

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

**SURINAME**

**WATER SUPPLY MODERNIZATION PROGRAM**

**(SU-L1058)**

**LOAN PROPOSAL**

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## CONTENTS

<b>PROJECT SUMMARY .....</b>	<b>1</b>
<b>I. PROJECT DESCRIPTION AND RESULTS MONITORING.....</b>	<b>2</b>
A. Background, problem addressed, and justification.....	2
B. Objective, components, and cost .....	11
C. Key results indicators .....	12
<b>II. FINANCING STRUCTURE AND MAIN RISKS.....</b>	<b>13</b>
A. Financing instruments .....	13
B. Environmental and social safeguard risks .....	14
C. Other risks and key issues .....	15
<b>III. IMPLEMENTATION AND MANAGEMENT PLAN.....</b>	<b>17</b>
A. Summary of implementation arrangements.....	17
B. Summary of arrangements for monitoring results .....	20

ANNEXES	
Annex I	Summary Development Effectiveness Matrix (DEM)
Annex II	Results Framework
Annex III	Fiduciary Arrangements
Annex IV	Safeguard Policy Filter (SPF) and Safeguard Screening Form (SSF)

REQUIRED ELECTRONIC LINKS (REL)	
REL#1	<a href="#">Pluriannual Execution Plan (PEP) and Annual Operational Plan (AOP)</a>
REL#2	<a href="#">Monitoring and Evaluation Arrangements</a>
REL#3	<a href="#">Environmental and Social Management Report (ESMR)</a>
REL#4	<a href="#">Procurement Plan</a>

OPTIONAL ELECTRONIC LINKS (OEL)	
OEL#1	<a href="#">Analysis of Project Cost and Economic Viability</a>
OEL#2	<a href="#">Technical Options and Design</a>
OEL#3	<a href="#">Financial Annex</a>
OEL#4	<a href="#">Compliance with the Public Utilities Policy</a>
OEL#5	<a href="#">Project Monitoring Report (PMR)</a>
OEL#6	<a href="#">Operations Manual (OM)</a>
OEL#7	<a href="#">Final Environmental and Social Documents (ESA, ESMP, SCA)</a>

ABBREVIATIONS	
AFD	French Development Agency
AOP	Annual Operational Plan
CC	Climate Change-
CDB	Caribbean Development Bank
DMAs	District Metered Areas
EA	Executing Agency
ERR	Economic Rate of Return
ESMR	Environmental and Social Management Report
EU	European Union
GoS	Government of Suriname
HR	Human Resources
IP	Implementation Plan
IDB	Inter-American Development Bank
MOF	Ministry of Finance
NH/DWV	The Department of Water Supply
NPV	Net Present Value
NRW	Non-Revenue Water
OC	Ordinary Capital
OM	Operations Manual
O&M	Operation and Maintenance
PACI	Platform for the Analysis of the Institutional Capacity
PEP	Pluriannual Execution Plan
PEU	Program Execution Unit
PP	Procurement Plan
SCADA	Supervisory Control and Data Acquisition
SWIT	Smart Water Infrastructure Technologies
SWM	Suriname Water Company

**PROJECT SUMMARY**  
**SURINAME**  
**WATER SUPPLY MODERNIZATION PROGRAM**  
**(SU-L1058)**

Financial Terms and Conditions				
Borrower			Flexible Financing Facility <sup>(a)</sup>	
Republic of Suriname			Amortization Period:	24 Years
Executing Agency (EA)			Disbursement Period:	6 Years
Suriname Water Company (SWM)			Grace Period:	6.5 Years <sup>(b)</sup>
Source	Amount (US\$)	%	Interest rate:	LIBOR Based
IDB (Ordinary Capital) <sup>(d)</sup> :	25,000,000	100	Credit Fee:	<sup>(c)</sup>
			Inspection and supervision fee:	<sup>(c)</sup>
Total:	25,000,000	100	Weighted Average Life (WAL):	15.25 Years
			Currency of Approval:	Dollars of the United States of America
Project at a Glance				
<b>Project Objective/Description:</b> The general objective of the proposed operation is to improve efficiency, quality, and financial and environmental sustainability of the potable water services provided by the Suriname Water Company (SWM). The specific objectives are to: (i) reduce Non-Revenue Water (NRW) levels in the Central Region through the implementation of critical aspects of the 2015 NRW reduction strategy; (ii) increase the availability of water supply services in Wanica through upgrading water production infrastructure; and (iii) modernize the operations and management of SWM through the implementation of key recommendations of the Implementation Plan (IP) and the development of a water supply strategy for the interior.				
<b>Special Contractual Clauses prior to the first disbursement:</b> The borrower, through the Ministry of Finance (MOF), shall provide evidence to the satisfaction of the Bank that the EA: (i) has established the Program Execution Unit (PEU); (ii) has appointed key staff of the PEU, including its program manager, procurement specialist, and financial specialist; (iii) has approved the Operations Manual (OM) ( <a href="#">OEL#6</a> ) for the program, in the terms agreed with the Bank and it has entered into effect; and (iv) a steering committee has been established and is composed by the three (3) deputy directors, the Director, or a representative of the Director of the EA, and one representative from the Ministry of Natural Resources ( <a href="#">¶3.5</a> ). See Environmental and Social conditions prior to first disbursement in Annex B of the ESMR ( <a href="#">REL#3</a> ).				
<b>Special Contractual Clauses of execution:</b> The borrower, through SWM, shall present evidence to the satisfaction of the Bank that: (i) by the end of the first year of execution of the loan, the EA has assigned two (2) senior engineers to work on the NRW unit contemplated for Component 1; (ii) in relation with the drilling of new wells under Component 2, prior to the award of the contract for the associated works, in accordance with laws and regulations of the borrower, it has obtained the possession of the real state property where each of the wells will be developed; and (iii) SWM, through the PEU, will contract a cost of service study to determine the actual cost of providing the service, which will serve as an input to request future tariff increases. This study should be completed by the end of the second year of project execution ( <a href="#">¶3.6</a> ). See Environmental and Social contractual conditions of Execution in Annex B of the ESMR ( <a href="#">REL#3</a> ).				
<b>Exceptions to Bank Policies:</b> None.				
Strategic Alignment				
Challenges <sup>(e)</sup> :	SI	<input checked="" type="checkbox"/>	PI	<input checked="" type="checkbox"/>
			EI	<input type="checkbox"/>
Cross-Cutting Themes <sup>(f)</sup> :	GD	<input checked="" type="checkbox"/>	CC	<input checked="" type="checkbox"/>
			IC	<input type="checkbox"/>

<sup>(a)</sup> Under the Flexible Financing Facility (document FN-655-1), the borrower has the option to request modifications to the amortization schedule, as well as currency, interest rate and commodity conversions. In considering such requests, the Bank will take into account operational and risk management considerations.

<sup>(b)</sup> Under the flexible repayment options of the Flexible Financing Facility (FFF), changes in the grace period are possible as long the Original Weighted Average Life (WAL) and the last payment date, as documented in the loan agreement, are not exceeded.

<sup>(c)</sup> 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.

<sup>(d)</sup> Pursuant to Document AB-2990, the disbursement of Bank resources (OC) will be subject to the maximum limits: (i) up to 15% during the first 12 months; (ii) up to 30% during the first 24 months; and (iii) up to 50% during the first 36 months. All these periods will be counted from the time the loan operation is approved by the Board of Executive Directors ([¶2.3](#)).

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

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

## I. PROJECT DESCRIPTION AND RESULTS MONITORING

### A. Background, problem addressed, and justification

- 1.1 The Republic of Suriname is located on the northeastern Atlantic Coast of South America and has a population of 541,638 people.<sup>1</sup> About 80% of Suriname's inhabitants live on the Coastal Plain. Paramaribo, Suriname's capital, has a population of 240,924 and is located about 20 kilometers south of the Atlantic Coast. The Savannah Belt, located south of the Coastal Plain, is sparsely populated while the interior, which makes up 80% to 85% of the total area of the country, consists of hills, mountains, and tropical rainforests that are inhabited mainly by dispersed indigenous people.
- 1.2 Suriname is a small open economy that is heavily dependent on gold and crude oil exports, which together account for 71% of total exports. The country experienced strong economic growth in the 2000s due mainly to favorable commodity prices and investments in the mining sector: economic growth averaged 4.4% over the period 2001-2014, with relatively small deficits on the fiscal balance and current accounts. However, a reversal of commodity fortunes in 2015 contributed to a 9% contraction in real GDP accompanied by a strong depreciation of the nominal exchange rate, high double-digit inflation, large fiscal and external imbalances, and a significant increase in public debt. The fiscal deficit averaged 9% of GDP from 2015-2018 and the debt ratio more than doubled over the same period reaching 73% of GDP in 2018. As of the beginning of 2017, there have been signs of a recovery in the real sector -economic growth returned, the exchange rate stabilized, and inflation declined to single digits- due largely to a better performance of the mining sector. Nevertheless, fiscal and debt positions remain challenging areas and reforms to strengthen those areas are ongoing.
- 1.3 **Water and Sanitation Sector Institutional and Legal Framework.** The water sector in Suriname is composed primarily of two government-owned drinking water service providers. The Suriname Water Company (SWM from its Dutch acronym Surinaamsche Waterleiding Maatschappij) is responsible for water supply in the coastal area, including the districts of Paramaribo, Wanica, Para, Nickerie, Marowijne (Albina and Moengo), Saramacca and Commewijne. The Department of Water Supply (NH/DWV) is responsible for water supply in the interior. The Ministry of Natural Resources oversees SWM's and NH/DW's performance and guides water management. Other agencies with responsibilities in the water and sanitation sector include: (i) the Ministry of Health; (ii) the Ministry of Agriculture Animal Husbandry and Fisheries; (iii) the Ministry of Public Works, Transport and Communication (MPWTC); and (iv) the Ministry of Regional Development. There is no independent regulator for the sector or a tariff-setting mechanism. SWM submits tariff increase requests to the Ministry of Natural Resources, which presents it to the Council of Ministers and the President for approval. SMW's tariff structure was updated in 2015 and consists of a fixed meter charge with a variable charge based on consumption blocks.

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<sup>1</sup> Suriname Census 2012.

