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April 29, 2019

Closing Date: Thursday, May 16, 2019 at 6:00 p.m.

FROM: Vice President and Corporate Secretary

Solomon Islands - Urban Water Supply and Sanitation Sector Project

Project Appraisal Document

Attached is the Project Appraisal Document regarding a proposed credit to Solomon Islands for a Urban Water Supply and Sanitation Sector Project (IDA/R2019-0106), which is being processed on an absence-of-objection basis.

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Report No: PAD3073

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED CREDIT

IN THE AMOUNT OF US$15 MILLION

TO THE

SOLOMON ISLANDS

FOR AN

URBAN WATER SUPPLY AND SANITATION SECTOR PROJECT

April 25, 2019

Water Global Practice
East Asia And Pacific Region

This document is being made publicly available prior to Board consideration. This does not imply a presumed outcome. This document may be updated following Board consideration and the updated document will be made publicly available in accordance with the Bank's policy on Access to Information.

CURRENCY EQUIVALENTS

(Exchange Rate Effective April 9, 2019)

Currency Unit	=	Solomon Islands Dollar (SBD)
SBD 8.14	=	US$ 1
US$ 0.12	=	SBD 1

FISCAL YEAR
January 1 - December 31

Regional Vice President:	Victoria Kwakwa
Country Director:	Michel Kerf
Senior Global Practice Director:	Jennifer Sara
Practice Manager:	Sudipto Sarkar
Task Team Leader(s):	Stephane Raphael Dahan

ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
APA	Alternative Procurement Arrangement
BP	Bank Procedure
CAPEX	Capital Expenditure
CBSE	Community Based Sanitation Enterprises
CPF	Country Partnership Framework
CSO	Community Service Obligation
DA	Designated Account
DBO	Design Build Operate
DFAT	Department of Foreign Affairs and Trade
DMA	District Metering Area
EARF	Environmental Assessment and Review Framework
EBCR	Economic Benefit-Cost Ratio
EC	Escherichia Coli
EIRR	Economic Internal Rate of Return
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
FIRR	Financial Internal Rate of Return
FM	Financial Management
FNPV	Financial Net Present Value
GAP	Gender Action Plan
GBV	Gender Based Violence
GCF	Green Climate Fund
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHG	Greenhouse Gas
GIS	Geographic Information System
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
GWSP	Global Water Security and Sanitation Partnership
HCI	Human Capital Index
ICB	International Competitive Bidding
ICT	Information and Communication Technology
IEE	Initial Environmental Examination
IFRs	Interim Financial Reports
IPF	Investment Project Financing
IRR	Internal Rate of Return
MFAT	Ministry of Foreign Affairs and Trade
MHMS	Ministry of Health and Medical Services
MLD	Million Liters per Day
NCB	National Competitive Bidding
NGO	Non-Governmental Organization

NPV	Net Present Value
NRW	Non-Revenue Water
NWSSP	National Water and Sanitation Sector Plan
O&M	Operation and Maintenance
OP	Operational Policy
OPEX	Operational Expenditure
POM	Project Operations Manual
PCR	Physical Cultural Resources
PDO	Project Development Objective
PMU	Project Management Unit
PPA	Project Preparation Advance
PPSD	Project Procurement Strategy for Development
RF	Resettlement Framework
RP	Resettlement Plan
RPF	Resettlement Policy Framework
SA	Social Assessment
SC	Steering Committee
SCADA	Supervisory control and data acquisition
SDG	Sustainable Development Goal
SIDS	Small Island Developing State
SIG	Solomon Islands Government
SOE	State Owned Enterprise
SPC	Secretariat of the Pacific Community
SW	Solomon Water
UWSSSP	Urban Water Supply and Sanitation Sector Project
WASH	Water, Sanitation and Hygiene

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DATASHEET

BASIC INFORMATION

Country(ies)	Project Name	
Solomon Islands	Urban Water Supply and Sanitation Sector Project	
Project ID	**Financing Instrument**	**Environmental Assessment Category**
P165872	Investment Project Financing	B-Partial Assessment

Financing & Implementation Modalities

[ ] Multiphase Programmatic Approach (MPA)	[ ] Contingent Emergency Response Component (CERC)
[ ] Series of Projects (SOP)	[✓] Fragile State(s)
[ ] Disbursement-linked Indicators (DLIs)	[✓] Small State(s)
[ ] Financial Intermediaries (FI)	[ ] Fragile within a non-fragile Country
[ ] Project-Based Guarantee	[ ] Conflict
[ ] Deferred Drawdown	[ ] Responding to Natural or Man-made Disaster
[✓] Alternate Procurement Arrangements (APA)	[ ] Hands-on Enhanced Implementation Support (HEIS)

Expected Approval Date	Expected Closing Date
16-May-2019	30-Jun-2027

Bank/IFC Collaboration

No

Proposed Development Objective(s)

To increase access and quality of water supply and quality of sanitation services in selected service areas of Solomon Water, and to improve the operational performance of Solomon Water.

Components

Component Name	Cost (US$, millions)

Urban Water Supply	11.00
Urban Sanitation	2.31
Water Conservation, Sanitation and Hygiene Awareness and Education	0.00
Institutional Strengthening and Project Management	0.00
Contingencies	1.69

Organizations

Borrower:	Solomon Islands through the Ministry of Finance and Treasury
Implementing Agency:	Solomon Islands Water Authority

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	82.33
Total Financing	82.33
of which IBRD/IDA	15.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	15.00
IDA Credit	15.00

Non-World Bank Group Financing

Counterpart Funding	9.00
Sub-borrower(s)	9.00
Other Sources	58.33
Asian Development Bank	38.00
EC: European Development Fund (EDF)	20.33

IDA Resources (in US$, Millions)

	Credit Amount	Grant Amount	Guarantee Amount	Total Amount
National PBA	15.00	0.00	0.00	15.00
Total	**15.00**	**0.00**	**0.00**	**15.00**

Expected Disbursements (in US$, Millions)

WB Fiscal Year	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Annual	0.00	0.30	0.56	0.74	1.35	2.30	2.78	2.87	2.77	1.32
Cumulative	0.00	0.30	0.86	1.60	2.96	5.26	8.04	10.91	13.68	15.00

INSTITUTIONAL DATA

Practice Area (Lead)

Water

Contributing Practice Areas

Climate Change

Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

Gender Tag

Does the project plan to undertake any of the following?	
a. Analysis to identify Project-relevant gaps between males and females, especially in light of country gaps identified through SCD and CPF	Yes
b. Specific action(s) to address the gender gaps identified in (a) and/or to improve women or men's empowerment	Yes
c. Include Indicators in results framework to monitor outcomes from actions identified in (b)	Yes

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	Substantial
2. Macroeconomic	Moderate

3. Sector Strategies and Policies	Moderate
4. Technical Design of Project or Program	Substantial
5. Institutional Capacity for Implementation and Sustainability	High
6. Fiduciary	Substantial
7. Environment and Social	Substantial
8. Stakeholders	Moderate
9. Other	Low
10. Overall	High

COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

[ ] Yes [✓] No

Does the project require any waivers of Bank policies?

[ ] Yes [✓] No

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01	✓	
Performance Standards for Private Sector Activities OP/BP 4.03		✓
Natural Habitats OP/BP 4.04	✓	
Forests OP/BP 4.36		✓
Pest Management OP 4.09		✓
Physical Cultural Resources OP/BP 4.11	✓	
Indigenous Peoples OP/BP 4.10	✓	
Involuntary Resettlement OP/BP 4.12	✓	
Safety of Dams OP/BP 4.37		✓
Projects on International Waterways OP/BP 7.50		✓

Projects in Disputed Areas OP/BP 7.60	✓

Legal Covenants

Sections and Description
Financing Agreement, Schedule 2, Section I.A., para 1. To ensure proper oversight of the Project, the Recipient shall maintain throughout the Project implementation period, a Steering Committee, with a mandate, composition and resources satisfactory to the Association.

Sections and Description
Financing Agreement, Schedule 2, Section I.A., para 2. The Recipient shall cause the Project Implementing Entity to maintain, throughout the Project implementation period, staff and/or personnel in adequate numbers for the implementation of Project activities.

Sections and Description
Financing Agreement, Schedule 2, Section I.A., para 3. The Recipient shall cause the Project Implementing Entity to maintain throughout the Project implementation period, Project Management Unit with a mandate, composition and resources satisfactory to the Association.

Sections and Description
Financing Agreement, Schedule 2, Section I.C, para. 1(b). No later than one (1) month after Effective Date, the Recipient shall adopt a Project Operations Manual, in form and substance satisfactory to the Association, for the purpose of ensuring proper implementation of the Project.

Sections and Description
Financing Agreement, Schedule 2, Section I.E., para 1. The Recipient shall cause the Project Implementing Entity to prepare and furnish to the Association, not later than November 30 of each year during the implementation of the Project (or such later interval or date as the Association may agree), an Annual Work Plan and Budget containing all eligible Project activities and expenditures proposed to be included in the Project for the following fiscal year of the Recipient.

Sections and Description
Financing Agreement, Schedule 2, Section II, para 1. The Recipient shall cause the Project Implementing Entity to furnish to the Association each Project Report not later than one month after the end of each calendar quarter, covering the calendar quarter.

Sections and Description
Financing Agreement, Schedule 2, Section II, para 2. The Recipient shall carry out, jointly with the Association, not later than June 30, 2023, or such other period as may be agreed with the Association, a mid-term review of the Project (the “Mid-Term Review”) to assess the status of Project implementation, as measured against the Project indicators acceptable to the Association, and compliance with the legal covenants included or referred to in this Agreement.

Sections and Description

Financing Agreement, Schedule 2, Section IV.A. The Recipient shall ensure that - throughout the duration of the Project - Solomon Water remains financially sustainable as indicated by the ability of Solomon Water to recover its costs (operations and maintenance costs as well as depreciation costs of plants and equipment it operates) through user fees and/or government subsidies.

Sections and Description

Project Agreement, Schedule, Section IV, para 2. The Project Implementing Entity shall undertake a study – under the terms of reference acceptable to the Association – to review water tariffs of Solomon Water (including a focus on affordability aspects) and furnish the completed study to the Association no later than December 31, 2020.

Conditions

Type	Description
Effectiveness	The Co-financing Agreement has been executed and delivered and all conditions precedent to its effectiveness or to the right of the Recipient to make withdrawals under it (other than the effectiveness of this Agreement) have been fulfilled.

I. STRATEGIC CONTEXT

A. Country Context

1. Solomon Islands' geography presents significant challenges to services delivery, infrastructure, and economic integration. The total population of Solomon Islands, estimated at 600,000 in 2016, is distributed amongst an archipelago of more than 300 inhabited islands spread over some 1.34 million km^2. Currently, the country has among the lowest population densities (18 persons/km^2) and urbanization rates (22 percent) in the world. However, with an annual urban growth rate of 4.7 percent, it is projected that by 2030, about 30 percent of the country's population will be living in urban areas if the present trend continues. Greater Honiara, the country's only significant urban center, was home in 2017 to about 105,000 people, a figure expected to surpass 300,000 within the next 30 years largely due to internal migrations. Other urban centers (e.g. Auki, Gizo, Noro) do not exceed 8,000 inhabitants. According to the last available Household Income and Expenditure Survey (HIES), 12.7 percent of the population lived under the national basic needs[1] poverty line in 2013 (9.1 percent in urban areas).

2. The country was affected between 1998 and 2003 by a civil conflict spurred by grievances between Greater Honiara landowners and migrants drawn by economic opportunities. The causes included the disproportionate concentration of economic development in and around Honiara compared to the rest of the country, and rapid social changes associated with increasing urbanization, leading to disenchantment among youth and a loss of social cohesion. While institutions have since then been re-built, their capacity remains for the most part limited.

3. Since the end of the conflict, Solomon Islands has experienced significant economic growth, driven mainly by logging, services (with boosted public sector and international community spending in the post-conflict context), and agriculture (copra and palm oil production). The tourism sector is also considered as having the potential to contribute to the country's growth in the longer-term. However, economic development has been largely diluted across a fast-increasing population base (over two percent per year in the past fifteen years) and the per capita gross domestic product (GDP) of US$2,070 per capita, when adjusted for inflation, remains lower today than it was before the conflict. Offering opportunities for cash employment, access to higher education and specialized social services unavailable elsewhere in Solomon Islands, Honiara has witnessed over the past decade the burgeoning of informal settlements.[2] Population in informal settlements is estimated to be growing by more than six percent per annum.[3] Peri-urban households around the capital Honiara suffer from disproportionate levels of poverty, with up to 25 percent of their population below the basic needs poverty line (12.5 percent nation-wide in 2013).

[1] Defined in reference to the absolute minimum resources necessary for long-term physical well-being, usually in terms of consumption goods.
[2] Informal or unplanned residential areas that have developed outside of the formal urban planning rules of a city, often physically located in marginal or peri-urban areas and that are not recognized by government agencies. They are characterized by uncertain or illegal land tenure, minimal or no access to public services (such as water supply, sanitation, electricity, and roads) and high presence of informal employment and low-income population.
[3] World Bank, 2015. Unsettled: Water and Sanitation in Urban Settlement Communities of the Pacific.

B. Sectoral and Institutional Context

4. *Access to safely managed water supply services.* Per recent data,[4] 90 percent of the urban population has access to a basic water supply service[5] (79 percent in informal settlements[6] and 56 percent in rural areas). Honiara and the country's largest towns, Auki, Munda, Noro and Tulagi, have reticulated water supply systems, which cover about 55 percent of their population (8,500 connections) and is operated by the national water utility, Solomon Islands Water Authority, trading as Solomon Water (SW). SW is also expected to take over the supply to Gizo, where past local government initiatives to provide a reliable long-term water supply have failed and the population resorts almost exclusively to rainwater harvesting. Overall, in 2015, SW customers in Honiara experienced quasi continuous water supply services with average 23 hours of service per day (up from eight hours per day in 2010), but during the rainy season, raw water quality issues prompted SW to shut down a major surface water production system (Kongulai) and more than half of its customers suffered service outages, often for several weeks. That same year, only 70 percent of tested water samples met national standards for residual chlorine. Moreover, most bores (and to a lesser extent spring sources), including those operated by SW, are vulnerable to contamination from human and solid waste, particularly from informal settlements, which typically lack formal drainage or sewerage / septic systems. Reticulation storage is limited, leading to insufficient supply security and to water outage during power failures where backup power supply via diesel generators is unavailable. Urban centers such as Tulagi and Auki do not have any water treatment system. In informal settlements, SW is currently piloting various service delivery models, including pre-paid metering systems and community-based management of water distribution. In urban communities not served by SW (e.g. in informal settlements on the fringes of Honiara city limits), households rely primarily on individual or collective household rainwater tanks, shallow wells and occasionally on surface water.

5. *Water availability*. On the larger islands such as those where SW operates, surface water from springs or rivers is the main source of drinking water and is often complemented with groundwater. In Honiara, the reticulated system draws from various springs, small rivers and bores, with a production capacity of 32.5 million liters per day (MLD). Raw water quality is generally satisfactory outside of bacteriological parameters (requiring chlorination), except during the rainy season, when surface water sources become highly turbid. There are currently no water resource protection management plans. The current demand, based on a per capita consumption of 169 liters per day and in conjunction with physical losses in the network, exceeds SW's water production capacity by 6.3 MLD. Even with a major reduction of physical losses and a decrease in per capita consumption, the gap could reach 50 MLD in 2040 as population grows and networks expand in urban areas. The development of water production capacity on the Lungga river, about five kilometers south of Honiara, has been identified as the best option to address this long-term supply gap and improve energy efficiency of the system of the capital, which now relies heavily on substantial pumping from underground sources.[7] Other considered options included desalination and more distant surface water sources, which would not be cost-competitive. While water production capacity is usually sufficient to meet average water demand in the urban centers of Auki, Noro and Tulagi, shortages are frequent during the dry season.

[4] WHO/UNICEF JMP, 2017. Retrieved from https://washdata.org/
[5] A household has access to basic water supply service when an improved water source is available with a collection time that is no more than 30 minutes for a roundtrip, including queuing. Improved water sources are those that are potentially capable of delivering safe water by nature of their design and construction. These include piped water, boreholes or tubewells, protected dug wells, protected springs, and rainwater. (SDG definition)
[6] Solomon Water, 2017. 30 Year Strategic Plan
[7] Solomon Water, 2017. 30 Year Strategic Plan

6. *Climate change*. Current climate change projections foresee negative impact on water and sanitation services and infrastructure due to: a warmer overall climate and more extremely hot days; increases in rainfall variability – both annual and seasonal; more frequent and more intense extreme rainfall events, which may lead to flash floods and landslides; rising sea levels; and, potentially more frequent and/or more intense droughts.[8] In 2014, flooding was assessed to have caused US$4.5 million of damage and economic loss in the water and sanitation sector.[9] The 1997 and 1998 droughts are estimated to have reduced the availability of freshwater in Honiara by around 30-40 percent, damaging crops and negatively affecting livelihoods. Rainwater harvesting, increasingly utilized by households not supplied by SW, is insecure due to projected seasonal and increasingly unpredictable changes in rainfall patterns as well as more frequent droughts. These climate-related risks are compounded by SW's lack of strategic and operational tools to prepare for and manage water supply crises induced by climate shocks.

7. *Access to improved sanitation and quality of sewerage services*. Currently 76 percent of urban households have access to basic sanitation[10] (18 percent in rural areas, where open defecation is reported as 50 percent).[11] The remaining population use shared sanitation facilities and onsite unimproved sanitation systems.[12] Honiara is the only partially sewered urban area, with about nine percent of the population currently connected to a system built in the 1970s and subject to repeated breakdowns, surcharge and overflows (20 blockages per kilometer of sewer in 2017).[13] Sewage from this system, managed by SW, is discharged without treatment (except for a few poorly maintained communal septic tanks) through ocean and river outfalls, most of which have been broken during previous storms and are discharging on the shoreline. Coastal areas are heavily polluted by the continuous flow of raw septage. Households that are not connected to the sewerage system typically rely on private flush toilets connected to septic tanks (or pit latrines commonly in informal areas), which are often inadequate to prevent groundwater pollution. Sludge generated from communal and household septic tanks is managed by Honiara City Council or by the private sector and transported near Lungga River estuary to a landfill disposal site that does not meet sanitary confinement requirements (when it is not illegally dumped elsewhere). A preliminary estimate[14] suggests about 60 percent of households use those septic tanks emptying services. Flooding, common on the larger islands such as those where Honiara and Auki are located, can be a major health hazard. For example, in 2015 a flash flood event in Honiara triggered more than 4,200 cases of diarrhea (notably among children), which ultimately turned into a nation-wide epidemic.[15]

8. In urban communities not served by SW, sanitation facilities mainly consist of shared toilets and on-site unimproved sanitation systems such as hand-dug pit latrines. Rivers are often used for laundry, bathing, and open defecation, to which about nine percent of urban population resort regularly. Diarrheal diseases are the sixth most

[8] CLIMsystems. 2017. Climate Change Impact for Honiara, Solomon Islands (report prepared for ADB).
[9] Government of Solomon Islands, 2014. Rapid Assessment of the Macro and Sectoral Impacts of Flash Floods in the Solomon Islands.
[10] A household has access to basic sanitation services when it uses sanitation facilities designed to hygienically separate excreta from human contact, and are not shared with other households. This includes flush/pour flush to piped sewer system, septic tanks or pit latrines, ventilated improved pit latrines, composting toilets or pit latrines with slabs.
[11] WHO/UNICEF JMP, 2017
[12] Including here public or shared latrines and pit latrines without a slab or platform.
[13] IB-Net
[14] Calculation based on a two-week survey of the amounts of fecal sludge downloaded by vacuum trucks at the landfill, conducted as part of project preparation.
[15] Jones, Forrest Kirby, 2015. "Widespread Dissemination Of Diarrhea Due To Rotavirus Serotype G9p8 In The Solomon Islands After A Focal Flood-Related Outbreak". *Public Health Theses*. 1143.

common cause of deaths in Solomon Islands, accounting for four percent of deaths.[16] A study conducted between 2008 and 2012 found that more than eight percent of children are underweight.[17] The link between poor water, sanitation and hygiene services and diarrhea, child undernutrition and other enteric infections has been documented. Environmental enteric dysfunction, a gut disorder caused in part by chronic ingestion of pathogenic microorganisms, is hypothesized to be the primary causal pathway between poor water supply, sanitation and hygiene, and child growth.[18]

9. *Gender aspects*. The impact of poor water and sanitation services falls disproportionately on women, who bear responsibility for all household water and sanitation related tasks such as cleaning, cooking, washing, caring for children and the sick. In areas unserved by SW (mostly informal settlements), the burden on women can also include physical labor required to collect water from water sources and carry water home. The risk of sexual and physical violence from collecting water or defecating away from home late at night or in the early morning is real. Men are the main decision makers and influencers in the household, in settlement community leadership, and in local government.[19]

10. *Efficiency of water supply and sanitation services and financial viability.* Historically, financial management of SW has been poor, reaching a state of near financial and operational collapse in 2010. Investments in recurrent and preventative maintenance and capital works programs were low due to inadequate revenue and funding, which has resulted in the deterioration of SW's water and sewerage networks. Due to weak governance under the previous Board, poor management, and inappropriately low tariffs, SW was in 2010 unable to pay its electricity bills and accumulated a substantial debt to the Solomon Islands electricity utility.

