

# PACIFIC URBAN UPDATE --- 2020







Creative Commons Attribution 3.0 IGO license (CC BY 3.0 IGO)

© 2020 Asian Development Bank  
6 ADB Avenue, Mandaluyong City, 1550 Metro Manila, Philippines  
Tel +63 2 8632 4444; Fax +63 2 8636 2444  
[www.adb.org](http://www.adb.org)

Some rights reserved. Published in 2020.

Publication Stock No.: ARM200166-2

The views expressed in this publication are those of the authors and do not necessarily reflect the views and policies of the Asian Development Bank (ADB) or its Board of Governors or the governments they represent. By making any designation of or reference to a particular territory or geographic area, or by using the term “country” in this document, ADB does not intend to make any judgments as to the legal or other status of any territory or area.

This work is available under the Creative Commons Attribution 3.0 IGO license (CC BY 3.0 IGO) <https://creativecommons.org/licenses/by/3.0/igo/>. By using the content of this publication, you agree to be bound by the terms of this license. For attribution, translations, adaptations, and permissions, please read the provisions and terms of use at <https://www.adb.org/terms-use#openaccess>

This CC license does not apply to non-ADB copyright materials in this publication. Please contact [pubsmarketing@adb.org](mailto:pubsmarketing@adb.org) if you have questions or comments with respect to content or permission to use. Corrigenda to ADB publications may be found at <http://www.adb.org/publications/corrigenda>.

Notes:

In this publication, “\$” refers to United States dollars.

Unless otherwise cited, the source for all tables and boxes is information provided by ADB’s Pacific Department to the author.

On the cover: Women from Tiki Village doing laundry along a river near Kotna-Lampramp road, Papua New Guinea.

Design credits for the icons: Joseph Manglicmot and Anthony Victoria.

# CONTENTS

ADB Urban Operations in the Pacific	iv
Overview	1
Regional Initiatives	7
Cook Islands	11
Federated States of Micronesia	12
Fiji	14
Kiribati	16
Marshall Islands	18
Nauru	21
Niue	23
Palau	24
Papua New Guinea	26
Samoa	29
Solomon Islands	30
Tonga	33
Tuvalu	36
Vanuatu	38
References	42

## TABLE, FIGURE, AND BOXES

### TABLE

Urban Population in Pacific Developing Member Countries	4
---	---

### FIGURE

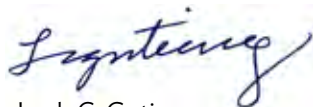
Risk-Informed Approach to Urban Planning and Control	40
--	----

### BOXES

1 ADB's Strategy 2030 and Urban Services in the Pacific	2
2 Emerging Initiatives in Regional Cooperation and Integration on Integrating Fragility into Urban Development	7
3 Spatial Analysis for Integrated Climate and Disaster Resilience in Port Vila	9
4 Saving Women's Time	17
5 Fecal Sludge Management in Port Moresby	28
6 What's Health Got to Do with Water	31
7 Tonga: Integrated Urban Resilience Sector Project	34

Welcome to the 2020 edition of the Pacific Urban Update of the Asian Development Bank (ADB). ADB's Pacific Department partners with governments, communities, and the private sector to increase access to essential goods, services, and opportunities, while building resilience to climate change and external shocks through improved urban services, including water supply, sanitation, and hygiene.

ADB's work in the Pacific urban sector supports its developing member countries in providing safe, efficient, and reliable urban services (including water supply and sanitation) that drive equitable socioeconomic growth and achieve sustainable results. By improving integrated urban solutions (planning, infrastructure, and capacity development), ADB seeks to help countries in the Pacific region build strong, healthy, and inclusive economies, while mitigating key challenges associated with their geographic isolation and limited resources. This update highlights some of ADB's core activities in the Pacific urban sector, the impacts these activities have on people's well-being and economic growth, and what ADB aims to achieve in the future in accordance with its Strategy 2030.



Leah C. Gutierrez  
Director General  
Pacific Department  
Asian Development Bank

## ACKNOWLEDGMENTS

The preparation of the *Pacific Urban Update 2020* was led by Anupma Jain with guidance from Jingmin Huang (Director, PAUW), and with contributions from Pacific Department colleagues and consultants. The *Pacific Urban Update 2020* discusses active and proposed programs, projects, and technical assistance (TA) active in Pacific developing member countries, as of 31 December 2019. A special thanks to contributors that prepared special features about the projects: Stephen Blaik, Maria Vicedo Ferrer, Lothar Linde, and Elizabeth Jung; and supported the overall publication process: Cecilia C. Caparas, Rhea Rochelle G. Vicente, Ana Theresa L. Cervantes, and Rhea Mae Pleños Maningo.

**For more information, contact:**  
**Urban Development, Water Supply and Sanitation Division**  
**Pacific Department**  
**Asian Development Bank**

**Jingmin Huang**, Director  
jhuang@adb.org

**Stephen Blaik**, Principal Urban Development Specialist  
sblaik@adb.org

**Anupma Jain**, Senior Urban Development Specialist  
ajain@adb.org

**Kristina Katich**, Senior Urban Development Specialist  
(Outposted in Pacific Subregional Office in Suva, Fiji)  
kkatich@adb.org

**Vivian Castro-Wooldridge**, Senior Urban Development Specialist  
vcastro@adb.org

**Alexandra Conroy**, Urban Development Specialist  
aconroy@adb.org

**Maria Vicedo Ferrer**, Urban Development Specialist  
mvicedoferrer@adb.org

**Yuki Ikeda**, Public Management Economist  
yukiikeda@adb.org

**Elizabeth Jung**, Young Professional  
ejung@adb.org

**Ryan Bert C. Peralta**, Associate Project Officer  
rperalta@adb.org

**Ana Theresa L. Cervantes**, Associate Project Analyst  
alcervantes@adb.org

**Rhea Rochelle G. Vicente**, Operations Analyst  
rvicente@adb.org

**Herzl Erin F. Banacia**, Operations Assistant  
hbanacia@adb.org

**Rhea Mae Pleños Maningo**, Operations Assistant  
rmaningo@adb.org

# ADB URBAN OPERATIONS IN THE PACIFIC

■ ACTIVE
 ■ PROPOSED



**PREPARING URBAN SERVICE IMPROVEMENT PROJECTS (PROJECT READINESS FINANCING)**  
 Proposed—Total financing: \$5.0 million  
**EBEYE WATER SUPPLY AND SANITATION PROJECT**  
 Active—Total financing: \$9.0 million  
**EBEYE SOLID WASTE MANAGEMENT PROJECT**  
 Proposed—Total financing: \$5.0 million  
**EBEYE WATER SUPPLY AND SANITATION PROJECT (ADDITIONAL FINANCING)**  
 Proposed—Total financing: \$3.0 million  
**MAJURO INTEGRATED URBAN SERVICE IMPROVEMENT PROJECT**  
 Proposed—Total financing: \$10.0 million



**CHUUK WATER SUPPLY AND SANITATION PROJECT**  
 Active—Total financing: \$5.0 million  
**CHUUK WATER SUPPLY AND SANITATION PROJECT**  
 Proposed—Total financing: \$14.0 million  
**KOSRAE WATER SUPPLY AND SANITATION EXPANSION PROJECT**  
 Proposed—Total financing: \$10.0 million



**KOROR-AIRAI SANITATION PROJECT**  
 Active—Total financing: \$28.8 million  
**KOROR-AIRAI SANITATION PROJECT, PHASE 2**  
 Proposed—Total financing: \$25.7 million



**WATER SUPPLY SCHEME FOR TETE SETTLEMENT**  
 Active—Total financing: \$0.8 million  
**URBAN WATER SUPPLY AND SANITATION PROJECT**  
 Proposed—Total financing: \$38.84 million  
**URBAN WATER SUPPLY AND SANITATION PROJECT (ADDITIONAL FINANCING)**  
 Proposed—Total financing: \$42.0 million



**URBAN WATER SUPPLY AND SANITATION SECTOR PROJECT**  
 Active—Total financing: \$57.35 million  
**URBAN WATER SUPPLY AND SANITATION SECTOR PROJECT (PROJECT READINESS FINANCING)**  
 Active—Total financing: \$3.0 million  
**URBAN WATER SUPPLY AND SANITATION SECTOR PROJECT (ADDITIONAL FINANCING)**  
 Proposed—Total financing: \$5.0 million  
**URBAN PLANNING PROJECT**  
 Proposed—Total financing: \$10.0 million



**URBAN DEVELOPMENT PROJECT**  
 Proposed—Total financing: \$5.0 million



**SOUTH TARAWA SANITATION IMPROVEMENT SECTOR PROJECT**  
 Active—Total financing: \$23.93 million  
**SOUTH TARAWA WATER SUPPLY PROJECT**  
 Active—Total financing: \$41.63 million  
**SOUTH TARAWA WATER SUPPLY PROJECT (PROJECT DESIGN ADVANCE)**  
 Active—Total financing: \$2.0 million  
**SOUTH TARAWA WATER SUPPLY PROJECT (ADDITIONAL FINANCING)**  
 Proposed—Total financing: \$5.0 million



**PREPARING THE FUNAFUTI WATER AND SANITATION PROJECT (PROJECT READINESS FINANCING)**  
 Proposed—Total financing: \$4.0 million  
**FUNAFUTI WATER AND SANITATION PROJECT**  
 Proposed—Total financing: \$9.0 million



**WASTEWATER AND SANITATION PROJECT**  
 Proposed—Total financing: \$20.0 million



**INTEGRATED URBAN RESILIENCE SECTOR PROJECT**  
 Active—Total financing: \$18.28 million  
**NUKU'ALOFA URBAN DEVELOPMENT SECTOR PROJECT**  
 Active—Total financing: \$14.52 million



**URBAN WATER SUPPLY AND WASTEWATER MANAGEMENT INVESTMENT PROGRAM - TRANCHE 1**  
 Active—Total financing: \$99.7 million  
**NADI FLOOD ALLEVIATION PROJECT**  
 Proposed—Total financing: \$150.0 million  
**URBAN WATER SUPPLY AND WASTEWATER MANAGEMENT INVESTMENT PROGRAM - TRANCHE 2**  
 Proposed—Total financing: \$155.3 million



**LUGANVILLE URBAN WATER SUPPLY AND SANITATION (PROJECT READINESS FINANCING)**  
 Active—Total financing: \$3.0 million  
**PORT VILA INTEGRATED URBAN IMPROVEMENTS PROJECT**  
 Proposed—Total financing: \$20.0 million  
**LUGANVILLE URBAN WATER SUPPLY AND SANITATION PROJECT**  
 Proposed—Total financing: \$16.6 million  
**PORT VILA INTEGRATED URBAN IMPROVEMENTS PROJECT (ADDITIONAL FINANCING)**  
 Proposed—Total financing: \$10.0 million  
**LUGANVILLE URBAN WATER SUPPLY AND SANITATION PROJECT, PHASE 2**  
 Proposed—Total financing: \$10.0 million

Note: Map excludes active and proposed technical assistance.

## ABBREVIATIONS

ADB	-	Asian Development Bank
DMCs	-	developing member countries
GIS	-	geographical information system
km	-	kilometer
km <sup>2</sup>	-	square kilometer
m <sup>3</sup>	-	cubic meter
MDG	-	Millennium Development Goal
O&M	-	operation and maintenance
OCR	-	ordinary capital resources
PNG	-	Papua New Guinea
PRF	-	project readiness financing
SDG	-	Sustainable Development Goal
SIDS	-	small island developing states
TA	-	technical assistance

## OVERVIEW

The Asian Development Bank (ADB) operates in 14 developing member countries (DMCs) in the Pacific region. These are the Cook Islands, the Federated States of Micronesia, Fiji, Kiribati, the Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu.<sup>1</sup> Most Pacific DMCs are small, remote, and fragile, and face natural constraints and external shocks that make achieving sustainable and inclusive growth challenging. Their small size and isolation increase the costs of providing services, while their high exposure to climate change and natural hazards and their narrow economic base make them extremely vulnerable to shocks.

