Project Progress Reports
Household Connections (including micro meters) in Leidingen replaced (#)	0	500	1,500	1,500	1,500	-	5,000	Contractor monthly reports; External Supervision; Project Progress Reports
Cast-Iron pipe replaced with PVC (Km)	0	-	-	7	-	-	7	Contractor monthly reports; External Supervision; Project Progress Reports
Outcomes								
Households benefitting from the improved water supply network (#)	0	500	2,360	3,700	3,560	1,480	11,600	SWM statistics; Project Progress Reports
Component 2. Non Revenue Water Program								
	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Target	Comments/ Means of verification
Outputs								
Network modeling and integration within the existing information system completed	0	-	-	1	-	-	1	Calibration exercise consultant report; Project Monitoring and Evaluation System

NRW pilot implemented	0	-	-	1	-	-	1	Consultant report; Project Monitoring and Evaluation System
Flow and pressure meters installed (#)	0	-	40	40	-	-	80	Purchase order; Supervision Report; Project Monitoring and Evaluation System
SWM Staff trained on NRW (#)	0	-	5	5	-	-	10	Training material; Certification of attendance; Consultant Report; Project Monitoring and Evaluation System
<b>Outcomes</b>								
Volume of potable water billed (mill m3/year)	18.64	18.83	19.22	19.79	20.37	20.56	20.56	SWM financial data; Project Monitoring and Evaluation System
% NRW in project areas (percentage points)	45 <sup>1</sup>	-	43	41	38	35	35	Consultant report; SWM measurements; Project Monitoring and Evaluation System
<b>Component 3. Energy efficiency pilot project</b>								
	<b>Baseline</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Target</b>	<b>Comments/Mean of verification</b>
<b>Outputs</b>								
Units of portable measuring equipment purchased (#)	0	-	5	-	-	-	5	Purchase order; SWM records
Pumping stations optimized (includes: Pumps, motors and/or other accessories purchased) (#)	0	-	4	4	-	-	8	Project Monitoring and Evaluation System (Progress Reports, Supervision Missions, External Supervision)
<b>Outcomes</b>								
Energy Consumption in the 8 pilot facilities (MWh/year)	13,000	-	12,500	12,000	11,000	10,000	10,000	Evaluation Report on the Analysis of operating Electrical Costs of the works financed through the Project
<b>Component 4. Institutional strengthening</b>								
	<b>Baseline</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Target</b>	<b>Comments/Mean of verification</b>
<b>Outputs</b>								

<sup>1</sup> The current NRW level, estimated to be at about 45% in the Greater Paramaribo area, is based on assumption that needs to be validated during the NRW program to be financed through the proposed operation. An accurate water balance analysis will allow to obtain a reliable baseline by the end of the second year of project implementation.

SWM Staff trained on O&M and energy efficiency (#)	0	-	5	5	5	-	15	Training material; Certification of attendance; Consultant Report; Project Monitoring and Evaluation System
NH/DWC Staff trained on water quality	0	-	5	-	-	-	5	Training material; Certification of attendance; Consultant Report; Project Monitoring and Evaluation System
Management Information System integration completed	0	-	-	1	-	-	1	Consultant Report; Project Monitoring and Evaluation System
<b>Outcomes</b>								
% Increase in amount of staff- hours spent on maintenance activities per year (%) <sup>2</sup>	0	-	-	5	5	-	10	SWM maintenance Team report (as for Maintenance Plan to be developed); Project Monitoring and Evaluation System
Time response to complains (# days)	10	-	9	8	7	5	5	SWM statistics; Project Monitoring and Evaluation System

<sup>2</sup> Currently SMW does not keep record of staff- hours spent on maintenance. A baseline will be established as part of the O&M capacity building program.