11. In mid-2010, Solomon Island Government (SIG) initiated a series of reforms to strengthen SW, which began with the replacement of the Board, the appointment of donor-funded General Manager and Finance and Administration Manager, and the preparation of a Short-Term Recovery Strategy (2011-2013) and subsequently a Two-Year Plan (2013-2015) to guide urgent reforms to SW's organization, finances and operations. Since then, water services have significantly improved in terms of quality of supplied water and continuity of service. SW's operational capacity and performance have also improved markedly in areas such as metering, billing and collections, asset management and operating profits. Collection ratio fluctuates between 84 percent and 100 percent over the years, and the company's operating cost coverage[20] reached 1.37 in 2018 nation-wide, due to a proactive debt collection policy, especially from SW's largest commercial and Solomon Islands Government (SIG) customers, which generate more than half of SW's revenues.[21] These strong financial results were confirmed in 2018 with a cost coverage ratio of 1.11. Ninety-three percent of water customers are metered, while the others are billed on a lump sum basis, based on an estimate of their water use. SW's main pending operational weakness is non-revenue water (NRW), which was estimated in 2015 to exceed 60 percent in Honiara and 50 percent in other urban centers, two thirds of the NRW is attributed to physical losses. Despite these high NRW levels, the financial position of SW has improved significantly in recent years from an operating loss of US$4.0 million in 2010 to a surplus of about US$2.0 million in 2017. In 2018, even though Australia Department of Finance and Trade (DFAT) had stopped its financial support for SW management staffing, SW still generated an operating surplus of

[16] ADB. 2016. Strengthening Urban Infrastructure Investment Planning in the Pacific. Manila (TA9181-REG).
[17] UNICEF, 2013. Solomon Islands Statistics.
[18] Humphrey, Jean H. 2009. *Child undernutrition, tropical enteropathy, toilets, and handwashing*. The Lancet, 374, 1032-1035
[19] World Bank, 2015
[20] Total annual operational revenues/Total annual operating costs
[21] Tennant, Stacey and Kearton, Ross, 2016. Independent evaluation of Phase 2 of the Australian Aid Program's urban water program in Solomon Islands.

US$0.4 million while keeping the same management team in place.

12. *Institutional strengthening.* In order to drive further operational improvement, SW has developed in 2018, with support from the Asian Development Bank (ADB), standard operational procedures to harmonize and optimize operational processes across a number of core business areas, including financial management, asset management, procurement, billing cycle, customer care and information technology. In view of major upcoming service development challenges, including major service expansion and improvement needs in a context of rapid urban growth, SW has prepared a 30 Year Strategic Plan and a 5-year Action Plan (2017), which identify a number of high priority projects, defines clear performance targets and corporate objectives. The Government has endorsed both plans. The proposed project is aimed at implementing the 5-year Action Plan and its results framework is largely aligned with that of the 5-year Action Plan. Project preparation work was undertaken through a technical assistance (TA) project provided by the ADB.

13. *Accountability framework.* The Ministry of Mines, Energy and Rural Electrification (MMERE) plays a policy and planning role with regards to the urban water sector. It oversees the implementation of the National Water and Sanitation Sector Plan (NWSSP), which was adopted by the Government in 2013 and lays out a ten-year plan to implement the goals and objectives of the National Development Strategy 2011-2020 and other Government initiatives and strategies, including the National Infrastructure Investment Plan. The Ministry of Health and Medical Services is responsible for setting water quality standards and the Ministry of Environment, Climate Change, Disaster Management, Conservation and Meteorology for permitting and environmental monitoring of water abstraction and pollution discharges to water bodies. SW is a state-owned enterprise (SOE) responsible for delivering water supply and sewerage services on a commercial basis in Honiara, Auki, Munda, Noro and Tulagi, and soon Gizo.[22] SW's Board reports to MMERE and to the Minister of Finance and Treasury (MFT). Collection and disposal of municipal solid waste and septage removal are under the responsibility of the Honiara City Council (HCC) and of respective councils in other urban centers.

14. *Affordability of WSS services.* The current tariff for the first tranche (below 15 m^3 per month) is US$0.76 per m^3 for residential water services, and US$0.38 per m^3 for residential sewerage services. According to a 2016 survey,[23] 86 percent of both formal and informal households are willing to pay for improvements to piped water, including better water quality, reliability and access. However, 61 percent of these households think the cost of water from SW is too high. The average monthly water bill equals 16.9 percent of the average income for households in informal areas, 10.9 percent for low income households and 6.1 percent for average income households. This is more than three times higher than the estimated affordability threshold of 3-5 percent of total income.[24] The proposed project will support a review of the tariff to enhance its affordability to the poor.

15. *Sector financing.* MFT submits to Parliament the set of service fees and charges proposed by SW's Board. The Government has approved late 2018 a two-year tariff increase schedule (of five percent per year), based on a cost recovery projection analysis[25] conducted by SW in 2017 as part of the 30-year Strategic Planning exercise. As indicated above, in recent years SW has recovered its operating costs in Honiara from charges to consumers

[22] SW area of operations officially includes the island of Guadalcanal, where Honiara is located, and nine urban centers. SW's activities currently focus on Honiara and three of these urban centers (Auki, Noro and Tulagi), and SW has been formally requested by the government to expand services to Munda. Taking over ownership and management of services in other areas, such as Gizo, is being considered under mutual agreement with the Solomon Islands Government and the respective provincial governments.
[23] E. Heslop, 2016. Social and Consumer Assessment
[24] Solomon Water, 2017. 30 Year Strategic Plan
[25] RMCG, 2017. Cost of Service and Tariff Review. Solomon Islands Water Authority

and has also been able to reinvest part of its generated revenues. SW is also entitled to receive Community Service Obligation (CSO) payments from the Solomon Islands Government to cover losses specifically related to operations outside of Honiara, even if SW generates a financial surplus overall. However, CSOs have not been systematically provided since 2015 and operation of these services currently represents a drain to SW's finances. Larger infrastructure investments remain dependent on public and donor financing.

16. *Donors' involvement in the sector.* Two main donors have supported the urban water sector in Solomon Islands. The Department of Foreign Aid and Trade, DFAT (formerly Australian Aid) played a critical role in the SW recovery efforts undertaken in 2011, contributing in 2013 and 2014 to approximately 86 percent of SW's operational budget.[26] Its assistance focused primarily on improving levels of service in Honiara and reducing NRW. Under various technical assistance packages, funding was geared towards the implementation of the Short-Term Recovery Strategy and the Two-Year Plan, the financing of SW management positions, some fleet and plant, and the set-up of the billing system. In parallel, the Japanese International Cooperation Agency (JICA) financed water infrastructure investments (US$16 million) in Honiara and Auki in the early 2010's and provided technical assistance for a *Non-Revenue Water Reduction Technical Cooperation Project* aimed to increase SW's capacity to reduce NRW. Additionally, the European Union has allocated Euro 18 million and the Asian Development Bank (ABD) US$49.6 million to the urban water sector (both to cofinance the proposed project). The ADB has already mobilized US$3.0 million towards the preparation of the proposed project and is supporting a two-year twinning program between SW and the Water Corporation of Perth, Australia, to help build SW's operational capacity. The Climate Technology Centre and Network (CTCN) is supporting energy efficiency improvement in SW infrastructure, with a focus on its main pumping stations. The United Nations Development Program (UNDP) has been financing between 2014 and 2018 a Solomon Islands Water Sector Adaptation Project (SIWSAP) to increase the capacity of targeted communities across the country (including Gizo) to adapt to climate change impacts on water resources. Finally, the European Union has allocated a US$44.7 million grant to support the improvement of water, sanitation and hygiene in rural areas.

C. Relevance to Higher Level Objectives

17. The proposed project will contribute to the achievement of higher-level development objectives of SIG and the World Bank. SIG's long-term development vision, the National Development Strategy 2016 to 2035 (NDS), establishes as its Goal 3 that all Solomon Islanders should have access to quality social services, including education and health. The Medium-Term Development Plan 2016-2020, translating the NDS long-term development objectives into operational priorities, aims through its medium-term strategy 3 to "build and upgrade physical infrastructure and utilities, and to ensure all Solomon Islanders have access to essential services", and, through its medium-term strategy 5, to "alleviate poverty, improve provision of basic needs and increase food security". The proposed project is also aligned with Development Objectives 2, 4, 5 and 6 of NWSSP, which aim to achieve respectively universal access to safe and reliable water, efficient and effective water, sanitation and wastewater services, strengthened financial viability of the sector, and wider public education and awareness on water issues.

18. SIG and the World Bank Group have prepared a Country Partnership Framework (CPF) for the period 2018-2023.[27] Under the Focus Area 1 (Strengthening the Foundations of Well-being), the proposed Objective 1.1 is to improve access to climate resilient infrastructure and services. From that perspective, the CPF commits World

[26] Solomon Islands WaSH Sector Analysis, Water Aid, 2016
[27] Report 122600-SB from February 7, 2018

Bank's support to SIG in implementing SW's 5-year Action Plan, which aligns with SIG's vision for the sector as outlined in the NDS, and which will focus on the extension of water supply and sewerage systems in Honiara and other urban centers. This project intends to reduce water stress in Solomon Islands' urban areas by increasing the beneficiaries' resilience to droughts and floods as well as sea level rise, and contributing to the proposed Objective 1.1.

19. The proposed project contributes to the World Bank Group's twin goals of eliminating extreme poverty and boosting shared prosperity, and to improving the country's Human Capital Index (HCI).[28] Support for improved water and sanitation services is a core contribution to World Bank's twin goals, by (i) reducing the time and effort—especially of women and children—to collect water, (ii) reducing the incidence of waterborne diseases caused by contact with contaminated water, (iii) reducing absenteeism from work and school and the costs associated with these, including lost income and opportunities, and (iv) contributing to reducing malnutrition and stunting. Poor access to water, sanitation and hygiene is one of the underlying causes of all these limiting factors to development. Project activities in informal areas will be particularly critical to the poverty reduction goal.

II. PROJECT DESCRIPTION

A. Project Development Objective

PDO Statement

20. The proposed PDOs are to increase access and quality of water supply and quality of sanitation services in selected service areas of Solomon Water, and to improve the operational performance of Solomon Water.

PDO Level Indicators

- People provided with access to improved water sources through piped house water connections (male/female)*;
- Samples tests meeting national water quality standards at distribution points (%);
- Percentage of collected wastewater disposed of in accordance with international environmental standards during dry weather (%);
- Volume of water unaccounted for (cubic meter per year); and
- Operating cost coverage (Number).

* corporate results indicator

B. Project Components

21. To achieve the Project Development Objectives (PDOs), the proposed Urban Water Supply and Sanitation Sector Project (UWSSSP) will have four components. Annex 2 provides a detailed project description. The project will be cofinanced by the Bank (IDA credit), the ADB (which will be the project lead cofinancier), the European

[28] The HCI measures the human capital of the next generation, defined as the amount of human capital that a child born today can expect to achieve in view of the risks of poor health and poor education currently prevailing in the country where that child lives. Further information available at: http://www.worldbank.org/en/publication/human-capital.

Union through the Investment Facility for the Pacific (IFP)[29], and will also include a counterpart financing contribution. The IFP grant will be administered by ADB. Payments requests will be addressed to the World Bank and to ADB (which will administer IFP funds) for amounts proportional to each of the two cofinanciers' overall financial contribution for a component.

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Table 1: Project cost (including contingencies) and financing plan by component

Project Components	Project cost	IDA Credit	ADB Grants	ADB Loan	IFP Grant	Counterpart (SW) Funding
Component 1: Urban Water Supply	43.07	11.00	1.00	21.80	9.27	0.00
Component 2: Urban Sanitation	16.39	2.31	5.00	3.00	6.08	0.00
Component 3: Water Conservation, Sanitation and Hygiene Awareness and Education	2.00	0.00	1.00	0.00	1.00	0.00
Component 4: Institutional Strengthening and Project Management	7.25	0.00	2.50	0.00	2.00	2.75
Contingencies (unallocated amount)	12.16	1.69	0.50	2.59	1.13	6.25
Interests during construction	0.61	0.00	0.00	0.61	0.00	0.00
EU Grant management fee	0.85	0.00	0.00	0.00	0.85	0.00
Total Project Costs and Financing	**82.33**	**15.00**	**10.00**	**28.00**	**20.33**	**9.00**

Component 1. Urban Water Supply (Cost: US$43.07 million excluding contingencies - Financed by IDA: US$11.00 million, and ADB and IFP: US$32.07 million)

22. This component will aim to improve access and quality of safe water supply services in Honiara and selected provincial capitals. The activities financed under this component include: (i) the construction, rehabilitation, upgrade and expansion of water production and treatment systems; (ii) the installation of additional water storage capacity within Solomon Water distribution network; (iii) the rehabilitation, upgrade and expansion of water supply transmission and distribution system; and (iv) carrying out non-revenue water reduction activities including leak detection and network repairs.

23. Investments will include: (a) *in Honiara*, (i) rehabilitation and expansion of water production and treatment systems to meet water demand and ensure full compliance with drinking water guidelines across the city and until 2027, (ii) installation of water supply mains to expand and rehabilitate the water supply system, (iii) additional water storage capacity, (iv) leak detection and pipeline repairs to reduce non-revenue water from its current level of 62 percent to 30 percent or less by 2027, (v) installing bulk supply metering and expansion of SW's customer meter replacement program to install pre-payment meters, and (vi) expanding SW's water supply networks to an additional 5,700 connections in unserved areas, including in informal settlements; (b) *in Auki, Gizo, Noro and Tulagi*, rehabilitation and expansion of the existing water supply systems; and (c) in *Munda*, development of a new water supply system.

24. All activities will address the increasing water stress in Solomon Islands' urban areas—by increasing supplies of adequately treated water, decreasing physical losses and stimulating water conservation (through

[29] EDF Board confirmation is scheduled in June 2019 and ADB's Board date is scheduled in September 2019.

Component 3). These activities will also reduce the beneficiaries' exposure to climate change-induced droughts by ensuring that their access to treated potable water will increase, while the efficiency measures will reduce extractions from existing water sources.

Component 2. Urban Sanitation (Cost: US$16.39 million excluding contingencies – Financed by IDA: US$2.31 million; and ADB and IFP: US$14.08 million)

25. This component aims to improve quality and efficiency of sewerage and sanitation services in Honiara. The activities financed under this component include: (i) the design, construction, operation and maintenance of a septage treatment facility; (ii) the improvement of the septage management institutional and regulatory framework; and (iii) the rehabilitation and upgrade of sewerage systems, including sewer mains, pumping stations and submarine outfalls.

26. The replacement and upgrade of the existing sewerage transmission system and those existing wastewater outfalls which are currently in a state of disrepair will reduce the current public and environmental health risks resulting from the discharge of untreated sewage to Honiara's foreshore and will benefit all residents of Honiara. Through this component, capacity to treat septage from 60,000 people which rely on onsite wastewater treatment and disposal methods in the Greater Honiara area will be improved. The septage treatment plant will be implemented through a Design-Build-Operate (DBO) contract, which will include five years for the operation phase. Septage management regulations will be prepared and technical advice will be provided to private fecal sludge collectors to help boost effective citywide fecal sludge management. Additionally, sewage from Honiara's sewer system will be subject to preliminary treatment (coarse screening) and, by 2027, discharged into the sea at depths and distances which would minimize the impact on water quality on the shore.

27. This component will also support the implementation of climate mitigation measures through (i) the adoption of more energy efficient wastewater treatment and/or disposal systems than conventional ones and (ii) the use of septage treatment technology. It is estimated that methane emissions could be reduced by around 1,284 tons of CO2 equivalent per year (38,610 tons of CO_2 equivalent over the lifetime of the facility) from the treatment of sludge currently left in anaerobic conditions in existing pits. Reducing the volume of improperly disposed fecal sludge would also mean less cross-contaminated water bodies during flood events.

28. The impacts of floods would also be reduced through this project because improved wastewater infrastructure is less likely to be damaged or submerged during a flood. Improved sewerage and sanitation services will also increase the resilience of the residents of the greater Honiara area to flooding due to less cross-contamination of water bodies during flood events.

Component 3. Water Conservation, Sanitation, and Hygiene Awareness and Education (Cost: US$2.00 million excluding contingencies – Financed by ADB and IFP: US$2.00 million)

29. This component aims to support significant transformations in the population's water use and behavior that are key to project success, with a particular focus on informal settlement areas. It will support the formulation and implementation of water conservation, sanitation and hygiene awareness and education activities. Activities will include the design and implementation of awareness and education programs aiming to change behaviors linked to sanitation, hygiene, menstrual hygiene management, and solid waste management in a nutrition-sensitive manner (i.e. considering and seeking to address the multiple pathways of fecal-oral transmission in the

local context). Awareness activities will also focus on water supply issues, including water conservation and the importance of paying water and sanitation bills. Hygiene and sanitation improvement plans will be defined at community level. Efforts to reduce per capita water demand will further help address water stress and enhance local resilience to climate change. The selection of target communities will be carried out in coordination with the Community Access and Urban Services Enhancement Project (P161320), to seek opportunities for synergy between the awareness and behavior change campaigns of both projects.

Component 4. Institutional Strengthening and Project Management (Cost: US$7.25 million excluding contingencies – Financed by ADB and IFP: US$4.5 million; and SW: US$2.75 million)

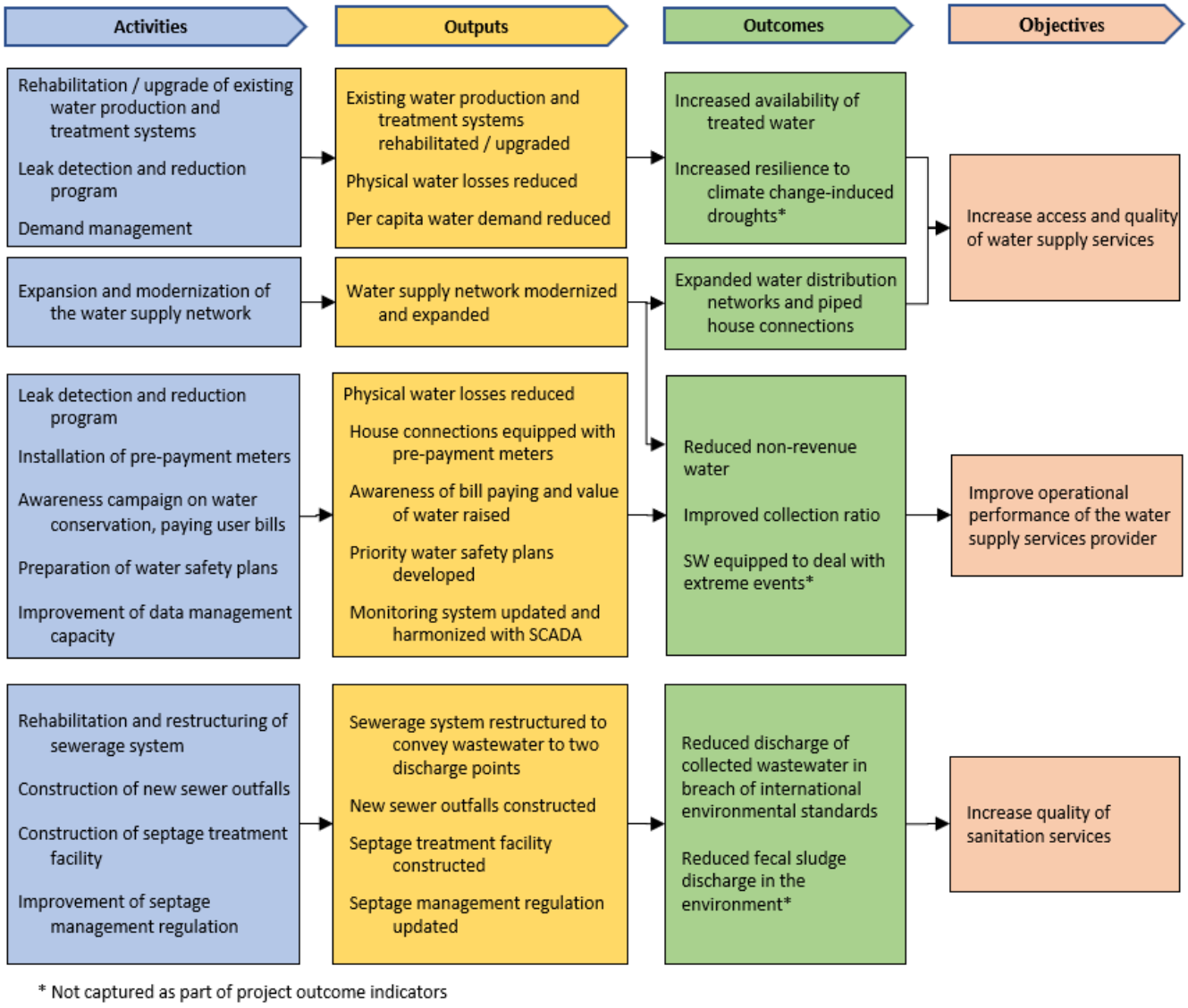
30. This component will aim to improve SW's financial, technical and operational sustainability so that by 2027 SW is expected to fully recover its annual operations and maintenance costs, asset depreciation costs, and debt servicing costs from user charges and SIG community service obligation payments. The activities financed under this component include: (a) the preparation and implementation of priority corporate and water sector policies; (b) strengthening of Solomon Water operational capacity; (c) the preparation of infrastructure designs and conduct of construction supervision; and (d) strengthening management capacity of the SW to administer, supervise and monitor Project implementation.

