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**The World Bank**

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Report No: PAD5573

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT PAPER

ON A

PROPOSED ADDITIONAL CREDIT  
IN THE AMOUNT OF US\$13 MILLION

AND A

PROPOSED ADDITIONAL GRANT  
IN THE AMOUNT OF SDR 1.6 MILLION  
(US\$2 MILLION EQUIVALENT)

TO

SOLOMON ISLANDS

FOR THE

ADDITIONAL FINANCING FOR THE URBAN WATER SUPPLY AND SANITATION SECTOR  
PROJECT  
NOVEMBER 15, 2023

Water Global Practice  
East Asia And Pacific Region

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## CURRENCY EQUIVALENTS

(Exchange Rate Effective October 31, 2023)

Currency Unit = Solomon Islands Dollar

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SBD 8.47 = US\$ 1

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US\$ 1.314 = SDR 1

### FISCAL YEAR

January 1 - December 31

Regional Vice President: **Manuela V. Ferro**

Country Director: **Stephen N. Ndegwa**

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## ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
AF	Additional Financing
APA	Alternative Procurement Arrangements
AWPB	Annual Workplan and Budget
CO <sub>2</sub>	Carbon Dioxide
CPF	Country Partnership Framework
DALY	Disability-Adjusted Life Year
DFIL	Disbursement and Financial Information Letter
DMA	District Metered Area
EFA	Economic and Financial Analysis
EIA	Environmental Impact Assessment
ERR	Economic Rate of Return
E&S	Environmental and Social
EU	European Union
EUR	Euro
FA	Financing Agreement
FCV	Fragility, Conflict and Violence
FM	Financial Management
FRR	Financial Rate of Return
FY	Financial Year
GBV	Gender-based Violence
GHA	Greater Honiara Area
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
IDA	International Development Association
IEE	Initial Environmental Examination
IPF	Investment Project Financing
km	Kilometers
kWh	Kilowatt hours
LARP	Land Acquisition and Resettlement Plan
Lcd	Liters per capita per day
L/s	Liters per second
m <sup>3</sup>	Cubic meter
ML	Megaliters
MLD	Megaliters per day
ML/y	Megaliters per year
mm	Millimeter
MMERE	Ministry of Mines, Energy and Rural Electrification
MoFT	Ministry of Finance and Treasury
MTR	Mid-Term Review

NRH	National Referral Hospital
NRW	Non-revenue water
OAG	Office of the Auditor General
OP/BP	Operational Policy/Bank Procedure
PDO	Project Development Objective
PMU	Project Management Unit
PPSD	Project Procurement Strategy for Development
RF	Results Framework
SBD	Solomon Islands Dollars
SIG	Solomon Islands Government
SIIP	Solomon Islands Investment Program
SOE	State-Owned Enterprise
SW	Solomon Water
US\$	United States Dollars
UWSSSP	Urban Water Supply and Sanitation Sector Project
WACC	Weight Average Cost of Capital
WASH	Water, Sanitation and Hygiene
WB	World Bank
WTP	Water Treatment Plant

Solomon Islands

Urban Water Supply and Sanitation Sector Project Additional Financing

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**BASIC INFORMATION – PARENT (Urban Water Supply and Sanitation Sector Project - P165872)**

Country	Product Line	Team Leader(s)		
Solomon Islands	IBRD/IDA	Shona Kate Fitzgerald		
Project ID	Financing Instrument	Resp CC	Req CC	Practice Area (Lead)
P165872	Investment Project Financing	SEAW1 (9391)	EACNF (6680)	Water

Implementing Agency: Solomon Islands Water Authority

Is this a regionally tagged project?	
No	

Bank/IFC Collaboration	
No	

Approval Date	Closing Date	Expected Guarantee Expiration Date	Original Environmental Assessment Category	Current EA Category
16-May-2019	30-Jun-2027		Partial Assessment (B)	Partial Assessment (B)

**Financing & Implementation Modalities**

<input type="checkbox"/> Multiphase Programmatic Approach (MPA)	<input type="checkbox"/> Contingent Emergency Response Component (CERC)
<input type="checkbox"/> Series of Projects (SOP)	<input checked="" type="checkbox"/> Fragile State(s)
<input type="checkbox"/> Performance-Based Conditions (PBCs)	<input checked="" type="checkbox"/> Small State(s)
<input type="checkbox"/> Financial Intermediaries (FI)	<input type="checkbox"/> Fragile within a Non-fragile Country
<input type="checkbox"/> Project-Based Guarantee	<input type="checkbox"/> Conflict
<input type="checkbox"/> Deferred Drawdown	<input type="checkbox"/> Responding to Natural or Man-made disaster
<input checked="" type="checkbox"/> Alternate Procurement Arrangements (APA)	<input type="checkbox"/> Hands-on Expanded Implementation Support (HEIS)



**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.

**Ratings (from Parent ISR)**

	Implementation				
	22-Dec-2021	24-Jun-2022	16-Dec-2022	13-Mar-2023	16-Sep-2023
Progress towards achievement of PDO	MS	MS	MS	MS	MS
Overall Implementation Progress (IP)	MS	MS	MS	MS	MS
Overall Safeguards Rating	MS	MS	S	S	S
Overall Risk	M	M	M	M	M
Financial Management	MS	MS	MS	MS	MS
Project Management	S	S	S	S	S
Procurement	S	S	MS	MS	MS
Monitoring and Evaluation	S	S	S	MS	S

**BASIC INFORMATION – ADDITIONAL FINANCING (Urban Water Supply and Sanitation Sector Project Additional Financing - P181388)**

Project ID	Project Name	Additional Financing Type	Urgent Need or Capacity Constraints
P181388	Urban Water Supply and Sanitation Sector Project Additional Financing	Cost Overrun/Financing Gap	No



Financing instrument	Product line	Approval Date	
Investment Project Financing	IBRD/IDA	12-Dec-2023	
Projected Date of Full Disbursement	Bank/IFC Collaboration		
31-Oct-2027	No		
Is this a regionally tagged project?			
No			

**Financing & Implementation Modalities**

<input type="checkbox"/> Series of Projects (SOP)	<input checked="" type="checkbox"/> Fragile State(s)
<input type="checkbox"/> Performance-Based Conditions (PBCs)	<input checked="" type="checkbox"/> Small State(s)
<input type="checkbox"/> Financial Intermediaries (FI)	<input type="checkbox"/> Fragile within a Non-fragile Country
<input type="checkbox"/> Project-Based Guarantee	<input type="checkbox"/> Conflict
<input type="checkbox"/> Deferred Drawdown	<input type="checkbox"/> Responding to Natural or Man-made disaster
<input checked="" type="checkbox"/> Alternate Procurement Arrangements (APA)	<input type="checkbox"/> Hands-on Expanded Implementation Support (HEIS)
<input type="checkbox"/> Contingent Emergency Response Component (CERC)	

**Disbursement Summary (from Parent ISR)**

Source of Funds	Net Commitments	Total Disbursed	Remaining Balance	Disbursed	
IBRD				<div style="width: 0%; height: 10px; background-color: #ccc;"></div>	%
IDA	15.00	2.79	12.21	<div style="width: 19%; height: 10px; background-color: #008000;"></div>	19 %
Grants				<div style="width: 0%; height: 10px; background-color: #ccc;"></div>	%

**PROJECT FINANCING DATA – ADDITIONAL FINANCING (Urban Water Supply and Sanitation Sector Project Additional Financing - P181388)**

**FINANCING DATA (US\$, Millions)**



**SUMMARY (Total Financing)**

	Current Financing	Proposed Additional Financing	Total Proposed Financing
<b>Total Project Cost</b>	82.33	41.26	123.59
<b>Total Financing</b>	82.33	41.26	123.59
<b>of which IBRD/IDA</b>	15.00	15.00	30.00
<b>Financing Gap</b>	0.00	0.00	0.00

**DETAILS - Additional Financing****World Bank Group Financing**

International Development Association (IDA)	15.00
IDA Credit	13.00
IDA Grant	2.00

**Non-World Bank Group Financing**

Other Sources	26.26
Asian Development Bank	26.26

**IDA Resources (in US\$, Millions)**

	Credit Amount	Grant Amount	SML Amount	Guarantee Amount	Total Amount
<b>Solomon Islands</b>	13.00	2.00	0.00	0.00	15.00
National Performance-Based Allocations (PBA)	13.00	2.00	0.00	0.00	15.00
<b>Total</b>	<b>13.00</b>	<b>2.00</b>	<b>0.00</b>	<b>0.00</b>	<b>15.00</b>

**COMPLIANCE****Policy**

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

Yes  No



Does the project require any other Policy waiver(s)?

[ ] Yes [ ✓ ] No

## INSTITUTIONAL DATA

### Practice Area (Lead)

Water

### Contributing Practice Areas

### Climate Change and Disaster Screening

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

## PROJECT TEAM

### Bank Staff

Name	Role	Specialization	Unit
Shona Kate Fitzgerald	Team Leader (ADM Responsible)	Water Supply and Sanitation	SEAW1
Eric Leonard Blackburn	Procurement Specialist (ADM Responsible)	Procurement	EEAR2
Janet Virginia Gamarra Rupa	Financial Management Specialist (ADM Responsible)	FM Specialist	EEAG2
Joyce Onguglo	Social Specialist (ADM Responsible)	Social Development	SEAS1
Khine Thwe Wynn	Environmental Specialist (ADM Responsible)	Environmental Specialist	SEAE1
Bonnie Frances Cavanough	Environmental Specialist	Environmental Specialist	SEAE1
Christian Holde Severin	Team Member		SEAW1
Dean Georgakopoulos	Procurement Team		EACNF
Fiona Evelyn Bingham	Team Member		EACNF
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Janet Funa	Procurement Team		EACSB
Maria Del Carmen Minoso	Team Member		SEAW1
Violeta Wagner	Team Member		SEAW1



William Alexander Murtagh Fraser	Team Member		EACNF
<b>Extended Team</b>			
<b>Name</b>	<b>Title</b>	<b>Organization</b>	<b>Location</b>
Gerard Soppe	Senior WSS Specialist		

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## I. BACKGROUND AND RATIONALE FOR ADDITIONAL FINANCING

### A. Introduction

1. This project paper seeks approval to provide additional financing (AF) in the amount of US\$15.0 million (US\$13.0 million International Development Association (IDA) Credit, US\$2.0 million equivalent IDA Grant) to the Solomon Islands Urban Water Supply and Sanitation Sector Project (UWSSSP). This AF was formally requested by the Solomon Islands Government (SIG) on May 18, 2023. It is intended to meet a portion of the current project financing gap due to cost overruns, and thereby enable key activities that are necessary for the achievement of the Project Development Objectives (PDOs), to proceed. The US\$82.33 million parent project was approved on May 16, 2019, and has a closing date of June 30, 2027. The project is co-financed by the World Bank (US\$15.0 million IDA credit<sup>1</sup>) and the Asian Development Bank (ADB). Co-financing administered by ADB includes an ADB Concessional Loan of US\$28.0 million, an ADB Grant US\$9.0 million, and a European Union (EU) Grant of EUR 18.0 million. The ADB will also process AF in the amount US\$26.26 million, including a Global Environment Facility (GEF) Grant of US\$1.26 million and an ADB Grant of US\$25 million. The GEF Grant is approved and effective, and the ADB Grant of US\$25 million, which will be used to cover part of the financing gap, is currently scheduled to be presented to the ADB Board in July 2024.