- 1.4 **SWM indicators and determinants of the main problems.** In 2018, SWM's water coverage was 78.2%. SWM supply water services to 126,066<sup>2</sup> households (approximately 488,000 people). SWM has 800 staff, which corresponds to a ratio of about six employees per 1,000 connections.<sup>3</sup> Overall, production capacity is estimated at 160,000m<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. While the service area comprises the entire coastal area, 85% of SWM's customers reside in the Central Region (Paramaribo, Wanica and Para). SWM's raw water is mostly fresh groundwater from confined aquifers and is usually of good quality. However, water quality test results are often inconsistent, which points to the need to strengthen the water quality laboratory capacity.
- 1.5 Overall, the water supply system is operating under constant challenges. The main problems include: (i) old pipes, the majority of which was installed 40 to 50 years ago (including 7% of asbestos-cement pipes laid in the 1950s and the 1960s); (ii) insufficient maintenance of the infrastructure and limited rehabilitation activities (SWM lacks systematic processes for asset management and maintenance of the network is reactive); (iii) increasing demand for water, with an average annual population growth in the Greater Paramaribo area estimated at approximately 1.2% (from census data); (iv) limited capacity in SWM to plan and manage water supply in the interior; and (v) billing based on metered consumption is only about 60% due to limited meter accessibility in closed properties and the quality of meter screens, which affects revenues. As a result, these problems have led to: (i) low levels of service; (ii) gradual deterioration of the network, with high levels of Non-Revenue Water (NRW), estimated at 39% for the Central Region in 2016;<sup>4</sup> (iii) insufficient financial capacity to cover needed capital investments; and (iv) insufficient revenues to cover operating costs.
- 1.6 SWM seems to have the technical knowledge to operate effectively. However, the utility lacks the underlying processes and systems that drive successful and sustainable performance. The utility has not prepared financial statements since 2013. This lack of financial information and of integration of its information and computer systems have contributed to SWM's poor decision-making. Moreover, there is low accountability across all levels of the organization. Table I shows available performance indicators.

**Table I: Performance Indicators**

Indicator	SWM	Year (SWM)	Region Averages
Average consumption per capita per day (liters)	163.9	2017	195
NRW <sup>5</sup>	39.0%	2016	45% <sup>6</sup>

<sup>2</sup> In the last 4 years, the number of connections increased steadily from 102,410 to 120,243 in 2017.

<sup>3</sup> The average in LAC is four staff per 1,000 connections (ALOAS, 2008). It is considered that between two and three staff per 1,000 connections is reasonable (IDB, 2017).

<sup>4</sup> The NRW Audit for the Central Region using 2013 data estimated that 63% was due to real losses, 19% due to apparent losses, and 18% to unbilled authorized consumption.

<sup>5</sup> NRW is equal to the total amount of water flowing into the water supply network (the System Input Volume) minus the total amount of water that industrial and domestic consumers are authorized to use (the Billed Authorized Consumption).

<sup>6</sup> 2017 (Castalia). Governance Position Paper on the Caribbean Water and Sanitation Sector.

**Table I: Performance Indicators**

Indicator	SWM	Year (SWM)	Region Averages
Quality of water supplied	91.0%	2018	95% <sup>13</sup>
Average response time - Leaks addressed in less than 7 days	99.3%	2018	NA
Collection rate (%) <sup>7</sup>	86.3	2017	NA
Accounts receivable days	129.5	2017	80 <sup>13</sup>
Metering rate (%) <sup>8</sup>	94.6	2018	80 <sup>11</sup>

- 1.7 **NRW.** NRW is high despite SWM's efforts to reduce it. In 2016, SWM's NRW was 39%<sup>9</sup> at the end of the execution of the NRW component of 2451/OC-SU, which fell short of the 35% target due to the need for additional DMAs. NRW is higher in the Central supply area (39%) than in the West and East supply areas (18.3% and 14.9%, respectively). This is expected because 84.9% of SWM's customers are in the Central Region (which includes the Districts of Paramaribo, Wanica and Para). In addition, Central's network is older, longer, and more deteriorated than networks in West and East.
- 1.8 **Metering, billing and collection.** SWM has a high metering rate (approximately 95%). However, only about 11% of the meters are accurate.<sup>10</sup> The utility does not appear to be using results from its meter bench facility to improve meter accuracy. Although SWM bills customers on time, it does not always measure their consumption accurately. Collection efficiency is on average about 86% and is often not calculated correctly. SWM's accounts receivable days are high at 129.5 (utilities in the Caribbean<sup>11</sup> take an average of 80 days). This level of accounts receivable suggests that SWM lacks strict collection management policies.
- 1.9 **Financial performance.** SWM has suffered net losses before subsidies for the past 6 years and has not been able to cover its operating costs. The utility relies on Government subsidies to cover operating expenses and to finance its capital investments.<sup>12</sup> Tariff increases are unpredictable. The last one was approved in 2004 and represented a 30% increase. The tariff is the lowest among all the Caribbean utilities and is one of the root causes for SWM's low revenues. In addition, SWM's overstaffing (60% of operating expenses are personnel costs), high levels of NRW, and poor meter reading have contributed to SWM's poor financial performance.
- 1.10 **Future demand and new developments.** The Wanica District has experienced an average population growth of approximately 3% from 2011 to 2017, one of the

<sup>7</sup> Collection rate is the percentage of revenues that are collected before completing 90 days in arrears.

<sup>8</sup> Metering rate is the percentage of customers that have a meter installed at their premises.

<sup>9</sup> This level is considered high when compared to international benchmarks. In general, NRW levels below 30% represent a well-performing utility. However, the economic level of a water utility's losses should be considered when setting specific goals for NRW levels.

<sup>10</sup> Meter accuracy refers to its ability to conform to its standards or specifications.

<sup>11</sup> 2017 (Castalia). Governance Position Paper on the Caribbean Water and Sanitation Sector.

<sup>12</sup> Subsidies from Government are inconsistent and unreliable. Subsidies dropped from SRD20 million (US\$2.6M) in 2013 to SRD6 million (US\$0.79M) in 2014. SWM has not received direct subsidies from the Government since 2015. However, the Government has been financing SWM's capital expenditures, often with the support of multilateral banks.



highest in the country. It is expected that by 2040, the new housing developments will demand 218m<sup>3</sup>/h, while the Wanica Hospital's demand will be 4m<sup>3</sup>/h. Thus, SWM needs to expand the water production capacity to avoid future water rationing.

- 1.11 **Transfer of NH/DWV operations to SWM.** In the past, the NH/DWV was responsible for supplying drinking water in the coastal rural areas and in the interior. Since April 2016, water supply on the coastal region is under the responsibility of SWM. As for the Interior Region, since December 2018 the Ministry of Natural Resources started the transfer of services of 13 interior areas to SWM. The transfer of operations has been challenging to SWM, resulting in urgent need for additional investments, as the water supply infrastructure in the rural areas of the coast, which were handed over are in poor conditions.<sup>13</sup> It is expected that eventually SWM will be the sole government-owned water supply provider in the country. However, there is no formal agreement with the government nor clear timelines for this to happen.
- 1.12 **IDB assistance.** In 2008 the Bank supported SWM with a Technical Cooperation operation (ATN/SF-11374-SU) "Suriname Water Supply Master Plan (SWSMP)" in the amount of US\$525,000, which identified capital investment needs of US\$250 million between 2009 and 2024 to improve water services. As a result of this TC, the Water Supply Infrastructure Rehabilitation Program (2451/OC-SU) in the amount of US\$12M was formulated in 2010 to address the most pressing issues in water supply in priority districts of the coastal area and to strengthen the growing institutional and executing capacity of the SWM. The objective of this program was to improve access to water through the rehabilitation of key potable water infrastructure and the strengthening of SWM. The program financed some reduction in NRW (from 45% to 39%), improved energy efficiency of pumping stations, and improved commercial management at SWM. Under the loan, over 16,600 households benefited from connection to an upgraded water supply network. In 2014, a US\$500,000 TC (ATN/OC-14410-SU) "Assessment of aquifer vulnerability and yield potential of coastal aquifers in Suriname" was approved and it showed that there is abundant fresh groundwater available in the coastal plain of Suriname to serve the drinking water supply needs through 2040 and beyond. The proposed new program, in accordance with the SWSMP, consolidates the lessons learned from similar activities started under 2451/OC-SU and which, given its small size was limited in scope. This operation includes further reduction of NRW, capacity building for improved operational and management efficiency, and increased water production capacity.
- 1.13 **Lessons learned.** Based on the experience gained during the implementation of 2451/OC-SU, key lessons learned to address SWM's weak institutional capacity include: (i) ensure that the key positions of PEU are staffed; (ii) careful review by the Bank's team of the AOP; (iii) having SWM staff physically involved is beneficial for project execution; (iv) the lack of involvement of the Operations Department from the project design phase and throughout implementation can impede the smooth execution of the project; (v) ensure that staff trained in procurement are involved in

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<sup>13</sup> These conditions include for pump stations: (i) depleted infrastructure due to age and limited maintenance, with high NRW levels; (ii) difficulties in servicing large areas with low population density since installation of pipe works for scattered household is uneconomical; (iii) absence of a revenue collection mechanism; (iv) lack of customer data; and (v) absence of a water quality program.

the procurement processes. With respect to bidding documents, requirements for international bidders should be defined based on the local market capabilities and to ensure that supervisory services are strong to provide needed support; and (vi) with respect to ICB and NCB, pre-bid meetings should be conducted timely to provide for clarification. Initial findings from the recently concluded loan operation 2624/OC-BH highlight the importance and effectiveness of comprehensive NRW reduction approaches that include: (i) detailed and quantitative analysis of the problem; (ii) development of a complete water loss reduction strategy; (iii) assiduous implementation of all tasks within the strategy; (iv) training provided to the operator's staff; and (v) an effective network management system. Accordingly, the proposed intervention includes technical assistance to SWM to strengthen SWM's capacity to effectively manage an NRW program.