31. The development of priority SW corporate policies will also include the preparation of a disaster management plan, a catchment management plan, a drought management plan, and a climate change risk assessment and associated adaptation plan for SW's water supply and wastewater systems to address key climate change risks. These activities will be critical to improve SW's resilience to the effects of climate change.

C. Project Beneficiaries

32. The Recipient of the IDA credit will be the SIG, which will on-lend to SW for project implementation. Much of Honiara population (about 106,000), in addition to dwellers of other provincial capitals such as Auki (6,200), Gizo (6,100), Munda (2,700), Noro (4,000) and Tulagi (1,400), are expected to benefit from improved water and sanitation services through the project. This includes households living in informal areas, which are particularly prevalent in Honiara and in Gizo. Upgrade from unimproved to improved water supply will mostly benefit new Honiara and Munda customers (up to 42,700 people) and part of Gizo's future customers (up to 4,000). Other beneficiaries with access to water supply, but of suboptimal quality, will now have access to continuous, better quality and resilient water supply. About 60,000 inhabitants of Honiara will benefit from improved fecal sludge management services and 10,000 people connected to Honiara's sewer system will have their wastewater subject to preliminary treatment (coarse screening) and discharged into the sea at depths and distances that will not affect water quality on the shore. As a result, dwellers from Honiara's coastal areas and seawater users, bathers and fishers) will enjoy a much-improved seawater quality. At least 10,000 persons are expected to gain increased knowledge of the benefits of improved sanitation and hygiene behaviors by 2027, with a significant share in informal settlements. Finally, SW's enhanced efficiency and financially viable service and improved regulations will also contribute to a more sustainable service across the country's urban areas.

D. Results Chain



* Not captured as part of project outcome indicators

E. Rationale for World Bank Involvement and Role of Partners

33. The World Bank's engagement in the Solomon Islands' water and sanitation sector adds value in several areas, including: (i) bringing in global experience of water infrastructure investments and associated technical assistance, (ii) providing best practices for water utility institutional strengthening and capacity building, (iii) expanding services in low-income and informal areas, (iv) supporting the introduction of best practice technology, design and utility management approaches for effective climate mitigation and adaptation, (v) promoting cost-effective citywide fecal sludge management, and (vi) helping SIG address any environmental and social safeguard issues. Transferring this expertise will be key in supporting the government to prepare and implement the proposed project efficiently and effectively. There is a rationale for public concessional financing of the project,

given the public good nature of project to improve water and sanitation services quickly. Commercial financing will increase the pressure to raise tariffs which would make the planned investments uncertain. In most countries, such investments are mainly financed through public financing.

34. The proposed investments and technical and financial improvements will help further strengthen the overall financial position of SW and, in time, could make private sector financial participation more viable in the future: the expansion of water services will significantly increase the revenue base of SW and improvements supported under component 4 will enhance the technical and financial viability of SW. These two sets of improvements form the foundation of SW's ability to achieve financial efficiency and improved creditworthiness. The DBO contract for the septage treatment plant will represent a first important step towards increasing private sector support to SW's activities.

35. The project will also help strengthen SW's resilience to climate change, bringing into project design a number of features adopted by advanced water utilities around the world. This includes the formulation and integration into SW's procedures of a drought management plan and a climate change adaptation plan, efforts to decrease SW's exposure to water stress through physical losses reduction and stimulate water conservation, and making the water and sewerage systems more robust to flood events. On climate mitigation side, the non-conventional technology promoted for the septage treatment plant will allow a reduction of methane emissions by discharges of fecal sludge generated by Honiara's population.

36. The project will be implemented over an eight-year period, to allow for the financing of the five-year O&M of the septage treatment facility DBO contract following the construction phase, and to contribute to a successful implementation of the utility turned around program and sector consolidation.

F. Lessons Learned and Reflected in the Project Design

37. *Capacity building.* As suggested in the evaluation of DFAT's assistance to SW between 2013 and 2017,[30] availability of skilled personnel is critical for success of SW operations and long-term capacity cannot be created using expatriate staff alone. World Bank project experiences in Bangladesh, Honduras and Mexico[31] echo these conclusions and show that tailored capacity building, inspired from thorough needs assessments and focused on the different stakeholders active in integrated urban interventions, is key to sustainable project outcomes. The project incorporates a long-term capacity building strategy, including engaging with training institutions and implementation of leadership development programs, as detailed in Annex 2.

38. *Service provision to informal areas*. World Bank project experience[32] indicates that improvements in poor communities cannot be achieved without the active involvement of communities in the design and selection of the type of service to be provided to them. Many attempts to provide services to informal settlements have had limited success because of failure to fully involve community residents in the design, planning, implementation, and monitoring, of investments. An engagement strategy for the informal areas is currently being prepared with

[30] Tennant et al., 2016
[31] Bangladesh Dhaka Water Supply and Sanitation Project (P093988), Honduras Water and Sanitation Sector Modernization Project (P103881), Mexico Water Utilities Efficiency Improvement Project (P121195).
[32] For example, in the Panama Water Supply and Sanitation in Low-Income Community Project [P082419], Kenya Informal Settlements Improvement Project [P113542], Indonesia National Community Empowerment Program for Urban Areas [P125405], Peru RAS Increasing Water Supply and Sanitation Services in Peri-Urban Areas of Lima [P149453 and P151314].

the support of the World Bank's Global Water Security and Sanitation Partnership (GWSP), building on SW's experience and on the recommendations outlined in *Unsettled: Water and Sanitation in Urban Settlement Communities in the Pacific*.[33] This work and further technical assistance to be financed by the project will help guide investment activities under the project.

39. *Citywide inclusive sanitation.* Centralized conventional sewers and wastewater treatment are only part of the solution to urban sanitation challenges. As shown now in numerous cities (such as Brasilia, Dakar, Durban or Kuala Lumpur) using a mix of onsite and offsite solutions can be the most cost-effective approach to citywide inclusive sanitation, while being resilient to external economic, demographic and environmental shocks. Furthermore, providing access to a toilet, a latrine or a sewer connection is only part of the solution. The Sustainable Development Goals (SDGs) now require that human waste is conveyed, treated and reused/ disposed of safely and sustainably. The full sanitation service chain needs to be sustainably managed. By improving the quality of sewerage services in the most densely urbanized areas, and elsewhere supporting the strengthening of the sludge collection and disposal system, the project recognizes and intends to apply these core principles.

40. *Community engagement, public awareness, and behavior change management*. Providing pressurized drinking water, delivered 24/7, will represent a major improvement in levels of service to many households currently unserved. With limited water resources available, managing demand and encouraging payment for services (both water and sanitation) will be crucial to ensure SW's financial sustainability. As shown in the Kiribati Adaptation Program III (P112615), considerable effort, time, and resources will be required for effective community engagement, public awareness raising, and behavior change management. SW's capacity and knowledge to undertake such type of community engagement is for the moment limited and will be strengthened under the proposed project.

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

41. The implementing agency will be SW. This will be the first time SW plays that role in a project financed by the World Bank or by a Multilateral Development Bank (MDB). A UWSSSP Steering Committee (SC) has been formed to provide strategic direction and guidance during project implementation. It will provide general oversight and will review progress and the results of periodic monitoring and evaluation activities. The SC is chaired by the Chairman of SW Board and includes as core members Permanent Secretaries of several key ministries,[34] representatives from Honiara City Council and from Guadalcanal Province, and may be expanded to include representation from other stakeholders, if needed, to strengthen coordination and implementation. The SC will meet on a semi-annual basis, or more frequently, as needed.

42. A Project Management Unit (PMU) has been established within SW to support UWSSSP implementation. In addition to its manager who has already been recruited, the PMU will appoint specialists with expertise in

[33] Schrecongost, Alyse, and Katherine Wong. 2015. *Unsettled: Water and Sanitation in Urban Settlement Communities of the Pacific*. Washington, DC: World Bank.
[34] Ministry of Finance and Treasury, Ministry of Mines, Energy and Rural Electrification, Ministry of Environment, Climate Change, Disaster Management and Meteorology and Ministry of Development Planning and Aid Coordination, Ministry of Health and Medical Services

technical and social matters, procurement and contract management, communication, and environmental and social safeguards. The PMU, under the guidance of SW Chief Executing Officer (CEO), has responsibility for overseeing and managing project execution and compliance with project requirements, including those associated with procurement, financial management and audits, safeguards, monitoring and evaluation, and project reporting. SW will mainstream into its routine activities some components of the PMU's work such as NRW management. SW permanent staff will contribute to works supervision, financial management and monitoring and evaluation.

43. SW indicated a strong preference for the World Bank and ADB to prepare a joint operation, rather than separate projects. Developing a unified approach, both during preparation and throughout implementation, will help minimize duplication, transaction costs and complexity, which would be essential in a context of limited implementation capacity. The World Bank and ADB subsequently adopted a common approach and framework to address each donor's respective environmental and social requirements, as well as financial management and disbursement arrangements. It was also agreed that, to facilitate project management, only one donor's procurement procedures should be utilized during implementation. For several reasons, including the amount of funding provided by ADB, and because ADB is mobilizing IFP funding, it was agreed that ADB would be the lead cofinancier and that the World Bank would use the Alternative Procurement Arrangements (APA) policy during implementation. Using ADB's procedures to procure works, goods and services will eliminate the need to carry out separate tenders according to different procurement procedures.

44. The APA agreement to be executed by World Bank and ADB defines how both agencies would respond to issues during implementation, including technical, procurement, financial management and safeguards aspects of UWSSSP. Both agencies agree to ensure the prompt delivery and exchange of information regarding the project and, when practical, will field joint missions during implementation to supervise progress. The APA would take effect after approval by the respective Boards of Executive Directors of both organizations.

45. A Project Operation Manual (POM) will be jointly developed with ADB and the PMU, which will define procedures for implementing UWSSSP. It shall be adopted by SW no more than one month after project effectiveness. UWSSSP will be carried out in accordance with the arrangements and procedures set out in the POM, which can be amended from time-to-time, provided all modifications are agreed with the World Bank and ADB in writing prior to any changes.

B. Results Monitoring and Evaluation Arrangements

46. To ensure effective monitoring and evaluation of all project indicators, several measures will be taken. Technical and WASH specialists of the PMU will be required to have demonstrated skills in data collection, collation and reporting, preferably on World Bank financed projects. Secondly, this expertise will be bolstered with support from the project team through the provision of reporting templates and feedback on reports. Many of the project indicators are part of SW's internal reporting system and are already being communicated to the Pacific Water and Wastewater Association for utilities benchmarking. These efforts will seek to streamline as much as possible all project indicators into SW's monitoring and evaluation system.

47. SW will issue quarterly progress reports that will be due the last day of March, June, September and December of each year. These will be forwarded to the World Bank within 30 days of the end of each calendar quarter. A mid-term review will be prepared in end-2022, and an Implementation Completion and Results Report

completed within six months of the end of project implementation. SW will also monitor progress against agreed performance indicators, as defined in Section VI.

C. Sustainability

48. The Borrower's commitment is demonstrated by the strong alignment between the project's investments and the 30-Year Strategic Plan and 5-Year Action Plan, which were endorsed by the Government.

49. To ensure the sustainability of project's investments and services, the infrastructure will be designed and specified considering the impacts of climate change on water infrastructure, climate-proofed and designed with durability of materials as a high priority. Projected climate change impacts in the country include occasional droughts, sea level rise, and increased rainfall variability, both seasonally and annually, which are likely to cause flash floods and landslides. The reduction of non-revenue water will significantly increase water availability for the population in a context of limited water resources. The installation of pre-payment meters will also contribute to a decrease of per capita water consumption, as has been found in recent pre-payment pilot areas in Honiara where per capita consumption has dropped from 169 to 137 liters per day.

50. The rehabilitation and limited expansion of Kongulai water source will further balance the use of groundwater and surface water resources in SW's portfolio, thereby hedging the risks related to any of these water resources. The development of catchment management plans will help improve their protection and sustainability. In coastal areas, water supply infrastructure and sewerage infrastructure have been designed to account for potential sea level rise and with protection from the wave regime where it may be exposed on the coast. To promote resilient response to more extreme climate events, the project proposes the development of a drought management plan and protocol. In parallel, to ensure sustainability from the customer/user perspective, the project will implement a comprehensive social management plan to promote good hygiene practices, demand management and community environmental stewardship.

51. The use of a long-term DBO contract for the septage treatment plant, to be fully financed by the project, will ensure the performance of this key asset for at least five years following completion of works. It will also help progressively strengthen SW's capacity to operate this infrastructure on its own in an efficient and sustainable manner. SW staff will benefit from extensive mentoring and on-the-job training from private sector professionals undertaking the O&M of the plant, as well as from technical assistance on a broad range of topics. After project completion in 2027, SW would be expected to build on this strengthened capacity and be able to operate the systems without external support. However, depending on SW's interest to manage directly the plant and on the availability of funds to extend the contract, there would also be the possibility for a continuation of the DBO arrangement, thereby increasing the operational sustainability. The future allocation of responsibility between SW and HCC in the operation of the plant will also be reassessed as part of the project.

52. Overall, the project's financial sustainability will be ensured through: (i) the improvement of SW's operational efficiency to minimize operating costs; (ii) the expansion of SW's customer base to increase revenues; (iii) the promotion of a regulated water tariff which will allow cost recovery, building on the Government's approved tariff increases and ensuring service affordability;[35] and (iv) Government commitment to the CSO policy, which was formally reiterated by the Ministry of Finance and Treasury to SW in late 2018.

[35] A legal covenant has been included in the Project Agreement to ensure that a review of SW's water tariffs (including a focus on affordability aspects) is completed by end-2020.

IV. PROJECT APPRAISAL SUMMARY

A. Technical, Economic and Financial Analysis

53. The project design represents a technically viable approach to improve access to water supply and sanitation services Honiara and selected provincial capitals. Engineering designs were built on past studies including the 30-Year Strategic Plan and the 5-Year Action Plan. The proposed technical solutions for reducing NRW, expanding water production and treatment systems, and pressurized and distribution transmission systems, in Honiara, are considered adequate to achieve drinking water service delivery standards. Until the implementation of a new major water production system (Lungga) recommended by the 30-Year Strategic Plan in the mid-2020s, the additional water needed to cope with the substantial increase of SW's customer base will be generated by a reduction of NRW, through enhanced water demand management (including with the installation of pre-payment meters) and a limited expansion of existing water production capacity. Undertaken up front, efforts geared towards reducing Honiara's overall water needs are the most cost-effective supply augmentation approach. They will also enable the size, timing and cost optimization of the Lungga water production and treatment system, the city's future large water investment. In provincial capitals, concept designs aim to limit the need for operating capacity locally, to minimize operating costs, while still ensuring continuous water supply service to these areas.

54. The vision of the 30-year Strategic Plan for the sanitation sector is to expand the sewerage system to only the most densely urbanized areas (to less than 30 percent of Honiara population), for which a wastewater treatment plant would be implemented in the long-term, and the development of onsite sanitation and fecal sludge management system elsewhere. The project contributes to this sensible approach by (i) reconfiguring the sewerage system design to allow for the future conveyance of all sewerage to a wastewater treatment plant; (ii) reducing the number of sewage outfalls and improving their design to allow for acceptable discharge conditions of all sewage before the wastewater treatment plant is implemented; (iii) implementing a septage treatment plant, including efficient and innovative O&M arrangements through a DBO contract, designed to receive and treat the fecal sludge generated by households not connected to the sewerage system; (iv) helping clarify the regulatory framework in which fecal sludge is being managed, and providing advice to sludge transport operators to improve the scope and efficiency of activities.

55. With regards to the discharge of sewage in the ocean, in the absence of national environmental standards, Australian and New Zealand Environment and Conservation Council (ANZECC) guidelines have been considered.[36] Based on preliminary numerical modeling, the submarine outfalls have been designed to ensure discharge sewage more than 500 meters from the coastline.[37] Refined modeling will be undertaken at detailed design stage. For each outfall, high density polyethylene (HDPE) ballasted pipes was found to be the most cost-effective option for the maritime sections. Outfalls will all discharge wastewater into the bottom of the ocean at depths more than 30 meters to meet the minimum dispersion requirements. For the septage treatment plant, reed bed filter technology has been identified as the most cost-effective and efficient approach given land availability constraints, over other options such as aerobic treatment, anaerobic treatment or lagoons.

[36] 150 EC/100ml only in 50 percent of cases; 1000 EC/100 ml in 10 percent of cases, when wind currents bring the plume directly to the coast.
[37] In the case of Point Cruz, this includes the existing strip of land jutting out in the sea.

56. Engineering criteria used for the conceptualization and design of water and sanitation infrastructure have been selected to minimize operating costs considering local needs. Overall, water and sanitation infrastructure investments and associated consulting services represent per capita cost of about US$680 per future beneficiary. While this cost seems high compared to common international references, the remoteness of the island and the need to have most equipment shipped from abroad significantly adds to the cost. The unit rates considered in project cost estimates are largely based on ADB's extensive operational experience in the water sector in the Pacific region.

57. Activities in informal areas will be informed by the findings of the technical assistance currently provided to SW by the World Bank's Global Water and Sanitation Program (GWSP). It is recognized that special approaches to ensure a positive incorporation of these communities into SW's formal system are needed. These approaches will involve strong community mobilization and participation in the selection on service standards, coupled with tailored technologies (such as pre-paid meters). Preliminary consultations as part of this technical assistance have shown the preference of communities for piped house water connections, shared tap stands, water kiosks or automated taps among a broad range of options commonly implemented in similar context. The strategic recommendations will build on the experience acquired by SW in engaging with communities in several informal areas and piloting some of these service delivery options. This work will detail community mobilization methodology, service standards and tailored technologies considerations, service expansion approaches based on prospective customers' land ownership status and adjusted commercial policies when needed. The conclusions of this technical assistance and the outline of SW's approach for the project will be available in May 2019.

58. Activities to reduce NRW consider the lessons learned from previous initiatives, in particular the technical assistance program provided by JICA. This program included the pilot development of four District Metering Area (DMA) zones, which have reportedly delivered good results in terms of NRW reduction. However, this has been a relatively labor-intensive process delivered on a project basis by a Task Force with support from the JICA advisers.[38] Equipment to establish DMAs across Honiara was not installed in time before the departure of the technical assistance team, and the DMAs were never operationalized. This experience demonstrated the importance of embedding NRW reduction capacity and practices in the normal operations of SW's Operations and Maintenance Division, rather than considering them as standalone project activities.