2. The Project Development Objective (PDO) of the UWSSSP is 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. The project is implemented by Solomon Water (SW), a state-owned enterprise that delivers water and sewerage services in urban areas. The PDO remains aligned with the World Bank's Country Partnership Framework, as well as SIG and SW priorities. The UWSSSP includes four components: (1) Urban Water Supply, (2) Urban Sanitation, (3) Water Conservation, Sanitation and Hygiene Awareness and Education, and (4) Institutional Strengthening and Project Management. Components (1) and (2) are co-financed with IDA financing. The proposed IDA-financed AF will co-finance contracts under component (1), namely, outstanding non-revenue water (NRW) reduction in Honiara (under Part 1(f) as specified in the Financing Agreement) and water supply system civil works in Munda (under Part 1(b) as specified in the Financing Agreement). The ADB's AF will fund other high priority contracts under components (1) and (2). Given that the current financing gap stands at an estimated US\$70.5 million, a restructuring to reduce the overall scope of the parent project is being sought along with the proposed additional financing. Moreover, the combined AF and restructuring will comprise changes to: (i) reflect the additional project funds; (ii) adjust co-financing percentages; (iii) remove project activities with insufficient financing within the available financing window; (iv) revise the results framework (RF) to reflect the scope of adjustments; and (v) amend the disbursement profile. Based on the current implementation schedule, the remaining project timeframe of 3.5 years is sufficient to implement IDA-funded contracts and the closing date therefore remains unchanged. The combination of AF and restructuring will resolve the financing gap.

3. The proposed IDA AF will be used to finance NRW reduction activities in Honiara and to co-finance the construction of a new water supply system in Munda. Investments in NRW reduction will include: (i) pipeline replacement; (ii) network and pressure management; and (iii) meter replacements. It is

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<sup>1</sup> IDA Credit Number 6407-SB



anticipated that these investments will reduce NRW from the current baseline of 6,777,000 m<sup>3</sup>/year to 4,745,000 m<sup>3</sup>/year in the remaining 3.5 years of the project, thereby improving the availability of water for supply and revenue generation. Investments in the construction of a new water supply system in Munda will increase access to water supply and improve the reliability and quality of services. Both activities will address the increased water stress in Solomon Islands' urban areas, with long-term benefits to public health and reduce the beneficiaries' exposure to climate change induced water shortages.

4. The project will be restructured, and the co-financing percentages and disbursement profile will be adjusted accordingly. The project scope will be reduced by excluding a portion of sewerage works in Honiara (with an estimated cost of US\$19.76 million) and Gizo town water supply (with an estimated cost of US\$11.66 million). The PDO and project description in the legal agreements will remain the same; however, the RF will be adjusted to reflect the scope changes. Changes to the RF will include adjustments to indicator targets.

### **B. Implementation Status of Parent Project**

5. The parent project is considered well-performing and eligible for Additional Financing. Solomon Water is the Implementing Agency and is governed by the Solomon Islands Water Authority Act 1992. SW's Board reports to the Minister of Mines Energy, and Rural Electrification (MMERE) and to the Minister of Finance and Treasury (MoFT). SW is considered a well-performing utility compared to its peers in the Pacific and is well-resourced for project implementation. There has been no change in the legal status of SW since the beginning of the project.

6. The PDO of UWSSSP consists of three parts: (i) to increase access to and the quality of water supply services in selected service areas of SW; (ii) to increase the quality of sanitation services in selected service areas of SW; and (iii) to improve the operational performance of SW. The total approved project amount is US\$82.3 million, including US\$73.3 million from the co-financing partners<sup>2</sup> and US\$9.0 million in counterpart financing from SW. In addition, SIG contributes tax exemptions to the value of approximately US\$10.27 million. The ADB is the lead co-financier, and the World Bank uses Alternative Procurement Arrangements (APA). The UWSSSP will meet its PDO by (i) improving the coverage, quality and efficiency of SW's water supply systems in Honiara and several provincial capitals (Component 1); (ii) improving the quality of sewerage and sanitation systems in Honiara (Component 2); (iii) implementing a water conservation, sanitation and hygiene awareness program (Component 3, not IDA financed); and (iv) supporting institutional strengthening and project management (Component 4, not IDA financed).

7. Overall Implementation Progress and progress towards the PDOs are rated Moderately Satisfactory. Since its inception, the project has consistently performed at Moderately Satisfactory or above. The project experienced delays in launching initial bids resulting from the COVID-19 pandemic and poor performance of the design consultant for the first tranche of engineering works. COVID-19 related travel restrictions ended in July 2022, and the design consultant completed detailed design and bidding documents for the Honiara works and provincial town supply systems in December 2022. Despite these delays, overall commitments under the project total US\$51.6 million, excluding tax exemptions. IDA credit commitments have reached 75 percent (US\$11.2 million), and disbursements are at 19 percent (US\$2.8

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<sup>2</sup> World Bank (US\$15.00 million IDA credit), ADB (US\$28.00 million concessional loan and US\$9.00 million grant), and EU (Euro 18.00 million grant administered by ADB)



million). Bids for the construction of the Noro Town water supply system have recently closed, which will increase IDA commitments to approximately 84 percent (US\$12.6 million) by the end of 2023. The slight lag in disbursements is attributed to delays in the effectiveness of the EU Co-financing Agreement between ADB and the EU (declared effective April 28, 2023) and an associated disbursement condition, which was lifted on June 26, 2023, and due to slow performance of construction contractors. Between donor missions conducted in Solomon Islands in May 2023 and September 2023, the performance on civil works contracts increased and revised construction schedules have been submitted for work to be completed in 2024. Disbursements are projected to increase to 23 percent (US\$3.4 million) by the end of December 2023.

8. Three subprojects have been completed to date, namely: (i) the rehabilitation of the Auki water supply system (increasing storage capacity by 820 m<sup>3</sup>, and improving water quality from 72 percent compliance to 95 percent compliance); (ii) water, sanitation and hygiene awareness raising campaigns in six informal settlements in Honiara (835 people reached face-to-face, and 285,000 people reached through social media); and (iii) the drafting of the Greater Honiara Area Sanitation Masterplan and sanitation bylaw (Plan finalized in collaboration with SW and Honiara City Council). In addition, the following four civil works contracts totaling US\$36.6 million, are under construction in Honiara: (i) water supply mains, 11.0 km; (ii) water supply reservoirs, (three reservoirs with a total storage capacity 8,550 m<sup>3</sup>); (iii) Kongulai Water Treatment Plant (WTP); and (iv) sewer works from Ranadi to Goodwood outfall, (1.7 km). The remaining subprojects to be tendered have been designed and bidding documents and safeguards instruments have been drafted. Progress against the RF is slower than projected at approval due to delays in going to market and slow performance of civil works contractors. While indicators against part (i) and (ii) of the PDO are progressing well, the number of beneficiaries will need to be reduced due to cost overruns. The indicators against part (iii) of the PDO are currently not progressing as projected due to limited achievements in NRW reduction.

9. Although there is substantial compliance with loan covenants, there is currently one overdue financial audit. The Project audited financial statements have been submitted in a timely manner; all have been reviewed and accepted by the WB. However, the Disbursement and Financial Information Letter (DFIL) also requires submission of Entity audited financial statements. The Entity audited financial statements for FY2022 have not yet been submitted to the WB. Correspondence from the Auditor General to the Chairman of SW on September 19, 2023, confirmed that the auditor's findings would be finalized for presentation to the SW Board in October, therefore submission of audited financial statements to the WB by end-December 2023 is likely. Exceptional approval was granted by the WB on November 3, 2023, to proceed with Negotiations, and on November 13, 2023, to proceed with Approval notwithstanding the overdue audit.

### **C. Rationale for Additional Financing**

10. The original PDO and project scope remain highly relevant. Solomon Islands is classified as a country affected by fragility, conflict and violence (FCV), and the country continues to face many challenges in the provision and maintenance of infrastructure, including rapid urbanization, climate change, extreme weather risks, and the population's ability to pay for essential services. Current climate change projections foresee negative impacts on water services due to: (i) warmer overall climate and more extremely hot days; (ii) increases in rainfall variability – both annual and seasonal; (iii) more frequent and more intense



extreme rainfall events, which may lead to flash floods and landslides; (iv) rising sea levels; and (v) potentially more frequent and/or more intense droughts. Access to improved water sources and sanitation facilities in Solomon Islands is low, at 78 percent and 35 percent of the population<sup>3</sup>, respectively, and is not keeping up with population growth. Average annual urban population growth from 2009 to 2019 was 5.9 percent, largely as a result of the 7.5 percent growth rate in the extended Honiara area.<sup>4</sup> In Honiara, the reticulated system draws from various springs, small rivers and bores, and has a production capacity of 32.5 million liters per day (MLD). The current demand, in conjunction with physical losses in the network, exceeds SW's water production capacity by more than 10 MLD. This highlights the need to reduce physical losses and concurrently expand services in urban areas. The ramifications of low levels of access are evident in public health data. For example, stunting of children under five years of age is estimated at 29.8 percent,<sup>5</sup> the fourth highest across the Pacific, and diarrheal outbreaks have been recorded in Gizo and Honiara as recently as 2021. Moreover, a recent review of Water, Sanitation and Hygiene (WASH) spending across the Pacific,<sup>6</sup> showed that Solomon Islands tracked the lowest in the region on average annual budgeted WASH expenditure (US\$1.00 per person from 2014 to 2021) and that Solomon Islands and Vanuatu are the most severely underfunded countries relative to access need. SW is the service provider for urban water and sewerage services and is currently mandated to operate in ten urban centers. SW currently operates in Honiara, Auki, Tulagi, and Noro and has plans to expand to Munda and Gizo. The subprojects under the UWSSSP seek to address issues facing the sector and to support achievement of the PDO. Over the long-term, improvements in access to water supply and sanitation are expected to improve overall health outcomes for Solomon Islanders, including reduction of water-borne disease and stunting.

11. The project has experienced significant cost overruns despite contingencies of 16.5 percent (average) included in appraisal cost estimates. The cost overruns are attributed to: (i) global market disruptions (COVID-19 and Russia's invasion of Ukraine) that have caused increases in civil works costs across all sectors; (ii) civil unrest in Honiara in November 2021 that coincided with the bidding period for major civil works contracts; (iii) limited market competition; (iv) the complexity of sanitation services in Honiara, requiring more robust technical solutions; and (v) lower than estimated yields from water sources in provincial towns, requiring more expensive infrastructure options. This has resulted in higher than estimated costs for water supply and sanitation investments, as well as cost escalations for technical assistance and institutional development activities. Consultant costs have escalated up to 1.9 times the appraisal estimates, while awarded civil works contracts have seen escalations between 1.1 and 3.3 times the appraisal estimates.

12. Cost estimates for the remaining activities have been updated based on project experience to date. The current cost estimate for all project activities is US\$152.8 million, excluding taxes, duties, and land acquisition costs. There is, therefore, a financing gap of US\$70.5 million compared to approved financing (refer to Table 1 on cost breakdowns). The IDA and ADB AF will cover high priority subprojects under Components 1 and 2 of the Project, while subprojects with alternate funding or phasing options, namely

<sup>3</sup> Solomon Islands National Statistics Office, Ministry of Finance and Treasury. September 2023. *2019 Population and Housing Census: National report (Volume 1)*.

<sup>4</sup> Solomon Islands National Statistics Office, Ministry of Finance and Treasury. September 2023. *2019 Population and Housing Census: National report (Volume 1)*.

<sup>5</sup> World Bank. 2022. <https://data.worldbank.org/>

<sup>6</sup> UNICEF Pacific. 2023. *Financing Water, Sanitation & Hygiene in the Pacific*.