**1.14 Gender gaps.** Gender balance is a challenge for the country. In Suriname, as in many countries, women's access to higher decision-making levels remains a challenge in most governments and the private sector. In Latin America, women represent more than 60% of the workforce in the service sector; however, they represent only 19.7% in the water sector.<sup>14</sup> Additionally, women living in rural areas encounter challenges such as a lower level of education with limited employment opportunities in their community, where they are responsible for the establishment of their home and the care of their children and their family. Most of the Surinamese woman's activities rely on agriculture with a low 37.9% of the total employment in non-agricultural activities (UNDP, 2018). According to a recent World Bank<sup>15</sup> study, women are underrepresented in technical and executive positions in companies that provide water and sanitation services, despite being important users and main decision makers regarding the use of water in the home. According to SWM's 2017 labor data, out of a total of 757 staff, 80% are men and only 20% are women (Western region: 40 men, 11 women, Saramacca Region: 5 men, 0 women, Central region: 518 men, 135 women, Commewijne Region: 5 men, 2 women, Eastern Region: 37 men, 4 women). In SWM there are three sub-directions (operations, planning and finance - only the finance management is occupied by a woman). Women worldwide tend to suffer higher barriers to entry, remain and grow within the sector. One of the barriers is the lack of training opportunities, lack of equipment and friendly environments, lack of professional development opportunities. There are many benefits that female inclusion in institutions and companies brings (better financial performance, more innovation, better service delivery, better business management, among others).<sup>16</sup>

**1.15 Climate change (CC) impacts and vulnerabilities.** Suriname is one of the most vulnerable countries in the region due to its geographical location (large percentage of population in coastal/riverine regions) and socio-economic context. With regards to drinking water, the National CC Policy and Action Plan for Suriname 2014-2021 highlights that changes in precipitation leading to drought or flooding may cause a decrease in freshwater availability. Moreover, there is an increased risk of saltwater intrusion into coastal ground water reservoirs due to sea level rise. However, this additional risk posed by CC is limited for the case of confined aquifers, which are the ones that are being used nowadays by several water systems in northern Suriname

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<sup>14</sup> BID (2016), <https://publications.iadb.org/es/publicacion/17521/tiene-genero-el-agua>

<sup>15</sup> World Bank (2019), <https://openknowledge.worldbank.org/handle/10986/32319>

<sup>16</sup> World Bank (2019), Box 1.1, <https://openknowledge.worldbank.org/handle/10986/32319>

(HACAS study, 2018). Emphasis in NRW reduction will contribute to an efficient management of the available water resources. According to recent climate modelling projections from a General Circulation Model ensemble from 15 different models and a Regional Climate model, the main impacts expected for Suriname are: (i) an increase of intense precipitation events while the average annual rainfall will decrease (although there is no model-projections homogeneity, so there is uncertainty on the extent and direction of changes of rainfall); (ii) unequivocal increase in average temperature, and (iii) sea level rise.

- 1.16 **Sustainable Infrastructure.** The proposed program is designed considering the four dimensions of sustainable infrastructure,<sup>17</sup> as follows: (i) environmental sustainability including climate resilience, as activities will be guided by the principle of efficient use of water resources and energy consumption reduction, especially in activities related to NRW and expansion of production facilities; (ii) institutional sustainability, via the following activities: implementation of a fix asset registry, cost of service study, implementation of control system, development of HR strategic plan among others. Also training activities for management and operations development aimed at strengthening SWM operation and management capacities to improve sustainability of its operations and management; (iii) social sustainability, whereby the activities of the program aim to strengthen SWM as a service provider, specifically improving the efficiency, quality and reliability of its operations and management, which will positively impact the livelihood and social well-being of the beneficiaries; and (iv) economic and financial sustainability, as the IAP will recommend activities to be implemented to improve the financial sustainability and more efficient service delivery by the SWM. In addition, regarding the new infrastructure, the contractors will develop operation and management plans and will also be responsible for training relevant SWM staff with regards to plant operation.
- 1.17 **Productive Local Development.** Under Component 2, the production capacity in Wanica will be expanded to provide drinking water to new housing developments and new businesses. Additionally, the new hospital facility at Wanica will also directly benefit from the expansion of production capacity. Additionally, under Component 3, the study for water supply in the interior will include an assessment of economic activities that will benefit from an improved water supply service with gender considerations, and economic activities to promote women and young people economic opportunities. Improving the quality and quantity of the drinking water and sanitation services will allow households to use their time in productive activities by not having to fetch water sometimes far away from the households. In addition, trainings will be delivered on operation and maintenance.
- 1.18 **Link to National Development Plan.** The proposed operation is aligned with the Suriname Policy Development Plan 2017-2021, which includes the development of the water sector within the first pillar of the development plan and recognizes the availability of healthy drinking water as a necessary link in the social and economic development of society. The Ministry of Finance, who made the request for this loan operation, as well as the Ministry of Natural Resources, that is responsible for policy pertaining to water supply in Suriname are committed to improvement of the efficiency of the operations of SWM and water supply service to the population. They are committed to the Water Supply Master Plan financed under

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<sup>17</sup> Technical Note No. IDB-TN-1388.

ATN/SF-11374-SU, followed by their adoption of the recommendations provided under the Operations and Management Audit financed under ATN/OC-16778-SU.

- 1.19 **Strategic Alignment.** This operation is aligned with the IDB Group Country Strategy with the Republic of Suriname 2016-2020 (GN-2873) and its strategic area of “Modernize the Public Sector”. Under this strategic area, the operation is aligned with the objective 1.4 of the results matrix of the Country Strategy to reduce Central Government financing to state-owned enterprises. The program will take a close view of SWM’s services that require improvement in governance, regulatory framework, operations efficiency, restructuring, and greater accountability and transparency. Ultimately, the operation is expected to contribute towards improving SWM’s performance, reducing SWM costs, and reducing subsidies. The program is aligned with the Corporate Results Framework 2020-2023 (GN-2727-12) through the indicators “strengthened digital technology and managerial capacity” and “Enterprises provided with technical assistance”. The program is consistent with the “Update to the Institutional Strategy. Development Solutions that Reignite Growth and Improve Lives” (second update) 2020-2023 (AB-3190-2) and is aligned with the development challenges of Social Inclusion and Equality, by increasing the access to water supply and by developing a strategy to increase access in rural areas. Additionally, the operation is aligned with Productivity and Innovation by reducing NRW and increasing SWM’s efficiency, using SWIT and innovative tools for information systems (§1.22). It is also aligned with the cross-cutting issues of Gender Equality and Diversity by considering gender specific activities in trainings, in the HRD Strategy and by including gender aspects in the development of the strategy for the interior (§1.20); and with Climate Change and Environmental Sustainability by contributing to the reduction of energy consumption and water losses in the water supply systems, minimizing herewith the extraction pressure on confined aquifers currently in use. This is particularly important for northern coastal states where sea level rise will have an impact on aquifers. Approximately 52% of operation resources are invested in climate change adaptation activities, in accordance with the [joint methodology of the multilateral development banks for tracking climate-change adaptation finance](#). These resources contribute to the IDB Group’s goal of increasing financing of climate change-related projects to 30% of all operation approvals by year-end 2020. The proposed program is consistent with the Water and Sanitation Sector Framework document (GN-2781-8) as it will contribute to improving SWM’s service quality and management efficiency. The present operation is included in the update of Annex III of the 2019 Operational Program Report (GN-2948-2), as part of the 2020 indicative pipeline.
- 1.20 **Gender actions.** To reduce the gaps identified in terms of employment, the project will include the following: (i) the production facility(ies) to be financed under Component 2 will be designed to satisfy future demands of the population and adequate access to services by women and men, (but specially on women in order to close the gender gap) within the beneficiary area; (ii) a training program for both, women and men (but specially for women in order to close the gender gap) on domestic water management, and plumbing will be designed under Component 3. This training will include plumbing, basic electricity, notions of construction, leadership and empowerment. Certified and trained women may be hired by the company, but they will also gain practical knowledge to provide their services independently; (iii) the Human Resources (HR) Strategy to be developed under Component 3, will include actions in gender to strengthen the presence of

women in the company, both in decision-making and technical positions, in order to contribute to closing the identified gender gap (¶1.14). It will include: (a) training topics on gender violence prevention and mitigation and training about workplace harassment; (b) quotas for women participation (at least a 15% of women participation will be targeted in all training activities); (c) development of a training program to increase women participation in decision making positions, including: mentorship and networking activities, training in leadership and management skills. And (iv) the study for water supply in the interior will include an assessment of economic activities with gender consideration.

- 1.21 **Inclusion of people with disabilities.** The program activities will include an assessment of accessibility to SWM public offices and will finance the implementation of accessibility measures for disabled persons, if necessary. In addition, Component 3 will finance the upgrade of IT communication systems, and inclusion of innovative systems to improve customer support and accessibility. The design and development of these systems will provide for specific measures for persons with disabilities.
- 1.22 **Innovation.** The NRW reduction component considers the implementation of Smart Water Infrastructure Technologies (SWIT), which have the potential to contribute significantly towards improved service delivery and efficiency of water operators; reducing costs and water losses, streamlining operation and maintenance, and improving data and asset management in water utilities, allowing for information based decision making.<sup>18</sup> Examples of SWIT to be used include: District Meters Areas (DMAs), Smart Metering Reading (AMR), pressure management, active leak detection, hydraulic modeling, energy efficiency measures, and implementation of NRW-relevant information management systems. For Component 2, the pumps station at Helena Christina will be equipped with a Supervisory Control and Data Acquisition (SCADA) system to gather and analyze real time data. Under Component 3, the information technology systems upgrade will provide for the inclusion of innovative systems for SWM to reach its customers, including provision for new online payment methods, development of SWM app to improve customer support, and improvement of SWM's website.
- 1.23 **Compliance with the Public Utility Policy for Domiciliary Services (GN-2716-6).** The proposed program and its objectives are consistent with the principles of the Domiciliary Public Services Policy (GN-2716-6) and comply with the conditions of financial sustainability and economic evaluation. The works to be financed by the project are viable from a socioeconomic point of view (¶2.10). The program will contribute to increased access to service, including vulnerable groups. With respect to financial sustainability, in order to ensure that the service provision generates or receives sufficient funds to cover the operation and maintenance of the systems, the project will support the Government of Suriname (GoS) efforts to gradually implement a cost recovery mechanism through the improvement of the commercial management area of SWM (billing and collection and NRW reduction). Until this mechanism is effective, the GoS will continue assigning the required resources to cover operation and maintenance costs of the systems to be built with resources of the project through the national budget. In addition, the Bank will finance a comprehensive study to determine the real cost

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<sup>18</sup> Evaluation of Smart Water Infrastructure Technologies (SWIT) IDB (2017).

of providing the services, which will include a revision of the tariff structure and willingness to pay, which will be a key input for future tariff increase request.