59. Concept designs for most of the Honiara water supply and sewerage system components have been completed. The engineering consultant responsible for the preparation of project detailed designs and bidding documents has been hired under ADB's US$3 million Project Readiness Financing (PRF) facility. Detailed designs and bidding documents for contracts representing about 70 percent of project amount are scheduled to be completed mid-2019. Terms of reference for the main project consultancies (PMU experts, awareness campaigns) have been prepared. During the first 18 months of project implementation, it is planned that most key contracts for infrastructure development will be procured and under implementation.

60. **Economic Analysis**. An ex ante economic analysis was undertaken for the proposed project, computing the economic internal rate of return (EIRR), economic net present value (ENPV), and economic benefit-cost ratio (EBCR) under two scenarios: low and high estimate of the value of carbon (CO_2) emissions reduction (respectively

[38] S. Tennant, Kearton, T. 2016. Independent evaluation of Phase 2 of the Australian Aid Program's urban water program in Solomon Islands.

US$40 and US$80 per ton).[39] The considered economic benefits were (i) the values of incremental water sales at the water tariff, considered as a proxy for the value of consumers' willingness-to-pay for piped water, and (ii) the value of CO_2 emissions avoided. Incremental water sales were calculated by comparing project benefits with a without-project situation in which water availability would diminish due to the progressive deterioration of NRW. A reduction in the incidence of water-borne diseases and positive impacts to the country's HCI are likely because of the project. However, the economic analysis did not attempt to quantify associated benefits (e.g. avoided direct health expenditure, decreased absenteeism in working age population, value of loss-of-life avoided), as attribution of health effects to the project would be difficult to establish. Likewise, environmental benefits due to the improved discharge of sewage and related increases in property value have not been quantified. Therefore, the proposed cost-benefit analysis can be considered conservative, and it would be reasonable to assume that the actual project benefits will be larger.

61. Results of the economic analysis, summarized in Table 3, indicate the economic viability of the project with an EIRR ranging between 15.6 percent and 16.2 percent in the base case scenario. The various sensitivity analysis also demonstrates the robustness of the economic viability of the project, as shown in Table 3. Further details are provided in Annex 3.

Table 3: Project EIRR and sensitivity analysis

	EIRR (Value of CO_2 emissions excluded – high value of CO_2 estimate), %
Base Case	15.8 - 16.2
20% increase in capital expenditures (CAPEX)	12.7 - 13.0
20% increase in operational expenditures (OPEX)	15.6 - 15.9
20% decrease in benefits	11.9 - 12.2
20% decrease in benefits and 20% increase in costs	9.16 - 9.42

62. **Financial analysis.** The project's financial viability was determined by computing the financial internal rate of return (FIRR) and financial net present value (FNPV). Incremental financial revenues are generated mainly from the sale of water supply services, compared with a without-project scenario in which water sales would decrease as a result of deteriorating NRW. In addition to project capital cost inclusive of physical contingencies, ADB loan interest repayment and IDA credit service charge, the financial analysis considered (i) OPEX incurred by the new water infrastructure, and (ii) incremental SW administrative and management costs (including labor). The project FIRR reaches 12.5 percent. The financial net present value (FNPV) of the project, which shows the present value of the net benefit stream, or the project's worth at present, is US$9.9 million at a 10 percent discount rate. The project is therefore considered viable.

63. **Cost recovery.** In this analysis, all SW OPEX (including replacement of assets existing before the project) and loan repayment (principal and interest based on US$43 million on-lending by the Government to SW at a four percent interest rate considered for this analysis) [40] were considered. Under the current tariff (anticipating the approved five percent increase early 2020), between 107 and 138 percent of all SW costs will be recovered between 2020 and 2040 and SW's cash flow will remain positive throughout that period. Over the course of the

[39] Consistent with the World Bank: *Guidance note on shadow price of carbon in economic analysis* (2017).
[40] Non-grant components of project financing will be on-lent by MFT to SW. The analysis considers a four percent interest rate (based on drawdowns) over a 20-year period, with a five-year grace period. The on-lending interest rate is yet to be agreed between MFT and SW.

project implementation period, the amount of financial surplus to be generated by SW is expected to reach US$36.5 million. In the event that SW fails to recover OPEX during project implementation, a covenant to the Financing Agreement will require that Government ensures availability of adequate financial resources to cover any shortfalls in the funding of SW's OPEX.

B. Fiduciary

(6) Financial Management

64. The financial management (FM) assessment was carried out in accordance with the "Principles Based Financial Management Practice Manual" issued by the Board on March 1, 2010. This states that, with respect to projects financed by the World Bank, the grantee is required to maintain appropriate implementation arrangements – including accounting, financial reporting, and auditing systems – adequate to ensure they can provide the World Bank with accurate and timely information regarding the project resources and expenditures. Overall, the financial management arrangements satisfy the financial management requirements of the World Bank Policy on Investment Project Financing. The financial management risk of the project is considered *moderate* provided a project accountant can be financed, if required, to assist SW to meet the financial management requirements.

65. **Implementing Agency.** SW will be responsible for the implementation of the FM aspects for this project. Solomon Islands Water Authority, trading as Solomon Water, is a wholly owned enterprise of the Solomon Islands Government. This will be the first operation between the World Bank and SW, although SW had previous experience in implementing projects funded by DFAT (Australia) and JICA (Japan). A subsidiary agreement will be established between MFT and SW, reflecting on-lending arrangements. The project will be cofinanced by the Bank (US$15 million IDA credit), the ADB (US$28 million loan and US$10 million grant) the IPF (Euro18 million grant) and a SW counterpart financing contribution (US$9 million).

66. **Accounting and Staffing Arrangements.** SW has an established accounting section within the organization with experienced and highly qualified staff. The SW accounting package, Magiq, is a web-based finance and administration system which is capable of maintaining an adequate set of project accounts within the SW accounts but can be segregated for reporting purposes. It was noted the 2017 SW financial statements were qualified on the basis that there were uncorrected errors that arose due to the migration of data to a new software system and that this migration was not sufficiently documented. While this is a concern, it is not expected to impact on the authority's ability to maintain the project accounts. The project will add to the workload of the current SW and the project can finance under Component 4 a finance consultant who would be responsible for maintaining the accounts of World Bank financed project and liaising with the World Bank on Financial Management related issues.

67. **Budget Arrangements.** The project budget will be prepared and monitored by SW which has experience in managing their own budget which is prepared on an annual basis and is approved by the Board. On a bi monthly basis, the budget is reviewed by the Board including a variance analysis. An overall project budget should be formulated, initially using the project paper as the first reference point and a work plan. The budget should be consistent with information provided in the procurement plan. A more detailed annual project budget will be developed from the overall budget and monitored on a quarterly basis. Financial Reports (more below) will include budget to actual comparisons.

68. **Internal Controls.** The broad control responsibilities for SW are outlined in Part V of the Solomon Authority Water Act of 1992. SW also has a Board which approves high level financial management policies and they have recently appointed a consultant to update current procedures. In addition**,** an internal auditor who reports directly to the CEO who carries out internal audits on various facets of the business, identifies weaknesses in process/practice and recommends management actions. In additional the internal auditor monitors progress against issues identified in the external auditors' Management Letter and the internal auditor reports are presented and discussed at the Audit & Risk Committee meetings. Monthly reconciliations of bank accounts are completed. The controls meet the World Bank requirements.

69. **Flow of Funds.** In addition to direct payments and reimbursement, project funds will flow from the World Bank into a designated account maintained by SW in Solomon Island dollars. Payments requests will be addressed to the World Bank and to ADB (which will administer IFP funds) for amounts proportional to each of the two cofinanciers' overall financial contribution to the component of the considered contract.

70. **Financial Reporting Arrangements.** SW will prepare calendar quarterly Interim Financial Reports (IFR) due to be received by the World Bank within 45 days after the end of the reporting period. The format for these reports will need to be acceptable to the World Bank and must include project commitments; and income and expenditure for the reporting period, year to date and cumulative figures. Prior to the disbursement of funds the format of the reports will be agreed to with SW.

71. **External Audit Arrangements.** No separate project audit will be required as the project activities will be included in the SW accounts. Hence a copy of the SW entity audited financial statements will meet the auditing requirements subject to the following disclosures in the main part of the accounts or in the notes to the accounts. The World Bank will reserve the right to request additional assurance through a Special Purpose Audit, financed through project funds if there are concerns over the accuracy of the project accounting.

72. **General note, to be included in the SW Accounts**: "Solomon Water received World Bank IDA funds, to implement the Solomon Islands Urban Water Supply & Sanitation Sector Project to increase access and quality of water supply and sanitation services in Honiara and selected provincial capitals, and to improve the operational performance of Solomon Water." For each source of finance and a consolidated summary a note as suggested in Annex 1 should be included, although the format can be agreed between the Bank and SW prior to the first disclosure requirements.

73. **Supervision Plan.** FM implementation review field mission will be conducted at least once a year with additional missions early in implementation to ensure all World Bank FM requirements are met. In addition, the FM team will conduct a desk review of the semester IFRs and the project notes to the accounts in the SW audited annual financial statements.

74. **Disbursement** The project will be able to use three disbursement methods: advance, reimbursement and direct payment. A designated project account (DA) will be required and the ceiling for the DA has been determined during the preparation of the Disbursement Letter. Disbursement for replenishments for the Designated Account will be based on a Statement of Expenditure. All direct payments will be paid based on records evidencing eligible expenditures, e.g. copies of receipts, supplier invoices.

(ii) Procurement

75. The project will adopt Alternative Procurement Arrangement (APA) instrument as per the section III.F of the World Bank's Policy "Procurement in IPF and Other Operational Procurement Matters" for all parts of the project. The project will rely on and apply the procurement rules and procedures of another Multilateral Development Bank – ADB. ADB will take lead in providing the implementation support and monitoring of project procurement activities under the project. The project will fund the procurement of goods, works and services using ADB's procurement rules and procedures. The World Bank will not participate in the supervision of procurement activities. The detailed procurement plan for the first 18 months is prepared based on the analysis in a short Project Procurement Strategy for Development (PPSD).

C. Safeguards

(i) Environmental Safeguards

76. The environment in Greater Honiara is greatly modified and substantially degraded due to uncontrolled urban sprawl, lack of solid waste management and aged / absent sewage and sanitation infrastructure. Communal septic tanks are overflowing or have blockages and consequently, raw sewage is found in stagnant ponds at various locations. The sewage outfalls to sea and the river have been damaged over the years, resulting in discharges to the beach at 13 locations along Honiara's water front and to informal gardens along the river banks. Groundwater wells for drinking water abstraction are located nearby sewage outfalls, septic tanks and unserved informal dwellings, leading to groundwater contamination and public health risks.

77. The current septage disposal facility is located at the city's solid waste landfill. The facility is not engineered and septage is dumped directly to the ground. Due to its location in a swampy area that is subject to flooding, infiltration and drying of the septage is severely hampered and again leads to environmental degradation of the nearby soil and groundwater. The location for the new facility has not been determined yet, but it will be engineered with adequate measures in place for sludge disposal and discharge of the liquid effluent to the sewer.

78. The majority of the proposed interventions in Honiara and the provincial capitals will take place in brownfield areas. As the general environment at the provincial capital locations has not been ascertained yet, they may include areas of natural habitat. Interventions at Tulagi are likely to be nearby World War II historical sites, which needs to be assessed when the exact locations of proposed works are finalized.

79. The project is proposed as Category B. As the proposed project involves the rehabilitation and expansion of failing water supply and sanitation infrastructure, as well as the development of more resilient and diversified water supply sources, the social and environmental benefits that will result from the project are largely positive, including reduction of public health and environmental contamination risks. Environmental safeguards policies triggered by the Project include: **OP/BP 4.01 Environmental Assessment, OP/BP 4.11 Physical Cultural Resources and OP4.04 Natural Habitats.**

80. As the lead for the project, ADB has commissioned the safeguards studies, which include an Environmental and Social Impact Assessment (ESIA) for the Honiara-based interventions and an Environmental and Social

Management Framework (ESMF)[41] for the yet to be designed interventions in the provincial capitals Auki, Gizo, Munda, Noro and Tulagi, as well as the septage treatment plant in Honiara. Both documents were disclosed on March 27, 2019.

81. The only potential significant environmental risk associated with the project consists of the contamination and public health impacts resulting from the continued improper discharge of untreated sewage and septage treatment facility effluent to the sea. In order to improve the current situation, the sewage discharge will be consolidated. The sewage outfalls will be extended to about 700 meters from the shoreline and will discharge at depths of more than 40 meters, in order to ensure adequate dilution and dispersion, thus minimizing water quality impacts on beach and fringing reef areas. The modeled concentrations of E.coli (EC) at 100 meters from the beach in the event of shoreward ocean currents (which occur less than 10 percent of the year) are below 1000 EC/100 milliliters. Since this exceeds the ANZECC standard for bathing water quality (median value of 150EC/100 milliliters), further work will need to be done during detailed design to assess values for different wave conditions to ensure compliance with the median value of 150 fecal organisms per 100 milliliters.

82. Other impacts associated with the interventions are deemed to be minor and manageable through standard environmental good practice procedures. Once a suitable location for the septage treatment plant is identified, an environmental risk assessment will need to be completed. In addition, once the interventions in the other provincial capitals are determined, ESIAs for each of the subprojects will be required to be undertaken during project implementation, in accordance with the requirements set out in the ESMF.

(ii) Social Safeguards

83. ***Land.*** Overall, land acquisition impacts associated with the project are expected to be low to moderate with most of the infrastructure including tanks, pumps and reticulation being located within land owned by the Government or SW. The World Bank's policy on **Involuntary Resettlement** (OP/BP4.12) has been triggered. Piped networks will largely be located within the public roads. Limited land acquisition may be required for augmentation of capacity at reservoirs, depending on location and on the amount of public land available adjacent to the existing sites. It is anticipated that implementation, expansion and rehabilitation of the provincial capitals' water supply systems can be implemented within public land, while existing water and sewer lines in Honiara may in some cases lie within private plots. During construction activities temporary physical and economic displacement may occur. The landholding arrangement along the waterfront where the existing sewer outfalls in Honiara are located is complex,[42] and attention will be given to the participation of individuals living along the foreshore in project consultations.

84. A Resettlement Policy Framework (RPF)[43], disclosed on March 27, 2019, identifies the land holding arrangements for the likely types of infrastructure proposed. The RPF addresses impacts including permanent loss of land, loss of structures, loss of crops and trees, loss due to temporary occupations, vulnerable households and unforeseen/unintended impacts. It also establishes the process and requirements for preparation of resettlement plan during implementation. The RPF also outlines a detailed process for dispute resolution over customary land use and the project will follow eligibility and provisions in the RPF for compensation of all types of losses resulting

[41] For the purpose of the project, and based on the terminology used by the ADB, the ESIA is named Initial Environmental Examination (IEE) and the ESMF an Environmental Assessment and Review Framework (EARF).
[42] For example, some land owners have attempted to have seabed adjacent to the waterfront registered as private land.
[43] For the purpose of the project, and based on the terminology used by the ADB, the RPF is named Resettlement Framework (RF).

from land acquisition or restriction on land use or access.

85. ***Indigenous Peoples.*** Although the project will be implemented almost entirely within urban areas, it is prudent to trigger the **Indigenous Peoples safeguards policy** (OP/BP4.10) to frame broad community support through consultation in case any infrastructure needs to be constructed in rural areas, affecting indigenous people. The engagement and impacts mitigation methodology is described in the RPF.

86. ***Gender aspects.*** Gender relations in Solomon Islands are strongly male-dominated, perpetuating discrimination against women and girls. Gender stereotypes entrench acceptance of discriminatory behavior and harmful practices such as keeping girls out of school, early marriage, sexual abuse, and using girls as commodities to offset cash poverty. Literacy levels are low among women and the 2009 Census reported that 21 percent of women have no schooling compared with 12 percent of men. These inequalities are also reflected in access to work opportunities: in Honiara, men hold the majority of jobs in government and self-employment, while 73 percent of those unemployed are women.[44] Overall, 27 percent of women decide on how their earnings are spent, 56 percent make the decision jointly with their husband or partner, and 10 percent report that the decision is mainly made by their husband or partner. Data from the SIG 2009 Census indicated that about 18 percent of households are headed by women, with little difference between urban and rural areas. Inequalities in control over decision making, economic resources, access to health care and education restrict the rights and freedom of girls and women, resulting in unequal benefits for them from the development process.

87. *Gender and the burden of water-related chores.* In Solomon Islands, women are generally responsible for ensuring there is enough water for washing, cooking and sanitation in the house. Data from the household survey (ADB, 2018) indicates that the task of water collection falls more frequently on women and girls, with women nearly four times more likely than men to collect water in Honiara and girls over two and half times more likely than boys. As such, the need to ensure that the household has safe water affects women's time and options for income generating and other activities. The expansion of water supply services through house connections in unserved areas will help reduce the time spent collecting water, which will benefit women primarily.

88. *Gender and security.* Lack of adequate sanitation and hygiene leads to numerous adverse health effects and impacts women particularly. In Solomon Islands, when latrines are not available in households, women and girls seek privacy early in the morning or after dark to defecate outside of their homes, exposing them to a greater risk of health hazards, harassment and sexual assault. The shame and indignity of defecating in the open also affects women's self-esteem, as does a lack of water for washing clothes and personal hygiene. As explained in paragraph 92, the project will help lessen the time spent collecting water and reduce open defecation through improved sanitation and hygiene behaviors, and therefore minimizing potential exposure to gender-based violence (GBV) during that time for women and girls.

89. *Gender gaps in employment.* Female labor force participation rate remains low in Solomon Islands, with the most recent (2017) ILO figures finding 54 percent female, and 81 percent male labor force participation rates. Additionally, women's participation in leadership and decision making at senior levels is low. While women make up 40 percent of public sector, they fill mostly junior positions. Only five percent of senior public sector positions and 22 percent of mid-level positions are occupied by women.[45] At SW, women currently comprise 30 percent of

[44] ADB, 2018: Urban Water Supply and Sanitation Sector Project – Project Preparatory Assistance (PPA) Household Survey Report. SLB_87028RWAW

[45] ADB 2015, *https://www.adb.org/documents/solomon-islands-country-gender-assessment*

senior management, exceeding the public sector average but still falling well short of parity. Moreover, the ratio of women to men employed at SW decreases both at higher management and technical staff level. SW employs a sizable proportion of engineers, plumbers, laborer's and security staff, almost all of whom are men, as well as administrative officers, who tend to be women. The data suggest SW may struggle to attract qualified women applicants into technical positions and provide equal opportunities for women's promotion to management.

90. To address the gap in women in leadership at SW and strengthen equal opportunities in the Company, the project will undertake several actions to improve recruitment and monitoring of staff turnover. SW is committed to increasing women's presence on staff and among contractors, and to measurably close gender gaps in three ways: (i) by establishing a target of increasing women in senior management (with current baseline at 30 percent; target 40 percent); (ii) by ensuring women's participation in capacity building programs across a broad range of topics at the core of SW's mandate and activities will help diversify their skill base and facilitate their later access to responsibility positions; and (iii) by continuing to strengthen Equal Opportunities policy and practice in line with the Waka Mere Commitment to Action, a two-year initiative promoting gender equality in the private sector in Solomon Islands. Actions agreed to be undertaken by SW include, at human resources level, the improvement of systems and processes that govern corporate behaviors, monitoring and management in terms of equal opportunities, and appointment of new female managers within the project period.

91. **Gender-based violence (GBV).** Gender inequality in Solomon Islands has a significant impact in the country and Gender- based violence is prevalent through many forms; sexual violence, coercion, emotional and/ or physical violence perpetrated by intimate partners or non-partners.[46] The violence of husbands against their wives is commonly accepted: in a survey of adolescents between the ages of 15 to 19, over 70 percent believed that a husband is justified in hitting his wife under certain circumstances.[47] Though the Ministry of Health and Medical Services identifies the reduction of domestic violence as a priority, enforcement mechanisms are limited and lodging complaints with the police is uncommon. In the context of water and sanitation services, GBV-related risks appear to relate to both water collection – the responsibility for which disproportionately falls on women and girls – and open defecation practices taking place in dark and remote areas.[48] Component 1 of the project will increase the provision of safe water sources through additional household connections in unserved areas, reducing time spent collecting water and potential exposure to GBV during that time for women and girls. Component 3 will aim to reduce open defecation through improved sanitation and hygiene behaviors, and therefore minimize women and girls' exposure to potential GBV. Overall, an assessment of the project was carried out using the World Bank's GBV Risk Assessment Tool, and it was found to fall into the "lower risk" category. This is due, in particular, to: (i) significant resources being dedicated by the project to construction supervision, with the presence of an international social development gender aspects specialist in the PMU; (ii) the absence of remote construction areas that would be difficult to supervise; and (iii) the limited amount (in time and number) of labor influx anticipated to carry out the works. The project grievance redress mechanism will outline a process for the management of reported GBV-related cases, including details of service providers and referral systems available in the country. Contracts related to construction activities will include a code of conduct setting GBV-sensitive behavior standards.