ADB's Strategy 2030 aims to better respond to a rapidly changing situation and landscape in the Asia and Pacific region through a vision focused on achieving "a prosperous, inclusive, resilient, and sustainable Asia and the Pacific, while sustaining its efforts to eradicate extreme poverty" (ADB 2018). It recognizes the distinct development challenges of small island developing states (SIDS), and fragile and conflict-affected situations (FCAS) and promotes a differentiated approach to operations among Pacific DMCs.

Making cities more livable is one of ADB's seven operational priorities that focuses on delivering integrated solutions (Box 1). The concept of urban resilience is central to the Pacific DMCs. It goes beyond focusing on climate change and disaster risk management to including a range of other socioeconomic and institutional pillars of resilience. The Pacific Department is working to provide essential urban services to growing urban populations through a differentiated approach by addressing the root causes of vulnerability and fragility, including low institutional capacities for planning and managing urban development. This involves integrated and coordinated investments in urban water supply, sanitation, and other municipal infrastructure and services based on strategic agendas set forth in ADB's *Pacific Approach 2016–2020*. The Pacific Department is also strengthening regional coordination and integration through studies, support to regional networks (e.g., Pacific Water and Wastewater Association) and new initiatives (e.g., subregional solid waste management).

The *Pacific Urban Update 2020* discusses active and proposed ADB programs, projects, and technical assistance (TA) initiatives in Pacific DMCs as of 31 December 2019.

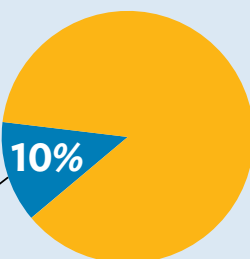
**In the Pacific, sea-level rises 4 times faster than the global average. By 2100, sea-level rise may reach more than 1 meter.**

Source: ADB. 2017. Climate Change in Asia and the Pacific (Infographic). Manila.

### URBAN PORTFOLIO IN THE PACIFIC

Urban development, water supply, and sanitation projects account for **more than 10%** of the total value of ADB's portfolio in the Pacific.

**17 urban development**, water supply, and sanitation projects at more than \$320.26 million.



### 2020–2022 ADB'S URBAN PIPELINE IN THE PACIFIC



**26 projects at \$579.39 million**, including \$123.10 million in cofinancing.

Note: Number of projects includes technical assistance.

<sup>1</sup> As of 1 October 2019, ADB's Southeast Asia Department includes Timor-Leste as part of its operations and portfolio management.



## Box 1: ADB's Strategy 2030 and Urban Services in the Pacific

ADB's Strategy 2030 sets operational priorities for achieving a more prosperous, inclusive, resilient, and sustainable development path in Asia and the Pacific. To do so, it establishes seven focus areas to guide its operations. Text boxes in this publication highlight the way in which Pacific urban initiatives are aligned with Strategy 2030. ADB's urban initiatives in the region support each operational area and are



**Addressing remaining poverty and reducing inequality** by (i) addressing the social dimensions of urbanization and critical issues of affordability, access, equity, health and well-being, and jobs; (ii) promoting inclusive urban planning and infrastructure; and (iii) promoting affordable urban water supply and sanitation, and access by the urban poor.



**Accelerating progress in gender equality** by (i) encouraging women-friendly city designs; (ii) promoting women's participation in urban water supply and sanitation planning and governance; (iii) promoting gender-responsive infrastructure designs and development; and (iv) including women as important stakeholders in consultations.



**Tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability** by (i) promoting an integrated approach, with coordinated and multisector planning, to address climate change mitigation and adaptation imperatives (i.e., risk-informed approach); (ii) installing resilient infrastructure that utilizes low-emission technologies and climate-resilient approaches; and (iii) employing nature-based solutions to urban water and flood risk management.



**Making cities more livable** by (i) localizing the global agenda on sustainable urban development and supporting cities in preparing and implementing city-specific plans for improved livability and well-being; (ii) enhancing urban governance, planning, and finance to help cities better engage with important stakeholders; (iii) transforming urban water supply and sanitation agencies into financially autonomous and accountable corporatized service providers; (iv) strengthening partnerships with the private sector on operation and maintenance; (v) ensuring wastewater is treated and reused, and promoting citywide inclusive sanitation systems, including sewer, non-sewer, and fecal sludge management solutions; (vi) establishing effective regulatory regimes and enforcement; and (vii) implementing waste reduction and management programs.



**Promoting rural development and food security** by strengthening rural-urban economic linkages through resilient urban water supply and sanitation planning, and infrastructure development; and incorporating a holistic approach to strategic long-term multisector urban planning that looks beyond the municipality administrative boundaries.



**Strengthening governance and institutional capacity** by (i) facilitating effective partnerships among the government, private sector, and civil society organizations to improve service provision; (ii) enhancing transparency and accountability of utilities and public institutions in cities; and (iii) improving urban water supply and sanitation service delivery to consumers and clients.



**Fostering regional cooperation and integration** by promoting regional and global public goods and regionalizing solid waste management, clean-up of ocean plastics pollution and improved oceans health.

## The Urban Context of Pacific Developing Member Countries

All 14 Pacific DMCs are considered small island developing states (SIDS), of which seven demonstrate the effects of fragility (Table 1).<sup>2</sup> Of the 14 Pacific DMCs, seven (the Cook Islands, Fiji, the Marshall Islands, Nauru, Niue, Palau, and Tuvalu) have over half of their population living in urban areas. Except for the Cook Islands and Samoa, urbanization rates are increasing in all Pacific DMCs.

People are increasingly attracted to towns, as these urban areas become centers of commerce, seats of government, and places of opportunity and hope. Informal settlements dominate urban growth and are now a permanent feature of the urban landscape in many Pacific towns and cities. These informal settlements are usually characterized as having inadequate levels of basic services and infrastructure, such as water, sanitation, and waste disposal. Utility providers often have no obligation to provide services to settlements, with insecure land tenure further hindering efforts to improve services to residents.


Urban concentration in many Pacific DMCs contributes to public health risks. This is reflected in statistics for the prevalence of diseases related to poor water, sanitation, and hygiene, such as diarrhea, gastroenteritis, dysentery, typhoid, conjunctivitis, tinea, and ringworm. Compact urban centers, while ideal for providing efficient services, require careful consideration during design to allow for sufficient public space, provisions that target enhanced community well-being, and systematic upgrading of urban health services to be able to respond to health emergencies and pandemics. Large household sizes are also common across Pacific DMCs, with an average of 8.2 people per household in the Marshall Islands and 6.2 people per household in Kiribati. These household sizes increase the likelihood of transmission of communicable diseases.

## Urban Development in Fragile and Conflict-Affected Situations of Pacific Developing Member Countries

Out of the 14 Pacific DMCs, seven are considered FCAS (the Federated States of Micronesia, Kiribati, the Marshall Islands, Nauru, Papua New Guinea, Solomon Islands, and Tuvalu). As all Pacific DMCs are considered SIDS, these classifications require a differentiated approach to working in the urban sector in the Pacific (see Table on the following page).

ADB is working to provide essential services to growing urban populations through a differentiated approach by addressing the root causes of their vulnerability and fragility, including low institutional capacities for planning and managing urban development. Specific interventions focus on (i) strengthening urban resilience in Pacific DMCs, (ii) assisting in urban strategic planning and multisector investment prioritization, and (iii) institutional strengthening and capacity development.

The Urban Development, Water Supply and Sanitation Division, together with the Social Sectors and Public Management Division, is implementing a regional TA project that draws out the lessons from incorporating fragility into urban development initiatives (the section under Regional Initiatives has more details).



**Rainwater harvesting.** A house in Kerema, Papua New Guinea that uses a basic rooftop rainwater collection method typical of residences in the area (photo by K. Marshall).

<sup>2</sup> For 2019 ADB Operations, the other FCAS countries include Afghanistan, Myanmar, and Timor-Leste.

**Table: Urban Population in Pacific Developing Member Countries**

Pacific Developing Nation	Total Population (million)	Land Area (km <sup>2</sup> )	Urban Population (million)	Urban Population (%)	GDP per Capita (current \$)	Number of Islands/ Atolls	Average Rate of Change of Urban Population 2010–2015 (%)	Fragile and Conflict-Affected Situations (ADB Operations, 2019)
Cook Islands	0.017	240	0.013	76.5	15,613	15	(-0.91)	
Fiji	0.919	18,274	0.521	56.7	5,639	332	1.69	
Kiribati	0.120	810	0.066	55.0	1,729	33	3.53	X
Marshall Islands	0.053	181	0.041	77.4	3,669	5 islands, 29 atolls made of up an indeterminate number of islets	0.82	X
Micronesia, Federated States of	0.107	702	0.024	22.4	3,300	607	0.30	X
Nauru	0.011	21	0.011	100.0	8,330	1	2.32	X
Niue	0.163	261	0.001	0.6	15,074 <sup>a</sup>	1	1.91	
Palau	0.022	189	0.018	81.8	16,261	More than 300	1.66	
Papua New Guinea	8.586	452,860	1.138	13.3	2,651	Approximately 600	2.15	X
Samoa	0.199	2,934	0.036	18.1	4,258	9 plus adjacent small islets	(-0.40)	
Solomon Islands	0.635	27,990	0.154	24.3	1,724	Approximately 998	4.33	X
Tonga	0.110	750	0.025	22.7	4,011	171	0.32	
Tuvalu	0.011 <sup>b</sup>	26	0.006 <sup>b</sup>	54.5	3,545	3 islands and 6 atolls (islets)	2.60	X
Vanuatu	0.288	12,274	0.073	25.3	2,876	84	2.67	
<b>TOTAL</b>	<b>12.593</b>		<b>2.546</b>	<b>20.2</b>				

Note: Figures maybe rounded to nearest decimal place.

km<sup>2</sup> = square kilometers, GDP = gross domestic product.

<sup>a</sup> Data as of 2016.

<sup>b</sup> Data as of 2017.

Sources: Asian Development Outlook database (2019); United Nations, Department of Economic and Social Affairs, Population Division (2017). World Population Prospects: The 2017 Revision, custom data acquired via website (2019 estimates); and United Nations, Department of Economic and Social Affairs, Population Division (2018). World Urbanization Prospects: The 2018 Revision, custom data acquired via website (2019 and 2015–2020 estimates); Government of Tuvalu. 2018. *Tuvalu Population and Housing Mini-Census 2017—Preliminary Report*. Funafuti.

## Spatial Urban Planning and Development in Pacific Developing Member Countries

Spatial urban planning and development in Pacific DMCs is essential to efficient land use, zoning, and development control for a defined physical area. It provides strategic direction and guidance for addressing urban growth issues, such as land use management, housing provisions, infrastructure development, environmental protection, and economic growth.<sup>3</sup>

ADB is exploring new operational modalities through multisector and integrated solutions. For instance, the regional TA project on *Implementing a Differentiated Approach to Urban Development in the Pacific* is promoting the delivery of integrated solutions covering capacity development for urban planning and project development, subregional solid waste management strategy, establishment of regional networks, and production of knowledge products to improve the quality of urban services in selected Pacific DMCs.