Gizo town water supply system and the western section of the Honiara sewerage system (known as the National Referral Hospital (NRH) sewerage network) rehabilitation and outfall construction, will be removed from the scope through restructuring. High priority subprojects are those that maximize achievement of the PDOs, including NRW reduction activities. NRW reduction will both increase availability of water for supply to households and will strengthen the operational performance of SW. For the sub-projects proposed to be removed from the scope, the Gizo water supply system has alternate funding proposed through the Australian Government-funded Solomon Islands Infrastructure Program (SIIP), and the phasing of the sewerage network aligns with SW's long-term strategy to consolidate all wastewater treatment and discharge in the eastern section of the network, which will be prioritized and the NRH section will be delayed until further funding becomes available.

*Table 1 Comparison of Appraisal and Current Cost Estimates by Component, US\$ millions*

<b>Component</b>	<b>Appraisal Cost Est.</b>	<b>Current Cost Est.<sup>7</sup></b>
Component 1: Urban Water Supply	43.07	84.82
Component 2: Urban Sanitation	16.39	55.28
Component 3: Water Conservation, Sanitation and Hygiene Awareness	2.00	1.89
Component 4: Institutional Strengthening and Project Management	7.25	9.74
Contingencies and financing fees	13.62	1.04
<b>Total</b>	<b>82.33</b>	<b>152.77</b>

13. The SIG and the World Bank Group prepared a Country Partnership Framework for the period 2018-2023 that has been extended to 2024. Under Focus Area 1 (Strengthening the Foundations of Well-being), Objective 1.1 aims to improve access to climate resilient infrastructure and services. The AF is aligned with this Objective as the AF's NRW reduction investments will improve the water supply system's and the recipient population's resilience to drought and floods, increase water supply for Honiara's population, and strengthen the financial position of SW for quality service provision. Moreover, the AF maintains alignment with SW's 30-year Strategic Plan for 2017-2047 and its 5-year Action Plans (2017-2022 and 2024-2028).

## II. DESCRIPTION OF ADDITIONAL FINANCING

14. The proposed US\$15.00 million AF is to cover part of the financing gap due to the cost overruns, detailed in Table 1. The AF consists of a US\$2.00 million IDA grant and a US\$13.00 million IDA Credit. Credit financing will be on-lent to SW with terms specified in a Subsidiary Agreement to be determined and agreed by Solomon Islands and SW. The AF will be used to co-finance select Component 1 contracts, namely, NRW reduction activities in Honiara and the Munda water supply system. There will be no change in the PDO, nor the project implementation arrangements or project timeline. Two contracts are proposed to be removed from the scope (see paragraph 12) and corresponding updates are made to the safeguards instruments, RF indicators and the co-financing percentages. Activities planned under the IDA AF have been designed as part of Component 1 of the original project scope and have a high degree of

<sup>7</sup> Table 1 current cost estimates include the Gizo Water Supply System and the Honiara western-area sewerage rehabilitation and outfall construction.





implementation readiness. Table 2 shows project costs by component, including AF.

*Table 2 Project costs (including contingencies) by component, US\$ million*

Component	Cost Estimates <sup>8</sup>		Co-financing Sources from Original Financing				Additional Financing		Total
	Appraisal	Current	IDA	ADB <sup>9</sup>	SW	Subtotal	IDA	ADB <sup>10</sup>	
1) Urban Water Supply	43.07	75.92	12.76	33.50	0.00	46.26	15.00	14.66	75.92
2) Urban Sanitation	16.39	24.90	2.22	12.05	0.00	14.27	0.00	10.63	24.90
3) WASH Awareness	2.00	1.89	0.00	1.89	0.00	1.89	0.00	0.00	1.89
4) Institutions and Project Management	7.25	8.79	0.00	7.74	1.05	8.79	0.00	0.00	8.79
Contingencies	12.16	0.00	0.02	0.00	7.95	7.97	0.00	0.97	8.94
Financing Charges	1.46	1.04	0.00	1.04	0.00	1.04	0.00	0.00	1.04
<b>Total Project Costs and Financing</b>	<b>82.33</b>	<b>121.48</b>	<b>15.00</b>	<b>56.22</b>	<b>9.00</b>	<b>82.22</b>	<b>15.00</b>	<b>26.26</b>	<b>121.48</b>

15. The IDA Additional Financing allocation under Component 1 shown in Table 2, includes US\$13.00 million for NRW reduction activities and US\$2.00 million for the Munda water supply system. These activities will be co-financed with ADB from funding sources under the original financing agreements. Co-financing will be implemented according to the provisions under the Alternative Procurement Arrangements and detailed in the Project Implementation Agreement between the WB and ADB. Contingencies have been reallocated against specific sub-components based on the latest market conditions and cost estimates.

16. The NRW reduction activities proposed to be co-financed include: (i) pipe replacement of 10 km of distribution mains; (ii) District Metered Area (DMA) activities for improved network and pressure management, including pipe repairs and replacement for distribution, reticulation and connection pipelines, supply and installation of network management instrumentation including bulk meters and household meters. Activity (i) is estimated at US\$11.57 million. Design of the replacement of the mains was completed by UWSSSP’s engineering design consultants in 2023 and bidding documents are drafted. Advanced procurement provisions are included to allow for bidding of the works contract in the first quarter of 2024. The concept design for Activity (ii) was completed in-house by the Solomon Water NRW team and included a pre-paid smart meter trial which is under final stages of evaluation. The estimated cost of the DMA activities is US\$1.43 million. It is anticipated that Activities (i) and (ii) will result in a 2,500 ML/year reduction of physical water losses, thereby achieving a level of 4,745 ML/year of unaccounted water by project end, which would correspond to an NRW rate of approximately 40 percent compared to the current 62 percent rate. NRW reduction will also result in significant adaptation and mitigation benefits, including reducing the exposure of beneficiaries to climate change-induced droughts by enhancing their access to safe and reliable water supply, improving public health outcomes, protecting

<sup>8</sup> Table 2 current cost estimates excludes Gizo Water Supply System and Honiara western-area sewerage rehabilitation and outfall construction, as these are proposed to be removed from the scope.

<sup>9</sup> Includes financing administered by ADB for the EU.

<sup>10</sup> Includes financing administered by ADB for the GEF.



the limited water sources on the islands from over extraction, and minimizing pumping for water supply. The RF has been updated accordingly.

17. The Munda water supply system cost for construction of a new water supply system to service 2,700 people is estimated at US\$6.48 million. The detailed design is complete, pending pumping tests at the Airport borehole to confirm the abstraction rate that are scheduled for fourth quarter 2023. The bidding documents are drafted and will be submitted to donor partners for review following confirmation of the borehole source. The Munda bidding process is expected to be launched in third quarter 2024.

18. The AF and accompanying restructuring will include the following changes to the co-financing arrangements: (i) revision of co-financing percentages (see paragraph 42); and (ii) update of the Co-financing definition in the FA, amended April 20, 2020. Co-financing percentages are proposed to be amended to *Up to 100% of the Credit's and/or Grant's agreed share of the cost specified and agreed upon in the Annual Workplan and Budget (AWPB)*. This change will allow flexibility for SW to specify the contract-specific co-financing percentage in the AWPB. This is required to re-balance cost-sharing arrangements after the front-loading of ADB funding for some contracts due to the delayed effectiveness of the EU Grant. The Co-financing definition will be updated to account for the current available financing from co-financing sources. EU Grant funds are administered by ADB and provided in Euros; the equivalent in United States Dollars has decreased from US\$20.347 million at appraisal to US\$19.59 million presently due to foreign exchange fluctuations. To avoid the need for future changes to the FA based on foreign exchange fluctuations, the Co-financing definition will be updated to specify the available co-financing from ADB in US\$ and from EU in EUR.

19. As reflected in Table 2, no new activities will be introduced through the AF. However, changes will include removal of two contracts from the original scope due to limited financing: the Gizo town water supply contract (Component 1) and NRH sewer rehabilitation and outfall construction (Component 2). The cost estimate for the Gizo town water supply system is US\$11.6 million for provision of water supply to 6,100 people. The NRH sewer rehabilitation and outfall construction cost estimate is US\$19.76 million for the discharge of preliminary treated sewage flows to a capacity of 180 L/s (corresponds to 35 percent of Honiara's planned pumped outfall discharge capacity to 2050). The PDO will remain achievable with the removal of these two subprojects and the RF will be adjusted accordingly.

### III. KEY RISKS

20. The overall project risk rating continues to be assessed as *Moderate*. Substantial risks include:

21. Fiduciary risk: *Substantial*. The project faces three main procurement risks: (i) limited national procurement expertise; (ii) lack of an independent procurement complaints mechanism; and (iii) allegations of procurement corruption. Although SW has a dedicated accounting and procurement division, prior to this project, it lacked experience with ADB and WB procurement and financial management (FM) guidelines and systems. SW will require support to develop its procurement capacity and familiarity with ADB procurement policies and guidelines (which will be applied under Alternative Procurement Arrangements), and with World Bank FM guidelines. To date, SW have successfully procured five civil works contracts, five goods contracts and 20 consulting services contracts in line with ADB guidelines. SW continue to receive procurement and FM training, in addition to support from project



implementation assistance consultants for strengthening procurement and FM capacity, particularly in relation to ADB procurement and WB FM guidelines and systems.

22. Stakeholder risks: *Substantial*. The ADB Board is expected to approve their AF as soon as possible following the formation of the Government after the Solomon Islands national elections in early 2024. Should ADB fail to approve its AF contribution as planned, the project would not be able to fully achieve its PDOs and rescope of the project would be required. This risk appears unlikely, as ADB has internally approved the AF allocation, with funding earmarked specifically for the UWSSSP. This risk will be mitigated by close coordination with ADB on the processing of the respective AFs, and programming high priority investments with maximum benefit to the PDO for the IDA AF.

23. Other risk: *Substantial*. The AF assumes timely processing and effectiveness to allow key contracts to be bid in early 2024. Should this not occur the implementation of NRW reduction activities will be further delayed, resulting in delayed benefits to SW. Further delays may also result in further cost overruns. This risk is mitigated by close and early communication with all counterparts, clarity and simplicity of project design, and inclusion of further contingencies in cost estimates based on market feedback.

24. Climate and disaster risk: *Substantial*. The parent project and AF have been screened for short and long-term climate change and disaster risks, and projections show; (i) a warmer overall climate and more extremely hot days; (ii) increases in rainfall variability – both annual and seasonal; (iii) more frequent and more intense extreme rainfall events, which may lead to flash floods and landslides; (iv) rising sea levels leading to further saltwater intrusion; and (v) potentially more frequent and/or more intense droughts. These climate-related hazards along with non-climate hazards, such as earthquakes and tsunamis, are likely to both put physical infrastructure at risk of damage and increase pressure on water and sanitation services. For example, these hazards may cause increased demand for domestic and industrial supply, while floods may increase exposure to fecal contaminants during floods. These risks will be mitigated through measures to reinforce and climate-proof water supply infrastructure, and through the preparation and adoption of appropriate plans by SW under Component 4, such as, Water Safety Plans, a disaster management plan, a drought management plan, and a climate change risk assessment and associated adaptation plan. The project and the proposed AF will address these risks through increasing availability of freshwater supplies, considering climate change in the design of water supply and sanitation systems.