(iii) Grievance Redress Mechanisms

[46] https://www.who.int/sdhconference/resources/draft_background_paper4_solomon_islands.pdf
[47] https://www.humanium.org/en/solomon-islands/
[48] https://www.amnesty.org/en/documents/asa43/001/2011/en/

92. SW has two grievance redress mechanisms (GRM) in place to receive and address complaints from clients: one managed by the Customer care unit, and the other by the Billing and Collections unit. To date those systems are not connected and the complaints received through a variety of channels including social media, which is monitored by another unit, the Communications team. As such, complaints are often not recorded in a systematic and harmonized manner. A technical assistance mobilized by the ADB is currently working with SW to help improve GRM procedures. Building on this technical assistance, the project will seek to further rationalize the systems in place and achieve acceptable grievance redressal standards.

93. The safeguards instruments have also integrated a GRM process for the project. This incorporates a process to receive and facilitate resolution of affected peoples' concerns, complaints, and grievances about the project's performance, including those concerning environmental and social impacts and issues. The GRM will ensure that: (i) the basic rights and interests of every affected person are protected; and (ii) their concerns arising from project performance during the phases of design, construction and operation activities are effectively and timely addressed. The GRM will need to ensure that any concerns are addressed quickly and transparently, and without retribution to the affected parties. The grievance process will ensure that no costs are imposed on those raising the grievances; that concerns arising from project implementation are adequately addressed in a timely manner; and that participation in the grievance process does not preclude pursuit of legal remedies. Specific means of redress are available in disputes over land ownership or compensation, or for grievances related to project construction impacts which are detailed in the safeguards instruments.

Grievance Redress Service.

94. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel, which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and World Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

V. KEY RISKS

95. *Overall risk*. The overall project risk rating is High, and this reflects the risks associated with the learning curve expected for a new implementing agency. SW has not implemented a World Bank or ADB financed project to date and will therefore initially need close support, especially for general project management, fiduciary and safeguards aspects.

96. *Political and governance (risk rating Substantial).* General elections took place in early April 2019. Following the elections, changes in Government's position with regards for example to borrowing policy or to the water sector could jeopardize project approval. Significant delays in forming a new Government could significantly

postpone project effectiveness. This risk may be mitigated by the fact that this project has received broad support from various stakeholders during the preparation of the Country Partnership Framework.

97. *Technical design (risk rating Substantial).* The project scope spans a variety of thematic areas (water supply, sewerage, onsite sanitation), types of activities (physical investments, technical assistance, behaviour change) and geographical areas across the countries. It seeks to extend services to informal settlement locations in which SW has limited experience and will need to test new delivery models. This risk will be mitigated by the participation in project management of five technical specialists, including two international SW staff mobilized to support the PMU.

98. *Institutional capacity for implementation and sustainability (risk rating High).* SW lacks experience in implementing projects by multilateral development banks, and the joint co-financing arrangements involving the World Bank and the ADB may represent a significant implementation challenge. SW's internal capacity has significantly improved over the past years, to a large extent due to strong leadership of foreign experts mobilized into key management positions under DFAT financing (and now financed by SW). However, at a lower level in the institution, capacity remains constrained by the small number of competent professionals available on the local market to manage and develop the services. The scale of the proposed project would largely exceed SW's present implementation capacity, and some of the considered infrastructure, such as sewage outfalls, may also require operational experience that is unavailable in SW at this time. The project will place a strong emphasis on strengthening SW project management capacity through a well-staffed PMU. Another risk stems from the SW's strong centralization of capacity at its higher management level. Changes in current management arrangements could undermine project effectiveness and efficiency, and affect its outcomes. This risk will be mitigated by: (i) simplified implementation arrangements by following ADB's procurement rules and adopting a common approach on safeguards and other aspects; (ii) continuous project management by a well-staffed PMU, and (iii) the projected adequate financial position of SW, which suggests a continued capacity to attract and pay for highly qualified utility managers.

99. *Fiduciary risk (risk rating Substantial)*. The project faces three main procurement risks: (a) limited national procurement expertise; (b) lack of an independent procurement complaints mechanism; and (c) allegations of procurement corruption. SW has a dedicated procurement division, but has no experience in ADB and World Bank procurement and financial management guidelines and systems. SW will require support to develop procurement capacity and familiarity with ADB procurement policies and guidelines (which will be applied under Alternative Procurement Arrangements), and with World Bank financial management guidelines. Procurement training, in addition to support from project implementation assistance consultants, will facilitate strengthening of SW's procurement and financial management capacity, particularly in relation to ADB procurement and World Bank financial management guidelines and systems.

100. *Environmental, climate, disaster and social safeguards risk (risk rating Substantial)*. Although land requirements for this project are not expected to be vast, even small land transactions in the Solomon Islands can be time consuming. Land ownership arrangements along the waterfront where the existing sewer outfalls are to be implemented are notably complex, including a mix of customary and private land. Furthermore, this will be the first engagement in the sector and in the country and SW does not have experience in the management of World Bank safeguards policies. This risk will be mitigated by hiring a resettlement specialist, and a land management specialist, both on full term positions by the PMU and the mobilization of SW's community liaison officer under the project. Close implementation support will be provided to the PMU by both the ADB and Bank social

safeguards team. Climate and disaster risks are also considered substantial, considering the project areas' increased exposure to extreme climate events such as droughts and flooding. This risk will be mitigated through the preparation under Component 4 and adoption of Water Safety Plans by SW, including a disaster management plan, a drought management plan, and a climate change risk assessment and associated adaptation plan for SW's water supply and wastewater systems.

101. *Other risk (risk rating Low).* Finally, the fact that IFP Board and ADB Board are expected to approve their respective financing six weeks and three months respectively after Bank Board date is considered as a low risk. Should any of these cofinanciers fail to approve its financial contribution as planned, the project would not be able to achieve its PDO and a major redesign of the project would be required. This risk appears unlikely, as both donors have agreed with SIG to programme this project and have already achieved several key internal processing milestones. A condition has been included in the Financing Agreement linking IDA credit effectiveness to the effectiveness of ADB's financing (including IFP financing).

VI. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY: Solomon Islands

Urban Water Supply and Sanitation Sector Project

Project Development Objectives(s)

To increase access and quality of water supply and quality of sanitation services in selected service areas of Solomon Water, and to improve the operational performance of Solomon Water.

Project Development Objective Indicators

Indicator Name	DLI	Baseline	Intermediate Targets							End Target
			1	2	3	4	5	6	7	
Increased access and quality of water supply and quality of sanitation services										
People provided with access to improved water sources through piped house water connections (Number)		0.00	0.00	0.00	5,000.00	10,000.00	20,000.00	30,000.00	40,000.00	40,000.00
People provided with access to improved water sources through piped water connections - Females (Number)		0.00	0.00	0.00	2,200.00	4,500.00	9,000.00	13,500.00	18,000.00	18,800.00
Samples tests meeting national water quality standards at		70.00	70.00	70.00	70.00	80.00	90.00	95.00	95.00	95.00

Indicator Name	DLI	Baseline	Intermediate Targets							End Target
			1	2	3	4	5	6	7	
distribution points (%) (Percentage)										
Percentage of collected wastewater disposed of in accordance with international environmental standards during dry weather (%) (Percentage)		0.00	0.00	0.00	30.00	30.00	60.00	60.00	70.00	70.00
Improved operational performance of Solomon Water										
Volume of water unaccounted for (Cubic meters/year)		7,355,000.00	7,355,000.00	7,000,000.00	6,500,000.00	6,000,000.00	5,400,000.00	4,900,000.00	4,400,000.00	3,900,000.00
Operating cost coverage (Number)		1.11	1.11	1.12	1.14	1.17	1.20	1.22	1.24	1.25

Intermediate Results Indicators by Components

Indicator Name	DLI	Baseline	Intermediate Targets							End Target
			1	2	3	4	5	6	7	
Component 1. Urban Water Supply										
1.1 Water mains created and rehabilitated (Kilometers)		0.00	0.00	0.00	5.00	10.00	20.00	35.00	45.00	56.00
1.2 New storage		0.00	0.00	0.00	6,000.00	6,000.00	6,000.00	6,000.00	6,000.00	12,000.00

Indicator Name	DLI	Baseline	Intermediate Targets							End Target
			1	2	3	4	5	6	7	
capacity implemented (Cubic Meter(m3))										
Component 2. Urban Sanitation										
2.1 New septage treatment capacity at the centralized septage treatment plant (Population-Equivalent) (Number)		0.00	0.00	0.00	0.00	60,000.00	60,000.00	60,000.00	60,000.00	60,000.00
2.2 Trunk sewer mains rehabilitated (Kilometers)		0.00	0.00	0.00	2.00	4.00	6.00	7.00	7.00	7.00
Component 3. Water Conservation, Sanitation, and Hygiene Awareness and Education										
3.1 People trained to improved hygiene behaviour or sanitation practices under the project (Number)		0.00	0.00	2,000.00	4,000.00	6,000.00	8,000.00	10,000.00	10,000.00	10,000.00
People trained to improved hygiene behaviour or sanitation practices under the project - Females (Number)		0.00	0.00	940.00	1,880.00	2,820.00	3,760.00	4,700.00	4,700.00	4,700.00
Component 4. Institutional Strengthening and Project Management										
4.1 SW staff training on improved operation and maintenance (Hours)		0.00	0.00	400.00	800.00	1,200.00	1,600.00	2,000.00	2,000.00	2,000.00
4.2 SCADA system installed and operational (Yes/No)		No	No	No	Yes	Yes	Yes	Yes	Yes	Yes

Indicator Name	DLI	Baseline	Intermediate Targets							End Target
			1	2	3	4	5	6	7	
4.3 Grievances responded to and satisfactorily resolved in relation to SW water services according to standards (Percentage)		0.00	0.00	60.00	80.00	90.00	90.00	90.00	90.00	90.00
4.4 Operating cost efficiency of water supply services (US$/m3 sold) (Amount(USD))		2.20	2.20	2.20	2.15	2.10	2.00	1.90	1.85	1.85
4.6 Increase in the share of women and girls who feel safer from gender-based violence during water collection or using sanitation facility as a result of the project (Percentage)		0.00								25.00
4.7 Share of women in management position at SW (Percentage)		30.00	30.00	30.00	35.00	35.00	35.00	40.00	40.00	40.00

Monitoring & Evaluation Plan: PDO Indicators					
Indicator Name	**Definition/Description**	**Frequency**	**Datasource**	**Methodology for Data Collection**	**Responsibility for Data Collection**
People provided with access to improved water sources through piped house water connections	This indicator measures the cumulative number of people who benefited from improved water supply services through piped house water connections that have been constructed under the project.	Semi-annually	SW billing system and census data	(Number of new connections) x (Number of people per household)	SW
People provided with access to improved water sources through piped water connections - Females	This indicator measures the cumulative number of females who benefited from improved water supply services through piped house connections created under the project.	Semi-annually	SW billing records and census data	(Number of new connections) x (Number of people per household) x (Share of female in population)	
Samples tests meeting national water quality standards at distribution points (%)	Water samples from the regular SW monitoring system that comply with Solomon Islands potable water quality standards	Semi-annually	SW water quality laboratory	Sampling at distribution point per SW standard water quality monitoring plan.	SW
Percentage of collected wastewater disposed of in accordance with international environmental standards during dry weather (%)	Percentage of collected sewage in the sewerage network that receive screening and are disposed through rehabilitated outfalls.	Semi-annually	Level gauge records in outfall pumping stations and rainfall records from Solomon	Review of level gauge records in outfall pumping stations for dry weather periods. Australian and New Zealand Environment and Conservation Council (ANZECC)	SW

			Islands Meteorological Services	guidelines are to be considered, in the absence of national guidelines.	
Volume of water unaccounted for	Difference between billed and produced water volumes for the supply of Honiara during one year.	Every 6 months	SW production and billing system	N/A	SW
Operating cost coverage	Total annual operational revenues (generated by water sales) / total annual operating costs (including depreciation)	Annually	SW reports	Technical and financial operational reporting	SW

Monitoring & Evaluation Plan: Intermediate Results Indicators					
Indicator Name	**Definition/Description**	**Frequency**	**Datasource**	**Methodology for Data Collection**	**Responsibility for Data Collection**
1.1 Water mains created and rehabilitated	Length of water mains installed or rehabilitated.	Semi-annually	SW PMU quarterly reports	N/A	SW
1.2 New storage capacity implemented	Volume of new reservoirs connected to the network.	Semi-annually	SW PMU quarterly reports	N/A	SW
2.1 New septage treatment capacity at the centralized septage treatment plant (Population-Equivalent)	Treatment capacity of the septage treatment plant	Semi-annually	SW PMU quarterly report	N/A	Solomon Water

2.2 Trunk sewer mains rehabilitated	Km of new or rehabilitated sewer trunk mains	Semi-annually	SW supervision reports	N/A	SW
3.1 People trained to improved hygiene behaviour or sanitation practices under the project	This indicator describes the number of people who have taken part in improved hygiene behavior or sanitation practices training under the project. This includes beneficiaries of face-to-face training, workshop, community consultations implemented as part of WASH awareness campaigns	Annually	SW PMU annual report	Training workshop proceedings, consultation and advocacy campaign reporting	SW
People trained to improved hygiene behaviour or sanitation practices under the project - Females	This indicator describes the number of females who have taken part in improved hygiene behavior or sanitation practices training under the project. This includes beneficiaries of face-to-face training, workshop, community consultations implemented as part of WASH awareness campaigns	Annually	SW PMU annual report	Training workshop proceedings, consultation and advocacy campaign reporting. If no detailed gender-disaggregated count of beneficiaries is available, the share of females in population will be applied to the total number of beneficiaries.	SW

4.1 SW staff training on improved operation and maintenance	This indicators captures the total amount of training (staff-hours) delivered to SW staff through activities supported by the project. This covers both theoretical and on-the-job training.	Semi-annually	SW quarterly reports	Training reports and proceedings	SW
4.2 SCADA system installed and operational	SCADA system has been installed and is operational.	Semi-annually	SW quarterly reports	N/A	SW
4.3 Grievances responded to and satisfactorily resolved in relation to SW water services according to standards	This indicators describes whether complaints are addressed in compliance with SW operating standards, which define timing of responsiveness, and the level of required responses.	Semi-annually	SW PMU quarterly reports	Grievance collection and management records	SW
4.4 Operating cost efficiency of water supply services (US$/m3 sold)	Ratio between operational and maintenance costs (without depreciation) and volumes of water sold over one year.	Annually	SW annual report or IBNet	Technical and financial operational reporting	SW
4.6 Increase in the share of women and girls who feel safer from gender-based violence during water collection or using sanitation facility as a result of the project	This indicator measures the cumulative increase (in percentage point) in the share of surveyed women and girls who declare feeling safer from gender-based violence during water collection and using sanitation facility than	Once, in the last year of project implement ation	Households survey in areas where SW water supply services have been expanded as part of the	Questionnaire based household survey eliciting women and girls' perception (in a safe interview space).	SW

	before the improvement of water supply and/or sanitation services due to the project.		project.		
4.7 Share of women in management position at SW	Share of women in employed Tier 1-4 positions at SW. This includes the following positions: Chief Executive Officer (Tier 1), Chief Financial Officer (Tier 2), Coordinators (Tier 3) and General Administrative and Management positions (Tier 4)	Yearly		SW HR data	SW

ANNEX 1: Implementation Arrangements and Support Plan

COUNTRY: Solomon Islands
Urban Water Supply and Sanitation Sector Project

Project Institutional and Implementation Arrangements

1. The implementing agency will be SW. This will be the first time SW will play that role in a project financed by the World Bank or by a Multilateral Development Bank (MDB). A UWSSSP Steering Committee (SC) has been formed to provide strategic direction and guidance during project implementation. It will provide general oversight and will review progress and the results of periodic monitoring and evaluation activities. The SC is chaired by the Chairman of SW Board and includes as core members Permanent Secretaries of several key ministries[49], representatives from Honiara City Council and from Guadalcanal Province, and may be expanded to include representation from other stakeholders, if needed, to strengthen coordination and implementation. The SC will meet on a semi-annual basis, or more frequently, as needed.

2. A PMU has been established to support SW. It reports to SW Chief Executing Officer (CEO). In addition to its manager already recruited, PMU will appoint specialists with expertise in technical and social matters, procurement and contract management, communication, and environmental and social safeguards. The PMU, under the guidance of SW CEO, has responsibility for overseeing and managing project execution and compliance with project requirements, including those associated with procurement, financial management and audit, safeguards, monitoring and evaluation, and project reporting. The management of project activities in the provincial capitals will be fully centralized as well under the PMU's responsibility, and SW's branches in these towns will play a coordination role when needed. SW will mainstream into its routine activities some components of the PMU's work, such as NRW management. SW permanent staff will contribute to works supervision, financial management and monitoring and evaluation.

3. SW indicated a preference for the World Bank and ADB to prepare a joint operation, rather than separate project. Developing a unified approach, both during preparation and throughout implementation, would help minimize duplication, transaction costs and complexity, which would be essential in a context of limited implementation capacity. The World Bank and ADB teams subsequently adopted a common approach and framework to address each donor's respective environmental and social requirements. It was also agreed that, to facilitate project management, only one donor's procurement procedures should be utilized during implementation. For several reasons, including because ADB is mobilizing IFP funding, it was agreed that ADB would be the lead cofinancier and that the World Bank team would use the Alternative Procurement Arrangements (APA) policy during implementation. Using ADB's procedures to procure works, goods and services will eliminate the need to carry out separate tenders according to different procedures.

4. The World Bank and ADB therefore prepared an APA agreement defining how both agencies would respond to issues during implementation, including technical, procurement and safeguards aspects of UWSSSP.

[49] Ministry of Finance and Treasury, Ministry of Mines, Energy and Rural Electrification, Ministry of Environment, Climate Change, Disaster Management and Meteorology and Ministry of Development Planning and Aid Coordination, Ministry of Health and Medical Services.

Both agencies agree to ensure the prompt delivery and exchange of information regarding the project and, when practical, will field joint missions during implementation to supervise progress. The APA would take effect after approval by the Boards of Directors of both organizations.

5. A project operation manual (POM) will been jointly developed by project effectiveness with ADB and the PMU and define procedures for implementing UWSSSP. It shall be adopted by SW no more than one month after project effectiveness. UWSSSP will be carried out in accordance with the arrangements and procedures set out in the POM, which can be amended from time-to-time, provided all modifications are agreed with the World Bank and ADB in writing prior to any changes.

6. The project will be implemented over an eight years period, to allow for the financing of the five-year O&M of the septage treatment facility DBO contract following the construction phase, and to contribute to a successful implementation of the utility turned around program and sector consolidation.

Financial Management

7. The financial management (FM) assessment was carried out in accordance with the "Principles Based Financial Management Practice Manual" issued by the Board on March 1, 2010 which states with respect to projects financed by the World Bank, the recipient is required to maintain appropriate implementation arrangements – including accounting, financial reporting, and auditing systems – adequate to ensure they can provide the World Bank with accurate and timely information regarding the project resources and expenditures. Overall, the financial management arrangements satisfy the financial management requirements of the Investment Project Financing Bank Policy. The assessed financial management risk of the project is considered *moderate* provided a project accountant can be financed through Component 4 of the project, if required, to assist SW to meet the financial management requirements for this project.