<sup>3</sup> ADB. 2012. *The State of Pacific Towns and Cities. Urbanization in ADB's Pacific Developing Member Countries. Pacific Studies Series*. Manila.



ADB is increasingly supporting Pacific DMCs in developing their long-term integrated urban strategic planning and multisector investment prioritization frameworks through its differentiated approach. These long-term plans include a common vision and aim at building an urban center in phases—first focusing on the nucleus of a city or urban center (i.e., central business district) before expanding to the outskirts and then synergizing overall planning and development activities. Owing to the nature of urban growth, these plans require coordination and cooperation between the municipality and neighboring province. ADB supported the Government of Solomon Islands in preparing the Greater Honiara Urban Development Strategy and Action Plan, which its cabinet approved in September 2018.

## Water Resources in Pacific Developing Member Countries

Water resources in Pacific DMCs are often limited to rainwater harvesting, which is vulnerable to natural variability in precipitation patterns or changes in storm tracks. Although surface water is found on islands with higher altitudes (parts of Fiji, Papua New Guinea, Solomon Islands, and Vanuatu), on low islands and atolls, it is often brackish and not usable as a freshwater resource. Groundwater—in particular, the fragile lenses found in the low-lying atolls of Kiribati, the Marshall Islands, Nauru, and Tuvalu—is increasingly under threat due to population growth in urban areas, contamination, and the impacts of climate change. These water resource challenges are leading governments to look for alternative water sources, which may also be resilient to the impacts of climate change.

## The Sustainable Development Goals

Of the 14 Pacific DMCs, seven met the Millennium Development Goal (MDG) for water, while 3 met the MDG for sanitation. The new Sustainable Development Goals (SDGs), which follow on from the MDGs, are a set of interrelated goals. While specific goals are set for sustainable cities and communities (SDG 11), and clean water and sanitation (SDG 6), the SDGs emphasize the importance of reaching across sector lines, breaking sector silos, and using resources more efficiently through a circular economy.

SDG 6 on water and sanitation aims to “ensure access to water and sanitation for all” by 2030. Specific targets under SDG 6 include achieving “universal and equitable access to safe and affordable drinking water for all” and achieving “access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.”

SDG 11 on livable cities aims to “make cities and human settlements inclusive, safe, resilient, and sustainable.” Specific targets under SDG 11 include reducing by 2030, the “number of deaths and number of affected people and decrease by  $y\%$  the economic losses relative to gross domestic product (GDP) caused by disasters, including water-related disasters, with the focus on protecting the poor and people in vulnerable situations,” and by 2020, increasing “by  $x\%$  the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, develop and implement in line with the forthcoming Hyogo Framework holistic disaster risk management at all levels.”

Both SDG 6 and SDG 11 are interlinked to other sector-specific SDGs (e.g., SDG 7 on affordable and clean energy) and those that are more crosscutting in nature (e.g., SDG 12 on responsible consumption and production and SDG 13 on climate change). For example, specific targets under SDG 12 include achieving “sustainable management and efficient use of natural resources” and reducing “waste generation through prevention, reduction, recycling, and reuse.”

The SDG targets provide an important foundation for developing sustainable cities and communities in the Pacific, providing improved water and sanitation services and delivering more efficient urban services more broadly.

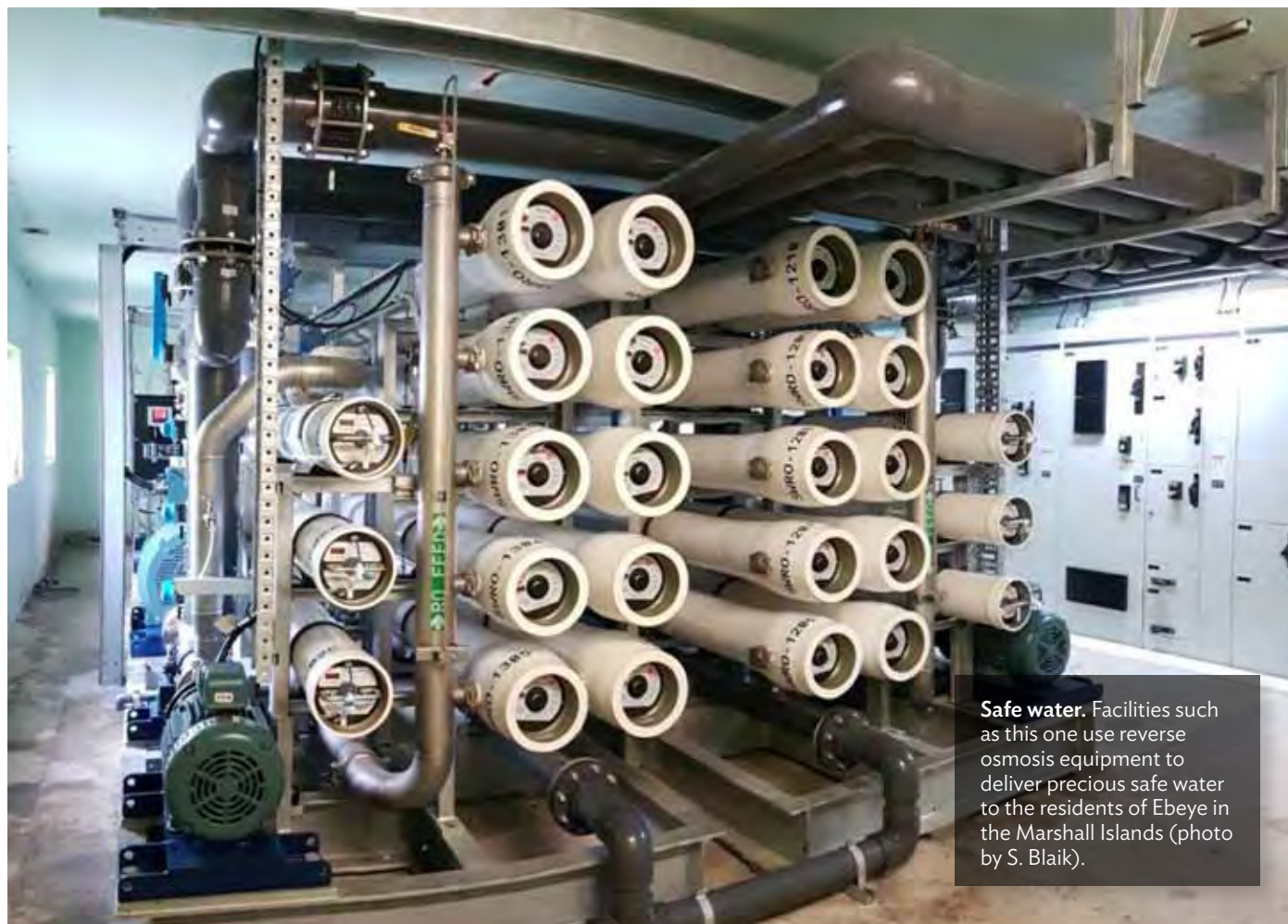
ADB supports Pacific DMCs in their efforts toward achieving the SDGs by 2030. ADB aligns its Pacific urban and water operations with DMC policies and ADB’s Strategy 2030, including our livable cities approach. The focus of ADB’s Pacific operations include

- sustainable urban and water supply services;
- inclusive and equitable access to urban and water services;
- resilience to climate change and other geohazards;
- technology introduction and innovation; and
- the importance of ecosystems in urban planning and design.

Sustainable social and economic development in the Pacific region's cities and towns requires significant investment and corresponding institutional reforms to improve the quality of, and access to, urban services. Together with Pacific DMCs, ADB is developing solutions on a case-by-case basis, according to the unique situation of each country and drawing upon lessons from past projects in the region. During project design and implementation, careful consideration is given to capacity constraints, climate change adaptation, gender equality, and identifying innovative approaches for ensuring the long-term sustainability of investments.

ADB's urban operations in the Pacific have focused on

- strengthening the sustainability and resilience of urban services;
- facilitating strategic urban planning and capital investment frameworks for urban centers, including application of geographic information system (GIS) for land-use planning;
- increasing access to safe water, improved sanitation, and hygiene management;
- upgrading and rehabilitating water supply networks, and reducing nonrevenue water;
- mainstreaming climate change adaptation and mitigation through climate-proofing urban infrastructure and assistance for accessing climate financing;
- using GIS in spatial planning and disaster risk and vulnerability assessments;
- capacity development of water utilities, utility reform and strengthening the financial performance of utilities;
- capacity development of planning ministries and municipality councils, including support on good governance and finance;
- benchmarking and monitoring performance of utilities through support to Pacific Water and Wastewater Association;
- promoting stakeholder engagement and empowering communities, including women and youth, in decision-making on water and sanitation services; and
- improving solid waste management services.



## REGIONAL INITIATIVES



### TECHNICAL ASSISTANCE

#### Implementing a Differentiated Approach to Urban Development in the Pacific

Support the integration of a differentiated approach to ADB's operations in the urban sector across the Pacific region.

**Technical assistance amount:** \$3.50 million

#### Funding sources

ADB (Technical Assistance Special Fund): \$3.00 million

Regional Cooperation and Integration Fund: \$0.50 million

**Executing agency:** ADB (Social Sector and Public Sector Management Division, Pacific Department)

**Implementing agencies:** Various

**Website:** <https://www.adb.org/projects/52259-001/main>

**Status:** Active

This regional TA project recognizes the distinct development challenges of SIDS and fragility and promotes a differentiated approach to operations in these groups of DMCs. The TA project is supporting the integration of a differentiated approach to ADB's operations in the urban sector across the Pacific region by focusing on (i) helping SIDS and FCAS adopt a longer-term horizon for planning, and support governments to prepare a more programmatic and multisector approach to urban infrastructure investments; (ii) strengthening institutional and capacity development; and (iii) strengthening regional coordination and integration through support for regional studies, existing and new regional networks (Box 2). The TA project is helping ADB tailor its approaches and processes to the needs and constraints of SIDS and FCAS, and enabling stronger resilience and sustainability of urban centers in the Pacific.

### Box 2: Emerging Initiatives in Regional Cooperation and Integration on Integrating Fragility into Urban Development



**Sovereign**  
**Approval:** 2019  
**Sector:** Public Sector Management (Public sector administration)  
**ADB:** \$0.95 million  
 Project No. 52259-001

- **Cross-border development challenge or opportunity.** A differentiated approach to Pacific island countries is needed to promote delivery of integrated solutions to making cities more livable.
- **Approach.** A regional cooperation and integration approach to urban resilience and solid waste management enables Pacific DMCs to garner blue economy opportunities based on shared natural resources, better waste management from land-based sources and greater urban resilience. The TA focuses on strengthening the resilience of urban areas in Pacific small island developing states and fragile and conflict-affected situations by addressing the root causes of their vulnerability and fragility, including low institutional capacities for planning and managing urban development. The two regional initiatives, supported by the TA and regional cooperation and integration fund, will develop: (i) a Pacific City Resilience Measurement Tool through the TA project's second output: delivery of capacity development and institutional strengthening for urban planning and project development, and (ii) a subregional solid waste management strategy and investment plan through the third TA project output: establishment of regional networks and production of knowledge products to support sustainable urban development.
- **Design/Innovation and distinct cross-border outcomes.** These two regional cooperation and integration initiatives will help create a common platform for increased regional cooperation among governments, reduced costs of doing business and providing quality urban services, and increased potential for private sector participation.
- **Expected impact and additionality.** This TA project is expected to strengthen resilience, productivity, and sustainability of urban centers in the Pacific.