## IV. APPRAISAL SUMMARY

### A. Economic and Financial Analysis

25. The major project benefits are assumed to emanate from additional water production capacity as well as reduced NRW. In Honiara, the parent project and AF activities are expected to reduce NRW from the current level of 62 percent (2023) to 40 percent by the end of the project in 2028. By 2040, NRW levels are expected to reach 30 percent. The project investments are expected to provide access to improved water sources for up to 50,000 people and an additional 6,300 new connections based on the assumption of 165 lcd and seven people served per connection. The Economic and Financial Analysis (EFA) excluded economic benefits accruing to sanitation, avoided carbon emissions, avoided mortality, reduced Disability



Adjusted Life Year (DALY) and sick time, and time and cost savings provided via access to piped water due to unavailability of reliable data.

26. The cost-benefit analysis conducted for the parent project has been updated for the proposed additional resources and the results have been revised. With- and without-project scenarios are defined to identify the incremental costs and benefits of the project. Benefits and costs are projected over a period of 17 years (2023 to 2040), while the years from 2019 to 2022 are subsumed under 2023 for the sake of clarity. The full set of assumptions and parameters driving the analysis and results are shown in Annex 1.

27. The financial price of water was estimated at US\$2.76/m<sup>3</sup> using the latest SW water supply tariff (based on SW's Increasing Block Tariff Structure of September 2023) which was duly triangulated by the operating cost efficiency calculations from 2020 to 2022. The economic value of water<sup>11</sup> was estimated at US\$4.13/m<sup>3</sup> by marking up the financial price by 50 percent, as per global experience in pricing water under scarcity conditions, where the price of water may be as high as US\$25.0<sup>12</sup> or even higher per cubic meter when procured in portable containers of 20 liters.

28. Both economic and financial analyses were conducted for the incremental benefits that will accrue to the project. The principal quantifiable economic and financial benefits consisted of the amount and value of incremental water sales from 2023 to 2040 under different set of prices and assumptions. In addition to the core difference of using a higher price for valuing water, the economic analysis excluded taxes and price contingencies and used a discount rate of 6 percent. The financial analysis used cost estimates that were inclusive of both while utilizing a Weighted Average Capital Cost (WACC) of 4.58 percent as was the case with the original project EFA.

29. The sensitivity analysis included adjusting the economic price of water and the investment cost. The economic price of water was varied to equal its financial price which yielded an Economic Rate of Return (ERR) of 9 percent. The investment cost for the economic analysis were increased by 25 percent, which still yielded an acceptable ERR of 6 percent. The reduced economic price of water at US\$3.4/m<sup>3</sup> also resulted in an ERR of 6 percent. Hence, it is surmised that the analysis is robust under parametric variations of the key variables. Comparable results would be expected for the financial analysis.

30. Based on the results of the analysis, summarized in Table 3, the AF is considered economically and financially viable.

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<sup>11</sup> The value of water is the benefit water consumers derive from access, use, or consumption of water, such as drinking, food production, or cultural purposes. The price and value of water are often mischaracterized as being equivalent. The value of water is determined by multiple individual and community determinants beyond markets. <https://www.cambridge.org/core/journals/cambridge-prisms-water/article/price-and-value-of-water-an-economic-review/340E30EA7586C861C7BBF50D33CE3C5A>, The price and value of water: An economic review, Published online by Cambridge University Press: May 17, 2023

<sup>12</sup> For instance, in Madagascar a single 20-liter jerrycan of water costs US\$25/m<sup>3</sup>, against the average income per person per year of approximately US\$50. <https://www.unicef.org/stories/madagascar-daily-search-water-replaced-turning-tap>,



Table 3. Economic and Financial Analysis Results

Economic		Financial	
ERR	16 percent	FRR	10 percent
E-NPV	US\$ 55.67 million	F-NPV	US\$ 40.22 million
Cost/Benefit Ratio	1.77	Cost/Benefit Ratio	1.47

31. Avoided Greenhouse Gas emissions were also calculated at preparation of the parent project. The total amount of CO<sub>2</sub> equivalent emissions that was calculated to be avoided over the life of the project (30 years) was 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 under Component 2, and the subsequent reduction of methane emissions occurring in the current pits where sludge is left in anaerobic conditions. 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<sup>3</sup> 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.

**B. Technical**

32. The proposed AF will be used to cover cost overruns and the resulting financing gap and will, therefore, fund sub-projects planned in the original design that would otherwise need to be removed from the scope. Without the AF, the scope reduction would prevent attainment of the PDOs, in particular, PDO (i) *to increase access to and the quality of water supply services*, and PDO (iii) *to improve the operational performance of SW*. The Mid-Term Review (MTR) conducted from May 9 to 18, 2023, showed that progress against these two PDOs was at risk without further project funding. For PDO (i), the AF is required to continue expanding access to SW services in Honiara and Munda. In Honiara, the current water supply system is limited by the water source production volumes. While the production volumes will be increased through the Kongulai WTP, there is also a need to reduce NRW to increase water available for consumption. For PDO (iii), a recent tariff review showed that SW’s revenue in 2022 was SBD 20 million (US\$2.36 million equivalent) lower than forecasted, with SBD 12.2 million of this shortfall attributed to NRW.<sup>13</sup> NRW, therefore, underpins the achievement of both PDOs and was identified at the MTR as the highest priority for AF and thus represents the majority of IDA AF costs.

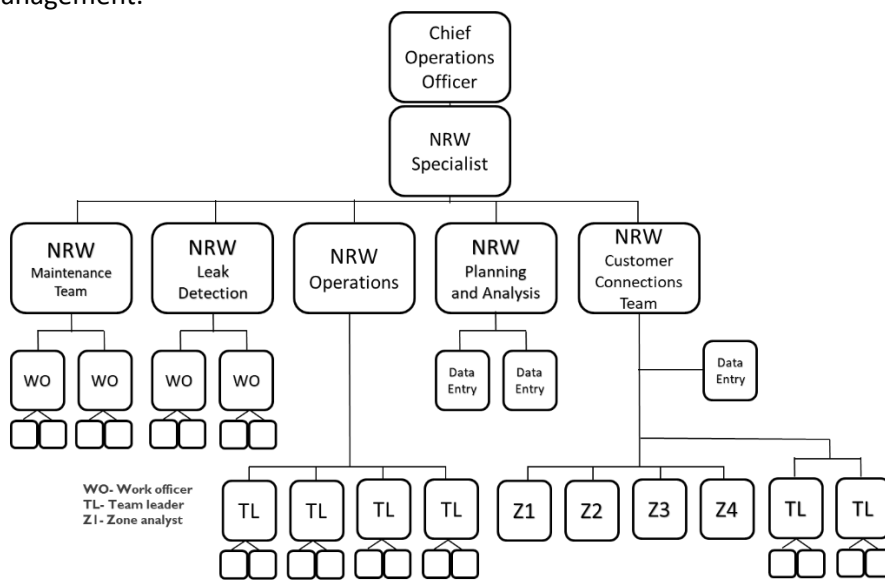
33. The proposed AF will cover a financing gap due to cost overruns related to activities approved prior to the Paris Agreement Alignment, which are not inconsistent with Paris Alignment principles. Risks from climate hazards have been assessed and are considered substantial. Appropriate measures have been incorporated into the project design to address these risks (see paragraph 24 on climate and disaster risk).

34. NRW reduction activities under the AF have been scoped through hydraulic modelling, leak detection, pipeline rehabilitation prioritization, and pre-paid smart metering trials. The implementation of NRW reduction activities to-date has been supported by a new NRW organizational structure, led by an NRW Specialist who reports to the Chief Operations Officer, as shown in Figure 1. The NRW team has a comprehensive workplan to measure, assess and address NRW. Water supply input volumes and bulk

<sup>13</sup> Solomon Water. April 2023. *Solomon Water Tarff Review Update*



supply meters are measured daily. NRW is assessed through monthly water balance calculations and systematic leak detection. NRW is addressed through active leak control, meter replacement and closing of illegal connections. Key achievements thus far include improved data management on customer accounts and operational parameters, leak detection and repair work programming, and systematic verification of low consumption accounts. For example, in 2022, 5,004 leak repairs were completed, representing an increase of 34 percent from 2021, and 9,400 low consumption accounts were verified and 3,000 were rectified (e.g., through meter replacement). Despite these successes in the operational approach and the performance of SW in addressing NRW, there has been little improvement from a baseline of 7,355 ML per year of water unaccounted for in 2019 to 6,777 ML per year in 2022. A recent analysis of NRW showed that physical leaks constitute 5,270 ML per year, or 78 percent of total NRW.<sup>14</sup> There is a need to complement SW’s operational activities with investments to reduce physical losses, including pipeline replacement, further meter replacements, and improved instrumentation for network management.



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Figure 1 NRW Organizational Structure

35. In 2022, the UWSSSP’s engineering design consultant carried out a prioritization of the water supply mains that needed to be replaced. A total of 10.095 km of water supply mains in nine locations around Honiara were subsequently designed for replacement. The pipeline diameters to be constructed vary from 250 mm to 450 mm. The SW NRW team carried out a prioritization of smaller diameter mains, reticulation, and connection pipelines for 12 priority DMAs with the target water recovery of 1,540 ML per year. A total of 6.95 km of pipeline in 12 priority DMAs has been identified for replacement. Further meter replacements, flow and pressure monitoring will also be considered for financing under the AF.

36. In 2020, the project’s engineering design consultants designed the Munda water supply system construction. This sub-project will be co-financed through IDA and ADB AF. The detailed design of the Munda system is complete, and the environmental safeguards instruments have been accepted by the

<sup>14</sup> World Bank. November 2023. *Solomon Water Non-Revenue Water Assessment*



WB and ADB. Borehole pump testing was not completed during the design stage given the COVID-19 pandemic; this testing will be carried out in fourth quarter of 2023. The system is expected to provide water supply for 2,700 people.

37. The listed AF priorities will also significantly contribute to building resilience to climate change. Reduction in NRW will reduce the exposure of beneficiaries to climate change-induced droughts by enhancing their access to safe and reliable water supply, improve public health outcomes and protect the limited water sources on the islands from over extraction. Reductions in NRW will also close the water supply-demand gap by reducing water losses, without having to abstract and pump more water (thereby avoiding the emission of more greenhouse gases). The Munda water supply system will increase the availability of water for beneficiaries, thereby mitigating the climate impacts of increased temperature, more extreme heat days (generating more water demand), and more frequent droughts.

38. Two contracts will be removed from the scope of the project: the Gizo water supply system (estimated cost of US\$11.66 million, Component 1, Part 1(a)<sup>15</sup>) and the NRH sewerage and outfall (estimated cost US\$19.76 million, Component 2, Part 2(c)<sup>16</sup>). SW has sought alternate funding for the Gizo town supply, which is now included in the pipeline for the Australian Government-funded Solomon Islands Infrastructure Program (SIIP).<sup>17</sup> It is anticipated that the funding earmarked from SIIP for Gizo will be sufficient to service the population until 2030.

39. The decision to prioritize the Ranadi sewerage and outfall works aligns with SW's long-term strategy to consolidate wastewater treatment and discharge to a treatment plant to be built at the Ranadi outfall pumping station site and through the Ranadi outfall. Moreover, the Ranadi outfall capacity represents approximately 65 percent of Honiara's sewage outfall pumped discharge planned to 2050, whereas the NRH outfall represents 35 percent. The sewage from the NRH sewerage system will continue to be discharged in near-shore areas until funding for further sewerage rehabilitation can be confirmed. An Environmental Impact Assessment (EIA) was conducted to examine three scenarios: construction of the Ranadi outfall only, construction of the NRH outfall only, or construction of both outfalls. The 3D hydrodynamic modelling results indicated that with all the proposed scenarios, the situation along the coastline was greatly improved compared to the initial state. The proposed sewerage infrastructure and outfall will significantly reduce current health risks based on recreational water quality modelling in terms of primary and secondary contact recreation and lead to improved water quality generally. The EIA was approved by the Ministry of Environment, Climate Change, Disaster Management and Meteorology.