- 1.24 **Program rationale and activities considered.** The proposed activities to be financed under the loan are to continue the investments started under 2451/OC-SU and are in line with the results of the operations and management audit and the IAP financed under ATN/OC-16778-SU “Support to SWM Institutional and Operational Strengthening”, as well as the SWSMP and emerging water supply expansion needs as identified by the GOS and SWM. The operation will consolidate improvements started under 2451/OC-SU including continuing the NRW interventions focused in the Central Region since improving NRW levels in this area will have a higher impact on SWM’s operations, as well as institutional strengthening to improve SWM’s capacity and expand its responsibility. The expansion of the Helena Christina pump station addresses the water supply needs in Eastern Wanica, a district with high population growth.
- 1.25 **Effectiveness of the interventions.** According to the literature,<sup>19</sup> the main determinants of NRW are both physical and management factors. In Bahamas 2624/OC-BH, the implementation of activities regarding leak detection and repairs, pressure management in District Meter Areas (DMA), and improvement in information systems, resulted in a reduction of NRW and costs savings for the utility<sup>20</sup>. In Suriname, a pilot project was implemented with the operation 2451/OC-SU to reduce NRW. The intervention included DMA, trainings and information system improvements that contributed to reduce the NRW.<sup>21</sup> Additionally, the [IDB \(2017\)](#) SWIT evaluation, which includes smart metering, DMAs, and leak detection, among others, concluded that the most effective and proven methodology for reducing NRW “is with the dynamic combination of SWIT that include tools like GIS and hydraulic modeling, the use of DMAs, pressure management areas (PMAs), Active Leak Detection, and management information system”. As part of the SWIT, and as recommended by the evaluation carried out by the IDB, the SCADA system will be implemented for Component 2 to improve the management of the infrastructure as well as monitor the quality of water. All these factors were considered when designing this operation.
- 1.26 **Donors Coordination.** SWM is currently working with the French Development Agency (AFD) and the European Union (EU) with a €\$15.5 million program to increase water production in Paramaribo and Marowijne (Moengo), implement SCADA for Paramaribo production stations, and update the Suriname Water Supply Master Plan. The Caribbean Development Bank (CDB) is also active with a technical cooperation (US\$834,000) to prepare designs to upgrade water supply facilities in the Nickerie and Paramaribo districts, which will be implemented with a US\$25 million program. The activities proposed under this loan are complementary to the ongoing activities under implementation by other development partners. For instance, the areas where water supply expansion is to be financed by the AFD

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<sup>19</sup> [Gonzalez et al \(2011\)](#).

<sup>20</sup> Initial results from the PCR for BH-L1028 shows that the program significantly reduced NRW by 70% based on the average daily volume of water (6.87 million imperial gallons per day at baseline and 2 MIG per day at closing), and based on NRW-per capita (there was a reduction of 35% between the second semester of 2014 and the first semester of 2019, according to the Counterfactual Analysis Annex.

<sup>21</sup> Project Completion Report SU-L1018.



and eventually by CDB are those areas where this operation is targeting reduction of NRW.

**B. Objective, components, and cost**

- 1.27 **Program objectives.** The general objective of the proposed operation is to improve efficiency, quality, and financial and environmental sustainability of the potable water services provided by SWM. The specific objectives are to: (i) reduce NRW levels in the Central Region through the implementation of critical aspects of the 2015 NRW reduction strategy; (ii) increase availability of water supply services in Wanica through upgrading water production infrastructure; and (iii) modernize the operations and management of SWM through the implementation of key recommendations of the IP and the development of a water supply strategy for the interior.
- 1.28 **Component 1: NRW reduction in Central Region (Paramaribo, Wanica and Para) (US\$9 million).** This component will be based on the 2015 NRW reduction strategy developed under 2451/OC-SU and lessons learned with a specific focus on the Central (Paramaribo, Wanica, and Para) Region of Suriname. Specific activities will include: (i) strengthening of the NRW unit through a technical assistance consultancy, which will develop the strategic requirements and plans for the establishment of the unit and ensure knowledge transfer to SWM while carrying out an updated water balance, a meter accuracy study, and a meter replacement plan; (ii) expansion of DMAs to help SWM establish and monitor at least five new DMAs, measures to reduce real and apparent losses in the selected DMAs through a systematic approach (The expansion of DMAs will include installation or replacement of water meters and service connections, active leak detection and repair, implementation of energy efficiency measures and smart water technologies for pressure management and meter reading); and (iii) updating of the customer database to ensure the current database information is accurate to facilitate SWM's informed decision making.
- 1.29 **Component 2: Upgrading water production infrastructure (US\$7.7 million).** This component will finance infrastructure works to expand the Helena Christina pump station in order to increase the water treatment capacity and meet projected demands. A technical analysis of the alternatives for this component was financed under ATN/OC-17519-SU, which confirmed the feasibility, estimated costs, and cost-effectiveness of the selected area ([OEL#2](#)). Specific activities to be financed under this component include: (i) expansion and rehabilitation of the Helena Christina pump station (the expected works comprise: drilling of four wells, rehabilitation of two wells, installation of 8.5 km of transmission pipelines, expansion of production capacity, and installation of 12.5 km of distribution network ([REL#3](#))); (ii) construction of two storage tanks at the Helena Christina pump station; and (iii) implementation of SCADA system for the Helena Christina pump station.
- 1.30 **Component 3: Institutional strengthening and modernization of SWM (US\$5.09 million).** This component will finance the modernization of SWM operations and management, improvement of its planning, management and operations capacity, as well as prepare SWM for taking over responsibility for water supply in the interior. Specific activities to be financed by the loan operation include:

(i) study for water supply solutions for the interior,<sup>22</sup> including a focus on climate change impacts on water availability towards sustainable use of water; (ii) information technology consultancy to diagnose the current state and functionality of IT systems including an assessment of how the IT system can be updated to improve accessibility, including for people with disabilities, propose a strategy for improved integration and upgrading of IT systems and its implementation with considerations for cybersecurity,<sup>23</sup> which will be crucial for SWM to respond to technological changes, allocate resources efficiently, and improve operational efficiency in view of potential seasonal changes in water availability due to climate variability and change; (iii) improved capacity of SWM's water quality laboratory towards accreditation and enhancing water quality monitoring capacity; (iv) design and implementation of a training program for women and men in water management, plumbing, and CC to raise awareness of the impacts and vulnerabilities that could put at risk water systems' operation, and to identify feasible adaptive water resources management options; (v) preparation of a cost study to determine the real cost of providing the service, which will empower SWM to request tariff adjustments based on reasonable costs; and (vi) assessment of the organizational structure and of the accessibility to SWM public offices.

- 1.31 **Program Management and other costs (US\$3.21 million).** This component will finance administrative expenses including, support for the PEU, audits, monitoring and evaluation, communication and supervision and implementation of Environmental and Social Management Plan (ESMP). About five percent of the loan resources have been allocated for contingencies.

### C. Key results indicators

- 1.32 Annex II describes in detail the Results Framework of the program. The main results the program aims to attain include: (i) decrease in the percentage of NRW in the Central Region; (ii) increase in the number of households with access to the water supply network in Wanica; (iii) strengthen SWM capacity to manage water supply services in the interior region; (iv) strengthen the HR and financial departments of SWM; and (v) achieve ISO:17025 accreditation for SWM's Water Quality Laboratory.

**Table II. Main expected outcomes**

Outcome <sup>24</sup>	Unit of Measurement	Baseline	End of Project
Volume of potable water billed in Central Region	M m <sup>3</sup> /year	28.2	29.8
Level of NRW in Central Region	%	39	33
Households with effective access to water supply network in Wanica Region	Households	29,576	33,296
Water samples that comply with water quality standards in the Central Region	%	91	95
SWM's Financial Statements audited from 2014 to 2024	%	0	100
SWM complying with laboratory quality standards (ISO:17025) in Central Region	Certification	0	1

<sup>22</sup> The study will include an environmental and social framework of the proposed solutions as well as designs and tender documents when required.

<sup>23</sup> The activities are guided by the IAP financed under ATN/OC-16778-SU.

<sup>24</sup> The baseline and targets related to the NRW component will be confirmed and adjusted based on a water balance to be financed by the program.



**Table II. Main expected outcomes**

Outcome <sup>24</sup>	Unit of Measurement	Baseline	End of Project
Strategy for water supply services in the Interior Region considering climate change aspects approved by the Ministry of Natural Resources	Strategy	0	1

- 1.33 **Beneficiaries.** The direct beneficiaries of the program will be the inhabitants in the locations of NRW reduction (Paramaribo, Wanica and Para) and upgraded production capacity interventions at Wanica. It is expected that the quality of the water supply services delivered in these areas will improve. SWM will directly benefit in terms of recovered water losses and of improved revenue through the NRW reduction strategy as well as improved operations and management system.

## II. FINANCING STRUCTURE AND MAIN RISKS

### A. Financing instruments

- 2.1 **Cost and Financing.** The total program cost is US\$25 million, which will be financed by the Bank from Ordinary Capital (OC) resources. The summary of program costs is presented in Table III. The detailed budget presents all program associated costs.