ADB = Asian Development Bank, DMC = developing member country, TA = technical assistance.

Source: ADB. 2019. *Regional Cooperation and Integration Thematic Group Work Plan 2019–2022*. 30 October. Manila.





## **TECHNICAL ASSISTANCE**

### **Strengthening Urban Infrastructure Investment Planning in the Pacific**

Build the capacity of Pacific developing member countries to plan and assess priority urban infrastructure investments to support more sustainable urban development in Pacific cities and towns.

**Technical assistance amount:** \$2.70 million

**Funding source:** ADB (Asian Development Fund): \$2.70 million

**Executing agency:** ADB

**Implementing agencies (Various):**

Ministry of Land, Housing and Surveys (Solomon Islands); Ministry of Finance (Palau)

**Website:** <https://www.adb.org/projects/49460-001/main>

**Status:** Active

This regional TA project provides support to governments in preparing their strategic urban development plans and capital investment frameworks for major cities and key urban centers. It supports governments in developing a more coordinated, long-term, multisector approach to urban planning and development—with a common city vision and consideration to alternative development scenarios.

Such strategies and action plans respond to challenges caused by rapid urbanization and growth beyond city or municipality boundaries—taking into consideration growth and movement patterns outside into neighboring provinces, states, or wards. They reflect a consultative approach, with different stakeholders, including communities, civil society organizations, and the private sector; and define implementation arrangements involving key stakeholders. Such plans also assess delivery and management of urban services, addresses challenges and opportunities for municipal finance, and identifies priority investment needs linked to strategic urban development goals.

In Solomon Islands, for instance, the TA project supported the Ministry of Lands, Housing and Survey in preparing the Greater Honiara Urban Development Strategy and Action Plan, which was approved by its cabinet in September 2018.<sup>4</sup> In the Pacific region, it is the first example of how ADB, in partnership with a Pacific DMC, is implementing a differentiated approach to urban development in the Pacific. The strategy develops the concept of a livable and resilient city—in line with Strategy 2030. The regional TA project will support the preparation of similar urban strategies and investment plans in Palau and Nauru and subsequently, capacity development support in these countries.

The TA project provides governments support in GIS hazard risk mapping. In Vanuatu, GIS technology was used to overlay existing asset data with hazard risk data on maps. These maps illustrated areas of high risk and vulnerability. The government used these maps to inform their zoning and development control plan for Greater Port Vila (Box 3).

<sup>4</sup> ADB and the Government of Solomon Islands, Ministry of Lands, Housing and Survey. 2018. *Greater Honiara Urban Development Strategy and Action Plan*. Manila. <https://www.adb.org/projects/documents/reg-49460-001-dpta>.

### Box 3: Spatial Analysis for Integrated Climate and Disaster Resilience in Port Vila



With a disaster risk value of 50.28, Vanuatu ranks last among 172 countries analyzed by the World Risk Report.<sup>a</sup> This reflects the countries' challenging development context: strong economic and livelihood dependence on environmentally sensitive sectors in a location that is exposed to a broad spectrum of seismic and climate-related hazards. Tropical Cyclone Pam in 2015, for instance, caused damages and losses at a total economic value of \$449.4 million across the nation, which accounted for 64.1% of Vanuatu's gross domestic product.<sup>b</sup>

In recent years, the Government of Vanuatu has taken steps to account for environmental shocks in its urban investment. In 2015, a comprehensive set of hazard maps was produced by Beca under the Mainstreaming Disaster Risk Reduction (MDRR) project, covering two major urban areas—Port Vila and Luganville. The country has also undertaken efforts to map and maintain spatial data of urban assets at high resolution (PCRAFI, OSM).

Through the regional technical assistance for Strengthening Urban Infrastructure Investment Planning in the Pacific, ADB supported the Port Vila Municipal Council with a spatial climate and disaster-risk assessment using latest planning, hazard and asset data for Greater Port Vila. The spatial analysis yielded fine-grained results on climate change and disaster risk. By integrating available spatial data in a transparent analytical framework, and aggregating results to planning-relevant units, assumptions and observations could be verified using quantitative evidence.

For example, the exercise revealed the following key trends:

- (i) urban assets in the Greater Port Vila area tend to be exposed to at least two hazards (seismic–earthquake, climate–storm);
- (ii) the number of hazards and their individual magnitude generally increase from “ridge to shore;”
- (iii) the distribution of urban assets is broadly aligned with hazard hot spots; and
- (iv) highly sensitive and highly valuable zones have a significant share of their allocated area in hazard hot spots, while less sensitive/valuable zones seem to have comparably small shares of the area in hazard hot spots.

These trends are being used to support the Government of Vanuatu prepare a draft Greater Port Vila resilient urban development strategy and prioritize investments in urban resilience. It is also informing the preparation of an urban investment and capacity development project.

<sup>a</sup> Alliance Development Works. 2018. *World Risk Report 2018*.

<sup>b</sup> Government of Vanuatu. 2015. *Vanuatu: Post-Disaster Needs Assessment Tropical Cyclone Pam, March 2015*. Port Vila.

Authors: Anupma Jain and Lothar Linde.



#### **TECHNICAL ASSISTANCE**

#### **Pacific Urban Development Investment Planning and Capacity Development Facility**

Build the capacity of Pacific DMCs to plan and assess priority urban infrastructure investments to support more sustainable urban development in Pacific cities and towns.

**Technical assistance amount:** \$4.90 million

**Funding source:** ADB (Asian Development Fund): \$4.90 million

**Executing agency:** ADB

**Implementing agencies:** (Various)

Ministry of Internal Affairs and Vanuatu Project Management Unit (Vanuatu); Solomon Water (Solomon Islands); Water PNG; Eda Ranu and Department of National Planning and Monitoring (Papua New Guinea); and the General Directorate for Water and Sanitation (Timor-Leste)

**Website:** <https://www.adb.org/projects/51175-001/main>

**Status:** Active

The transaction TA facility is providing Pacific DMCs with technical support and policy advice in urban development, capacity building, and project preparation for a series of projects. The TA project is supporting the *Pacific Approach 2016–2020* strategic priority of enabling value creation by promoting livable and economically vibrant urban areas, supporting projects that will help governments with long-term urban planning to ensure that services can be sustained, and encouraging private sector and civil society organization involvement in the provision of urban infrastructure and services. The TA facility is also supporting the *Pacific Approach 2016–2020* by providing (i) stronger, better, and faster project delivery through the expanded use of regional approaches and faster delivery mechanisms, and (ii) improved generation and sharing of knowledge.

The TA facility is currently supporting project preparation in Solomon Islands, Vanuatu, and Papua New Guinea and will provide future project preparation support to Nauru. Technical expertise in project and contracts management, water, sanitation, and hygiene are being provided to governments in Papua New Guinea, Solomon Islands, and Vanuatu.



**Urban housing in Solomon Islands.** Typical urban housing in the Greater Honiara Area (photo by A. Jain).



# COOK ISLANDS



## Solid waste management.

A waste station site for communities to practice waste segregation in the Muri district in the Cook Islands (photo by ADB).

**Population (2019):** 17,000 (percentage of women not available)

**Urban Population (2019):** 76.5%

**Access to at least basic water supplies (2017):** 99.9% (urban: not available)

**Access to at least basic sanitation (2017):** 97.6% (urban: not available)



## **TECHNICAL ASSISTANCE**

### **Wastewater and Sanitation Project**

Increase access to environmentally safe sewerage systems and waste treatment facilities in urban centers.

**Technical assistance amount:** \$0.50 million

**Funding source:** ADB (Technical Assistance Special Fund): \$0.50 million

**Executing agency:** To be determined

**Implementing agencies:** To be determined

**Status:** Approval in 2020

**Proposed project amount:** \$20.00 million

#### **Funding sources**

ADB (ordinary capital resources [OCR]): \$20.00 million

Government: To be determined

**Website:** Forthcoming

**Status:** [Proposed in 2021/2022](#)

The Government of the Cook Islands' long-term investment aims to develop a centralized sewer and sanitation system and improve the water quality of the lagoons in Rarotonga and Aitutaki. The government is leading public consultations for a holistic approach including wastewater, land zoning, wetland protection, and urban planning.

# Federated States of Micronesia

**Access to safe water.** Children enjoy playing in a river in Pohnpei, Federated States of Micronesia (photo by ADB).

**Population (2019):** 106,983 (48.7% women)

**Urban population (2019):** 22.4%

**Access to at least basic water supplies (2017):** 78.6% (urban: not available)

**Access to at least basic sanitation (2017):** 88.3% (urban: not available)

**Utilities:**

Yap North–Gagil Tomil Water Authority

Yap Central–Yap State Public Service Corporation

Yap South–Southern Yap Water Authority

Kosrae–Department of Transportation and Infrastructure

Pohnpei Public Utilities Corporation

Chuuk Public Utilities Corporation



## **PROJECT READINESS FINANCING**

**Preparing the Chuuk Water Supply and Sanitation**

Prepare the Chuuk Water Supply and Sanitation Project and facilitate a transition to a smooth project implementation

**Project Readiness Financing (PRF) amount:** \$5.43 million

**Funding sources**

ADB (concessional OCR lending/Asian Development Fund): \$5.00 million

Government: \$0.43 million

**Executing agency:** Department of Finance and Administration

**Implementing agency:** Chuuk Public Utility Corporation

**Website:** <https://www.adb.org/projects/53284-001/main>

**Status:** Active

**Proposed project amount:** \$34.00 million

**Website:** Forthcoming

**Status:** Proposed in 2020



The PRF grant will prepare the Chuuk Water Supply and Sanitation Project and support a smooth transition to project implementation. The PRF will help streamline the initial contract awards for consulting firms, individual consultants, and equipment. It will also expedite disbursements. The PRF has three outputs: (i) an enabling environment for the ensuing investment project is created; (ii) the investment scope is identified, the project readiness is prepared, and key project components are procured; and (iii) a smooth transition to implementation by strengthening Chuuk Public Utility Corporation's water supply operations is developed.

The PRF is aligned with ADB's *Strategy 2030* operational priorities. Specifically, (i) address remaining poverty and reducing inequalities; (ii) tackle climate change, build climate and disaster resilience, and enhance environmental sustainability; (iii) make cities more livable; and (iv) strengthen governance and institutional capacity.

The preparation for the proposed water supply and sanitation project in Chuuk has commenced and is expected for approval by ADB in 2020. The proposed project will deliver sustainable and resilient water supply and sanitation services and will build on water supply improvements delivered in Chuuk under the Weno Water Supply Well Remediation Project (completed in 2012). The project will increase access in Chuuk State to efficient, uninterrupted, and sustainable water supply and sewerage services that are resilient to climate change and disasters. The project will have four outputs: (i) increased number of registered households with access to uninterrupted, safe, and climate and disaster resilient water supplies; (ii) provision of effective, efficient, and safe sanitation services to the residents of Chuuk; (iii) enhanced and sustained awareness and behavior of hygiene and water conservation to raise residents' awareness of water issues and willingness to pay, and sustainably improve their hygiene behavior; and (iv) continued strengthening of Chuuk Public Utility Corporation's (CPUC) financial, technical, and operational sustainability.



**Access to clean water.** A woman washes clothes at a river in Pohnpei in the Federated States of Micronesia (photo by ADB).



# FIJI

**Display of handicrafts.**  
Women weavers from the Fiji Arts Council present at the 2019 Fiji National Women's Expo (photo by K. Katich).