### **C. Financial Management**

40. There is no change to the Implementing Agency under the AF, therefore Solomon Water remain responsible for FM. Under the AF, there will be no changes to the existing FM arrangements. The FM arrangements in place help ensure that: (i) project funds are used for the intended purposes with due regard to economy, efficiency, and effectiveness; (ii) timely and reliable financial reports for the project

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<sup>15</sup> Part 1(a) includes construction, rehabilitation, upgrade and expansion of water production and treatment systems in all urban areas except the Recipient's town of Munda

<sup>16</sup> Part 2(c) includes rehabilitation and upgrade of sewerage systems, including sewer mains, pumping stations and submarine outfalls

<sup>17</sup> See <https://siip.com.sb/>, accessed October 9, 2023



are produced; and (iii) there are measures in place to protect the assets of the project. Moreover, there are no individual contracts to be funded from both IDA AF and IDA parent project funds; this will enable clear management and control of funding sources. The FM performance rating of the project is rated *Moderately Satisfactory*.

41. Financial reporting is generally compliant but not in a timely manner. SW has submitted all required Interim Financial Reports to-date, however, the Interim Financial Report for semester ended June 30, 2023 was submitted two months after the deadline. External audit arrangements at UWSSSP approval anticipated that there would be no separate project audit as project activities will be included in the SW accounts. However, in an adjustment to the arrangements requested by SIG on March 31, 2021, and detailed in an amended DFIL on April 16, 2021, it was agreed that separate Project and Entity audits would be submitted to the WB and ADB. Although the Project audit for the year ended December 2022, was submitted to and accepted by the WB, the Entity audit is overdue. Exceptional approval has been granted by the WB to proceed with Negotiations notwithstanding the overdue audit, on the basis that the audit would be completed and submitted to the Bank by December 31, 2023.

42. The disbursement arrangements will follow the arrangements established under the parent project and detailed in the DFIL and Project Operations Manual. To account for cost overruns experienced to date and the introduction of AF, the following adjustments to the eligible expenditure table are proposed:

Table 4. Proposed changes to eligible expenditure table

Category <sup>18</sup>	Amount of the Financing Allocated (expressed in US\$)			Percentage of Expenditures to be Financed (exclusive of Taxes)		
	Original IDA Credit	AF Credit	AF Grant	Original IDA Credit	AF Credit	AF Grant
(1) Goods, works, non-consulting services, Training, Incremental Operating Costs and consulting services for Parts 1(a), (c), (d), and (e) of the Project	11,795,000	0	0	Up to 100% of the Credit's agreed share of the cost specified and agreed upon in the AWPB	-	-
(2) Goods, works, non-consulting services, Training, Incremental Operating Costs and consulting services for Part 2 of the Project	2,225,000	0	0	Up to 100% of the Credit's agreed share of the cost specified and agreed upon in the	-	-

<sup>18</sup> Please note categories shown are as per proposed amendments through the AF. These categories differ from the original financing and the parent project FA will be updated accordingly.





Category <sup>18</sup>	Amount of the Financing Allocated (expressed in US\$)			Percentage of Expenditures to be Financed (exclusive of Taxes)		
	Original IDA Credit	AF Credit	AF Grant	Original IDA Credit	AF Credit	AF Grant
				AWPB		
(3) Unallocated	0	0	0	-	-	-
(4) Goods, works, non-consulting services, Training, Incremental Operating Costs and consulting services for Part 1 (b) <sup>19</sup> of the Project	0	2,000,000	0	-	30.9%	
(5) Goods, works, non-consulting services, Training, Incremental Operating Costs and consulting services for Part 1 (f) <sup>20</sup> of the Project	980,000	11,000,000	2,000,000	Up to 100% of the Credit's agreed share of the cost specified and agreed upon in the AWPB	Up to 100% of the Credit's or Grant's agreed share of the cost specified and agreed upon in the AWPB	-
<b>TOTAL AMOUNT</b>	<b>15,000,000</b>	<b>13,000,000</b>	<b>2,000,000</b>			

**D. Procurement**

43. Procurement performance is currently rated as *Moderately Satisfactory*. The project will continue to adopt the APA instrument as per section III.F of the World Bank's Policy "Procurement in IPF and Other Operational Procurement Matters" for all parts of the project. ADB will take the lead in providing implementation support and monitoring of procurement activities under the project. The project will fund the procurement of goods, works and services using ADB's procurement rules and procedures. The WB will not participate in the supervision of procurement activities.

44. The SW PMU will remain responsible for procurement activities. To-date, the PMU has successfully procured five civil works contracts, five goods contracts and 20 consulting services contracts. The detailed procurement plan has been updated for activities over the next 18 months. The Project Procurement Strategy for Development (PPSD) will be reviewed and updated, including noting that advanced contracting has been provisioned for this project in line with ADB's procurement regulations. The risk mitigation measures in the PPSD have been successful and will continue to be applied.

**E. Social (including Safeguards)**

45. Social safeguards performance is currently rated as *Satisfactory*; the rating has been consistently

<sup>19</sup> Part 1(b) includes construction, rehabilitation, upgrade and expansion of water production and treatment systems in the Recipient's town of Munda

<sup>20</sup> Part 1(f) includes carrying out of NRW activities including leak detection and network repairs



*Moderately Satisfactory* or above throughout project implementation. Safeguards instruments for the 11 civil works subprojects have been drafted and Land Acquisition and Resettlement Plans (LARPs) have been cleared for five of the subprojects. The PMU has a highly experienced part-time social safeguards specialist who is closely supported by SW's strategic manager and land acquisition specialist. The PMU has a good understanding of Environmental and Social (E&S) risk management and good capacity to implement E&S risk management measures. This has been evidenced through a functional Grievance Redress Mechanism, land acquisition and relocation activities completed under the project, and ongoing community consultations throughout design and construction. The AF will address a financing gap for the parent project only and will not add new activities. The E&S risks, therefore, remain unchanged and can be managed utilizing the existing project E&S instruments. The Integrated Safeguards Datasheet has been updated to reflect the proposed removal of the Gizo water supply system and the Honiara western-area sewerage rehabilitation and outfall construction. The sub-project level Initial LARPs for the Gizo and Honiara western-area sewerage rehabilitation will be completed for SW's future implementation of these sub-projects but will no longer be required in the implementation and supervision of the UWSSSP.

46. Addressing gender gaps is central to the project design, for example, the project includes targets for increased female employment at the managerial level at SW, and for gender-informed WASH interventions. The percentage of senior management staff who are women at SW is currently 25 percent, down from 30 percent in 2019. However, the number of female staff members in lower hierarchy positions is growing and is expected to support a positive trend of women in management positions in coming years. Aligned with and in continuation of the parent project, capacity building through UWSSSP and the proposed AF will continue to support SW to: (i) work towards the target of increasing women in senior management to 40 percent, including through maintaining two women on the Board of Directors, providing training on Gender-based Violence (GBV) for all staff and updating human resources policies with reference to GBV and sexual harassment; (ii) ensure women's participation in capacity building programs across a broad range of topics at the core of SW's mandate. These activities will help diversify women's skill base and facilitate their later access to senior positions; and (iii) by continuing to strengthen Equal Opportunities policy and practice in line with the Waka Mere Commitment to Action,<sup>21</sup> including through Gender Action Plan training and requirements for contractors to employ 20 percent female staff. Progress to address gender gaps is reported through UWSSSP's Gender Action Plan, updated semi-annually. Citizen engagement measures will be carried forward from the parent project, along with GBV aspects. This includes citizen engagement through the WASH awareness program, Community Advisory Committees for each sub-project, and grievance redress mechanisms (GRM), including for reporting GBV-related cases. The project tracks whether complaints received through SW's GRM are addressed in compliance with SW's operating standards, which define timing of responsiveness, and successful resolution of grievances. For 2022, the utility resolved 99 percent of received grievances in accordance with their standards, which is above the target rate of 90 percent.

## F. Environment (including Safeguards)

47. Environmental safeguards performance is currently rated as *Satisfactory*. The rating has been consistently *Moderately Satisfactory* or above throughout project implementation. Safeguards instruments for the 11 civil works subprojects have been drafted, and Initial Environmental Examinations

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<sup>21</sup> A two-year initiative promoting gender equality in the private sector in Solomon Islands.



(IEEs) have been cleared by the World Bank for nine of the subprojects. The PMU has a full-time environmental safeguards specialist who is supported by a part-time international specialist. The PMU has a good understanding of E&S risk management and good capacity to implement E&S risk management measures. This has been evidenced through SW's management of civil works projects in Honiara, including close supervision of erosion and sediment control at the Kongulai WTP site and of occupational health and safety. The AF will address a financing gap for the parent project only and will not add new activities. The E&S risks, therefore, remain unchanged and can be managed utilizing the existing project E&S instruments. The Integrated Safeguards Datasheet has been updated to reflect the proposed removal of the Gizo water supply system and Honiara western-area sewerage rehabilitation and outfall construction. The sub-project level IEEs for Gizo and Honiara western-area sewerage rehabilitation will be completed for SW's future implementation of these sub-projects but will no longer be required in the implementation and supervision of UWSSSP.

48. The parent project and AF have been screened for short and long-term climate change and disaster risks, as described in paragraph 24. The project and the proposed AF will address these risks by increasing the availability of freshwater supplies, considering climate change in the design of water and sanitation systems, and improving the collection, transport and treatment of sewage and fecal sludge in Honiara.

#### **G. Other Safeguard Policies (if applicable)**

49. The project triggers the following Operational Policy/Bank Procedure (OPs/BPs): Environmental Assessment OP/BP 4.01; Natural Habitats OP/BP 4.04; Physical Cultural Resources OP/BP 4.11; Indigenous Peoples OP/BP 4.10; Involuntary Resettlement OP/BP 4.12. Although the works are mostly in urban areas, policies 4.11 and 4.10 were triggered to ensure that procedures are in place to manage chance finds of physical cultural resources or in case indigenous people are affected. Assessment and management procedures for compliance against all policies is contained in the project safeguards instruments, including the over-arching Environmental and Social Management Framework and at a site-specific level through the sub-project IEEs and LARPs.

#### **V. WORLD BANK GRIEVANCE REDRESS**

50. **Grievance Redress.** Communities and individuals who believe that they are adversely affected by a project supported by the World Bank may submit complaints to existing project-level grievance mechanisms or the Bank'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 Bank's independent Accountability Mechanism. The Accountability Mechanism houses the Inspection Panel, which determines whether harm occurred, or could occur, as a result of Bank non-compliance with its policies and procedures, and the Dispute Resolution Service, which provides communities and borrowers with the opportunity to address complaints through dispute resolution. Complaints may be submitted to the Accountability Mechanism at any time after concerns have been brought directly to the attention of Bank Management and after Management has been given an opportunity to respond. For information on how to submit complaints to the Bank's Grievance Redress Service (GRS), please visit <http://www.worldbank.org/GRS>. For information on how to submit complaints to the Bank's Accountability Mechanism, please visit <https://accountability.worldbank.org>.