**Table III. Summary of program costs (in US\$ thousand)**

Components	IDB	Total	%
<b>Component I. NRW reduction in Central Region (Paramaribo, Wanica, Para)</b>	<b>9,000</b>	<b>9,000</b>	<b>36.00</b>
✓ Micrometers installed (7,000)	1,050	1,050	4.20
✓ NRW activities (SWIT, Service connections, Leak detection and repair,	4,130	4,130	16.52
✓ NRW Unit strengthened	2,070	2,070	8.28
✓ District Metered Areas (DMAs) created and Customer database updated	1,750	1,750	7.00
<b>Component II. Upgrading water production infrastructure</b>	<b>7,700</b>	<b>7,700</b>	<b>30.80</b>
✓ Pumping station expanded	5,700	5,700	22.80
✓ Storage tanks built	2,000	2,000	8.00
<b>Component III. Institutional Strengthening and Modernization of SWM</b>	<b>5,090</b>	<b>5,090</b>	<b>20.36</b>
✓ Drinking water supply in the Interior developed	550	550	2.20
<b>Information Technology System audit conducted</b>	250	250	1.00
<b>Organizational Structure and Accessibility Assessed</b>	150	150	0.60
<b>Financial and Economic Affairs Department Strengthened</b>	450	450	1.80
<b>Human Resources Management Department Strengthened</b>	475	475	1.90
<b>Action Plan for laboratory Certification Develop and Implemented</b>	1,415	1,415	5.66
<b>Information Technology Systems updated</b>	1,500	1,500	6.00
<b>Training and other studies</b>	300	300	1.20
<b>Program Management and other costs</b>	<b>3,210</b>	<b>3,210</b>	<b>12.84</b>
✓ Administrative Expenses (including PEU support, communication, and supervision and implementation of ESMP)	1,800	1,800	7.20
✓ Evaluation Monitoring and Audits	160	160	0.64
✓ Contingencies	1,250	1,250	5.00
<b>Total</b>	<b>25,000</b>	<b>25,000</b>	<b>100.00</b>

- 2.2 **Modality and Financial Structure.** The lending instrument to be used for this operation is a Specific Investment Loan. The lending instrument is adequate since the proposed loan will finance three specific interdependent projects with specific purposes. The proposed execution period is six years. In line with the Pluriannual Execution Plan (PEP) the program responds to the prioritized needs of the SWM. The disbursement projections are presented in Table IV.

**Table IV. Disbursement Table (in US\$ thousand)**

Source/Year	1	2	3	4	5	6
IDB	313	3,208	7,158	6,048	5,113	3,158
% cumulative	1	14	43	67	87	100

- 2.3 **Disbursement Restrictions.** Pursuant to Document AB-2990, the disbursement of Bank resources will be subject to the maximum limits: (i) up to 15% during the first 12 months; (ii) up to 30% during the first 24 months; and (iii) up to 50% during the first 36 months. These limits may not apply if the requirements established in the Bank's policy in this regard have been fulfilled, provided that the borrower has been notified in writing. All these periods will be counted from the time the loan operation is approved by the Board of Executive Directors.

**B. Environmental and social safeguard risks**

- 2.4 In compliance with the Environmental Safeguards and Compliance Policy OP-703 and following the results of the [ESA](#), this operation has been classified as Category "B". This is due to the fact that no significant negative impact to the environment have been identified, no indigenous peoples are in the impacted area and the operation will not require any physical displacement. During construction, there will be local and short-term negative environmental and social impacts such as air quality, noise, waste, water pollution or depletion, however, none of these are likely to be significant. Component 1 (NRW) was studied in terms of environmental and social impacts and risks as part of the Environmental and Social Assessment (ESA). Both options (that were presented in the Project Profile) under Component 2 were evaluated in the ESA. As part of the [ESA](#), an Environmental and Social Management Plan ([ESMP](#)) was developed for the construction and operation phase of the operation. A socio-cultural assessment (SCA) was also done as there are indigenous communities located in the vicinity of one of the options for the proposed infrastructure components. This option was not selected and therefore it has been verified that no indigenous communities will be affected by the infrastructure to be financed under Component 2. After the technical assessment (that evaluated cost, current and future demand and available information), SWM decided that the operation would fund the Helena, Christina in Wanica option for Component 2 where an additional production capacity of 240m<sup>3</sup>/h is required. This option does not affect indigenous communities. The [ESMP](#) for the construction and operation phase of the operation will help ensure compliance with the environmental and social safeguards requirements.
- 2.5 The consultation process began with an event held in the Helena Cristina area on November 28th for the infrastructure to be financed under Component 2, and the activities to be financed under Component 1 were consulted on the week of December 3rd through a questionnaire administered by telephone to 30 individuals from key and vulnerable stakeholder groups. Both of these processes

were designed and set up logistically following the Consultation Plan prepared as part of the ESA, and includes measures to promote inclusion of women, disabled people, and other vulnerable groups and key stakeholders. The main concerns shared during the consultation on Component 1 had to do with advance notice of water service disruptions, professional conduct and practices of SWM employees, and alternative sources of water for some vulnerable families, and businesses. For Component 2, the main questions and comments were related to the 12 km road intervention and how it would affect homes, and how specific potential environmental impacts like water quality and noise would be managed. The consultation report was submitted to the IDB and disclosed as part of the final [ESA](#), [ESMP](#).

- 2.6 Additional risks were identified as medium and include: (i) natural disasters (flooding), which can impact the works especially during the construction phase. This risk will be mitigated by planning construction activities around the raining season and by building resilient infrastructure; (ii) there is a risk that stakeholders are not properly engaged in the process. This risk will be mitigated through the implementation of a stakeholder's engagement plan that has already been developed as part of the [ESA](#).

### C. Other risks and key issues

- 2.7 **Fiduciary Risks.** The limited capacity of SWM to implement multiple programs at the same time was deemed "Medium" and will be mitigated through the establishment of a dedicated PEU, which will draw on the experience gained from execution of project 2451/OC-SU. The PEU staff will be trained to improve project management capacity. The following two risks were considered "High": (i) limited capacity and language barrier of local contractors to comply with Bank procurement policies. This risk will be mitigated through the translation of documents and mandatory pre-bid meetings to explain the terms of the bidding documents; and (ii) delays in payments to contractors by the (MOF). This risk will be mitigated through support from IDB to facilitate direct payments to contractors from the MOF. This does not imply the contracting of works or services directly by the Bank.
- 2.8 **Development risks.** The following three risks were considered "Medium": (i) unavailability of vacant land at the location designated for the wells, which will be mitigated through the Land Acquisition and Livelihood Restoration Plan;<sup>25</sup> (ii) disruption of services associated with the rehabilitation of the network, which will be mitigated through the support of a standby team at SWM and the Stakeholders Engagement Plan; and (iii) limited pool of local contractors with the required technical knowledge, which will be mitigated through an SWM list of contractors with previous experience with SWM as well as a pre-announcement and multiple announcements of works to be executed. The risk associated with the limited availability of key staff for the implementation of the Institutional Strengthening Action Plan was considered "High" and will be mitigated through the contracting of additional staff, as needed.

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<sup>25</sup> Should the land to be acquired be in use, the livelihood of those using the land would be restored. There will be no resettlement and possibility of having to use land that is in use is very low.

- 2.9 **Technical viability.** The proposed technical solutions contribute to address the need to improve the water supply service provided by SWM. The Technical options and Design ([OEL#2](#)) include a description of the proposed works and related costs. The interventions, based on a technical analysis by experienced consultants in the area of NRW and engineering, are feasible, and are the outcome of an analysis that contemplated different technical alternatives and configurations. The costs of these alternatives were estimated and compared to make an economic feasibility appraisal considering local unit prices, technologies, and services. The sizing criteria and parameters are fully compatible with local and international design standards. SWM is familiar with the operation and maintenance (O&M) of the assets that will be financed and will receive additional support through Component 3. The general approach, the materials, and technology that will be used for the WTP construction and for NRW activities are known in Suriname<sup>26</sup> and have been successfully used in other projects. Overall, the proposed interventions are technically viable, adequate for the defined capacity and quality objectives, and correspond to the minimal cost solution under the framework of such objectives.
- 2.10 **Socio-economic viability.** A cost-benefit analysis for the main components of the program was performed using a discount rate of 12%. The program is economically viable, showing an Economic Rate of Return (ERR) of 20.3% and an Economic Net Present Value (NPV) of US\$3.4 million for the NRW interventions (Component 1 and institutional strengthening activities from Component 3), and an ERR of 14.3% and an NPV of US\$0.9 million for the upgrading of the production infrastructure (Component 2 and training activities from Component 3) ([OEL#1](#)). The analysis was complemented by appropriate sensitivity and risk assessments. The achieved ERRs can be safely regarded as the lower bound estimation, as conservative assumptions were made for the analysis.
- 2.11 **Financial viability.** The most recent financial statements available (2013 and 2014) show that SWM cannot cover its operating expenses. Management accounts from subsequent years provide little evidence that the financial situation at SWM has improved. Since SWM does not have audited financial statements for any year after 2013, it cannot use its financial statements to make informed decisions or track changes in financial performance. When SWM cannot cover its operating expenses, it relies on subsidies from the GoS to cover them as well as its capital investments (¶1.9 – footnote No.12).
- 2.12 SWM's poor financial performance has resulted in net losses before subsidies for at least the past six years. SWM's poor financial performance is driven by its inability to cover its operating expenses with revenue from operations. The main identified root cause is SWM's low tariffs and the lack of tariff setting regime. In 2014, SWM's average water tariff was approximately US\$0.57 (SRD1.87) per cubic meter of water.<sup>27</sup> This tariff was the lowest of all utilities in the region. It was at least four times lower than the regional average of US\$2.37 for Caribbean utilities in 2014 and 2015. Collection rate is estimated at 86%. SWM has high levels of NRW close to 39% and has been reporting high accounts receivable days of

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<sup>26</sup> The treatment technology proposed for the expansion Helena Christina pump station is similar to the one implemented currently in the same pump station.

<sup>27</sup> Average water tariff is calculated by dividing total revenues from water sales (in US dollars) by total water billed (in cubic meters).

129.5 days. Furthermore, SWM is overstaffed with personnel costs representing 60% of operating costs, which impact negatively its revenues. SWM's management accounts show that the utility was able to improve its EBITDA by increasing revenue and keeping operating expenses stable after 2015. Revenue rose by 75% in 2016 and 34% in 2017, as a result of tariff increases and there was a reduction in net losses during that same period.

- 2.13 SWM's capacity to improve its financial situation will depend on its capacity to increase its revenues and control its cost. Control of staff hiring is key to reach this objective (staff represents 60% of operating costs). The utility must focus its efforts on the following: (i) reduce levels of NRW; (ii) propose and implement periodic tariff adjustments; (iii) increase efficiency in billing and collection; and (iv) control its operating costs, mainly its personnel costs. High impact activities such as metering, energy efficiency measures as well as pressure management will further contribute to that goal. SWM will also receive support to modernize its financial department to ensure the production of financial statements on a timely basis as well as the reliability of financial information systems. In addition, the project will finance a cost study to calculate the real cost to SWM to provide the service, an analysis of the tariff structure as well as willingness to pay. This input will help determine whether costs are recorded correctly and whether they are reasonably efficient. This study will also empower SWM to request tariff adjustments based on reasonable costs.
- 2.14 **Institutional viability.** The institutional viability of SWM was conducted through the Platform for the Analysis of the Institutional Capacity (PACI) to define the level of staff and technical support required for the project. The results obtained from the application of PACI indicate a "medium" level of capacity development and risk. SWM has had some experience executing projects from donor agencies such as the previous IDB loan operation as well as external financing from the AFD and CDB. However, SWM needs to be strengthened with respect to internal control, financial planning and budgeting, accounting and financial reporting system. SWM will use its own structure with a Program Execution Unit. The PEU will draw on the experience gained from execution of project 2451/OC-SU. That staff will be trained in IDB procurement and financial procedures and additional experts will support SWM's technical staff in specific areas, as needed. In addition, SWM will improve the integration of its management information system and software it uses to ensure better interface.