**Population (2019):** 918,757 (49.3% women)

**Urban Population (2019):** 56.7%

**Access to at least basic water supplies (2017):** 93.8% (urban: 97.8%)

**Access to at least basic sanitation (2017):** 95.1% (urban: 95.3%)

**Utilities:** Water Authority of Fiji



**Urban Water Supply and Wastewater Management Investment Program**

Increase access to reliable and adequate water supply, sanitary and environmentally safe sewerage systems, and waste treatment facilities in urban centers.

**Project amount:** \$405.14 million

**Funding sources**

ADB (OCR): \$153.20 million

Green Climate Fund: \$31.04 million

Government of Fiji: \$150.10 million

European Investment Bank (collaborative cofinancing): \$70.80 million

**Executing agency:** Ministry of Economy

**Implementing agency:** Water Authority of Fiji

**Website:** <https://www.adb.org/projects/49001-002/main>

**Status:** *Active*

Program Tranche 1: \$180.3 million

European Investment Bank: \$26.6 million

Asian Development Bank: \$42.1 million

Global Climate Fund: \$31.0 million

Government: \$80.7 million

Program Tranche 2: \$224.7 million (proposed)

ADB: \$111.1 million

EIB: \$44.2 million

Government: \$69.4 million

The two-tranche program involves building and renovating infrastructure to improve access to safe water and sewerage systems in the Greater Suva Area, ensuring that further growth is sustainable and public health is improved. A project design advance assisted the government in delivering the concept design for a design-and-build contract, the conceptual and detailed engineering designs for wastewater treatment (WWT) expansion and sewerage works, and the bidding documents for all works. The advance supported the technical evaluation of bid proposals as well as other preparatory work for the project. It allowed the government to complete detailed engineering designs and preliminary designs before the proposed urban water and sanitation upgrade project became effective.

The ongoing program is supporting several infrastructure investments. A new river water intake station on the Rewa River and associated water supply infrastructure will be constructed—expanding water supply by 40,000 cubic meters (m<sup>3</sup>) per day. The wastewater network will be rehabilitated and expanded and the Kinoya WWT plant and associated sewer coverage will be improved—expanding the WWT capacity at Kinoya by 164% to serve approximately 277,000 people.

The program has three distinct outputs: (i) improvement of supply and access to safe water in the Greater Suva Area; (ii) increased capacity for WWT and management in the Greater Suva Area; and (iii) improvement of the Water Authority of Fiji's management and sustainable service delivery capacity through program management and capacity development support. By improving the network and expanding the WWT capacity, the Water Authority of Fiji will ensure that 60% of households in the Greater Suva Area will have access to a reticulated sewage collection system. The remaining households with individual septic units will be catered by a fecal sludge management system.

The program also integrates climate change into the design and includes adaptation measures for building the new Rewa river scheme, specifically moving the facility from 29 kilometers (km) to 49 km from the river mouth. The design feature potentially avoids future climate change impacts embodied in projected rising sea levels and potential migration of the saltwater wedge up the river.



## **TECHNICAL ASSISTANCE**

### **Nadi Flood Alleviation Project**

Increase access to reliable and adequate supplies of safe water, sanitary and environmentally safe sewerage systems, and waste treatment facilities in urban centers.

**Technical assistance amount:** \$2.00 million

**Funding source:** ADB (Japan Fund for Poverty Reduction): \$2.00 million

**Executing agency:** Ministry of Economy

**Implementing agency:** Water Authority of Fiji

**Website:** <https://www.adb.org/projects/52233-002/main>

**Status:** Active

**Proposed project amount:** \$150.00 million

**Funding sources**

ADB (OCR): \$150.00 million

Government: To be determined

**Website:** Forthcoming

**Status:** Proposed in 2021/2022

The TA project will help prepare the proposed Nadi Flood Alleviation Project (NFAP), planned for approval in 2021. In 2017, Nadi town, which is Fiji's fourth-largest urban center after Suva, Nasinu, and Lautoka, had a population of 59,717. A commercial and tourism center of Fiji, Nadi significantly contributes to Fiji's GDP. The tourism industry accounted for earnings equivalent to 19.1% of GDP (2017). The proposed project will include structural and nonstructural measures to protect Nadi town and the lower Nadi river floodplain from increasingly regular floods and to sustain its strategic economic importance to Fiji.



# KIRIBATI

**Improved water supply.** A site for the proposed desalination plant is considered at McKenzie, South Tarawa, Kiribati (photo by S. Ayala).

**Population (2019):** 120,428 (50.7% women)

**Urban population (2019):** 55%

**Access to at least basic water supplies (2017):** 71.6% (urban: not available)

**Access to at least basic sanitation (2017):** 47.8% (urban: not available)

**Utilities:** Public Utilities Board



## South Tarawa Sanitation Improvement Sector Project

Improve sanitation infrastructure, sewerage and maintenance capacity, and public hygiene.

**Project amount:** \$25.89 million

### Funding sources

Government of Australia: \$13.95 million

ADB (concessional OCR lending/Asian Development Fund): \$10.36 million

Water Financing Partnership Facility: \$0.61 million

Government: \$0.97 million

**Executing agency:** Ministry of Finance and Economic Development

**Implementing agency:** Ministry of Infrastructure and Sustainable Energy

**Website:** <https://www.adb.org/projects/43072-013/main>

**Status:** *Active*

South Tarawa is formed by a series of islets located along the southern rim of Tarawa Atoll with a total land area of 15.76 square kilometers (km<sup>2</sup>). Almost 50% of Kiribati's population lives in South Tarawa. High population density, poor hygiene practices, and inadequate sanitation infrastructure have contributed to a high prevalence of waterborne diseases among South Tarawa's population, and to natural environment degradation. The project is supporting improvements in the health of communities in South Tarawa by (i) enhancing community engagement in, and public awareness of, hygiene and sanitation; (ii) rehabilitating and upgrading sanitation infrastructure; (iii) developing capacity in sector planning and operation and maintenance (O&M) of urban water supply and sanitation services; and (iv) creating a sanitation maintenance fund to ensure adequate financing to maintain sanitation infrastructure.





## Project Design Advance: South Tarawa Water Supply Project

Improve the health of South Tarawa's population through water supply infrastructure investments and hygiene practices

**Project amount:** \$2.00 million

**Funding source:** ADB (Asian Development Fund): \$2.00 million

**Executing agency:** Ministry of Finance and Economic Development

**Implementing agency:** Ministry of Infrastructure and Sustainable Energy

**Website:** <https://www.adb.org/projects/49453-003/main>

**Status:** Active



## South Tarawa Water Supply Project

Improve the health of South Tarawa's population through water supply infrastructure investments and hygiene practices

**Project amount:** \$61.83 million

**Funding sources**

ADB (Asian Development Fund): \$13.00 million

Green Climate Fund: \$28.63 million

World Bank: \$12.96 million

Government: \$7.24 million

**Executing agency:** Ministry of Finance and Economic Development

**Implementing agency:** Ministry of Infrastructure and Sustainable Energy

**Additional financing:** \$5.00 million (proposed)

**Website:** <https://www.adb.org/projects/49453-002/main>

**Status:** Approved

The project will continue from the ongoing South Tarawa Sanitation Improvement Sector Project in addressing factors resulting in the high incidence of waterborne diseases in South Tarawa, the capital of Kiribati, through the delivery and effective management of new and rehabilitated climate-resilient water supply assets and improved hygiene practices. The project includes four outputs: (i) building climate-resilient and low-carbon water supply infrastructure; (ii) increasing the capacity of the Ministry of Infrastructure and Sustainable Energy and Public Utilities Board to effectively manage water supply infrastructure; (iii) raising awareness of water, sanitation, and hygiene (WASH) and climate change issues; and (iv) efficient and effective management of project implementation.

A project design advance is assisting the Government of Kiribati to improve project readiness through surveys, preparation of detailed designs of the water supply network infrastructure, procurement support, safeguards support and community engagement, and project management support. ADB has assisted the government in securing grant financing of \$28.63 million from the Green Climate Fund to support the investment. Based on a household survey conducted during project preparation, a knowledge product, which outlines the water boiling practices of households in South Tarawa and estimates for related gas emissions, with consideration of gender elements is being prepared (Box 4).

### Box 4: Saving Women's Time

In relation to the ongoing Kiribati South Tarawa Water Supply Project, ADB is preparing a knowledge product based on the survey held during the project preparation. The survey was conducted in January 2018 and presents the water boiling practice of South Tarawa residents. A total of 200 households from 16 villages in South Tarawa cooperated in this survey. The study shows estimated costs, the gender disparities associated with boiling water, and provides a basis for greenhouse gas emission estimation on water boiling. The knowledge product will highlight the key findings from the survey and discuss the implications of the findings.

Author: Elizabeth Jung.

# MARSHALL ISLANDS

**Access to transportation.**  
Passengers disembark from ferry services at Ebeye dock in the Marshall Islands (photo by ADB).



**Population (2019):** 53,211 (estimated 49.6% women)

**Urban population (2019):** 77.4%

**Access to at least basic water supplies (2017):** 88.5% (urban: 86.7%)

**Access to at least basic sanitation (2017):** 83.5% (urban: 91.1%)

**Utilities:**

Majuro Water and Sewer Company

Kwajalein Atoll Joint Utility Resources



## Ebeye Water Supply and Sanitation Project

Improve access to safe water and improved sanitation in Ebeye.

**Project amount:** \$19.02 million

**Funding sources**

ADB (concessional OCR lending /Asian Development Fund): \$5.00 million

Government of Australia: \$4.00 million

Government: \$10.02 million

**Executing agency:** Office of the Chief Secretary

**Implementing agency:** Kwajalein Atoll Joint Utilities Resources

**Website:** <https://www.adb.org/projects/46346-002/main>

**Status:** Active

**Proposed additional financing:** \$3.00 million

**Funding source:** ADB (Asian Development Fund): \$3.00 million

**Status:** Proposed in 2020

Through the Ebeye Water Supply and Sanitation Project, the island's public water supply system will be improved, and safe drinking water supplied continuously to all households. A new seawater reverse osmosis plant, with a production capacity of 1,600 m<sup>3</sup> per day, has been built, along with two new saltwater wells with the capacity to fully meet saltwater demand. Since the new seawater reverse osmosis plant was commissioned in September 2017, the incidence of waterborne diseases in Ebeye has decreased by 37%.



The sewerage system in Ebeye will be upgraded to minimize the frequency and severity of uncontrolled sewage overflows, and to reduce environmental and health impacts. A hygiene awareness and promotion program, focusing on women and children, will be implemented over the duration of the project. The power generation and electrical distribution system on Ebeye will be improved to reduce risks to Ebeye's water supply and sewerage systems. A program will be implemented to help the Kwajalein Atoll Joint Utilities Resources implement its reform strategy to build its financial, technical, and operational sustainability.



## **PROJECT READINESS FINANCING**

### **Preparing Urban Service Improvement Projects**

Prepare two ensuing projects (the proposed Ebeye Solid Waste Management and Majuro Water Supply and Sanitation projects), facilitate the preparation of the projects, and facilitate a smooth transition to project implementation

**Project Readiness Financing amount:** \$5.50 million

#### **Funding sources**

ADB (concessional OCR lending/Asian Development Fund): \$5.00 million

Government: \$0.50 million

**Executing agency:** Ministry of Finance

**Implementing agency:** Ministry of Works, Infrastructure and Utilities

**Website:** <https://www.adb.org/projects/53351-001/main>

**Status:** Proposed in 2020

The PRF will prepare for two ensuing projects (the proposed Ebeye Solid Waste Management [SWM] and Majuro Water Supply and Sanitation projects), facilitate the preparation of the projects, and facilitate a smooth transition to project implementation. The PRF will also support the development of a strategic and integrated SWM investment plan for Majuro. The PRF has four outputs: (i) creating an enabling environment for the ensuing investment projects; (ii) identifying investment scope, achieving project readiness, and completing advance procurement activities for ensuing projects; (iii) reviewing tariff frameworks and fee collection systems and strengthening of the Majuro Water and Sewer Company (MWSC) water supply network operations; and (iv) developing an integrated SWM investment plan for Majuro.