## SUMMARY PROCUREMENT TABLE

Description of the contract and estimated cost of procurement	Price	Procurement method <sup>1</sup>	Review (ex-ante or ex-post)	Source of financing and percentage		Prequalification  (Yes/No)	Estimated dates		Status (pending, in process, awarded, cancelled)	Comments
				IDB %	Local/ other %		Publication of specific procurement notice	Completion of contract		
1. Goods										
Purchase of 80 measuring devices	1,000,000	ICB	Ex-ante	100		No	Jun 2011	Dec 2013	Pending	
Purchase of 54,000 m of 110/160 mm PVC pipes	1,800,000	ICB	Ex-ante	100		No	Jun 2011	Dec 2015	Pending	
Purchase of 7,000 m of 400 mm PVC pipes	180,000	ICB	Ex-ante	100		No	Jun 2011	Dec 2015	Pending	
Purchase of 15,000 m of PVC pipes for household connections with fittings	90,000	ICB	Ex-ante	100		No	Jun 2011	Dec 2012	Pending	
Purchase of valves and fittings	250,000	ICB	Ex-ante	100		No	Jun 2011	Dec 2013	Pending	
Purchase of 5,000 water meters	200,000	PC	Ex-ante	100		No	Jun 2011	Dec 2013	Pending	
Purchase of 5 portable measuring devices, 8 pumps, motors and/or accessories.	490,000	PC	Ex-ante	100		No	Jun 2011	Dec 2013	Pending	
ICT Serves upgrade	300,000	ICB	Ex-ante	100		No	Jun 2012	Dec 2013	Pending	
WaterCad Software	40,000	DC	Ex-ante	100			June 2011	Dec 2013	Pending	
Total Goods	4,350,000									
2. Non-Consulting Services										
Public awareness campaign materials and services	50,000	NCB	Ex-ante	100			Jun 2011	Dec 2015	Pending	
Water quality program	30,000	NCB	Ex-ante	100			Jun 2011	Dec 2012	Pending	
Total Non Consulting Services	80,000									
3. Consulting Services										
Network design and NRW program	650,000	QCBS	Ex-ante	100			June 2011	Dec 2013	Pending	

<sup>1</sup> **Goods and Works:** ICB: International competitive bidding; LIB: limited international bidding; NCB: national competitive bidding; PC: price comparison; DC: direct contracting; FA: force account; PSA: Procurement through Specialized Agencies; PA: Procurement Agents; IA: Inspection Agents; PLFI: Procurement in Loans to Financial Intermediaries; BOO/BOT/BOOT: Build, Own, Operate/Build, Operate, Transfer/Build, Own, Operate, Transfer; PBPP: Performance-Based Procurement; PLGB: Procurement under Loans Guaranteed by the Bank; PCP: Community participation procurement.

**Consulting Firms:** QCBS: Quality- and Cost-Based Selection QBS: Quality-Based Selection FBS: Selection under a Fixed Budget; LCS: Least-Cost Selection; CQS: Selection based on the Consultants' Qualifications; SSS: Single-Source Selection.

**Individual Consultants:** NICQ: National Individual Consultant selection based on Qualifications; ICC: International Individual Consultant selection based on Qualifications



Description of the contract and estimated cost of procurement	Price	Procurement method <sup>1</sup>	Review (ex-ante or ex-post)	Source of financing and percentage		Prequalification (Yes/No)	Estimated dates		Status (pending, in process, awarded, cancelled)	Comments
				IDB %	Local/ other %		Publication of specific procurement notice	Completion of contract		
Construction Supervision	600,000	QCBS	Ex-ante	100			June 2011	June 2015	Pending	
Energy efficiency and asset management training	95,000	SSS	Ex-ante	100			June 2011	Dec 2013	Pending	
System integration	100,000	CQS	Ex-ante	100			June 2011	Dec 2012	Pending	
Training on environmental and social issues	20,000	NICQ	Ex-ante	100			June 2011	Dec 2012	Pending	
<b>Total Consulting Services</b>	<b>1,315,000</b>									
<b>4. Civil works</b>										
Rehabilitation of 16 km secondary networks for various cities in Suriname with disposal of asbestos pipes	1,204,000	ICB	Ex-ante	100		No	June 2011	Dec 2014	Pending	
Rehabilitation of 5,00 household connections	220,000	ICB	Ex-ante	100		No	June 2011	Dec 2013	Pending	
Rehabilitation of 35 km of secondary water network	380,000									
Replacement of 7 km cast iron network	500,000	ICB	Ex-ante	100		No	June 2011	Dec 2013	Pending	
Flushing of some areas of the network	100,000	QCBS	Ex-ante	100		No	Dec 2012	June 2015	Pending	
Re-laying of 70 km of water network	1,050,000	ICB	Ex-ante	100		No	Sept 2011	Dec 2012	Pending	
Rehabilitation of 8 pump stations	100,000	ICB	Ex-ante	100		No	Sept 2011	Dec 2012	Pending	
Replacement of pipes, valves and fittings for pilot project.	200,000	ICB	Ex-ante	100		No	Sept 2011	Dec 2012	Pending	
<b>Total Civil Works</b>	<b>3,904,000</b>									

**Goods and Works:** ICB: International competitive bidding; LIB: limited international bidding; NCB: national competitive bidding; PC: price comparison; DC: direct contracting; FA: force account; PSA: Procurement through Specialized Agencies; PA: Procurement Agents; IA: Inspection Agents; PLFI: Procurement in Loans to Financial Intermediaries; BOO/BOT/BOOT: Build, Own, Operate/Build, Operate, Transfer/Build, Own, Operate, Transfer; PBP: Performance-Based Procurement; PLGB: Procurement under Loans Guaranteed by the Bank; PCP: Community participation procurement.

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