### III. IMPLEMENTATION AND MANAGEMENT PLAN

#### A. Summary of implementation arrangements

- 3.1 **Borrower and EA.** The borrower for the proposed program is the Republic of Suriname and the EA will be SWM, which will establish a PEU that will support the execution of the Program.
- 3.2 **Program Execution Unit.** The PEU will be composed of the following staff: (i) a program manager; (ii) a manager for each of the three components of the program; (iii) a financial/accounting specialist; (iv) a procurement specialist; (v) an environmental and social specialist; and (vi) a communication specialist. The PEU will draw on the experience gained from execution of project 2451/OC-SU.

During the execution of the project, specific experts will be identified and contracted as needed to support the technical staff of SWM (i.e. non-revenue water expert). The PEU's responsibilities will include: (i) preparation of budgets and disbursement projections; (ii) preparation and implementation of the AOPs; (iii) conducting of procurement processes for works, goods and services; (iv) preparation of the annual Procurement Plan (PP) for the program; (v) conducting of the financial management of the program; (vi) monitoring of the progress of project activities; (vii) contracting of the external audit planning, management, procurement, environmental supervision for the duration of the execution of the loan period; and (viii) monitoring of compliance with contractual clauses of the loan.

- 3.3 A Steering Committee will be established and composed of the three deputy directors from SWM, the Director or a representative of the Director of the EA, and one representative from the Ministry of Natural Resources who will monitor and oversee the execution of the project as well as resolve potential bottlenecks during execution. The PEU's program manager will report to the Steering Committee. Work supervision will be conducted by staff from SWM.
- 3.4 **Operational Manual (OM).** The OM will set forth the details regarding project execution including coordination of activities amongst the different offices. The program will be executed following the AOP that will include for each programmed annual activity: its goals, terms of reference, budget, source of funding, and responsibility for its execution. The AOPs will be prepared according to guidelines established in the OM. Changes to the AOP will require the non-objection of the Bank. The overall need to update the Operations Manual will be assessed during the mid-term review.
- 3.5 **Special Contractual Clauses prior to the first disbursement.** The borrower, through the Ministry of Finance (MOF), shall provide evidence to the satisfaction of the Bank that the EA: (i) has established the PEU; (ii) has appointed key staff of the PEU, including its program manager, procurement specialist, and financial specialist; (iii) has approved the Operations Manual (OM) ([OEL#6](#)) for the program, in the terms agreed with the Bank and it has entered into effect; and (iv) a steering committee has been established and is composed by the three (3) deputy directors, the Director or a representative of the Director of the EA, and one representative from the Ministry of Natural resources. These conditions are essential to ensure the timely execution of the project, as they will guarantee the definition of detailed governance arrangements and regulations on operational and fiduciary issues, including the roles and responsibilities of the PEU key staff. See Environmental and Social conditions prior to first disbursement in Annex B of the [ESMR](#).
- 3.6 **Special Contractual Clauses of execution.** The borrower, through SWM, shall present evidence to the satisfaction of the Bank that: (i) by the end of the first year of execution of the loan, the EA has assigned two (2) senior engineers to work on the NRW unit contemplated for Component 1; (ii) in relation with the drilling of new wells under Component 2, prior to the award of the contract for the associated works, in accordance with laws and regulations of the borrower, it has obtained the possession of the real state property where each of the wells will be developed; and (iii) SWM, through the PEU, will contract a cost of service study to determine the actual cost of providing the service, which will serve as an input to request future



tariff increases. This study should be completed by the end of the second year of program execution. These conditions are included to ensure the land ownership prior to the beginning of works and that SWM is able to cover its operation and maintenance costs through tariffs. See Environmental and Social contractual conditions of Execution in Annex B of the [ESMR](#).

- 3.7 **Financial Management.** Financial management of the program will be carried out in accordance with the Bank's Management Guidelines (OP-273-12). Financial programming will be carried out based on standard models included in the Bank's project disbursement guide. The Bank will determine the supervision procedures necessary to verify the success of the operation, including independent financial auditing performed in accordance with the guidelines for financial reporting and external auditing of projects financed by the Bank.
- 3.8 **Procurement.** The PP will be covering 18 months of execution starting on the date of approval of the program. The PP will be agreed by the SWM and the Bank. The PP will be updated annually, whenever necessary or as required by the Bank. Procurement for the proposed project will be carried out in accordance with: (i) Policies for the Procurement of Works and Goods financed by the Bank (GN-2349-15); and (ii) Policies for the Selection and Contracting of Consultants financed by the IDB (GN-2350-15). The program contemplates Single Source Selection (SSS) of VEI Dutch Water Operators which is currently assisting SWM under twinning arrangements within the framework of the Water Operators' Partnerships. The Dutch utilities have been bringing support to SWM for several years in different areas. The continuity of the technical and institutional strengthening focus, their proven track record with respect to transfer of experience and knowledge to similar utilities in other developing countries, and unique knowledge and experience with SWM operations, as well as language skills present significant advantages as compared to a new bidding process. The SSS would be justified under GN-2350-15 section 3.10 (b) and (e).
- 3.9 **Operation and Maintenance (O&M).** O&M manuals for the infrastructure expansion at the Helena Christina pump station will be prepared by the contractor prior to the completion of the works. Standard operating procedures (SOP) for the operation of the system will be prepared within the four months following the completion of the expansion. Both O&M manuals and SOPs must be presented to the Bank for its approval prior to implementation. For the NRW intervention, the technical assistance financed under the loan will include the development of O&M protocols for the equipment installed in the network. From the date of approval of the O&M manuals, within sixty (60) days from the beginning of each year, the execution agency will submit to the Bank an O&M report, which shall include: (i) details on O&M activities performed; and (ii) information pertaining to the resources to be allocated for maintenance during the current year. The O&M reports will have to be submitted throughout program execution and for the five years following program completion. If, from the inspections carried out by the Bank, or from the reports it receives, it is determined that maintenance is carried out below acceptable levels, the borrower, through the EA, must take the necessary measures to fully correct the deficiencies.

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

- 3.10 **Monitoring.** The program will be monitored using the Bank's monitoring instruments and based on the annual work plan, pluriannual execution plan, PP and Results Matrix. SWM will be in charge of monitoring program performance and progress throughout execution. SWM will submit semi-annual reports, which will serve as a basis for the project monitoring reports and the project completion report and will include: (i) general information on activities; (ii) progress made with respect to the results matrix; (iii) a summary of the project's financial position; (iv) environmental and social compliance; (v) a cash flow estimate for the next six-month period; (vi) in the annual reports, updated versions of the annual work plan and PP; (vii) an analysis of problems encountered and corrective measures taken; and (viii) problems that may affect project execution.
- 3.11 **Evaluation.** Using loan's resources, independent evaluators will be hired by SWM to conduct: (i) a mid-term evaluation at the end of 36 months from the date of the signature of the loan contract or after 60% of the resources have been committed, whichever comes first; and (ii) a final evaluation of the program, after 90% of loan resources have been committed. The final evaluation will include an ex post socioeconomic evaluation, as established in the monitoring and evaluation plan. The evaluations will include reporting on environment and social issues and on safeguards compliance. A description of the methodology is provided in the [REL#2](#) and Annex III presents other fiduciary arrangements and auditing requirements.



Development Effectiveness Matrix		
Summary		SU-L1058
I. Corporate and Country Priorities		
1. IDB Development Objectives	Yes	
Development Challenges & Cross-cutting Themes	-Social Inclusion and Equality -Productivity and Innovation -Gender Equality and Diversity -Climate Change and Environmental Sustainability	
Country Development Results Indicators	-Households with new or upgraded access to drinking water (#)*	
2. Country Development Objectives	Yes	
Country Strategy Results Matrix	GN-2873	Reduce central Government financing to state-owned enterprises
Country Program Results Matrix	GN-2948-2	The intervention is included in the 2019 Operational Program.
Relevance of this project to country development challenges (If not aligned to country strategy or country program)		
II. Development Outcomes - Evaluability		Evaluable
3. Evidence-based Assessment & Solution		7.7
3.1 Program Diagnosis		3.0
3.2 Proposed Interventions or Solutions		1.7
3.3 Results Matrix Quality		3.0
4. Ex ante Economic Analysis		10.0
4.1 Program has an ERR/NPV, or key outcomes identified for CEA		3.0
4.2 Identified and Quantified Benefits and Costs		3.0
4.3 Reasonable Assumptions		1.0
4.4 Sensitivity Analysis		2.0
4.5 Consistency with results matrix		1.0
5. Monitoring and Evaluation		8.5
5.1 Monitoring Mechanisms		2.5
5.2 Evaluation Plan		6.0
III. Risks & Mitigation Monitoring Matrix		
Overall risks rate = magnitude of risks*likelihood		Medium
Identified risks have been rated for magnitude and likelihood		
Mitigation measures have been identified for major risks		
Mitigation measures have indicators for tracking their implementation		
Environmental & social risk classification		B
IV. IDB's Role - Additionality		
The project relies on the use of country systems		
Fiduciary (VPC/FMP Criteria)		
Non-Fiduciary		
The IDB's involvement promotes additional improvements of the intended beneficiaries and/or public sector entity in the following dimensions:		
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		

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

The general objective of the proposed operation is to improve efficiency, quality, and financial and environmental sustainability of the potable water services provided by the Suriname Water Company (SWM). The specific objectives are: (i) reduction of Non-Revenue Water (NRW) levels in the Central Region through the implementation of critical aspects of the 2015 NRW reduction strategy; (ii) increase availability of water supply services in Wanica through upgrading water production infrastructure; and (iii) modernize the operations and management of SWM through the implementation of key recommendations of the Institutional Action Plan (IAP) and the development of a water supply strategy for the Interior.