8. **Implementing Agency.** Solomon Islands Water Authority, trading as Solomon Water, is a wholly owned enterprise of the Solomon Islands Government. SW will be responsible for the implementation of the FM aspects for this project. SW is a water and sewerage business supplying potable water and collecting municipal effluent in the urban centers of Honiara. It also provides potable water services to Auki, Noro and Tulagi. This will be the first operation between the World Bank and SW, however SW have had previous experience in Administering donor funds with DFAT (Australia) and JICA (Japan). A subsidiary agreement will be established between MFT and SW, reflecting on-lending arrangements.[50]

9. **Accounting and Staffing Arrangements.** SW have an established accounting section within the organization with experienced and highly qualified staff. The SW accounting package, Magiq is a web-based finance and administration system which is capable of maintaining an adequate set of project accounts within the SW accounts but can be segregated for reporting purposes. It was noted the 2017 SW financial statements were qualified on the basis that there were uncorrected errors that arose due to the due to the migration of data to a new software system and that this migration was not sufficiently documented. While this is a concern, it is not expected to impact on the authority's ability to maintain the project accounts. The new project will add to the

[50] Non-grant components of project financing will be on-lent by MFT to SW. The on-lending interest rate is yet to be agreed between MFT and SW.

workload of the current SW and the project can finance a finance consultant who would be responsible for maintaining the accounts of World Bank financed project and liaising with the World Bank on Financial Management related issues.

10. **Budget Arrangements.** The project budget will be prepared and monitored by SW which has experience in managing their own budget which is prepared on an annual basis and is approved by the Board. On a bi monthly basis, the budget is reviewed by the Board including a variance analysis. An overall project budget should be formulated, initially using the project paper as the first reference point and a work plan. The budget should be consistent with information provided in the procurement plan. A more detailed annual project budget will be developed from the overall budget and monitored on a quarterly basis. Financial Reports (more below) will include budget to actual comparisons.

11. **Internal Controls.** The broad control responsibilities for SW are outlined in Part V of the Solomon Authority Water Act of 1992 SW also has a Board which approves high level financial management policies and they have recently appointed a consultant to update current procedures. In addition**,** an internal auditor who reports directly to the CEO who carries out internal audits on various facets of the business, identifies weaknesses in process/practice and recommends management actions. In additional the internal auditor monitors progress against issues identified in the external auditors' Management Letter and the internal auditor reports are presented and discussed at the Audit & Risk Committee meetings. Monthly reconciliations of bank accounts are completed. The controls meet the World Bank requirements.

12. **Flow of Funds.** In addition to direct payments and reimbursement, project funds will flow from the World Bank into a designated account maintained by SW in Solomon Island dollars.

13. **Financial Reporting Arrangements.** SW will prepare calendar quarterly Interim Financial Reports (IFR) due to be received by the World Bank within 45 days after the end of the reporting period. The format for these reports will need to be acceptable to the World Bank and must include project commitments; and income and expenditure for the reporting period, year to date and cumulative figures. Prior to the disbursement of funds the format of the reports will be agreed to with SW.

14. **External Audit Arrangements.** No separate project audit will be required as the project activities will be included in the SW accounts. Hence a copy of the SW entity audited financial statements will meet the auditing requirements subject to the following disclosures in the main part of the accounts or in the notes to the accounts. The World Bank will reserve the right to request additional assurance through a Special Purpose Audit, financed through project funds if there are concerns over the accuracy of the project accounting.

15. **General note, to be included in the SW Accounts**: "Solomon Water received World Bank IDA funds, to implement the Solomon Islands Urban Water Supply & Sanitation Sector Project to increase access and quality of water supply and sanitation services in Honiara and selected provincial capitals, and to improve the operational performance of Solomon Water." For each source of finance and a consolidated summary the following note should be included, although the format can be agreed between the World Bank and SW prior to the first disclosure requirements:

"Note X. World Bank Financing

(6) Solomon Water received (IDA) funds dated mm/dd/yy for implementation support

	Current Year ($)	Preceding Year ($)	Cumulative ($)
Accounts received during the year			
Expenditures during the Year			

(b) The proceeds of the Solomon Islands Urban Water Supply & Sanitation Sector Project has been expended in accordance with the intended purposes as specified in the Grant Agreement."

16. **Supervision Plan.** FM implementation review field mission will be conducted at least once a year with additional missions early in implementation to ensure all World Bank FM requirements are met. In addition, the FM team will conduct a desk review of the semester IFRs and the project notes to the accounts in the SW audited annual financial statements

Disbursements

17. The project will be able to use the following disbursement methods: advance, reimbursement, direct payment and special commitment. A segregated designated account (DA) in Solomon Islands Dollars will be required and opened at a commercial bank or financial institution acceptable to the Bank; the ceiling for the DA will be included in the Disbursement and Financial Information Letter (DFIL). Disbursement for replenishments for the Designated Account will be based on a Statement of Expenditure. All direct payments will be paid based on records evidencing eligible expenditures, e.g. copies of receipts, supplier invoices. The IFP grant will be administered by ADB. Payments requests will be addressed to the World Bank and to ADB (which will administer IFP funds) for amounts proportional to each of the two cofinanciers' overall financial contribution to the component of the considered contract.

18. The project will have two disbursement categories as outlined in the table below. The unallocated category is included to cover as needed contingencies associated to expenditure categories (1) and (2).

Table A1.1: Expenditure Categories

Category	**IDA (expressed in US$)**	**Percentage of Expenditures to be Financed (inclusive of Taxes)**
(1) Goods, works, consultancy services, non-consulting services, training, incremental operating costs under Part 1	11,000,000	25.54 percent
(2) Goods, works, consultancy services, non-consulting services, training, incremental operating costs under Part 2	2,310,000	14.09 percent
(3) Unallocated	1,690,000	
TOTAL AMOUNT	15,000,000	

Procurement

19. *Capacity Assessment.* The project implementing agency will be SW, which has some project procurement and implementation experience with development partners JICA and DFAT. A PMU has been established within SW and staffed by appropriately qualified and experienced expertise. All project management responsibility i.e. preparation of tender documents, contract administration, supervision of works, etc. will be with SW. An assessment of SW's capacity to implement procurement actions for UWSSSP was carried out as part of project preparation through the PPSD. The results of the assessment are available in the World Bank's project portal website and identify risks, risk ratings and mitigation measures. The overall procurement-related risk is rated "substantial." A risk mitigation action plan has been agreed with SW.

20. SW has a detailed procurement policy and a procurement team within its Finance and Administration department. The procurement team will provide procurement services to the PMU in line with the SW Procurement Policy. SW's Chief Financial Officer, a Chartered Accountant and member of SW's PMU, will be responsible for the preparation and management of the PFR (and ensuing UWSSSP) accounts.

21. Under UWSSSP, SW will be receiving financial support from the World Bank and ADB for the first time. Due to the scale and complexity of the project, and to limited procurement capacity, SW could face difficulties implementing the project following two sets of rules and procedures in parallel. At the request of SW, the World Bank and ADB agreed to follow ADB's procurement procedures. The project will adopt the APA policy as per the section III.F of the World Bank Policy "Procurement in IPF and Other Operational Procurement Matters" for all project components. The Project will rely on and apply the procurement rules and procedures of other Multilateral Development Bank – ADB. ADB will take the lead in providing the implementation support and monitoring of project procurement activities under the project.

22. ADB's procurement and consultants guidelines are well harmonized with the World Bank's. ADB and the World Bank will provide inputs and jointly clear all terms of reference and key components of bid documents, specifically relating to design reports, bill of quantities and engineer's estimates, specifications, drawings, and delivery and completion schedules. Once jointly cleared, these inputs will form part of requests for proposals and bid packages that SW will procure according to ADB's policies and procedures. After a tender is completed, the World Bank will be informed of such and provided a copy of the signed contract. During implementation, the World Bank and ADB would supervise the work of consultants and contractors fully and equally.

23. It is anticipated that delivery of UWSSSP may involve both national and international contractors. Given the limited number and capability of national consultants it is likely that construction project design and implementation supervision consultancy will be undertaken by international consultants perhaps in collaboration with a national partner. There is a limited but increasing number of individual national consultants in safeguards and communications sectors with the capacity to undertake these types of assignments. For delivery of WASH-related projects and services, international and national civil society organizations with the necessary capacity are working in the Solomon Islands. The supply of goods may also require national and international suppliers and/or partnering arrangements between them. Procurement will be through international competitive bidding (ICB) process. The majority of projects will be undertaken using standard works contract approaches; however, for the septage treatment plant, a DBO approach including five year for operations is foreseen.

24. *Exceptions to National Competitive Bidding (NCB) Procedures.* ADB's procurement risk assessment

identified adjustments necessary for NCB, which would include an increase in advertisement time to a minimum of 28 days, and guidance on pass-fail criteria for evaluation of bids for goods and works.

25. *Procurement of Works.* Procurement of works will include water treatment plants, water distribution networks, sewerage systems, submarine outfalls and septage treatment plant. International Competitive Bidding and NCB procedures are expected be followed for procurement of works.

26. *Procurement of Goods.* Goods to be procured might include water meters, information and communication technology (ICT) equipment, hardware and software, and possibly office equipment and facilities. Goods would be carried out under shopping procedures.

27. *Selection of Consultants.* Consultants would be hired for specialized technical services, project management, fiduciary, safeguards, and monitoring and evaluation services. SW would be responsible for processing the selection of consultants to be hired internationally.

28. *Prior-Review Thresholds*. The procurement methods and prior review thresholds for different types of procurement, as agreed with ADB, will be provided in the POM.

29. *Procurement Plans*. An initial procurement plan was prepared by SW in relation to likely investments to take place during the first 18 months of project implementation.

Environmental and Social (including safeguards)

30. The Environmental and Social Management Framework (ESMF) sets appropriate measures during the implementation of the project. This also include provisions for terms of reference of design consultants to prepare future instruments relevant to the measures that were not identified in the investments. The implementation of the plans will be supervised and under Component 4, support will be provided to SW in project management, design and supervision activities. This includes hiring consulting services to undertake (i) surveys to facilitate detailed design of project infrastructure; (ii) detailed design of water supply network infrastructure; (iii) procurement support to SW, including preparation of bidding documents, bid evaluation and contract award; (iv) supervision of works; (v) safeguards support and community engagement in preparation for project activities; and (vi) sector studies such as reviews of water sector technical and financial regulation. The World Bank will work closely with the ADB team and bring in specific specialists on an as-needed basis, supervise the implementation of the social and environmental management instruments and provide guidance to SW PMU to address any issues.

Monitoring and Evaluation

31. To ensure effective monitoring and evaluation of all project indicators, several measures will be taken. Members of the PMU will be required to have demonstrated skills in data collection and reporting, preferably on World Bank or ADB projects. Secondly, this expertise will be bolstered with support from the project team through the provision of reporting templates and feedback on reports. Many of the project indicators are part of SW's internal reporting system and are already being communicated to the Pacific Water and Wastewater Association for utilities benchmarking. These efforts will seek to streamline as much as possible all project indicators into SW's monitoring and evaluation system.

32. SW PMU will issue quarterly progress reports that will be due the last day of March, June, September and December. These will be forwarded to the World Bank within 30 days of the end of each calendar quarter. A mid-term review will be prepared in end-2022 (expected), and an Implementation Completion and Results Report completed within six months of the end of project implementation. SW PMU will also monitor progress against agreed performance indicators, as defined in Section VI.

Role of Partners

33. The ADB and World Bank teams have devised a common approach and framework to jointly implement the project, and to address technical matters and each donor's respective environmental, social, financial management and disbursement requirements. It should be noted that, the joint co-financing arrangement implies both donors' involvement in implementation support of all project activities, regardless of whether their respective financial contributions only focus on a subset of project components. During implementation, procurement will be carried out using ADB's procurement policies and procedures. As part of this approach, ADB and the World Bank will jointly carry out bi-annual missions to supervise project progress and implementation. At least one representative designated to speak on behalf of each partner will participate. ADB and the World Bank will jointly prepare and issue reports, such as MoUs/Aide Memoires, at the end of each supervision mission. If a joint mission is not possible, the partners can field teams independently, but will share all project documentation.

Strategy and Approach for Implementation Support

34. **Risk minimization through design**. The strategy for implementation support is based on the design of the project and its identified risk profile. During project preparation, considerable efforts have been made to identify key risks. Key project design decisions were made in order to reduce risks going into project implementation. These include simplifying the project scope, providing sufficient technical and operational assistance support to SW, designing procurement strategies based on careful market assessments and seeking alignment with the 5-Year Action Plan and the 30-Year Strategic Plan.

35. **Risks during Implementation**. Notwithstanding these risk minimization and mitigation measures in project design, significant residual risks will remain during implementation, stemming in particular from the impact changes in leadership could have on SW operational and financial performance, if the process is not managed adequately, or from land acquisition activities. The World Bank's implementation oversight activities will need to meet the World Bank's own fiduciary obligations. In addition, the World Bank's implementation support approach will focus on providing technical support to SW PMU to support its efforts to (i) successfully carry out the project activities, (ii) meet the fiduciary, environmental and social safeguards compliance requirements of the Solomon Islands, the World Bank and ADB, and (iii) strengthen its institutional capacities.

Implementation Support Plan and Resource Requirements

36. The implementation support approach includes the following:

(a) **Technical Guidance and Supervision**. Joint missions with ADB will be conducted about every six months, or more frequently, if needed. The focus of engineering implementation support will be on (i) working closely with SW PMU, its own technical assistance and supervision consultants to review

and provide technical advice on designs and specifications (including the normal reviews of bidding documents), (ii) working closely with SW PMU, its own technical assistance and supervision consultants to review ongoing technical assistance and physical works and provide advice on technical issues as they arise.

(b) **Safeguards**. The World Bank's supervision team includes environmental and social safeguards specialists who will undertake safeguard supervision and monitoring of the project. The World Bank's team will work closely with the ADB team and bring in specific specialists on an as-needed basis. The World Bank team will supervise implementation of the social and environmental management instruments and provide guidance to SW PMU to address any issues. Technical supervision will include review of SW's quality monitoring records during normal supervision follow-up, and take mitigating actions in the event quality issues are detected.

(c) **Fiduciary**. World Bank FM supervision will generally be conducted by on-site visits in the Solomon Islands, at least twice a year or as the needs arise, based on the risk assessment of the project. The supervision objective will be to ensure that financial management systems are adequately maintained throughout the life of the project. The supervision will include a review of overall operation of the FM system, including transaction-testing and other areas deemed necessary during supervision. Capacity building needs will be assessed on an ongoing basis, and addressed in collaboration with the implementing agency and project management.

Table A1.2: Schedule of Implementation Support

Time	Focus	Skills Needed	Resource Estimate	Partner Role
First twelve months	Project launch and start-up	Task Team Leader Water and Sanitation Engineer Non-revenue Water Specialist Financial Management Environment and social Administrative Support	Supervision budget	ADB to participate in joint missions and provide technical support
12-96 months	Project implementation	Task Team Leader Water and Sanitation Engineer Sewage Outfall Specialist Community Engagement Specialist Financial Management Environment and social Administrative Support	Supervision budget	ADB to participate in joint missions and provide technical support
Skills Mix Required				

Skills Needed	Number of Staff Weeks	Number of Trips	Comments
Task Team Leader	8	2	Based in Region
Co-Task Team Leader	8	2	Based in Region
Water and Sanitation Engineer	6	2	Based in Region
Non-revenue Water Specialist	1	1	Two trips overall
Sewage Outfall Specialist	2	1	Until outfall completion
Community Engagement Specialist	2	1	Two trips overall
Environmental Specialist	2	2	Based in Region
Social specialist	4	2	Based in Region
FM specialist	2	2	Based in Region
Procurement specialist	2	1	Provided by ADB under APA
Country officer	4	NA	Based in CO

Partners

Name	Institution/Country	Role
Asian Development Bank	ADB / Manila, Philippines	Ongoing support during implementation

ANNEX 2: Detailed Project Description

COUNTRY: Solomon Islands
Urban Water Supply and Sanitation Sector Project

1. To achieve the Project Development Objectives (PDOs), the proposed project has the following four components:

Component 1. Urban Water Supply (Cost: US$43.07 million excluding contingencies – Financed by IDA: US$11.00 million, and ADB and IFP: US$32.07 million)

2. This component will aim to improve access and quality of safe water supply services in Honiara and selected provincial capitals. The activities financed under this component include: (i) the construction, rehabilitation, upgrade and expansion of water production and treatment systems; (ii) the installation of additional water storage capacity within Solomon Water distribution network; (iii) the rehabilitation, upgrade and expansion of water supply transmission and distribution system; and (iv) carrying out non-revenue water reduction activities including leak detection and network repairs.

3. More specifically, the activities financed under this component will include:

(a) *in Honiara*, (i) expansion of Kongulai water source and implementation of a new water treatment plant; (ii) installation of water supply mains to upgrade and restructure the water supply system in a manner that will optimize its hydraulic management; (iii) the addition of water storage capacity, to help address peak water demand and improve supply security; (iv) leak detection, improved pressure management and pipeline repairs to reduce physical losses; (v) installation of bulk supply metering and expanding SW's customer meter replacement program with pre-payment meters which will help improve SW's commercial management; and (vi) expansion of SW's water supply networks in unserved areas in Honiara, both in formal and informal settlements.;

(b) *in Auki, Noro and Tulagi*, (i) expansion of water production capacity to reduce the current supply-demand gap (50 percent in in Auki, 17 percent in Noro); and (ii) rehabilitation and upgrade of pumping and storage systems consistently with increased water production capacity;

(c) *in Gizo*, rehabilitation, upgrade and expansion of the old water supply system owned and operated by the provincial government (after SW is formally mandated by the government to take over water supply services); and

(d) *in Munda*, implementation of the town's first centralized water system.

4. Project interventions in informal areas will be informed by the findings of the technical assistance provided to SW by the World Bank's Global Water and Sanitation Program (GWSP). This review will build on the lessons and experiences from the SW's previous pilots in informal areas. It is recognized that special approaches to ensure a positive incorporation of these communities into SW's formal system are needed; these approaches will involve strong community mobilization and participation in the selection on service standards, coupled with tailored technologies (such as pre-paid meters). The conclusions of this technical assistance and the outline of SW's approach for the project will be available in May 2019.

5. All activities will address the increasing water stress in Solomon Islands' urban areas—by increasing supplies of adequately treated water, decreasing physical losses and promoting water conservation. All of these activities will also reduce the beneficiaries' exposure to climate change-induced droughts by ensuring that their access to treated potable water will increase, while the efficiency measures will reduce extractions from existing water sources.

Component 2. Urban Sanitation (Cost: US$16.39 million excluding contingencies – Financed by IDA: US$2.31 million; and ADB and IFP: US$14.08 million)

6. This component aims to improve quality and efficiency of sewerage and sanitation services in Honiara. The activities financed under this component include: (i) the design, construction, operation and maintenance of a septage treatment facility; (ii) the improvement of the septage management institutional and regulatory framework; and (iii) the rehabilitation and upgrade of sewerage systems, including sewer mains, pumping stations and submarine outfalls.

7. Through this component, capacity to treat septage will be improved. It is estimated that the 60,000 people in the Greater Honiara area generate around 30 cubic meters of septage daily, generally through onsite sanitation facilities. The septage treatment plant will be implemented through a Design-Build-Operate (DBO) contract, including five years for the operation phase. The preparation of septage management regulations and the provision of technical advice to private fecal sludge collectors will help boost effective citywide fecal sludge management. Additionally, sewage from Honiara's sewer system (servicing about 10,000 people) will be subject to preliminary treatment (coarse screening) and, by 2027, discharged into the sea at depths and distances that guarantee adequate water quality on the shore. The existing sewerage transmission system and existing wastewater outfalls which are in a state of disrepair. Their replacement and upgrade will reduce the current public and environmental health risks resulting from the discharge of untreated sewage to Honiara's foreshore and will benefit all residents of Honiara.

8. This component will support the implementation of climate mitigation measures through (i) the implementation of low energy wastewater treatment and/or disposal systems (septage treatment plant, submarine outfalls), and (ii) the use of septage treatment technology to reduce by 1,284 tons of CO_2 equivalent per year (38,610 tons of CO_2 equivalent over the lifetime of the facility) the methane emissions generated in the existing pits where sludge is left in anaerobic conditions. Also, improved sewerage and sanitation services will increase the resilience of the residents of the greater Honiara area to flooding—by reducing the impact of floods and reducing the volume of improperly disposed fecal sludge. Improved wastewater infrastructure to be built under the project are less likely to be damaged or submerged during a flood. Improved septage management meanwhile will lead to less cross-contaminated water bodies during flood events.

Component 3. Water Conservation, Sanitation and Hygiene Awareness and Education (Cost: US$2.00 million excluding contingencies – Financed by ADB and IFP: US$2.00 million)

9. This component aims to support significant transformations in the population's water use and behavior that are key to project success, with a particular focus on informal settlement areas. It will support the formulation and implementation of water conservation, sanitation and hygiene awareness and education activities. Through

this component at least 10,000 persons are expected to gain increased knowledge of the benefits of improved sanitation and hygiene behaviors by 2027.