**Landfill management.** An enclosed landfill is located in northern Ebeye island in the Marshall Islands (photo by E. Jung).





## Majuro Urban Service Improvement Project

Improve delivery of water supply, sanitation, and SWM services to urban households through better water sources and storage; collecting, purifying, and distributing water supply; and managing water supply, sanitation, and solid waste.

**Proposed project amount:** \$10.00 million

**Funding sources**

ADB (concessional OCR lending/Asian Development Fund): \$10.00 million

Government: To be determined

**Executing agency:** Ministry of Finance

**Implementing agency:** Ministry of Works, Infrastructure and Utilities

**Website:** Forthcoming

**Status:** [Proposed in 2021](#)

The proposed project will improve the quality and quantity of water supply, sanitation, and SWM services provided for 4,300 households in Majuro. The proposed outputs include (i) providing reliable, equitable, and resilient urban water supply services; (ii) ensuring availability of safe and efficient urban sanitation services; (iii) improvement of integrated SWM in Majuro; (iv) enhancing awareness of hygiene, water issues, waste recycling and reduction and sustaining improved hygiene behavior; and (v) strengthening the financial and technical sustainability of MWSC and Majuro Atoll Waste Company. The MWSC has prepared a comprehensive 20-year water and sanitation strategic investment plan, and water and sanitation development plan that identifies critical water supply and sanitation activities in Majuro. The proposed project will finance priority investments identified in the water and sanitation development plan. The PRF will support the government in preparing the proposed urban service improvement project.



## Ebeye Solid Waste Management Project

Improve the SWM for the communities in Ebeye Island located in the Kwajalein Atoll

**Proposed project amount:** \$5.00 million

**Funding sources**

ADB (concessional OCR lending/Asian Development Fund): \$5.00 million

Government: To be determined

**Executing agency:** Ministry of Finance

**Implementing agency:** Kwajalein Atoll Local Government (KALGOV)

**Website:** Forthcoming

**Status:** [Proposed in 2020](#)

The proposed project will support the establishment of a sustainable and integrated SWM system for 1,200 households in Ebeye. The PRF will assist Kwajalein Atoll Local Government (KALGOV) to prepare a project on SWM in Kwajalein Atoll. The ensuing project is proposed to assist KALGOV implement the reform strategy as set out in the *Kwajalein Atoll Solid Waste Management Plan 2019–2028* (Action Plan: 2019–2023) that will enable KALGOV to deliver improved and sustainable waste management services. The project outputs will include (i) introduction of the Container Disposal Legislation program; (ii) maintenance of waste collection services; (iii) improvement of disposal operations, including potential waste volume; and (iv) establishment of a financially sustainable SWM system.

# NAURU



**Traffic management.**  
A traffic roundabout is located near the airport in Nauru (photo by A. Jain).

**Population (2019):** 11,260 (estimated 49.2%)

**Urban population (2019):** 100%

**Access to at least basic water supplies (2017):** 99.5% (urban: 99.5%)

**Access to at least basic improved sanitation (2017):** 65.6% (urban: 65.6%)

**Utilities:** Nauru Utilities Corporation



## **TECHNICAL ASSISTANCE**

### **Urban Development Project**

Improve the delivery of the urban resilience project in Nauru

**Technical assistance amount:** \$0.50 million<sup>5</sup>

**Funding source:** ADB (Technical Assistance Special Fund): \$0.50 million

**Executing agency:** Ministry of Finance

**Implementing agencies:** To be determined

**Status:** *Active*

**Project amount:** \$5.00 million

**Funding source:** ADB (Asian Development Fund): \$5.00 million

**Government:** To be determined

**Website:** Forthcoming

**Status:** *Proposed in 2021/2022*

<sup>5</sup> Through the Pacific Urban Development Investment Planning and Capacity Development Facility.




ADB plans to help the Government of Nauru to address challenges presented by its growing population and land constraints. The proposed TA project will consider support for urban infrastructure and services such as water supply, sanitation, and drainage. It will build on existing government strategies and master plans, including the Pacific Regional Infrastructure Facility support for preparing the Nauru Integrated Infrastructure Sector Strategy, approved on 27 November 2019. Urban resilient infrastructure and services include, for example, water supply, sanitation, and drainage.



**Housing development.**  
Workers build cottages by the beach in Nauru (photo by ADB).



# NIUE



**Morning sunrise.** A view of the morning sky in Niue (photo by R. Rabanal).

**Population (2019):** 163,000 (percentage of women: not available)

**Urban population (2019):** 1.0%

**Access to piped improved water supplies (2017):** 86.9% (percentage of urban: not applicable)

**Access to at least basic sanitation (2017):** 78.0% (percentage of urban: not applicable)

Currently, there are no technical assistance, project readiness facilities, or proposed projects in the pipeline.





# PALAU

**Improved sewage systems.**  
Site of the Koror–Airai Sanitation Project in Palau, which is designed to help improve the country’s environment and public health (photo by ADB).

**Population (2019):** 22,204 (estimated 46.5% women)

**Urban population:** 81.8%

**Access to at least basic water supplies (2017):** 100.0% (urban: 100%)

**Access to at least basic sanitation (2017):** 100.0% (urban: 100.0%)

**Utilities:** Palau Public Utilities Corporation



## Koror–Airai Sanitation Project

Provide effective, efficient, and sustainable sewage collection systems in Koror and Airai

**Project amount:** \$28.80 million

### Funding sources

ADB (OCR): \$26.90 million

ADB (concessional OCR lending/Asian Development Fund): \$1.90 million

Government: \$1.20 million

**Executing agency:** Ministry of Finance

**Implementing agency:** Palau Public Utilities Corporation

**Website:** <https://www.adb.org/projects/42439-013/main>

**Status:** Active

The degraded condition and limited capacity of the Koror sewerage network, and rapid development and unsuitable soils for septic tanks in Airai are causing environmental and health issues with serious impacts on the Palau economy. The Koror–Airai Sanitation Project aims to improve the country’s environment and public health. The outcome of the project will be improved delivery of sanitation services by the Palau Public Utilities Corporation. This will be achieved through (i) effective, efficient, and sustainable sewage collection systems in Koror and Airai; (ii) sewage treatment and disposal that meets Palau’s environmental standards; (iii) safe and hygienic public toilet facilities in Koror; and (iv) effective project management.



## TECHNICAL ASSISTANCE

### Preparing Koror–Babeldaob Urban Development Strategy and Action Plan

Develop an urban multisector strategic development plan for improved land-use planning on Babeldaob Island

**Technical assistance amount:** \$0.50 million<sup>6</sup>

**Funding source:** ADB (Technical Assistance Special Fund): \$0.50 million

**Executing agency:** Ministry of Finance

**Implementing agencies:** State Governments

**Website:** <https://www.adb.org/projects/49460-001/main>

**Status:** Active

This TA project supports the (i) preparation of an urban development strategy and action plan for Koror–Babeldaob Island; and (ii) consultations with the Office of Palau Automated Land and Resource Information System on existing data and GIS maps of Palau and Babeldaob Island, including capacity development needs for more integrated resilience planning and development and integration of hazard risk maps into strategy preparation. The TA project also assists the government prepare a strategic vision for Babeldaob Island, which includes land-use planning and management, identifies sectors and industries for growth, and prioritizes key urban interventions (structural and nonstructural) for capital investment. In doing so, the TA project reviews the role Koror plays as an economic hub for driving development and land-use planning options for Babeldaob Island. The TA project team works with the national and state governments in developing a strategic document that maintains a balance among its economic, cultural, and physical environments, while optimizing the use of scarce resources in response to emerging opportunities. The proposed strategy and action plan are planned for government approval in 2020.



**Better sewer networks.** Rehabilitating and expanding the sewer network in Malakal and Meyuns in Palau (photo by ADB).

<sup>6</sup> Through the Strengthening Urban Infrastructure Investment Planning in the Pacific project.



# PAPUA NEW GUINEA



**Recreation on the beach.**  
Children play on the beach during sunset in Kimbe, Papua New Guinea (photo by ADB).

**Population (2019):** 8,586,525 (49.1% women)

**Urban population (2019):** 13.3%

**Access to at least basic water supplies (2017):** 41.3% (urban: 85.8%)

**Access to at least basic sanitation (2017):** 12.9% (urban: 47.8.2%)

**Utilities:** Water PNG, Eda Ranu



## TECHNICAL ASSISTANCE

### Support for Water and Sanitation Sector Management

Improve water and sanitation sector management and strengthen the government's capacity to implement the National Water, Sanitation and Hygiene (WASH) Policy of Papua New Guinea (PNG).

**Technical assistance amount:** \$1.688 million

#### **Funding sources**

ADB (Technical Assistance Special Fund): \$0.700 million

Government of Australia: \$0.738 million

Water Financing Facility–Multidonor Trust Fund: \$0.150 million

Bill & Melinda Gates Foundation: \$0.100 million

**Executing agency:** Department of National Planning and Monitoring

**Implementing agency:** Water PNG

**Website:** <https://www.adb.org/projects/49454-001/main>

**Status:** Active

This capacity development TA project is assisting the Department of National Planning and Monitoring, and Water PNG to strengthen the management and delivery of water and sanitation infrastructure, and to ultimately increase access to improved water and sanitation, particularly in urban settlements. The TA project is also supporting improved sector coordination and leadership, as well as feasibility studies for proposed investments in selected provincial towns to be pursued through the proposed Urban Water Supply and Sanitation Project (2020/2021).



## Urban Water Supply and Sanitation Project

Improve access to water supply and sanitation in provincial towns.

**Project amount:** \$38.82 million

### Funding sources

ADB (concessional OCR/Asian Development Fund): \$30.90 million

Government of Australia: \$3.42 million

High Level Technology Fund: \$2.50 million

Government: \$2.00 million

**Website:** <https://www.adb.org/projects/49454-001/main>

**Status:** Proposed in 2020/2021

The proposed project will improve access to safe water and sanitation in provincial towns of PNG. This will be achieved through the construction of water supply and sanitation infrastructure in selected provincial towns, which will be complemented by a hygiene awareness program. The project is in-line with PNG's National WASH Policy, which includes a target for 95% of the urban population to have access to a safe, convenient, and sustainable water supply and 85% of the urban population to have access to safe, convenient, and sustainable sanitation. Lessons learned from ADB interventions in PNG will be applied to the proposed project.



**Rainwater collection.** This basic rainwater collection practice in Kerema is typical for many homes in Papua New Guinea (photo by K. Marshall).





## Water Supply Scheme for Tete Settlement Project

Improve the health of PNG's peri-urban population

**Project amount:** \$0.93 million

**Funding sources**

ADB (People's Republic of China Poverty Reduction and Regional Cooperation Fund): \$0.80 million

Government: \$0.13 million

**Executing agency:** Department of National Planning and Monitoring

**Implementing agency:** Eda Ranu

**Website:** <https://www.adb.org/projects/50372-001/main>

**Status:** Active

The pilot project is expected to improve access to safe water in Tete settlement in the capital city of Port Moresby, PNG. Port Moresby has an estimated urban population of 800,000, of which more than half reside in informal settlements. The growth rate in informal settlements is between 5% and 8%, while for the urban population it is around 2%. This rapid urbanization has contributed significantly to a growing landless class living in squatter and informal settlements with limited or no access to basic social services. These settlements are now an established feature of the urban landscape in Port Moresby.