The documentation provides a good description of the Water and Sanitation sector, including its institutional and legal framework. Key problems are identified, including high levels of NRW, due to physical and management factors; increasing water demand in the Wanica District due to rapid population growth; and the transfer of responsibilities of water operations in the interior to SWM in the context limited capacity to plan and manage the water supply in the interior.

To mitigate these problems, the Program will implement three components: 1) NRW reduction in the Central Region; 2) Upgrading water production infrastructure; and 3) Institutional Strengthening and Modernization of SWM. Relevant evidence is presented for the effectiveness of similar programs aimed to improve NRW levels. The results matrix reflects the specific objectives of the program and shows a clear vertical logic. Output and outcome indicators are SMART, and have baseline values, targets, and means to collect information.

Two Cost-Benefit Analysis are done—one for Component 1 and one for Component 2. The costs of key outputs from Component 3, for Institutional Strengthening and Modernization of SWM, that contribute to the objectives of Components 1 and 2 are included in their respective economic analysis. The main costs and benefits are properly identified and quantified. The assumptions are reasonable and are supported with relevant literature. For component 1, the economic rate of return (ERR) is 20.3%, and the net present value (NPV) is US\$3.4 million. For component 2, the ERR is 14.3% and the NPV is US\$0.9 million. Sensitivity analysis are performed based on key variables; the modifications do not present significant changes to the NVP or ERR.

The monitoring and evaluation plan propose an ex-post economic analysis to assess improvements in NRW. This will be complemented by a reflexive evaluation and a qualitative evaluation focused on identifying difficulties encountered during execution.

The risks identified seem reasonable and are classified as Low risk (5), Medium (6) and High (3). All risks include a means of mitigation and compliance indicators.

RESULTS MATRIX											
General Objective	The general objective of the proposed operation is to improve efficiency, quality, and financial and environmental sustainability of the potable water services provided by the Suriname Water Company (SWM). The specific objectives are to: (i) reduce Non-revenue water (NRW) levels in the Central Region through the implementation of critical aspects of the 2015 NRW reduction strategy; (ii) increase the availability of water supply services in Wanica through upgrading water production infrastructure; and (iii) modernize the operations and management of SWM through the implementation of key recommendations of the Implementation Action Plan (IP) and the development of a water supply strategy for the interior.										
RESULTS											
Expected Outcomes	Unit of Measure	Base-line	Base-line Year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Means of Verification	Comments
Outcome 1. Non-revenue water (NRW) level is reduction in Central Region (Paramaribo, Wanica, Para)											
Volume of potable water billed in Central (Paramaribo, Wanica, Para)	M m³/year	28.2	2017				28.5	29.2	29.8	SWM progress reports	
Level of Non-Revenue Water (NRW) in Central (Paramaribo, Wanica, Para)	%	39%	2017				38%	36%	33%	SWM progress reports	A water balance will be conducted during project execution to confirm the baseline. The targets will be adjusted based on the updated baseline
Outcome 2. Water supply production capacity in Wanica upgraded											
Households with effective access to water supply network in Wanica region	Households	29,576	2017						33,296	SWM progress reports	The number of new households to be benefited with the program are 3,720.
Outcome 3. Modernize the operations and management of SWM											
Water samples that comply with water quality standards in the Central Region	%	91%	2018						95%	SWM progress reports	Quality of water supplied measures the percentage of water tests that meet WHO standards on thermotolerant E. coli. The results presented are for the Central supply area only.
SWM's financial statements audited from 2014 to 2024	%	0	2019						100%	SWM progress reports; Audited financial statements available	

Expected Outcomes	Unit of Measure	Base-line	Base-line Year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Means of Verification	Comments		
SWM complying with laboratory quality standards (ISO:17025) in Central Region	Certification	0	2019						1	SWM progress reports; ISO:17025 Certification			
Strategy for water supply services in the Interior Region considering climate change aspects approved by the Ministry of Natural Resources	# Strategy	0	2019						1	SWM progress reports; Approved Water Supply strategy for the interior			
Component 1. Non-Revenue Water Reduction in Central Region (Paramaribo, Wanica, Para)													
Outputs	Estimated Cost (US\$)	Related Outcome	Unit of Measure	Base-line	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Final Target	Means of Verification	Comments
Micrometers installed	1,050,000	1	Micrometers	0				1,000	3,000	3,000	7,000	SWM progress reports	
Smart water infrastructure technologies for NRW reduction implemented	1,000,000	1	System	0						1	1	SWM progress reports	SWIT technologies mean pressure management systems, smart meters, automatic meter reading.
Service connections replaced	900,000	1	Connections	0				1,000	1,000	1,000	3,000	SWM progress reports	
Leaks detected and repaired	2.230.000	1	Leaks	0				1,253	1,253	1,254	3,760	SWM progress reports	

Outputs	Estimated Cost (US\$)	Related Outcome	Unit of Measure	Base-line	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Final Target	Means of Verification	Comments
NRW Unit strengthened and equipped	2,070,000	1	Unit	0						1	1	SWM progress reports	Strengthened means that: technical assistance for the water unit in execution; a methodology for the Water balance has been developed for SWM, meter accuracy test conducted, meter replacement plan developed. Equipped means: Business systems implemented and leak detection equipment available.
District Metered Areas created	1,250,000	1	Areas	0				1	2	2	5	SWM progress reports	
Customers data base updated	500,000	1	Data base	0				1			1	SWM progress reports	
<b>Component 2. Upgrading water production infrastructure</b>													
Outputs	Estimated Cost (US\$)	Related Outcome	Unit of Measure	Base-line	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Final Target	Means of Verification	Comments
Helena Cristina Pump Station expanded	4,700,000	2	Pump Station	0					1		1	SWM progress reports	
Storage tank built	2,000,000	2	Tank	0					2		2	SWM progress reports	

SCADA system implemented	1,000,000	2	System	0					1		1	SWM progress reports	
<b>Component 3. Institutional strengthening and modernization of SWM</b>													
Outputs	Estimated Cost (US\$)	Related Outcome	Unit of Measure	Base-line	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Final Target	Means of Verification	Comments
Drinking Water Supply Strategy in the Interior considering climate change aspects developed	550,000	3	Strategy	0			1				1	SWM progress reports; Consultant's Final Report	
Information Technology System Audit conducted	250,000	3	Audit	0			1				1	SWM progress reports; Consultant's Final Report	The audit will include an assessment of how the IT system can be updated to improve accessibility, including for people with disabilities.
Organizational structure and accessibility assessed	150,000	1 and 3	Assessment	0			1				1	SWM progress reports; Consultant's Final Report	
Milestone 1: Assessment of SWM's Organizational Structure			Assessment				1				1		

Outputs	Estimated Cost (US\$)	Related Outcome	Unit of Measure	Base-line	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Final Target	Means of Verification	Comments
Milestone 2: Assessment of Accessibility to SWM public offices			Assessment				1				1		
Implementation Plan for strengthening of Financial and Economic Affairs Department at SWM implemented	450,000	3	Plan	0						1	1	SWM progress reports; Consultant's Final Report	Implemented means: Fixed asset administration completed; cost of service study prepared; planning and control system implemented; and financial model developed.
Implementation Plan for strengthening of Human Resources Management Department implemented	475,000	2 and 3	Plan	0						1	1	SWM progress reports; consultant's Final Report	Implemented means: Strategic HR Plan is developed; Management development program and SWM training program implemented. The Plan will include actions on mentoring, leadership and management skills for women in decision making positions.
Implementation Plan for enhancing water quality monitoring capacity for the Laboratory and Certification developed and implemented	1,415,000	3	Plan	0						1	1	SWM progress reports; Consultant's Final Report	Implemented means: Key recommendations from the Action Plan are financed by the Loan.

Outputs	Estimated Cost (US\$)	Related Outcome	Unit of Measure	Base-line	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Final Target	Means of Verification	Comments
Information Technology infrastructure updated	1,500,000	1 and 3	Infrastructure	0						1	1	SWM progress reports; Consultant's Final Report	Infrastructure updated means: Gaps identified by the IT audit are financed by the Loan. The updating of the infrastructure will include recommendations from the IT System Audit related to improving accessibility, including for people with disabilities.
Training program for women and men in plumbing, water management and climate change aspects, designed and implemented	100,000	3	Program	0						1	1	SWM progress reports; Consultant's Final Report	At least 20 women trained. SWM will offer internships to these women.
Cost of service study	200,000	3	Study	0		1					1	SWM progress reports; Consultant's Final Report	

## **FIDUCIARY ARRANGEMENTS**

**Country:** Suriname

**Project:** Water Supply Modernization Program (SU-L1058)

**Executing Agency:** Suriname Water Company (SWM)

**Fiduciary Team:** Vikash Bhagirath, Financial Management Consultant;  
Mariska Tjon A Loi, Procurement Specialist

### **I. EXECUTIVE SUMMARY**

- 1.1 The general objective of the program is to improve efficiency, quality, financial and environmental sustainability of the potable water services provided by the Suriname Water Company (SWM), through an IDB investment loan of US\$25 million.
- 1.2 The entity responsible for implementing the program will be the Suriname Water Company (SWM). A PEU will be established within the existing institutional structure of the SWM. The PEU will be responsible for financial management, procurement and program management of the program. To this end, the PEU will be strengthened with qualified and specialized personnel fully dedicated to the program. The PEU will draw on the experience gained from execution of program 2451/OC-SU.

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

- 2.1 SWM is a state-owned company under the supervision of the Ministry of Natural Resources (MNH).
- 2.2 The specific features of the SWM's Public Financial Management Systems (PFMS) are:
  - a. The SWM Financial Structure is headed by the Director for financial affairs. The following units are part of the financial structure: financial services and economic affairs (accounting), ICT and sales, planning budgeting and control, and other administrative units. These Units have solid financial staffing, although systems and business processes are undergoing an improvement process. Continued training on Bank financial management policies is recommended.
- 2.3 Specific features of SWM relating to Procurement. The PACI indicates the following weaknesses in the procurement framework within SWM:
  - a. No flowcharts on procurement processes and responsibilities, no annual procurement plan, procurement processes are not always publicly announced, bidding documents do not include procedures for filing complaints, and there are no procedures to regulate evaluation committees.
  - b. The procurement archive system does not meet standards, there is no system to publish contract awards and/or produce reliable reports; procurement data is stored at the financial department.
  - c. The General Manager is the authority to approve or reject contract awards.