10. The activities under this component will include a detailed baseline analysis to inform subsequent activities and the design and implementation of a hygiene awareness and education program (HAEP) in SW's specific service areas and for targeted beneficiaries of Honiara and Gizo. The HAEP will be articulated around four points of entry: schools, health clinics, public toilets, and communities. The selection of target communities will be carried out in coordination with the Community Access and Urban Services Enhancement Project (P161320), to seek opportunities for synergy between the awareness and behavior change campaigns of both projects. The program of activities will promote nutrition-sensitive sanitation and hygiene practices by considering and seeking to address the multiple pathways of fecal-oral transmission in the local context. This includes (i) reducing fecal load in the environment by encouraging the use of sanitary facilities and though the safe disposal of child feces, (ii) reducing fecal transmission via hands by promoting handwashing by all household members after key potential contamination events, (iii) encouraging the use of potable water for all consumptive use, if needed after complementary treatment measures, and (iv) reducing risks of child fecal ingestion through awareness of risks associated with playing in a contaminated environment. This program is also expected to help increase awareness of water supply issues such as water conservation and the cost of water service delivery services. The campaign will also foster awareness of the importance of paying water and sanitation (fecal sludge emptying) bills. The approaches will be community-led to enhance local ownership and sustainability. The HAEP components have been developed based on an analysis of current and past WASH projects in the Solomon Islands and the region to understand key successes and barriers to establishing an enabling environment for improved hygiene practices. Specific elements of the HAEP will include:

(a) developing capacity across the sector through mechanisms such as a national WASH symposium at the start and end of the project, regular training sessions targeted to needs, and regular communication forums to share stories and address WASH challenges;
(b) developing communication materials geared to specific messages defined during the baseline analysis and setting up hygiene and sanitation improvement plans at community level;
(c) promoting innovative measures such as the development of School WASH Clubs and Community Based Sanitation Enterprises (CBSEs);
(d) harnessing support from community leaders, churches, women's groups, youth groups, and school communities through inclusive engagement processes;
(e) including special considerations for gender equity and social inclusion throughout all consultative processes, specifically targeting women for participation in the training and livelihood opportunities of the CBSEs; and
(f) a comprehensive M&E framework to ensure accountability in implementation and ensure lessons learned are incorporated.

11. An International NGO will be selected through a competitive bidding process to coordinate and implement the HAEP in collaboration with at least three partner Civil Society Organizations with established networks and local credibility. The International NGO will also support the Civil Society Organizations in capacity development, monitoring and reporting, and strategic development.

Component 4. Institutional Strengthening and Project Management (Cost: US$7.25 million excluding contingencies – Financed by ADB and IFP: US$4.5 million; and SW: US$2.75 million)

12. This component will aim to improve SW's financial, technical and operational sustainability so that by 2027 SW is expected to fully recover its annual operations and maintenance costs, asset depreciation costs, and debt servicing costs from user charges and SIG community service obligation payments. The activities financed under this component include: (a) the preparation and implementation of priority corporate and water sector policies; (b) strengthening the operational capacity of SW; (c) the preparation of infrastructure designs and carrying out of construction supervision; and (d) strengthening management capacity of SW to administer, supervise and monitor Project implementation.

13. *Preparation and implementation of priority corporate and sector policies*. SW has identified the development of Water Safety Plans as one of its priority corporate policies to manage risks, to be supported under (a). These plans will consist in several components, including (i) a disaster management plan summarizing the main protocols to be followed in identifying and managing major incidents and emergencies to promote a coordinated response; (ii) a catchment management plan identifying activities to manage the risk to drinking water catchments from land use, development and population growth, defining stakeholder responsibilities and engagement, and proposing measures to enforce existing regulation; (iii) a climate change risk assessment for the water supply and wastewater systems in Honiara and associated adaptation plan to address key climate change risks; (iv) the potential adaptation of this assessment and adaptation plan for the provincial water systems; (v) a drought management plan outlining the different response actions to undertake during an extended drought period and measures to protect the water supply system from failure, including backup and emergency supply options; (vi) a demand management plan to improve water use efficiency and reduce wastage, targeting schools, homes and businesses, in complement of the pre-payment roll-out campaign; and (v) a review of water supply and sanitation tariff regulation, with a focus on tariff and other mechanisms to improve service affordability.

14. *Strengthening the operational capacity of SW.* This will be achieved by increasing staff capacity and by strengthening financial and technical data management. Staff development programs will seek to improve SW staff capacity in several areas, including: (i) identification and reduction of non-revenue water; (ii) assets management and maintenance practices; (ii) development and commercially-sustainable management of water and sanitation services in informal areas and community mobilization; (iii) management of land acquisition and environmental issues in line with international best practice. The component will incorporate a long-term capacity building strategy, including engaging with training institutions and implementation of leadership development programs. This component will also seek to improve SW's data management to better determine the measures needed to improve their financial and technical performance. The activities will consist in:

(a) improving data collection processes, including data storage, analysis and reporting for the network performance, failure events and customer complaints and geolocation of assets in Geographic Information Systems (GIS);
(b) integrating existing systems (GIS, assets database, customer relations, billing) with Supervisory control and data acquisition (SCADA);
(c) reviewing and updating the existing hydraulic model of the Honiara network based on demands and network connectivity and calibrating it with actual data with the goal to produce operational recommendations to increase energy efficiency;
(d) reviewing water quality monitoring performance against the two-year plan objectives and implement any outstanding measures;

(e) developing system monitoring procedures adapted to the new data availability and software in Honiara and complement SW equipment and software as needed;
(f) improving responsiveness to grievances received by SW in relation to water and sewerage services; and
(g) assessing monitoring requirements of the other provincial centers.

15. *Engineering design and support to the PMU.* These subcomponents will support the PMU in project management, design and supervision activities. They will include hiring consulting services to undertake: (i) surveys to facilitate feasibility studies and detailed design of project infrastructure; (ii) feasibility study and detailed design of water and sanitation infrastructure; (iii) procurement support to SW, including preparation of bidding documents, bid evaluation and contract award; (iv) supervision of works; and (v) safeguards support and community engagement in preparation for project activities. To the extent possible, activities will be mainstreamed into SW's routine work and use of SW's internal resources.

ANNEX 3: Economic and Financial Analysis

COUNTRY: Solomon Islands
Urban Water Supply and Sanitation Sector Project

1. **General Methodology.** An ex-ante economic and financial analysis was carried out to test the project's financial feasibility and economic viability. The analysis covers Components 1 and 2 of the project, which constitutes 86 percent of the total project cost of US$82.33 million. Incremental cost-benefit analysis (CBA) was applied with costs and benefits defined based on "with" and "without" scenarios and from the economic (society) and financial (water utility) perspectives. Economic viability is measured by a positive economic net present value (NPV) and an economic internal rate of return (IRR) that is higher than the social discount rate of six percent. Financial feasibility, on the other hand, is measured in terms of positive financial NPV and financial IRR.

Economic Analysis

2. **Basic project assumptions**. The following assumptions have been considered in the analysis, based on the 30-Year Plan and on the preparatory work carried out by the ADB PPA.

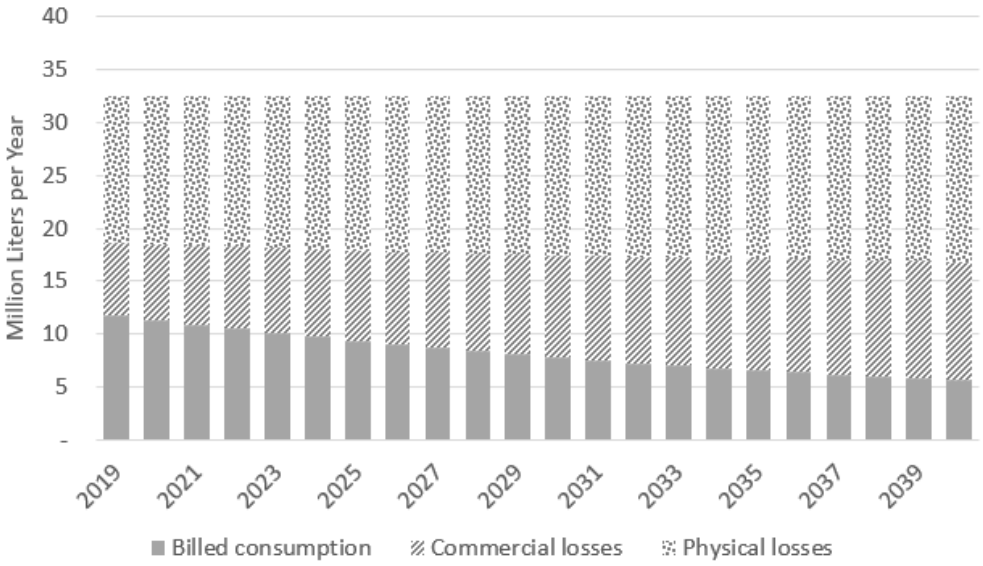
a. Production capacity is currently 32.5 MLD. An additional 2 MLD will be added by SW starting 2021 with improvement of bores yield and another 3MLD starting 2024 with the improvement of Kongulai source capacity under the project.
b. The number of water connections is expected to rise from 8,000 to 13,700 (residential connections), and from 880 to 1,500 (non-residential connections)
c. Water service coverage is currently 51 percent and is expected to increase to 64 percent by 2027.
d. Per capita consumption is currently 169 liters per day. With the full roll-out of prepayment systems by 2020 complemented by demand management activities, future per capita consumption is expected to stabilize at 137 liters per day, as suggested by recent SW pilot areas where pre-payment has been implemented.
e. NRW in with-project and without-project scenarios. NRW is currently reported at 62 percent. Physical losses account for 42 percent while meter under-measurement and illegal connections share 6 percent and 14 percent, respectively. With the project, the NRW target by 2027 is expected to decline to 30 percent and distributed as follows: physical losses (20 percent), meter under-measurement (3 percent) and illegal connections (7 percent). In the absence of efforts to address NRW, physical losses would increase by 0.5 percent per year, meter under-measurement by 0.5 percent per year and illegal consumption by 0.3 percent per year.[51] This yearly increase is consistent with SW's historical NRW data observed between 2012 and 2017.[52]
f. Energy intensity of the water system is currently 0.36 kWh per m^3 produced and it is not expected to vary significantly with the project.

[51] In this without-project analysis, NRW increase is considered to slow down asymptotically, to that overall NRW does not exceed 85 percent on the long term.
[52] International Benchmarking Network (IBNet) data: www.ib-net.org

3. ***Economic Benefits***. Project investments are expected to generate the following direct economic benefits: (a) increased availability and delivery of treated water to final consumers resulting from investments in NRW reduction, demand management and network expansion; and (b) improved access to sewerage services. These benefits, in turn, are expected to improve the health and overall quality of life of residents in Honiara and those in provincial capitals.

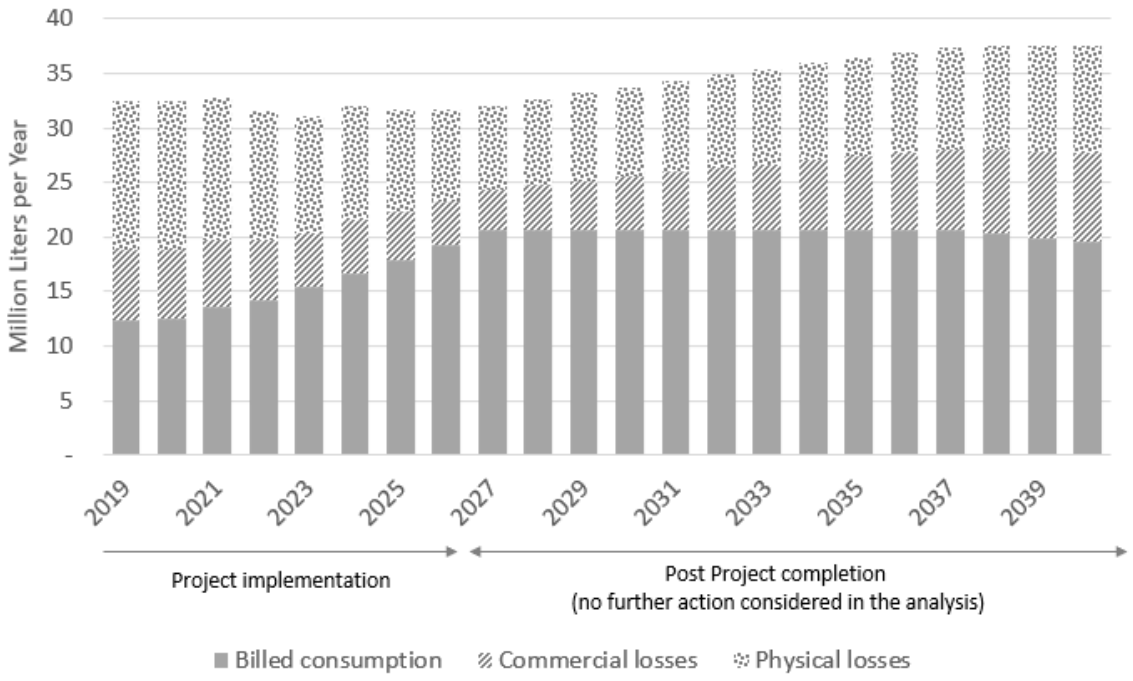
4. *Water supply services benefits*. Investments in NRW reduction and demand management are expected to result in "incremental saved water", which can be used to provide piped water access new customers. Without the project, i.e., absence of any interventions to reduce NRW, the existing network is expected to continue to deteriorate, as indicated in paragraph 3. Reduction in water availability for the population would prevent network expansion to un-served areas and reduce per capita water supply to existing customers down to 60 lpcd, leading to chronic water shortages. Without any NRW intervention, billed consumption will progressively drop from 12.4 MLD in 2020 to approximately 5.7 MLD in 2040 (as shown in Figure A3.1), creating hardship for the population.

Figure A3.1: Without-project Production and Disposition of Water, 2017-2050



5. With the project, i.e., with programs for NRW reduction and demand management, physical and apparent losses will be reduced progressively, allowing the satisfaction of water demand from existing customers, and making additional water available for new consumers. Billable water will increase from 12.4 MLD to 19.5 MLD in 2040, as shown on Figure A3.2, leading to economic benefits associated with the delivery of piped water. The incremental volume of billable water due to the project represents therefore, by comparison between the with-project and without-project situations, 13.8 MLD in 2040.

Figure A3.2: With-project Production and Disposition of Water, 2017-2050



6. The value of incremental water saved and subsequently consumed by existing and new consumers is measured in terms of the water tariff, which is being used as a proxy for the value of consumers' willingness-to-pay for piped water. [53] The tariff has just increased by 5 percent early 2019, and will again increase by 5 percent early 2020, as agreed by the Government.[54] Based on the tariff structure (2019) shown in Table A3.1, the average tariff for water by a domestic consumer is US$1.22 per m^3, and by a non-domestic consumer is $3.80 per m^3. Due to limited data availability, the resource cost savings generated by new consumers that are to be connected to the piped water system with-the-project were not included in the computation.

Table A3.1: SW Tariff Structure 2019 (US$)

	Water usage charge per m^3	**Wastewater charge***
Residential	7.13 (fixed charge)	7.13 (fixed charge)
Tier 1: 0 to 15 m^3 per connection per month	0.83	0.39
Tier 2: 15 to 30 m^3 per connection per month	1.25	0.59
Tier 3: > 30 m^3 per connection per month	1.46	0.69
Non-residential	7.13 (fixed charge)	7.13 (fixed charge)
Tier 1: 0 to 30 m^3 per connection per month	0.41	1.67
Tier 2: 30 to 60 m^3 per connection per month	0.62	1.88
Tier 3: > 60 m^3 per connection per month	0.72	2.09

** Surcharge on the water billed per month per m^3*

[53] Lower tier water tariff figures are consistent with findings from the willingness-to-pay survey conducted as part of project preparation.
[54] A legal covenant has been included in the Project Agreement to ensure that a review of SW's water tariffs (including a focus on affordability aspects) is completed by end-2020.

7. *Health benefits.* Key UWSSSP benefits include the reduction of population's reliance on contaminated water resources for drinking and basic hygiene and the reduction of adverse health impacts for seawater users (bathers, fishers) near current sewage outfall. Water-borne diseases are a serious health issue in the Solomon Islands, as explained in paragraph 8 of the main text. A reduction in the incident of water-borne disease would entail a number of benefits, contributing to the improvement of the country's Human Capital Index: (i) avoided direct health expenditure due to decrease in illness, (ii) income gained as a result of decrease in illness-related absenteeism in working age population, (iii) income gained as a result of decrease in child illness related absenteeism among caretakers of targeted school age population; (iv) opportunity cost of school absenteeism among the targeted school age population; (v) estimated value of loss-of-life avoided as a result of improvements in water and sanitation; and (vi) estimated value of time savings resulting from improved convenience of access to sanitation. The economic analysis did not attempt to quantify these economic benefits as attribution of health effects to the project would be difficult to establish among other possible factors, e.g. improvements in nutrition habits, solid waste management, or sanitation services (outside of the areas targeted by sewerage expansion).

8. *Greenhouse Gas (GHG) emissions avoided*. The total amount of CO_2 equivalent emissions that will be avoided over the life of the project (30 years) is 30,570 tons or 1,1019 tons per year. This will result from the improved treatment of fecal sludge at the new septage treatment plant and the reduction of methane emissions currently occurring in the current pits where sludge is left in anaerobic conditions. The decrease in CO_2 equivalent emissions as a result of these Component 2 activities represents 1,284 tons per year (38,610 tons of CO_2 equivalent over the lifetime of the facility). Under Component 1, while NRW reduction will lead to a significant reduction in the amount of energy required to deliver water per beneficiary, additional energy will be mobilized to supply new customers. The overall energy intensity of the Honiara water supply system (as kWh of electricity per m^3 produced) will remain unchanged after project completion. The improved sewerage system will generate a marginal increase in overall electricity requirement, as will the upgraded provincial capital water production systems. Overall, the increase in CO_2 equivalent emissions as a result of these Component 1 activities represents 165 tons per year (4,950 tons of CO_2 equivalent over the lifetime of the system). The value of CO_2 emitted, on low estimate scenario, is assumed at US$40 per ton in 2020 and increasing to US$78 per ton in 2050.[55] On high estimate scenario, the value of CO_2 emitted is assumed at US$86 in 2020 and increasing to US$168 per ton in 2050. Annual growth rate in real terms is 2.25 percent.

9. *Other benefits*. Other economic benefits have not been quantified for the purposed of this economic analysis. These include: (a) benefits associated to improved services in the outer islands, (b) environmental benefits related to the adequate containment and treatment of fecal sludge in the new septage treatment plant; and (c) benefits associated to the improvement of wastewater discharge through the new outfalls, i.e., improved property value in coastal areas, improved marine ecosystem. The development of water supply services in Gizo and Munda will also be critical to the development of the country's tourism sector. Finally, it should be noted that some benefits accruing to the population also may not be financial or economic in nature—for instance, access to improved water supply provides dignity and reduces coping costs. Considering these benefits and health benefits described in the previous paragraph, the proposed cost-benefit analysis can be considered conservative, and it would be reasonable to assume that the actual project economic benefits will be larger.

10. *Economic Costs.* The economic costs associated with the project, both CAPEX and OPEX, were derived from the project financial estimates. The economic costs are expressed in constant 2018 prices and are converted

[55] World Bank Guidance Note on Shadow Price of Carbon in Economic Analysis (2017)

to economic costs by excluding taxes and duties and applying conversion factors. Price contingencies were also removed while physical contingencies remain. The shadow exchange rate factor used for the analysis is 1.0. Moreover, the price of labor was also adjusted to consider high underemployment of unskilled labor, but not skilled labor. The shadow exchange rate factor was unskilled labor is 0.8 and 1.0 for unskilled, and skilled labor, respectively. Price contingencies and interest during construction were excluded while physical contingencies remain in the analysis.

11. The recurrent water supply OPEX include costs associated with pumping and chlorinating incremental water, asset repair and maintenance, and incremental maintenance economic costs covering personnel and chemicals for the expanded surface water production system in Kongulai. The incremental economic cost of electricity associated is computed as energy intensity multiplied by incremental production and electricity cost of US$0.71 per kWh before the completion of Tina River Hydropower Plant (2023), and US$0.52 per kWh after. The economic cost of chlorination is calculated considering a cost ratio of US$0.011 per m^3 produced. The annual repair and maintenance cost per year is assumed to be two percent of initial cost. The recurrent sewerage OPEX considers electricity cost of incremental wastewater pumped and personnel cost for operation and maintenance of pumping stations and outfalls.