**VI. SUMMARY TABLE OF CHANGES**

	Changed	Not Changed
Results Framework	✓	
Components and Cost	✓	
Reallocation between Disbursement Categories	✓	
Implementing Agency		✓
Project's Development Objectives		✓
Loan Closing Date(s)		✓
Cancellations Proposed		✓
Disbursements Arrangements		✓
Safeguard Policies Triggered		✓
EA category		✓
Legal Covenants		✓
Institutional Arrangements		✓
Financial Management		✓
Procurement		✓
Implementation Schedule		✓

**VII. DETAILED CHANGE(S)****COMPONENTS**

Current Component Name	Current Cost (US\$, millions)	Action	Proposed Component Name	Proposed Cost (US\$, millions)
Urban Water Supply	11.00	Revised	Urban Water Supply	27.77
Urban Sanitation	2.31	Revised	Urban Sanitation	2.23
Water Conservation, Sanitation and Hygiene Awareness and Education	0.00	No Change	Water Conservation, Sanitation and Hygiene Awareness and	0.00



			Education	
Institutional Strengthening and Project Management	0.00	No Change	Institutional Strengthening and Project Management	0.00
Contingencies	1.69	Revised	Contingencies	0.00
<b>TOTAL</b>	<b>15.00</b>			<b>30.00</b>

**REALLOCATION BETWEEN DISBURSEMENT CATEGORIES**

Current Allocation	Actuals + Committed	Proposed Allocation	Financing % (Type Total)	
			Current	Proposed
IDA-64070-001   Currency: USD				
iLap Category Sequence No: 1		Current Expenditure Category: Gds Wrks NCS Trng IOC CS Pt 1acde		
9,300,000.00	2,219,570.05	11,795,000.00	30.30	100.00
iLap Category Sequence No: 2		Current Expenditure Category: Gds Wrks NCS Trng IOC CS Pt 2		
2,310,000.00	0.00	2,225,000.00	14.09	100.00
iLap Category Sequence No: 3		Current Expenditure Category: UNALLOCATED		
1,690,000.00	0.00	0.00		0.00
iLap Category Sequence No: 4		Current Expenditure Category: Gds Wrks NCS Trng IOC CS Pt 1b		
1,700,000.00	0.00	0.00	30.30	0.00
iLap Category Sequence No:		Current Expenditure Category: Gds Wrks NCS Trng IOC CS Pt 1f		
0.00	0.00	980,000.00		100.00
<b>Total</b>	<b>15,000,000.00</b>	<b>2,219,570.05</b>	<b>15,000,000.00</b>	



**Expected Disbursements (in US\$)**

Fiscal Year	Annual	Cumulative
2019	0.00	0.00
2020	299,130.00	299,130.00
2021	560,400.00	859,530.00
2022	744,780.00	1,604,310.00
2023	1,353,750.00	2,958,060.00
2024	4,092,819.00	7,050,879.00
2025	10,185,793.00	17,236,672.00
2026	6,787,588.00	24,024,260.00
2027	4,096,383.00	28,120,643.00
2028	1,879,357.00	30,000,000.00

**SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)**

Risk Category	Latest ISR Rating	Current Rating
Political and Governance	● Moderate	● Moderate
Macroeconomic	● Moderate	● Moderate
Sector Strategies and Policies	● Moderate	● Moderate
Technical Design of Project or Program	● Moderate	● Moderate
Institutional Capacity for Implementation and Sustainability	● Moderate	● Moderate
Fiduciary	● Substantial	● Substantial
Environment and Social	● Substantial	● Moderate
Stakeholders	● Moderate	● Substantial
Other	● Moderate	● Substantial
Overall	● Moderate	● Moderate



**LEGAL COVENANTS – Urban Water Supply and Sanitation Sector Project Additional Financing (P181388)**

**Sections and Description**

Financing Agreement, Schedule 2, Section I.C, para. 1. No later than thirty (30) days after the Effective Date, the Recipient shall cause Solomon Water to prepare and adopt an updated Project Operations Manual, in form and substance satisfactory to the Association.

Financing Agreement, Schedule 2, Section I.D., 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, including a specification of the source or sources of financing and co-financing percentages for all eligible expenditures, and environmental and social safeguard measures taken or planned to be taken in accordance with the provisions of Section I.D of Schedule 2 to the Original Financing Agreement.

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.

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.

Financing Agreement, Article IV, para 4.01. The Co-financing Deadline for the effectiveness of the Co-financing Agreement is August 30, 2024

**Conditions**

Type	Financing source	Description
Effectiveness	IBRD/IDA	The Amendment Letter has been executed and delivered on behalf of the Recipient.



**VIII. RESULTS FRAMEWORK AND MONITORING**

**Results Framework**

COUNTRY: Solomon Islands

Urban Water Supply and Sanitation Sector Project Additional Financing

**Project 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.

**Project Development Objective Indicators by Objectives/ Outcomes**

Indicator Name	PBC	Baseline	Intermediate Targets							End Target
			1	2	3	4	5	6	7	
<b>Increased access and quality of water supply and quality of sanitation services</b>										
People provided with access to improved water sources through piped house water connections (Number)		0.00	0.00	0.00	2,000.00	4,000.00	14,000.00	24,000.00	34,000.00	34,000.00
<b>Action: This indicator has been Revised</b>	<p><b>Rationale:</b>  <i>Gizo subproject removed from the project, so beneficiary target numbers updated accordingly</i></p> <p><b>Indicator name: unchanged</b></p> <p><b>Baseline: unchanged</b></p> <p><b>Intermediate Targets: updated based on current project progress</b></p> <p><b>End Target: Reduced from 40,000 to 34,000 to exclude Gizo</b></p> <p><b>Monitoring and Evaluation Plan: definition edited</b></p>									





Indicator Name	PBC	Baseline	Intermediate Targets							End Target
			1	2	3	4	5	6	7	
People provided with access to improved water sources through piped water connections - Females (Number)		0.00	0.00	0.00	940.00	1,800.00	6,500.00	11,200.00	16,000.00	16,000.00
<b>Action: This indicator has been Revised</b>	<p><b>Rationale:</b>  <i>Gizo subproject removed from the project, so beneficiary target numbers updated accordingly</i></p> <p><b>Indicator name:</b> unchanged</p> <p><b>Baseline:</b> unchanged</p> <p><b>Intermediate Targets:</b> updated based on current project progress</p> <p><b>End Target:</b> Reduced from 40,000 to 34,000 to exclude Gizo</p> <p><b>Monitoring and Evaluation Plan:</b> definition edited</p>									
Samples tests meeting national water quality standards at distribution points (%) (Percentage)		70.00	70.00	70.00	70.00	80.00	90.00	95.00	95.00	95.00
<b>Action: This indicator has been Revised</b>	<p><b>Rationale:</b>  <i>Updating missing information</i></p> <p><b>Indicator name:</b> unchanged</p> <p><b>Baseline:</b> unchanged</p> <p><b>Intermediate Targets:</b> unchanged</p> <p><b>End Target:</b> unchanged</p> <p><b>Monitoring and Evaluation Plan:</b> definition added</p>									
Percentage of collected wastewater disposed of in accordance with		0.00	0.00	0.00	0.00	0.00	0.00	30.00	65.00	65.00



Indicator Name	PBC	Baseline	Intermediate Targets							End Target
			1	2	3	4	5	6	7	
international environmental standards during dry weather (%) (Percentage)										
<p><b>Rationale:</b>  <i>NRH sewerage and outfall system removed from scope and Ranadi sewerage and outfall system contract start delayed.</i></p> <p><b>Indicator name:</b> <i>unchanged</i></p> <p><b>Action: This indicator has been Revised</b>  <i>Baseline: unchanged</i>  <i>Intermediate Targets: updated according to current project progress</i>  <i>End Target: reduced from 70% to 65%</i>  <i>Monitoring and Evaluation Plan: included collection/billing data as datasource</i></p>										
<b>Improved operational performance of Solomon Water</b>										
Volume of water unaccounted for (Cubic meters/year)		7,355,000.00	7,355,000.00	7,000,000.00	6,700,000.00	6,310,000.00	5,920,000.00	5,530,000.00	5,140,000.00	4,745,000.00
<p><b>Rationale:</b>  <i>Updated based on AF preparation analysis</i></p> <p><b>Indicator name:</b> <i>unchanged</i></p> <p><b>Baseline:</b> <i>unchanged</i></p> <p><b>Intermediate Targets:</b> <i>edited according to updated NRW projections</i></p> <p><b>End Target:</b> <i>edited according to updated NRW projections</i></p> <p><b>Monitoring and Evaluation Plan:</b> <i>unchanged</i></p> <p><b>Other:</b> <i>tagged as climate change indicator</i></p>										
Operating cost coverage (Number)		1.11	1.11	1.12	1.14	1.17	1.20	1.22	1.24	1.25



Indicator Name	PBC	Baseline	Intermediate Targets							End Target
			1	2	3	4	5	6	7	
<p><i>Rationale:</i>  <i>Updating missing information</i>  <i>Indicator name: unchanged</i>  <i>Baseline: unchanged</i>  <i>Intermediate Targets: unchanged</i>  <i>End Target: unchanged</i>  <i>Monitoring and Evaluation Plan: definition added</i></p>										

**Intermediate Results Indicators by Components**

Indicator Name	PBC	Baseline	Intermediate Targets							End Target
			1	2	3	4	5	6	7	
<b>Component 1. Urban Water Supply</b>										
1.1 Water mains created and rehabilitated (Kilometers)		0.00	0.00	0.00	5.00	8.00	10.00	25.00	35.00	45.00
<p><i>Rationale:</i>  <i>Gizo subproject removed from the project, so kilometers of pipeline reduced accordingly</i>  <i>Indicator name: unchanged</i>  <i>Baseline: unchanged</i>  <i>Intermediate Targets: updated based on current project progress</i>  <i>End Target: reduced from 56km to 45km</i>  <i>Monitoring and Evaluation Plan: unchanged</i></p>										



Indicator Name	PBC	Baseline	Intermediate Targets							End Target	
			1	2	3	4	5	6	7		
1.2 New storage capacity implemented (Cubic Meter(m3))		0.00	0.00	0.00	6,000.00	6,000.00	6,000.00	6,000.00	6,000.00	6,000.00	12,000.00
<b>Action: This indicator has been Revised</b>	<p><b>Rationale:</b>  <i>Updating missing information</i>  <i>Indicator name: unchanged</i>  <i>Baseline: unchanged</i>  <i>Intermediate Targets: unchanged</i>  <i>End Target: unchanged</i>  <i>Monitoring and Evaluation Plan: definition added</i></p>										
<b>Component 2. Urban Sanitation</b>											
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	60,000.00
<b>Action: This indicator has been Revised</b>	<p><b>Rationale:</b>  <i>Updating missing information</i>  <i>Indicator name: unchanged</i>  <i>Baseline: unchanged</i>  <i>Intermediate Targets: unchanged</i>  <i>End Target: unchanged</i>  <i>Monitoring and Evaluation Plan: definition added</i>  <i>Other: indicator tagged to climate change</i></p>										
2.2 Trunk sewer mains rehabilitated		0.00	0.00	0.00	2.00	4.00	6.00	7.00	7.00	7.00	7.00