### III. FIDUCIARY RISK EVALUATION AND MITIGATION ACTIONS

- 3.1 The Fiduciary Risk is deemed medium for the SWM. The following risks and mitigation measures were identified pursuant to the application of the PACI: (i) limited capacity of SWM to implement multiple programs at the same time. This risk will be mitigated through the establishment of a dedicated PEU, which will draw on the experience of personnel that was assigned to the execution of the previous loan operation. In addition, the PEU staff will be trained in IDB's fiduciary processes and requirements; (ii) limited capacity and language barrier of local contractors to comply with Bank Procurement Policies. This risk will be mitigated through the translation of documents and mandatory pre-bid meetings to explain the terms of the bidding documents; (iii) delays in payments to contractors by the Ministry of Finance. This risk will be mitigated through support from IDB to facilitate payments to contractors from the Ministry of Finance. This does not imply the contracting of works of services directly by the Bank.

### IV. FIDUCIARY ARRANGEMENTS FOR PROCUREMENT EXECUTION

- 4.1 The procurement fiduciary arrangements establish the conditions applicable to all procurement execution activities in the program.

4.2 **Procurement Execution.**

Procurements for the proposed program will be carried out in accordance with the Policies for the Procurement of Goods and Works financed by the Inter-American Development Bank GN-2349-15, and the Policies for the Selection and Contracting of Consultants financed by the Inter-American Development Bank GN-2350-15, with the provisions established in the Loan Contract and the procurement plan (PP).

- a. **Procurement of Goods, Works and Non-Consulting Services:** Procurement of goods, works and non-consulting services under the program will be governed by the policies for the Procurement of Goods and Works GN-2349-15. The PP indicates the procedures to be used for the contracting of goods, works and non-consulting services under the program. Procurement processes subject to International Competitive Bidding will be executed through the use of the Standard Bidding Documents (SBDs) issued by the Bank. Processes subject to national Competitive Bidding (NCB) may be executed through the use of other documents satisfactory to the Bank. Where these are not available the Bank's SBDs will be used. The review of technical specifications during the preparation of the selection process is the responsibility of the program sector specialist.
- b. **Procurement of Consulting Services:** Procurement of consulting services under the project will be conducted in accordance with the Policies for the Selection and Contracting of Consultants GN-2350-15. The PP indicates the procedures and methods to be used for the procurement of consultancy services. Review of the Terms of Reference (TOR) for consultants is the responsibility of the project sector specialist.
- c. **Selection of Individual Consultants:** Individual Consultants will be selected in accordance with the Policies for the Selection and Contracting of Consultants

(GN-2350-15) referenced above and may be done by three (3) Curriculum Vitae (CV) comparison (comparison of qualifications), Single Source Selection or open advertisement.

- d. **Single Source Selection (SSS).** The Program contemplates Single Source Selection of VEI Dutch Water Operators. VEI supports water utilities in Africa, Asia and Latin America for the improvement of urban water supply. The support takes place through the outsourcing of employees of Dutch water companies to thereby transfer knowledge and skills on in the field of business management, financial management, and human resources. SSS is the most appropriate method for these activities since it presents a clear advantage over competition considering the importance of continuity of the technical and institutional strengthening approach that has been implemented in SWM with previous support from VEI. SWM past experiences with VEI have been satisfactory. VEI has a proven track record with respect to transfer of experience and knowledge to similar utilities in other developing countries. Additionally, as water operators VEI provides access to exceptional expertise and unique knowledge and experience for water supply operators. For SWM operations, language skills of VEI also present an advantage. **The SSS would be justified under GN-2350-15 section 3.11 (d) “when only one firm is qualified or has experience of exceptional worth for the assignment”.**
- **Principle of efficiency:** SSS is the most efficient procurement method since it presents more advantages than using a competitive procurement method considering the VEI Dutch Water Operators are water utility companies with high water supply service provision performance, and strong experience in knowledge transfer. The operators have in the past engaged in similar experiences with other water supply operators to improve their performance in different areas, in particular business management, financial management, and human resources. The Dutch operators count with the technical expertise, experience and technical knowledge to assist the SWM in the implementation of the activities in the field of business management, financial management, and human resources.
  - **Principle of economy:** The rates proposed by VEI are reasonable considering the level of expertise provided. VEI experts' rate is about 500 USD.
  - **Eligibility:** VEI is registered as a Private Company with the Chamber of Commerce, with offices at Reactorweg 47, 3542 AD, Utrecht, the Netherlands which is a Bank eligible country.
- e. **Recurrent Expenses:** This category includes the payment of salaries of some positions of the PEU.

**f. Thresholds:**

**Table 1. Thresholds (in US\$)**

International Competitive Bidding Threshold*		National Competitive Bidding Range ** (Complex Works and non-common goods)		Consulting Services
Works	Goods	Works	Goods	International Short List
≥1,000,000	≥100,000	100,000 – 1,000,000	25,000 to 100,000	≥100,000

\* When procuring simple works and common goods and their amount is under the International Competitive Bidding thresholds, Shopping may be used.

\*\* When procuring complex works and non-common goods with amounts under the NCB range, Shopping shall be used.

Country Thresholds Table (US\$) [www.iadb.org/procurement](http://www.iadb.org/procurement)

- 4.3 **Procurement Plan and Supervision:** The PP covering the duration of the program indicates the procedures to be used for the various categories and types of procurement. It also indicates the estimated cost of each contract or group of contracts and the requirement for prior or post review by the Bank. Ex-ante supervision will be maintained for high risk/value activities. Where ex-post review is applied, reviews will be performed at least once per year but may be more frequent if warranted by the volume of activities. The ex-post review process will include at least once physical inspection visit. The PP will be updated annually or as necessary as required by the Bank.

**V. SPECIFIC FIDUCIARY ARRANGEMENTS FOR FINANCIAL MANAGEMENT**

- 5.1 **Programming and Budget:** SWM starts with a strategic planning process that is the basis for the annual budgeting, which is translated into department budgets. The Budgeting process, as well as the monitoring, are not automated. The process is managed on a manual basis using Microsoft Excel by SWM.
- 5.2 **Disbursement Restrictions.** Pursuant to Document AB-2990, the disbursement of Bank resources (OC) will be subject to the maximum limits: (i) up to 15% during the first 12 months; (ii) up to 30% during the first 24 months; and (iii) up to 50% during the first 36 months. These limits may not apply if the requirements established in the Bank's policy in this regard have been fulfilled, provided that the borrower has been notified in writing. These periods will be counted from the time the loan operation is approved by the Board of Executive Directors.
- 5.3 **Treasury: Disbursements and flow of Funds:** SWM through the MoF, will open separate bank accounts at the Central Bank of Suriname for the management of the resources. This is a central government current requirement to use the Treasury Single Account (TSA) which is also applicable to public entities such as the SWM. The financial plan will serve as the basis for the disbursement of funds to the EA to cover the Project's 6-month cash flow needs. The EA will provide adequate control

over the utilization of all Advance of Funds balance, whenever 80% of said balance has been spent. The main disbursement methodology will be the advance of funds. Other disbursement methodologies that will be used on a smaller scale are the Reimbursement of Payments Made and Direct Payment to Supplier.

- 5.4 **Accounting and Information Systems:** SWM will use Navision, which is the company's financial management system or any other accounting software acceptable to the Bank for the financial administration of the program. This includes recording and classification of all **financial** transactions, providing information related to planned versus actual financial execution of the program, financial planning, financial reports performance reports, and any other reports, financial or otherwise, audited or unaudited, that may be required from the Bank from time to time.
- 5.5 **Internal Control and Audit:** The PEU will establish an internal control system documented in the OM that should provide reasonable assurance that: (i) the Program funds are used for their intended purpose; (ii) program assets are properly safeguarded; (iii) program transactions, decisions and activities are properly authorized and documented; and (iv) Program transactions are executed in accordance with the established policies, practices and procedures delineated in the legal agreements.
- 5.6 **External Control and Reporting:** The External audit of the Program will be performed by an independent audit firm acceptable to the IDB. Audits will be performed in accordance with IDB's Guidelines for Financial Reports and External Audit. The PEU will be responsible for contracting of an external auditor eligible to the IDB to perform the Program audit.
- 5.7 **Exchange Rate:**  
The application of the exchange rate will be as follows:
- (i) Reimbursement of Expenses made: the effective rate of exchange on the date of payment of each expenditure, as published by the Central Bank of Suriname;
  - (ii) Reporting on Accounts or justification of the Advance of Funds: - the effective rate of exchange used in the conversion of the currency of the operation to the local currency;
  - (iii) Disbursements in alternate currencies from the US Dollar and the Suriname Dollar: In cases of direct payment and reimbursement of a guarantee of letter of credit, the equivalent of the currency of the operation will be fixed in accordance with the amount effectively disbursed by the IDB.
- 5.7 **Financial Statements and Reports, audited or unaudited:**
- (i) Semi-annual financial reports are to be included in the semi-annual progress report which will be submitted by the PEU to the Bank;
  - (ii) Annual financial statements of the project, audited by an independent audit firm acceptable to the Bank, are to be submitted by the PEU to the Bank within 120 days at the end of each fiscal year, beginning with the fiscal year in which the first project expenditures are incurred and
  - (iii) Final financial statements, audited by an independent audit firm acceptable to the Bank, are to be submitted by the PEU to the Bank within 120 days following the last disbursement date.

**5.8 Records, Inspections and Reports:**

The PEU shall be responsible for maintaining updated files and records, permit inspections, submit reports maintain a managements accounting and financial administration system acceptable to the Bank and according to accepted best practices, and kept for up to three (3) years beyond the end of the program execution period.

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-\_\_\_/20

Suriname. Loan \_\_\_\_/OC-SU to the Republic of Suriname  
Water Supply Modernization Program

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such contract or contracts as may be necessary with the Republic of Suriname, as borrower, for the purpose of granting it a financing to cooperate in the execution of the Water Supply Modernization Program. Such financing will be for the amount of up to US\$25,000,000 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 \_\_\_\_ 2020)