12. ***Results***. Based on the estimates of the stream of economic benefits and costs over the 30-year period considered as the average economic life of future assets, the ENPV and EIRR were computed under three scenarios: (a) excluding CO_2 emissions reduction in the cost-benefit analysis; (b) including and valuing CO_2 emissions reduction using low estimate; and (c) including and valuing CO_2 emissions reduction using high estimates. Sensitivity tests were likewise undertaken: (a) 20 percent increase in CAPEX, (b) 20 percent increase in OPEX, (c) 20 percent decrease in benefits, and (d) 20 percent decrease in benefits and 20 percent increase in costs.

13. Table A3.2 below summarizes the results of the base case and the sensitivity tests. ENPV figures are higher than zero and EIRR values are at acceptable levels and EBCR values are higher than 1. These results indicate the economic viability of the project.

Table A3.2: Results of Economic Analysis

	CO_2 Emissions Reduction excluded			Value of CO_2 Emissions Reduction: Low Estimate			Value of CO_2 Emissions Reduction: High Estimate		
	ENPV (US$ million)	EIRR (%)	EBCR	ENPV (US$ million)	EIRR (%)	EBCR	ENPV (US$ million)	EIRR (%)	EBCR
Base Case	55.9	15.9	1.9	56.7	16.0	1.9	57.5	16.2	1.9
20% increase in CAPEX	45.2	12.8	1.6	46.0	12.9	1.6	46.8	13.0	1.7
20% increase in OPEX	54.3	15.7	1.9	55.1	15.8	1.9	55.9	16.0	1.9
20% decrease in benefits	32.5	11.9	1.5	33.3	12.1	1.5	34.1	12.2	1.6
20% decrease in benefits and 20% increase in costs	20.2	9.2	1.3	21.0	9.3	1.3	21.8	9.4	1.3

Financial Analysis

14. **SW Financial Performance.** Overall, the financial position of SW has improved significantly in recent years from an operating loss of US$4.0 million in 2010 to a surplus of about US$2.0 million in 2017. Collection ratio fluctuates between 84 percent and 100 percent over the years, and the company's cost coverage ratio reached 1.37 in 2017 nation-wide, due to a proactive debt collection policy, especially from SW's largest Solomon Islands Government (SIG) and commercial customers, which generate more than half of SW's revenues.[56] These strong financial results were confirmed in 2018 with a cost coverage ratio of 1.11. Even though Australia Department of Finance and Trade (DFAT) has stopped its financial support for SW management staffing, SW still achieved in 2018 an operating surplus of about US$0.4 million while conserving the same management team. Key SW operational indicators for 2017 are provided in the Table below.

Table A3.3: SW operational performance indicators (sources: IBNet, team calculations)

Indicator	Year 2017
Coverage (water services) (%)	55
Non-revenue water (%)	62
Metering level (%)	93
Continuity of service (hours per day)	22
Collection ratio (%)	96
Unit operational cost (US$/$m^3$ sold)	1.6
Staff per 1,000 water connections	8.8
Labor costs vs. operational costs (%)	35
Electrical energy costs vs. operational costs (%)	41
Maintenance costs vs. operational costs (%)	14

15. **Financial benefit-cost analysis.** The financial benefit-cost analysis was carried out after the least cost technology option was identified for the project. The project's financial viability was determined by computing the financial internal rate of return (FIRR) and financial Net Present Value (FNPV). Incremental financial revenues are generated mainly by incremental sales of water supply services between the without-project and with-project scenarios (as described in paragraphs 3 to 5 of the present Annex). The expected incremental revenues that will be generated by the project is then computed considering the tariff described in Table A3.1 and a 5 percent tariff increase scheduled early 2020 as already decided by the Government. Investment costs estimates are presented in Section II-B of the main text. In addition to investment costs inclusive of physical contingencies (US$ 74.99 million), the financial analysis considered (i) incremental OPEX incurred by the new water and sewerage system (an additional US$0.91 million per year by 2030), (ii) incremental administrative, management costs for SW (US$0.90 million by year 2030), and (iii) debt servicing (US$0.29 million by year 2030). [57]

16. **Results**. Based on the estimated financial costs and revenues, the financial IRR at which the present value of the net benefits becomes zero is computed at 12.5 percent. The financial net present value (FNPV) of the

[56] Tennant, Stacey and Kearton, Ross. Independent evaluation of Phase 2 of the Australian Aid Program's urban water program in Solomon Islands. 2016

[57] ABD loan considered with a maturity of 40 years, a grace period of 8 years and one percent interest rate; IDA credit considered with a maturity of 40 years, a grace period of 10 years, and a service charge of 1.45 percent.

project, which shows the present value of the net benefit stream, or the project's worth at present, is US$9.9 million at a 10 percent discount rate. The project is therefore considered viable.

Cost Recovery

17. The project was further assessed to determine future level of cost-recovery for SW. In this case, all SW OPEX (including all operating costs not due to the project as well as replacement of assets existing before the project) and loan repayment (principal and interests) were considered. The analysis suggests that between 107 and 138 percent of all SW costs will be recovered between 2020 and 2040. According to sensitivity analyses, revenues will exceed costs in all scenarios, with the amount of financial surplus generated by SW is expected to represent between US$20.5 million and US$36.4 million over project implementation period depending on the sensitivity analysis scenario. This is to be put in perspective with the proposed US$9.0 million contribution by SW to project financing. After project completion, the cost coverage ratio will progressively decrease if no more effort is deployed to improve or at least maintain NRW at its project completion level.

18. Detailed projects of SW's operational and financial parameters are provided in Table A3.5 overleaf.

Table A3.5: Main SW operational and financial parameters

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
General parameters													
Water Produced (MLD)	32.5	30.6	28.5	28.1	28.1	28.4	28.9	29.6	30.3	31.0	31.8	32.5	33.3
NRW (%)	62%	55%	50%	45%	41%	37%	33%	30%	32%	33%	35%	36%	38%
Physical losses (MLD)	13.65	11.78	10.62	10.40	9.38	8.45	7.62	7.81	7.99	8.17	8.35	8.53	8.53
Commercial losses (MLD)	12.66	11.00	9.96	9.79	8.86	8.02	7.26	8.14	8.98	9.79	10.56	11.31	11.31
Total Water Delivered (MLD)													
Residential customers	11.91	10.56	11.06	11.20	12.01	12.89	13.86	14.20	14.54	14.90	15.26	15.63	15.63
Population Served	*56,000*	*61,000*	*66,000*	*71,000*	*77,000*	*83,000*	*89,000*	*95,000*	*95,000*	*95,000*	*95,000*	*95,000*	*95,000*
Per capita demand (lpcd)	*152*	*142*	*137*	*137*	*137*	*137*	*137*	*137*	*137*	*137*	*137*	*137*	*137*
Non-domestic customers	6.94	10.36	12.16	12.82	15.90	16.11	16.16	16.02	14.96	14.43	13.88	13.34	13.34
Revenues													
Total Water Sold (MLD)													
Domestic customers	7.91	8.60	8.99	9.74	10.52	11.33	12.17	13.07	13.07	13.07	13.07	13.07	13.07
Non-domestic customers	4.61	5.01	5.24	5.67	6.13	6.60	7.09	7.61	7.61	7.61	7.61	7.61	7.61
Average Water Tariff (US$/m3)													
Domestic customers	$ 1.34	$ 1.34	$ 1.34	$ 1.34	$ 1.34	$ 1.34	$ 1.34	$ 1.34	$ 1.34	$ 1.34	$ 1.34	$ 1.34	$ 1.34
Non-domestic customers	$ 4.19	$ 4.19	$ 4.19	$ 4.19	$ 4.19	$ 4.19	$ 4.19	$ 4.19	$ 4.19	$ 4.19	$ 4.19	$ 4.19	$ 4.19
Billing amount (million US$/year)	1.95	1.96	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90
Metering level	95%	97%	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%
Collection ratio	97%	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%
Op. Water Revenue (US$ mil./yr)	**10.38**	**11.37**	**11.99**	**12.99**	**14.03**	**15.11**	**16.24**	**17.44**	**17.44**	**17.44**	**17.44**	**17.44**	**17.44**
Water Connection fees (US$ mil./yr)	**0.00**	**0.11**	**0.11**	**0.13**	**0.13**	**0.14**	**0.14**	**0.15**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Average Sewerage Tariff (US$/m3) 1.41													
Domestic customers	$ 0.79	$ 0.80	$ 0.80	$ 0.80	$ 0.80	$ 0.80	$ 0.80	$ 0.80	$ 0.80	$ 0.80	$ 0.80	$ 0.80	$ 0.80
Non-domestic customers	$ 2.11	$ 2.11	$ 2.11	$ 2.11	$ 2.11	$ 2.11	$ 2.11	$ 2.11	$ 2.11	$ 2.11	$ 2.11	$ 2.11	$ 2.11
Billing amount (million US$/year)	2.03	1.95	1.96	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90
Collection ratio	97%	97%	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%
Op. Sewerage Revenue (US$ mill./yr)	**1.90**	**1.92**	**1.86**	**1.86**	**1.86**	**1.86**	**1.86**	**1.86**	**1.86**	**1.86**	**1.86**	**1.86**	**1.86**
CSO (US$ million/year)	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37

Total revenues (US$ million/year)	**12.65**	**13.78**	**14.34**	**15.35**	**16.40**	**17.49**	**18.62**	**19.83**	**19.67**	**19.67**	**19.67**	**19.67**	**19.67**
Costs													
Operating Costs (US$ million/year)													
Labor	3.39	3.45	3.51	3.57	3.64	3.71	3.79	3.87	3.87	3.87	3.87	3.87	3.87
Chemical	0.13	0.12	0.11	0.11	0.11	0.11	0.12	0.12	0.12	0.12	0.13	0.13	0.13
Electricity	3.41	3.23	3.03	2.27	2.27	2.29	2.32	2.37	2.42	2.48	2.53	2.58	2.63
Other operational	3.40	3.62	3.86	4.06	4.42	4.72	4.99	5.28	5.29	5.29	5.29	5.30	5.30
Other, non-capital costs (US$ million/year)													
Replacement of existing assets, loan repayment	*1.02*	*1.02*	*1.02*	*1.02*	*1.02*	*1.02*	*1.02*	*1.02*	*1.02*	*1.02*	*1.02*	*2.18*	*2.20*
Total Operating Costs (US$ million/year)													
Without depreciation, loan repay.	**10.34**	**10.43**	**10.52**	**10.02**	**10.45**	**10.84**	**11.22**	**11.64**	**11.70**	**11.76**	**11.82**	**11.88**	**11.94**
=> operating cost (US$/m3 sold)	2.26	2.10	2.03	1.78	1.72	1.66	1.60	1.54	1.55	1.56	1.57	1.57	1.58
Plus depreciation, loan repayment	**11.36**	**11.44**	**11.53**	**11.04**	**11.47**	**12.17**	**13.03**	**14.08**	**14.93**	**15.70**	**15.92**	**16.46**	**16.52**
Cost Coverage Ratio (incl. all non-capital costs)	**1.11**	**1.20**	**1.24**	**1.39**	**1.43**	**1.44**	**1.43**	**1.41**	**1.32**	**1.25**	**1.24**	**1.20**	**1.19**

ANNEX 4: Aspects related to the Indigenous Peoples Policy (OP/BP 4.10)

COUNTRY: Solomon Islands
Urban Water Supply and Sanitation Sector Project

1. The Urban Water Supply and Sanitation Project (UWSSSP) acknowledges that the vast majority of groups resident in the project areas are considered to be indigenous Solomon Islanders, which thus triggers OP/BP 4.10 on Indigenous Peoples. The project integrates, as part of the ESMF and RPF, elements of the Indigenous Peoples Plan (IPP) into the project design and safeguards instruments.

2. The Project will have large positive impacts on target communities through the rehabilitation and expansion of failed water supply and sanitation infrastructure. The project design includes community consultation with participation of free, prior and informed consultation through broad community support to the project and its objectives, this have been reflected into the ESMF and RPF. This will allow for local communities to engage and provide input into project implementation. Appropriate measures will reflect the vulnerable groups and measures outlined in the project's Gender Action Plan.

3. Community Consultations are led by the SW communications and liaison officer. The community consultation process conducted by SW until now has been summarized in the ESIA, ESMF and RPF.

4. The Bank safeguards team will provide ongoing support and has reviewed the ESMF, RPF and ESIA to ensure that elements of the IPP are included as a part of the common approach with ADB.

Grievance Redress Mechanism

5. The safeguards instruments have integrated a Grievance Redress Mechanism (GRM) process for the project. This incorporates a process to receive and facilitate resolution of affected peoples' concerns, complaints, and grievances about the Project's performance, including those concerning environmental and social impacts and issues. The GRM will ensure that: (i) the basic rights and interests of every affected person are protected; and (ii) their concerns arising from Project performance during the phases of design, construction and operation activities are effectively and timely addressed. The GRM will need to ensure that any concerns are addressed quickly and transparently, and without retribution to the affected parties. The grievance process will ensure that no costs are imposed on those raising the grievances; that concerns arising from project implementation are adequately addressed in a timely manner; and that participation in the grievance process does not preclude pursuit of legal remedies. Specific means of redress are available in disputes over land ownership or compensation, or for grievances related to Project construction impacts which are detailed in the safeguards instruments.

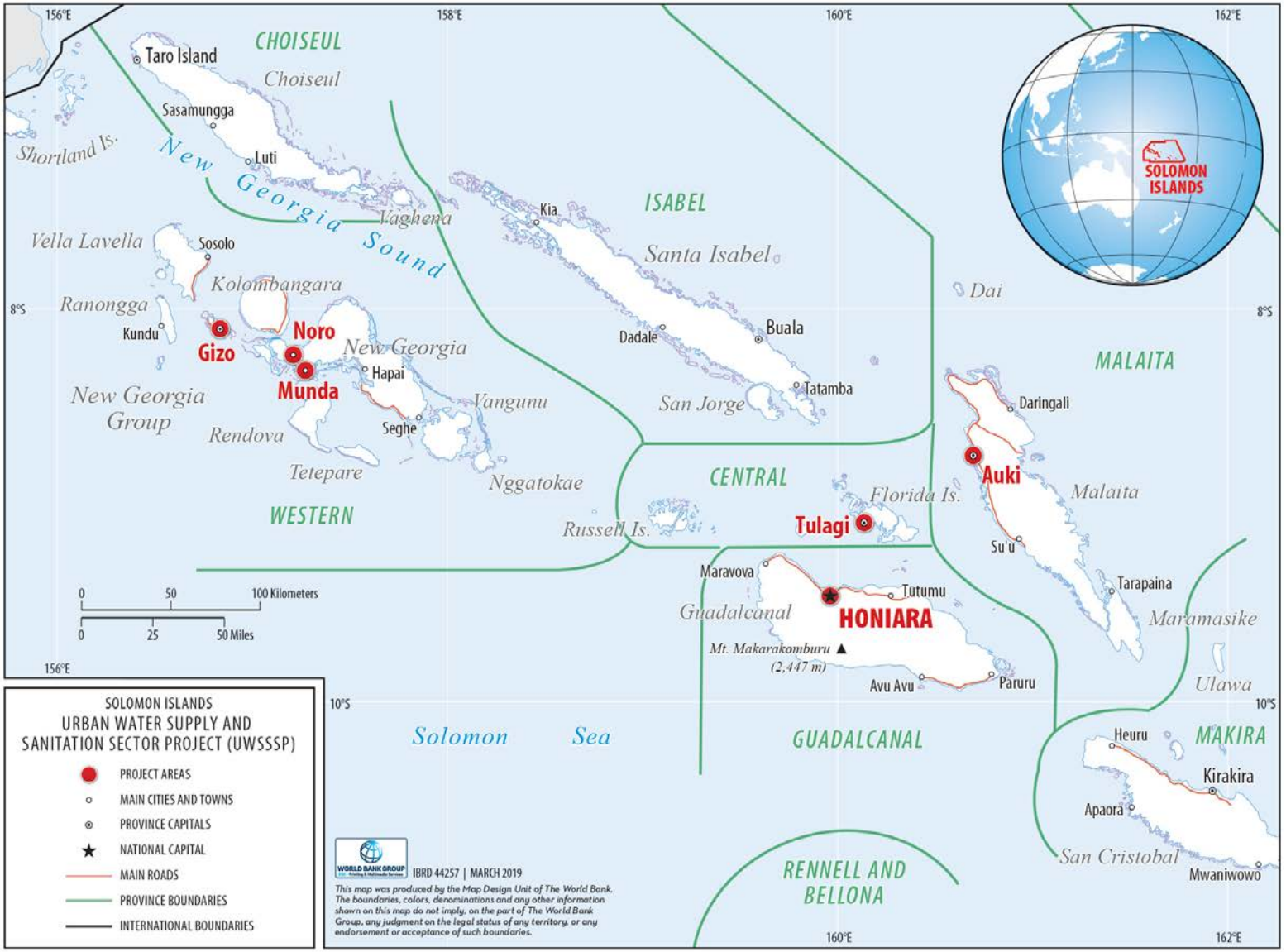
6. Table A4.1 overleaf summarizes how elements of the IPP are incorporated into the overall project design.

Table A4.1 Incorporating Elements of an IPP into Overall Project Design (Cat B Projects)

IPP Elements (OP/BP 4.10, Annex B)	***Best Available Means for Incorporation***
1. Summary of legal and institutional framework, and baseline data, as relating to Indigenous Peoples in the project context.	This summary is presented in RPF.
2. Summary of social assessment findings.	This summary is presented in the RPF.
3. Summary of consultations with Indigenous Peoples communities.	Consultations have been conducted and the results are presented in the ESMF.
4. Actions to ensure that Indigenous Peoples receive culturally appropriate social and/or economic benefits.	From the community consultations and broad community support undertaken, the social benefits have been outlined in the RPF. Some minor impacts on land may occur, however this will be determined during project implementation. The RPF provides details of project activities and of measures to address associated impacts. Further details on project specific sites and activities that may impact the land will be incorporated into a Resettlement Action Plan during implementation and will be reflected as foreseen under OP 4.12.
5. Actions to address any adverse impacts on Indigenous Peoples communities.	Actions to address any adverse impacts are described into the overall RPF and the ESIA. Summary of people affected by land acquisition or relocation, mitigation measures are incorporated into the RPF. Further, mitigation measures required if people are affected by the loss of access to natural resources and protected areas are described into the ESIA as foreseen under OP 4.12
7. Appropriate grievance procedures.	The GRM process is captured in the RPF and ESIA.
8. Monitoring and evaluation arrangements.	Monitoring and evaluation arrangements are captured in the RPF and ESIA.

ANNEX 5: Map

COUNTRY: Solomon Islands
Urban Water Supply and Sanitation Sector Project


156°E
158°E
160°E
162°E
8°S
10°S
CHOISEUL
Choiseul
Taro Island
Sasamungga
Luti
Shortland Is.
New Georgia Sound
Vaghena
Vella Lavella
Sosolo
Kolombangara
Ranongga
Kundu
Gizo
Noro
Munda
New Georgia
Hapai
New Georgia Group
Rendova
Seghe
Tetepare
Vangunu
Nggatokae
WESTERN
ISABEL
Kia
Santa Isabel
Dadale
Buala
San Jorge
Tatamba
CENTRAL
Russell Is.
Tulagi
Dai
MALAITA
Daringali
Auki
Malaita
Florida Is.
Su'u
Tarapaina
Maramasike
Maravova
Tutumu
Guadalcanal
HONIARA
Mt. Makarakomburu
(2,447 m)
Avu Avu
Paruru
Ulawa
Solomon Sea
GUADALCANAL
MAKIRA
Heuru
Kirakira
Apaora
San Cristobal
Mwaniwowo
RENNELL AND BELLONA
SOLOMON ISLANDS
0 50 100 Kilometers
0 25 50 Miles
SOLOMON ISLANDS
URBAN WATER SUPPLY AND SANITATION SECTOR PROJECT (UWSSSP)
PROJECT AREAS
MAIN CITIES AND TOWNS
PROVINCE CAPITALS
NATIONAL CAPITAL
MAIN ROADS
PROVINCE BOUNDARIES
INTERNATIONAL BOUNDARIES
WORLD BANK GROUP
IBRD 44257 | MARCH 2019
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