Indicator Name	PBC	Baseline	Intermediate Targets							End Target
			1	2	3	4	5	6	7	
(Kilometers)										
<b>Action: This indicator has been Revised</b>		<p><b>Rationale:</b>  <i>Updating missing information</i>  <i>Indicator name: unchanged</i>  <b>Baseline: unchanged</b>  <b>Intermediate Targets: unchanged</b>  <b>End Target: unchanged</b>  <b>Monitoring and Evaluation Plan: definition added</b></p>								
<b>Component 3. Water Conservation, Sanitation, and Hygiene Awareness and Education</b>										
3.1 People trained to improved hygiene behaviour or sanitation practices under the project (Number)		0.00	0.00	200.00	400.00	600.00	800.00	1,000.00	1,000.00	1,000.00
<b>Action: This indicator has been Revised</b>		<p><b>Rationale:</b>  <i>During COVID-19 WASH campaigns pivoted to include more online engagement with communities. The face-to-face training indicator target is therefore reduced</i>  <i>Indicator name: unchanged</i>  <b>Baseline: unchanged</b>  <b>Intermediate Targets: updated based on current project progress</b>  <b>End Target: reduced from 10,000 to 1,000 people</b>  <b>Monitoring and Evaluation Plan: unchanged</b>  <b>Other: tagged as citizen engagement indicator</b></p>								
People trained to improved hygiene behaviour or sanitation practices		0.00	0.00	94.00	188.00	282.00	376.00	470.00	470.00	470.00



Indicator Name	PBC	Baseline	Intermediate Targets							End Target
			1	2	3	4	5	6	7	
under the project - Females (Number)										
<b>Action: This indicator has been Revised</b>	<p><b>Rationale:</b>  <i>During COVID-19 WASH campaigns pivoted to include more online engagement with communities. The face-to-face training indicator target is therefore reduced</i></p> <p><b>Indicator name: unchanged</b></p> <p><b>Baseline: unchanged</b></p> <p><b>Intermediate Targets: updated based on current project progress</b></p> <p><b>End Target: reduced from 4,700 to 4,70 people</b></p> <p><b>Monitoring and Evaluation Plan: unchanged</b></p>									
<b>Component 4. Institutional Strengthening and Project Management</b>										
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
<b>Action: This indicator has been Revised</b>	<p><b>Rationale:</b>  <i>Updating missing information</i></p> <p><b>Indicator name: unchanged</b></p> <p><b>Baseline: unchanged</b></p> <p><b>Intermediate Targets: unchanged</b></p> <p><b>End Target: unchanged</b></p> <p><b>Monitoring and Evaluation Plan: definition added</b></p>									
4.2 SCADA system installed and operational (Yes/No)		No	No	No	No	No	No	Yes	Yes	Yes
<b>Action: This indicator has been Revised</b>	<p><b>Rationale:</b>  <i>Updating missing information</i></p>									



Indicator Name	PBC	Baseline	Intermediate Targets							End Target
			1	2	3	4	5	6	7	
<p><i>Indicator name: unchanged</i>  <i>Baseline: unchanged</i>  <i>Intermediate Targets: updated based on current project progress</i>  <i>End Target: unchanged</i>  <i>Monitoring and Evaluation Plan: definition added</i></p>										
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
<p><i>Rationale:</i>  <i>Updating missing information</i>  <i>Indicator name: unchanged</i>  <i>Baseline: unchanged</i>  <i>Intermediate Targets: unchanged</i>  <i>End Target: unchanged</i>  <i>Monitoring and Evaluation Plan: definition added</i></p> <p><b>Action: This indicator has been Revised</b></p>										
4.4 Operating cost efficiency of water supply services (US\$/m3 sold) (Amount(USD))		2.20	2.20	2.20	2.18	2.16	2.14	2.10	2.05	2.00
<p><i>Rationale:</i>  <i>Change to end target based on AF economic analysis and current NRW projections</i>  <i>Indicator name: unchanged</i>  <i>Baseline: unchanged</i>  <i>Intermediate Targets: updated based on economic analysis and NRW projections</i></p> <p><b>Action: This indicator has been Revised</b></p>										



Indicator Name	PBC	Baseline	Intermediate Targets							End Target
			1	2	3	4	5	6	7	
<p><b>End Target: increased from \$1.85 / m3 sold to \$2.00 /m3 sold</b>  <b>Monitoring and Evaluation Plan: definition added</b></p>										
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
<b>Action: This indicator has been Revised</b>	<p><b>Rationale:</b>  <b>Updating missing information</b>  <b>Indicator name: unchanged</b>  <b>Baseline: unchanged</b>  <b>Intermediate Targets: unchanged</b>  <b>End Target: unchanged</b>  <b>Monitoring and Evaluation Plan: unchanged</b>  <b>Other: tagged as citizen engagement and gender indicator</b></p>									
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
<b>Action: This indicator has been Revised</b>	<p><b>Rationale:</b>  <b>Updating missing information</b>  <b>Indicator name: unchanged</b>  <b>Baseline: unchanged</b>  <b>Intermediate Targets: unchanged</b>  <b>End Target: unchanged</b></p>									





Indicator Name	PBC	Baseline	Intermediate Targets							End Target
			1	2	3	4	5	6	7	
<p><i>Monitoring and Evaluation Plan: unchanged</i>  <i>Other: tagged as gender indicator</i></p>										

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.	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.	Semi-annually	SW billing records and census data	(Number of new connections) x (Number of people per household) x (Share of female in population)	SW
Samples tests meeting national water quality standards at distribution points (%)	Water samples from the regular SW monitoring system that comply with SW's water safety plans.	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	Percentage of collected sewage in the sewerage	Semi-annually	Connection/billing	Review volumetric consumption from billed	SW



international environmental standards during dry weather (%)	network that receives screening and is disposed through rehabilitated outfalls.		data, level gauge records in outfall pumping stations and rainfall records from Solomon Islands Meteorological Services	data for NRH system. Review of level gauge records in outfall pumping stations for Ranadi system for dry weather periods. Australian and New Zealand Environment and Conservation Council (ANZECC) 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 12 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, audited financial statements	Technical and financial operational reporting	SW



**Monitoring & Evaluation Plan: Intermediate Results Indicators**

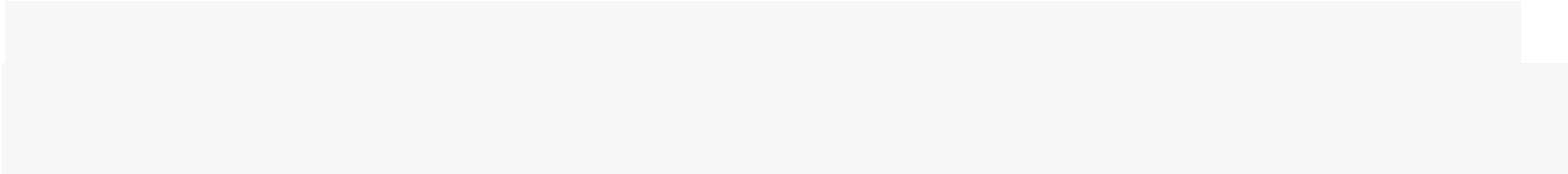
Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
1.1 Water mains created and rehabilitated	Length of water mains installed or rehabilitated	Semi-annually	SW PMU quarterly reports	N/A	SW
1.2 New storage capacity implemented	Increased volume of storage capacity connected to the network.	Semi-annually	SW PMU quarterly reports	New reservoir volume data minus decommissioned/demolished reservoir volume data	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	Annually	SW PMU annual report	Training workshop proceedings, consultation and advocacy campaign reporting	SW



	as part of WASH awareness campaigns.				
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,	Semi-annually	SW PMU quarterly reports	Grievance collection and management records	SW



	and the level of required responses.				
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 before the improvement of water supply and/or sanitation services due to the project.	Once, in the last year of project implementation	Households survey in areas where SW water supply services have been expanded as part of the project.	Questionnaire based household survey eliciting women and girls' perception (in a safe interview space).	SW
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: Board of Directors, 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. Economic and Financial Analysis

- 1. Economic and Financial Analysis (EFA) Scope:** Due to overall data paucity, this EFA focuses solely on the water supply interventions in the Greater Honiara Area (GHA) for which information was available. Due to cost escalations, the restructured project is estimated to cost US\$115.73 million of which US\$71.73 million, 62 percent of project resources, is expected to support the water supply interventions in the GHA. It is assumed that the tax burden will either be shouldered directly by the Government or indirectly by the issuance of tax exonerations. In this exercise, sanitation related interventions as well as the remaining project locations (mainly the other islands Noro, Munda, Auki and Tulagi) are excluded.
- 2. Project Benefits Included:** The major project benefits are assumed to emanate from additional water production capacity as well as reduced NRW. In the GHA the original (parent) project and AF activities are expected to reduce NRW from the current level of 62 percent (2023) to 40 percent by the end of the project in 2028. By 2040, NRW levels are expected to reach 20 percent in 2040. The project investments are expected to provide access to improved water sources for up to 50,000 people and an additional 6300 new connections based on the assumption of 165 Lcd and seven people served per connection.
- 3. Project Benefits Excluded:** Economic benefits accruing to sanitation, avoided carbon emissions, avoided mortality, reduced DALY, sick time, and time and cost savings provided via access to piped water were excluded due to unavailability of reliable data. With reference to the carbon benefits in Small Island States, it is deemed that such benefits contribute little to the ERR because there is limited industry in these islands. Exclusion of a range of important economic benefits has a distinct bearing on the level of the ERR while the financing rate of return (FRR) would remain mostly unaffected.
- 4. Counterfactual:** Regarding the counterfactual, in the absence of the project it is expected that the existing situation would be exacerbated with NRW increasing from 62 percent in 2023 to 77 percent in 2040 with dire consequences for the urban population in GHA. This grave situation would be compounded by the fact that the GHA population would have increased from 129,500 people in 2019, to more than 300,000 within the next 20 years. Hence, the project benefits have a two-pronged effect. One effect will involve improving upon the existing NRW levels, while the other will be preventing further deterioration of the current NRW if there is no intervention.
- 5. Approach to Cost Benefit Analysis:** The cost-benefit analysis conducted for the parent project has been updated for the proposed additional resources and the results have been revised. With- and without-project scenarios are defined to identify the incremental costs and benefits of the project. Benefits and costs are projected over a period of 17 years (2023 to 2040), while the years from 2019 to 2022 are subsumed under 2023 for the sake of clarity.
- 6.** The full set of assumptions and parameters driving the analysis are shown in Table 5.



Table 5 Economic and Financial Analysis Assumptions

Assumptions and Parameters				
Description	Units	Without	With	Citations
<b>Key Economic and Financial Parameters</b>				
NRW (2023)	%	60%	60%	Given
NRW (2040)		77%	30%	Projection
Population in 2023 in GHA	persons	100,000	180,000	Ecofin
Population Growth GHA	% PA	3.50%	3.50%	Ecofin
Consumption per Person	lcd	165	165	Ecofin/PAD
International Dollar Inflation per annum	percent	N/A	4%	ycharts.com
<b>Adjusted Revised Project Cost - Excluding Taxes</b>				
Overall Revised Project Cost (2023) - All Components	M US\$	N/A	115.73	Disbursement Profiles
Costs for GHA and Water Supply Only (2023)	M US\$	N/A	71.74	Disbursement Profiles
Incremental O&M Cost	M US\$	N/A	1.41	See Incremental O&M Cost Sheet
<b>Time and Timing Related Parameters</b>				
Project Implementation Period	Years	N/A	8	PAD
Remaining Project Implementation	Years	N/A	4	Given
Operational Period from 2019 to 2040	Years	N/A	14	Given
Planning Period (2019-2040)	Years	N/A	22	Given
<b>Financial and Economic Pricing, Taxes &amp; Discount Factor</b>				
Financial Price of Water	US\$/m <sup>3</sup>	2.76	2.76	Latest SW Tariff
Economic Price of Water - 50% higher than fin price	US\$/m <sup>3</sup>	N/A	4.13	Financial price plus 50%
Average tax rate applicable on project expenditures	percent	10.00%	10.00%	Trading Economics web site
Weighted Average Cost of Capital - FIN	percent	N/A	4.58%	EcoFin - Fin Sheet
Discount Rate (Opportunity Cost of Capital) - ECON	percent	N/A	6%	Consultant estimate
<b>Water Production Capacity or System Input Value</b>				
Existing Water Sources (2023)	MLD	32.00	32.00	Email from TTL
New Water Source - To be Commissioned in 2024	MLD	N/A	3.00	Email from TTL
Info Water Sources provided by TTL Shona Fitzgerald - email of October 30, 2023				
In the project: Kongulai WTP with total increased production of 5 MLD to be commissioned in 2024				

7. The financial price of water was estimated at US\$2.76/m<sup>3</sup> using the latest SW water supply tariff (based on SW’s Increasing Block Tariff Structure of September 2023) which was duly triangulated by the operating cost efficiency calculations from 2020 to 2022. The economic value of water<sup>22</sup> was estimated at US\$4.13/m<sup>3</sup> by marking up the financial price by 50 percent, as per global experience in pricing water under scarcity conditions, where the price of water may be as high as US\$25<sup>23</sup> or even higher per cubic meter when procured in portable containers of 20 liters.