A community of 8,000 residents, Tete is on the northern outskirts of Port Moresby. It is currently serviced by one standpipe which provides an intermittent and unpredictable water supply. Through the project, Tete residents will benefit from new water supply infrastructure, which will be managed by the community. The intervention represents the piloting of a community-driven water supply in an informal settlement area with potential for scale-up or replication in PNG and regionally. The TA project on *Support for Water and Sanitation Sector Management* will complement this small stand-alone grant to implement a community-driven pilot.

To complement ADB's investments in PNG, support through a direct charge was provided in 2018-2019, financed by the Water Financing Partnership Facility, via the Sanitation Partnership Fund from Bill & Melinda Gates Foundation. The TA project aimed to improve access to safe sanitation in Port Moresby by exploring fecal sludge management and non-sewered sanitation options in PNG, including the provision of various training, awareness raising and knowledge activities to strengthen institutional capacity. A report on fecal sludge management in Port Moresby was completed, which provides a technical, social, and political economy assessment of the status of fecal sludge management in Port Moresby. The report is available online.<sup>7</sup> Box 5 provides an excerpt from the report.

### Box 5: Fecal Sludge Management in Port Moresby



“Half of the population in Port Moresby dispose of their faecal waste via networked wastewater systems (sewerage or storm water drains) of which only 10% is safely transported and treated. The networked wastewater system failures are caused by the congestion of the sewers with foreign objects and overloading with water. Almost all the other half of the population reside in non-networked or informal settlements using on-site sanitation systems with only 4% safely transported and treated. The on-site sanitation system failures are primarily caused by the failure to manage the effluent (liquid) rather than the sludge (solids). For dry pit toilets, excessive moisture in the pits destroys the aerobic digestion process rendering the pit contents unsafe. Limiting the intrusion of water, improving air flow and reducing their use for just urination will greatly improve the efficiency of dry pit toilets. For the water borne toilets, the high density of the soil in Port Moresby means that all the effluent cannot be absorbed by the leach drains leading to either the discharge of effluent to the storm water or the premature filling of septic tanks with effluent (not sludge). Separating the grey water from the black water will improve the efficiency of leach pits dramatically increasing the time between empties for septic tanks. Separating the grey water from the black water appears to be practical given that most households already appear to have separate grey and black water plumbing. Separating the grey water from black water also appears to be prudent, given that the efficiency of the water borne sanitation systems is compromised by excessive volumes of water and the effectiveness plagued by foreign objects (i.e. fats, oil, grease, soap, detergent) that often enter via the grey water.”

Source: ADB. 2019. *Papua New Guinea: Faecal Sludge Management in Port Moresby*. Consultant's report. Manila. <https://www.adb.org/sites/default/files/project-documents//tacr-en.pdf>.

<sup>7</sup> ADB. 2019. *Papua New Guinea: Faecal Sludge Management in Port Moresby*. Consultant's report. Manila. <https://www.adb.org/sites/default/files/project-documents//tacr-en.pdf>.



# SAMOA



**Afternoon smiles.**  
A mother and her children enjoy their day in Faleasiu Village in Samoa (photo by ADB).

**Population (2019):** 198,909 (48.4% women)

**Urban population (2019):** 18.1%

**Access to at least basic water supplies (2015):** 95.9% (urban: 99.5%)

**Access to at least basic sanitation (2015):** 96.6% (urban: 98.1%)

**Utilities:** Samoa Water Authority

Currently, there are no technical assistance, project readiness facilities, or proposed projects in the pipeline.



**Central Apia.** A rainbow rises over Central Apia, the capital and largest city of Samoa (photo by ADB).



# SOLOMON ISLANDS



**Investing in health and well-being.** Children share a smile on the outskirts of Honiara in Solomon Islands (photo by ADB).

**Population (2019):** 611,343 (% women)

**Urban population (2019):** 24.3%

**Access to at least basic water supplies (2017):** 67.8% (urban: 91.4%)

**Access to at least basic sanitation (2017):** 33.5% (urban: 77.9%)

**Utilities:**

Solomon Islands Water Authority (Trading as Solomon Water – “SW”)

Greater Honiara Urban Development Strategy and Action Plan 2035 (approved 2018)

The Greater Honiara Area is the center of Solomon Island’s urban growth and hosts the main international gateway and port of entry to the country. It is a hub for employment, public administration, education, and health services, and represents the largest single market for both local and imported products. The population in Greater Honiara Area is expected to grow from 100,000 in 2015 to 235,000 by 2035, with a significantly young population.



## **PROJECT READINESS FINANCING**

### **Preparing the Urban Water Supply and Sanitation Sector Project**

The project readiness financing will facilitate a smooth transition from preparation to implementation of the Urban Water Supply and Sanitation Sector Project and will minimize contracting delays and speed up the initial disbursements for the project.

**Project Readiness Facility amount:** \$3.32 million

**Funding sources**

ADB (concessional OCR lending/Asian Development Fund): \$3.00 million

Government: \$0.32 million

**Executing agency:** Ministry of Finance and Treasury

**Implementing agency:** Solomon Islands Water Authority

**Website:** <https://www.adb.org/projects/51271-002/main>

**Status:** Active

The PRF facilitates a smooth transition from preparation to implementation of the Urban Water Supply and Sanitation Sector Project. Under the PRF, consulting firms and individual consultants will be engaged to (i) conduct surveys required for the detailed engineering design of selected priority project components; (ii) deliver detailed engineering design and bidding documents for selected priority project components; (iii) support Solomon Islands Water Authority in procuring project goods, equipment, and civil works contracts, including bid evaluation, preparation of bid evaluation reports, and the award of contracts; (iv) strengthen the capacity of Solomon Islands Water Authority's project management unit; and (v) assist Solomon Islands Water Authority in preparing and implementing safeguard plans and community consultations.



Improve access to safe water and improved sanitation in urban and peri-urban areas of Solomon Islands

**Project amount:** \$92.82 million

**Funding sources**

ADB (Asian Development Fund): \$9.00 million

ADB (concessional OCR lending/Asian Development Fund): \$28.00 million

European Union: \$20.35 million

World Bank: \$15.00 million

Government: \$11.47 million

Solomon Islands Water Authority: \$9.00 million

**Executing agency:** Ministry of Finance and Treasury

**Implementing agency:** Solomon Islands Water Authority

**Website:** <https://www.adb.org/projects/51271-001/main>

**Status:** Active

**Proposed additional financing:** \$5.00 million

**Funding source:** Global Environment Facility: \$5.00 million

**Status:** Proposed in 2020

The Urban Water Supply and Sanitation Sector Project will improve access to safe water and sanitation in urban areas of Solomon Islands. The project outcome is efficiency, climate change and disaster resiliency, and sustainability of safe water and improved sanitation in Greater Honiara Area and five other urban areas. These towns include Auki, Gizo, Noro, Munda, and Tulagi.

The project will (i) secure safe urban water supply; (ii) provide effective, efficient, and safe urban sanitation services; (iii) enhance awareness of hygiene and water issues and sustained improved hygiene behavior; and (iv) support Solomon Water to become financially and technically sustainable. Key features include a focus on climate and disaster resilient water supplies, reduction of nonrevenue water, improved septage management and sewage discharge, increased knowledge of the benefits of improved sanitation and hygiene behavior, and improved operational efficiency and financial performance of the Solomon Islands Water Authority.

**Box 6: What's Health Got to Do with Water?**



Solomon Islands has a high incidence of waterborne diseases. Diarrheal diseases ranks sixth among the most common cause of death in Solomon Islands, accounting for 4.1% of deaths (or 28.1 deaths per 100,000 people). The high incidence of waterborne diseases can be primarily attributed to limited access to safe water and improved sanitation and poor hygiene awareness and behaviors. The high incidence of waterborne diseases will continue unless access to safe water and improved sanitation increases and hygiene behaviors change. Several programs to improve hygiene awareness and behaviors ("WASH") are being implemented in Solomon Islands. However, these WASH programs focus primarily on rural areas and few, if any, comprehensive and long duration urban and peri-urban WASH programs exist. Solomon Islands failed to achieve Target 7C of the Millennium Development Goals. Between 2000 and 2015, access to safe water there only increased by 1.1% (from 79.7% in 2000), and sanitation increased by 4.3% (from 25.5% in 2000). Without substantial investment to improve access to safe water and sanitation, Solomon Islands is unlikely to achieve Goal 6 of the Sustainable Development Goals.





Improve access to integrated and resilient urban services in Greater Honiara

**Project amount:** \$10.00 million

**Funding sources**

ADB (concessional OCR/Asian Development Fund): \$5.00 million

ADB (Asian Development Fund): \$5.00 million

Government: To be determined

**Executing agency:** Ministry of Finance and Treasury

**Implementing agencies:** Ministry of Lands, Housing and Survey; Honiara City Council; and Guadalcanal Provincial Government

**Website:** Forthcoming

**Status:** Proposed in 2021/2022

The proposed project will select prioritized infrastructure from the Greater Honiara Urban Development Strategy and Action Plan (GHUDSAP) approved in 2018. ADB assisted the Ministry of Lands, Housing and Survey prepare the GHUDSAP from concept to approval. The GHUDSAP is a strategic, long-term, integrated, and institutionally resourced strategy that will guide sustainable urban development to 2035. It also provides guidance on actions required by stakeholders to ensure that initiatives are well-coordinated to yield optimal results.

The strategy and action plan provide the foundation for ADB to pursue a sector lending project. A focus on integrated urban planning and governance, improved financial sustainability, and greater urban resilience are aligned with *Strategy 2030* and operational priorities.



**Environmental sanitation.** Maintaining a healthy environment is important for future generations in Greater Honiara, Solomon Islands (photo by A. Jain).

<sup>8</sup> Technical assistance amount and source to be determined.



# TONGA



**Piped water supply networks.** Construction workers lay out water pipes in Nuku'alofa, Tonga (photo by ADB).

**Population (2019):** 110,041 (49.8% women)

**Urban population (2019):** 22.7%

**Access to at least basic water supplies (2017):** 99.9% (urban: 99.8%)

**Access to at least basic sanitation (2017):** 93.4% (urban: 96.6%)

**Utilities:** Tonga Water Board, Waste Authority Limited



**Nuku'alofa Urban Development Sector Project**

Improve urban planning and management, and to deliver sustainable urban services in the capital, Nuku'alofa

**Project amount:** \$14.53 million

**Funding sources**

ADB (concessional OCR/Asian Development Fund): \$6.06 million

Government of Australia: \$8.47 million

**Executing agency:** Ministry of Finance and National Planning

**Implementing agencies:** National Spatial Planning Authority Office; Waste Authority Limited

**Website:** <https://www.adb.org/projects/42394-022/main>

**Status:** *Active*

The Nuku'alofa Urban Development Sector Project is providing high-priority urban infrastructure identified in the Nuku'alofa Urban Infrastructure Development Plan. The project is also strengthening the policy environment for the delivery of urban services. It is expanding on infrastructure development undertaken through the Nuku'alofa Reconstruction Project and the Integrated Urban Development Sector Project. Outcomes from the project will include (i) a strengthened policy environment for the delivery of urban services; (ii) effective, efficient, and sustainable water supply services in Nuku'alofa (core subproject provided by the Tonga Water Board); (iii) sustainable solid waste services in Nuku'alofa (core subproject provided by Waste Authority Limited); (iv) other municipal infrastructure upgraded and well-maintained; (v) increased community awareness of municipal services; and (vi) effective project management services.