8. **Results of Economic and Financial Analysis:** Both economic and financial analyses were conducted for the incremental benefits that will accrue to the project; the results are shown in Table 6 and Table 7.

<sup>22</sup> The value of water is the benefit water consumers derive from access, use, or consumption of water, such as drinking, food production, or cultural purposes. The price and value of water are often mischaracterized as being equivalent. The value of water is determined by multiple individual and community determinants beyond markets. <https://www.cambridge.org/core/journals/cambridge-prisms-water/article/price-and-value-of-water-an-economic-review/340E30EA7586C861C7BBF50D33CE3C5A>, The price and value of water: An economic review, Published online by Cambridge University Press: May 17, 2023

<sup>23</sup> For instance, in Madagascar a single 20-liter jerrycan of water costs US\$0.50 (US\$25/m<sup>3</sup> when converted to cubic meters), against the average income per person per year of approximately US\$50. <https://www.unicef.org/stories/madagascar-daily-search-water-replaced-turning-tap>





The principal quantifiable economic and financial benefits consist of the amount and value of incremental water sales from 2023 to 2040 under different set of prices and assumptions. In addition to the core difference of using a higher price for valuing water, the economic analysis excluded taxes and price contingencies and used a discount rate of 6 percent. The financial analysis used cost estimates that were inclusive of both while utilizing a WACC of 4.58 percent as was the case with the original project EFA.

Table 6 Economic Analysis Summary

**Solomon Islands UWSSSP - Economic Analysis**

Year	Estimation of Economic Benefits			Incremental Costs			Cash Flow
	Total Incremental Water Due to Project	Economic Price Attributed to Water	Economic Value of Incremental Water	Investment Economic Cost - GHR Only	O&M Costs (New Sources Only)	Total Incremental Costs	
	M m <sup>3</sup> /year	US\$/m <sup>3</sup>	M US\$	M US\$	M US\$	M US\$	
	A	B	C = A*B	D	E	F = D + E	
2023	0.04	4.13	0.17	21.52	1.51	23.03	-22.86
2024	1.11	4.13	4.59	17.06	0.43	17.49	-12.90
2025	1.53	4.13	6.32	17.39	0.63	18.02	-11.70
2026	1.95	4.13	8.06	7.49	0.93	8.42	-0.36
2027	2.37	4.13	9.80	5.00	1.27	6.27	3.53
2028	2.79	4.13	11.54		1.27	1.27	10.28
2029	3.04	4.13	12.58		1.27	1.27	11.31
2030	3.29	4.13	13.62		1.27	1.27	12.35
2031	3.55	4.13	14.67		1.27	1.27	13.40
2032	3.80	4.13	15.72		1.27	1.27	14.45
2033	4.06	4.13	16.77		1.27	1.27	15.50
2034	4.14	4.13	17.11		1.27	1.27	15.85
2035	4.22	4.13	17.46		1.27	1.27	16.20
2036	4.31	4.13	17.82		1.27	1.27	16.55
2037	4.40	4.13	18.18		1.27	1.27	16.91
2038	4.49	4.13	18.55		1.27	1.27	17.28
2039	4.58	4.13	18.92		1.27	1.27	17.65
2040	4.67	4.13	19.29		1.27	1.27	18.03
<b>TOTALS</b>				68.46	21.27	89.72	

<b>NPV (Benefits)</b>	<b>128</b>
<b>NPV (Costs)</b>	<b>72.17</b>
<b>ERR</b>	<b>16%</b>
<b>E-NPV</b>	<b>55.67</b>
<b>C/B Ratio</b>	<b>1.77</b>

Opportunity Cost of Capital (Discount Rate) = 6%

Costs exclude price contingencies and taxes

Only water supply and related investment costs considered - sewerage and related costs were excluded.

Total incremental water refers to water generation from new sources plus savings in physical NRW

Investment costs were adjusted for price contingencies only. Taxes were already excluded in the base data.



Table 7 Financial Analysis Summary

**Solomon Islands UWSSSP - Financial Analysis**

Year	Estimation of Economic Benefits			Incremental Costs			Cash Flow
	Total Incremental Water Billed Due to Project	Financial Price of Water (WAWT)	Financial Value of Incremental Water	Investment Financial Cost - GHR Only	O&M Costs (New Sources Only)	Total Incremental Costs	
	M m <sup>3</sup> /year	US\$3/m3	M US\$	M US\$	M US\$	M US\$	
	A	B	C = A*B	D	E	F = D + E	
2023	-	2.76	-	23.01	1.68	24.69	-24.69
2024	1.05	2.76	2.91	19.52	0.48	20.00	-17.09
2025	1.67	2.76	4.61	20.69	0.70	21.39	-16.78
2026	2.29	2.76	6.31	9.27	1.03	10.30	-3.99
2027	2.91	2.76	8.03	6.44	1.41	7.85	0.18
2028	3.53	2.76	9.74		1.41	1.41	8.33
2029	3.90	2.76	10.76		1.41	1.41	9.35
2030	4.27	2.76	11.78		1.41	1.41	10.37
2031	4.65	2.76	12.81		1.41	1.41	11.40
2032	5.02	2.76	13.84		1.41	1.41	12.43
2033	5.40	2.76	14.87		1.41	1.41	13.46
2034	5.52	2.76	15.21		1.41	1.41	13.80
2035	5.64	2.76	15.55		1.41	1.41	14.14
2036	5.77	2.76	15.90		1.41	1.41	14.49
2037	5.89	2.76	16.25		1.41	1.41	14.84
2038	6.02	2.76	16.60		1.41	1.41	15.19
2039	6.16	2.76	16.97		1.41	1.41	15.56
2040	6.29	2.76	17.33		1.41	1.41	15.92
TOTALS				78.91	23.63	102.54	

**NPV - Benefit** 127

**NPV - Costs** 86.33

**FRR** 10%

**F-NPV** 40.22

**C/B Ratio** 1.47

WAWT stands for weighted average water tariff

It is assumed that the WACC of 4.58% would apply in the case of financial analysis as well.

**Costs include price contingencies and taxes**

Only water supply and related investment costs considered - sewerage and other costs were excluded.

Total incremental water refers to water generation from new wells plus savings in overall NRW

Incremental O&M costs were borrowed from Ecofin SW Costs Sheet

O&M for 2023 is cumulative from previous years

Investment cost is cumulative from previous years (2019-2022)

9. **Entity Level Financial Analysis:** The financial analysis performed above can be characterized as one which is project-based and incremental, as well as being partial. Its principal difference from the economic analysis is that it uses market prices, while the economic analysis employs economic prices. Such an entity level financial analysis has not been performed as part of this EFA. When performed, the entity level



analysis seeks to assesses the financial structure, efficiency, and viability of the project entity based on audited historical and pro forma financial statements, using financial ratio analyses and measurements against relevant industry comparators or averages. This analysis also discusses the appropriateness of tariffs in relation to long-run marginal cost and operating and maintenance costs and the effect of pricing and cost recovery policies generally on the financial viability of the entity.

10. To fill this void, an attempt was made to re-interpret the FRR, which is estimated at 10 percent, clearly exceeding the WACC of 4.58 percent by a wide margin. This is the first evidence of the financial viability of the proposed project based on the GHA water supply interventions. The cost/benefit ratio of 1.47 means that for every US\$1 invested, the entity earns US\$1.47, which should be sufficient to cover the cost of the investment while implying an overall rate of return of roughly 47 percent on the investment. This is the second piece of evidence that the proposed project is a viable one. Another way of looking at the FRR of 10 percent is that the entity is expected to earn 10 percent annually on the total investment plus operation and maintenance costs for the duration of the planned investment horizon. This would amount to about US\$8 million (US\$79 million investment cost<sup>24</sup> multiplied by 10 percent). Hence, the project is expected to pay back for the investment in about 15 years, which is an attractive prospect from the investor's standpoint. This represents the third piece of evidence concerning project viability.

11. **Sensitivity:** As a limited sensitivity analysis, the economic price of water was set equal to its financial price which yielded 9 percent ERR. Another test was performed, increasing the investment cost by 25 percent for the economic analysis, which still yielded an acceptable ERR of 6 percent, and which also represents the switching value. The reduced economic price of water at US\$2.5/m<sup>3</sup> also resulted in 6 percent ERR, representing another configuration for the switching value. Hence, it is surmised that the analysis is robust under parametric variation of the key variables. Comparable results are expected for the financial analysis.

12. **Justifying High Economic Returns in this EFA:** Literature shows that every US\$1 invested in water and sanitation provides a US\$4 economic return from lower health costs, more productivity, and fewer premature deaths.<sup>25</sup> This may correspond to an ERR in the order of 50 percent or higher. Similar evidence is provided by the WHO in the "Burden of disease attributable to unsafe drinking-water, sanitation and hygiene"<sup>26</sup> which states that "Every dollar invested in water and sanitation returns US\$4.3 and an estimated gain of 1.5 percent of global gross domestic product through reduced health care costs, as well as providing benefits such as reduced pollution, greater workplace productivity, increased school attendance and greater dignity, privacy and safety".

13. Therefore, the fact that the original project ERR is being exceeded under the provision of AF should be interpreted as tacit acknowledgement that the initial analysis underrated the ERR by equating the economic and financial price of water over and above the exclusion of many other pertinent benefits, the inclusion of which could have raised or potentially doubled both the initial and re-calculated ERR estimate.

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<sup>24</sup> It is expected that only about three fourths of the investment cost is subject to repayment after allowance for the grant portions of project financing.

<sup>25</sup> <https://water.org/our-impact/water-crisis/economic-crisis/>

<sup>26</sup> [https://iris.who.int/bitstream/handle/10665/75140/WHO\\_HSE\\_WSH\\_12.01\\_eng.pdf?sequence=1](https://iris.who.int/bitstream/handle/10665/75140/WHO_HSE_WSH_12.01_eng.pdf?sequence=1)



**Conclusion:** Based on the results of the analysis in Table 8 the AF is considered economically and financially viable.

*Table 8 Economic and Financial Analysis Results*

<b>Economic</b>		<b>Financial</b>	
ERR	16 percent	FRR	10 percent
E-NPV	US\$ 55.67 million	F-NPV	US\$ 40.22 million
Cost/Benefit Ratio	1.77	Cost/Benefit Ratio	1.47