## Integrated Urban Resilience Sector Project

Improve the living standards in Nuku'alofa and strengthen its resilience to extreme natural events and to the threat of climate change

**Project amount:** \$21.32 million

**Funding sources**

ADB (Asian Development Fund): \$18.28 million

Government: \$3.04 million

**Executing agency:** Ministry of Finance

**Implementing agencies:** Ministry of Lands and Natural Resources

**Website:** <https://www.adb.org/projects/49455-002/main>

**Status:** Active

Development pressure in Tonga's capital, Nuku'alofa, is increasing due to population growth. Further investment in sustainable urban infrastructure is required, particularly on building disaster and climate change resilience. The Integrated Urban Resilience Sector Project will provide high-priority urban infrastructure and will improve living standards in Nuku'alofa and strengthen its resilience to disaster and climate change. Outputs from the project will include (i) implementation of an effective flood risk management infrastructure; (ii) improvement of water supply service in Nuku'alofa; (iii) enhancing public and environmental health; and (iv) strengthening urban resilience (Box 7).

### Box 7: Tonga: Integrated Urban Resilience Sector Project



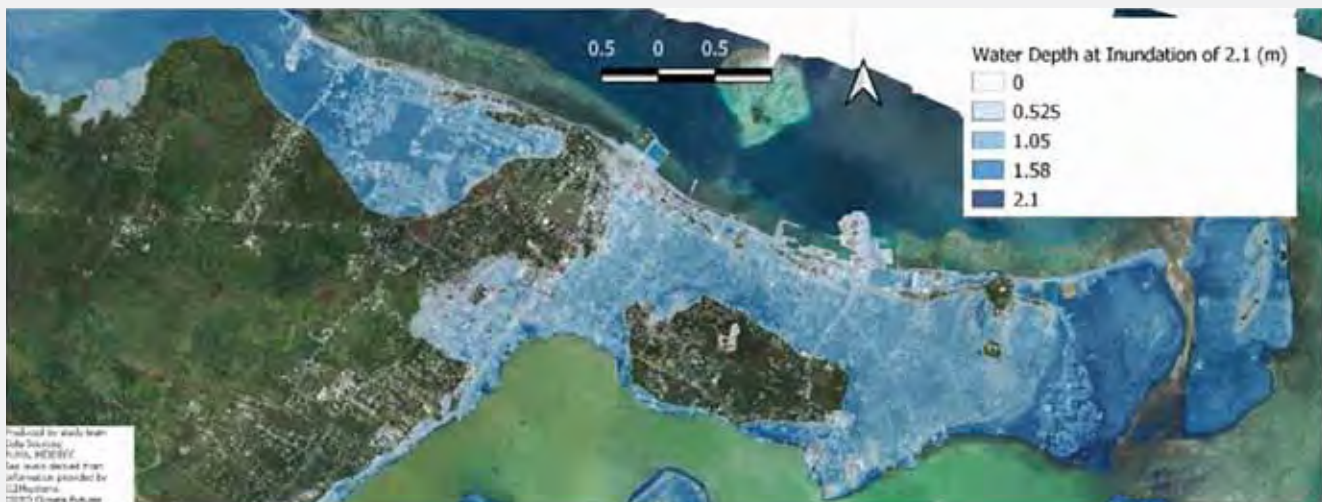
<b>Approval Date:</b>	28 August 2019
<b>Commitment Year:</b>	2019
<b>Completion Date:</b>	2025
<b>Modality:</b>	Sector Grant
<b>Total:</b>	\$21.32 million
<b>ADB:</b>	\$18.28 million
<b>Government:</b>	\$03.04 million

The Integrated Urban Resilience Sector Project provides priority infrastructure, enhances the delivery of public urban services and supports urban planning to improve Nuku'alofa's living standards and resilience to climate change. This project manages the nexus of urban floods, solid waste, water supply, wastewater, and urban planning in a holistic manner, providing solutions not only to current priorities but also supporting the planning of long-term adaptation solutions to climate change threats and natural hazards.

### Issues and Problems

The World Risk Index ranks Tonga as the second-highest country in the world in terms of risks from natural hazards, mainly because of its high exposure to a number of geophysical hazards and worsening climate-related hazards.

### Projected flooding due to sea-level rise





Box 7: continued

The greatest long-term threat is sea-level rise, which will lead to permanent inundation of low-lying areas throughout the country. In Nuku'alofa, Tonga's capital city, the initial impacts are already observable. In the districts of Popua and Sopa, rising sea levels have led to inundation during spring tides, which is exacerbated by haphazard filling and lack of planning for proper drainage and water flow.

By 2100, mean sea level is projected to be approximately 1 meter higher than present under an RCP8.5 scenario. By that time, significant parts of Nuku'alofa will lie below sea level. However, 20 or so years before that point, sea-level rise will start having negative impacts, including dying vegetation, decreased functioning of septic systems, increased coastal erosion, and decreased drainage capacities and effectiveness.

Ponding of water increases health risks, which are exacerbated by poor sanitation, as the septage sludge treatment facilities do not have sufficient capacity. Solid waste management capacities are insufficient and need to be augmented, and the water supply system needs improvement to reduce nonrevenue water and improve water resources management in view of more frequent droughts brought about by climate change.

### Project Approach and Solutions

The project builds on previous urban projects in Tonga but takes one step further in terms of building resilience to climate change and improving long term sustainability, as it emphasizes long-term asset management and sustainability through all its components.

### Flood management infrastructure



To reduce flood risk, the project will rehabilitate and provide new flood management and drainage infrastructure at seven flood-prone locations throughout Nuku'alofa. The flat terrain of Nuku'alofa limits engineering options to mitigate flooding, and in areas where trunk channels might be effective, mitigating flooding beyond once-in-2-year events would require very wide channels. Because of these challenges, a citywide flood management system is not viable. However, some infrastructure and nature-based solutions will be implemented to ease flooding in parts of the city in the short to medium term.

To adapt to the significant long-term climate change impacts, the project will prepare a climate and disaster resilient urban development strategy and investment plan to strengthen urban resilience planning in the long term, providing support to the Government of

Tonga to design a long-term climate change adaptation pathway solution for Nuku'alofa through a strategic, flexible, and structured long-term investment planning process.

To enhance public and environmental health, the project will enhance septage and solid-waste management and collection in Tongatapu by upgrading the Tapuhia septage and leachate wastewater treatment plant, constructing a new sanitary landfill cell, providing a new office and a mechanical servicing facility at Tapuhia sanitary landfill; and procuring essential equipment to expand waste management operations.

To improve the water supply service, the project will reduce nonrevenue water through the rehabilitation and upgrade of Nuku'alofa's piped water distribution network and will improve Tonga Water Board operation and maintenance capacities by providing new equipment and capacity building to use water supply models and field data to guide the planning and implementation of pipe distribution network upgrades.

ADB = Asian Development Bank.

Author: Maria Vicedo Ferrer.

# TUVALU

Funafuti. An aerial view of the Funafuti coastline (photo by K. Katich).

**Population (2019):** 10,500 (percentage of women not available)

**Urban Population (2019):** 54.5%

**Access to at least basic water supply (2017):** 99.3% (urban: 49.8%)

**Access to at least basic sanitation (2017):** 77.8% (urban: 78.6%)



## **PROJECT READINESS FACILITY**

### **Funafuti Water and Sanitation Project**

Prepare ensuing project (the proposed Funafuti Water and Sanitation Project) and facilitate a smooth transition from preparation to implementation

**Project Readiness Facility amount:** \$4.35 million

#### **Funding sources**

ADB (Asian Development Fund): \$4.00 million

Government: \$0.35 million

**Executing agency:** Ministry of Finance

**Implementing agencies:** To be determined

**Website:** Forthcoming

**Status:** [Proposed in 2020](#)

The PRF will prepare the ensuing project (the proposed Funafuti Water and Sanitation Project), and facilitate its preparation and smooth transition to project implementation. The PRF has the following three outputs: (i) creating an enabling environment for the ensuing investment project, (ii) identifying the investment scope, and (iii) completing detailed engineering designs.





Increase access to safe water and improved sanitation to reduce the incidence of waterborne diseases in Funafuti

**Proposed project amount:** \$9.00 million

**Funding sources**

ADB (Asian Development Fund): \$4.00 million

Global Environment Facility: \$5.00 million<sup>9</sup>

Government: To be determined

**Executing agency:** Ministry of Finance

**Implementing agencies:** To be determined

**Website:** Forthcoming

**Status:** Proposed in 2022

The proposed investment project will increase access to safe water and improved sanitation to reduce the incidence of waterborne diseases in Funafuti. The project outputs and investments will be identified and selected during the project preparation phase. Possible outputs include (i) improvement of water supply infrastructure and services, (ii) improvement of sanitation infrastructure and services; (iii) enhancing and sustaining awareness and behavior of hygiene and water conservation; and (iv) financially and technically sustaining water supply and sanitation services.



**Construction activities.** A construction employee oversees activities at a park in Tuvalu (photo by ADB).

<sup>9</sup> Proposed, to be confirmed.

# VANUATU

**Spatial planning in development.**  
An aerial view of Port Vila provides information on how the city is spatially laid out (photo by A. Jain).



**Population (2019):** 288,000 (49.3% women)

**Urban population (2019):** 25.3%

**Access to at least basic water supplies (2017):** 47.1% (99.5% urban)

**Access to at least basic sanitation (2017):** 34.1% (48.3% urban)

**Utilities:** Union Electrique du Vanuatu Limited



## Port Vila Urban Development Project

Expand access to basic services in the capital, Port Vila, and surrounding areas in Shefa province.

**Project amount:** \$38.87 million

### Funding sources

ADB (concessional OCR lending/Asian Development Fund): \$5.00 million

Government of Australia: \$31.00 million

Global Environment Facility: \$2.87 million

**Executing agency:** Ministry of Finance and Economic Management

**Implementing agencies:** Ministry of Infrastructure and Public Utilities; Department of Environmental Protection and Conservation

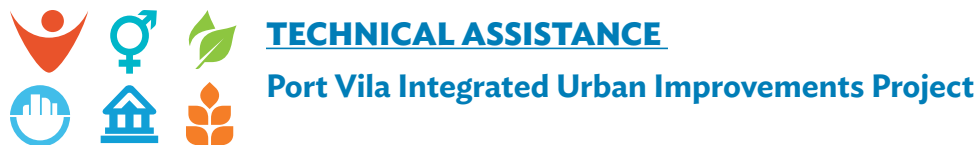
**Website:** <https://www.adb.org/projects/42391-013/main>

**Status:** Active

The Port Vila Urban Development Project is improving drainage, roads, and sanitation systems in the Greater Port Vila area (taking in the municipality and adjacent urban and peri-urban areas in the Shefa province). The project will implement the recommendations of the drainage and sanitation master plan, prepared through the project preparatory TA. The master plan identified priority interventions for improved access to, and delivery of, drainage and sanitation services for the residents of Port Vila. It will support affordable, sustainable, and effective sanitation, roads, and stormwater drainage services, and contribute to climate-resilient, sustainable urban development in and around Port Vila.



The project will address the following key issues: (i) links between sanitation and drainage and road development, (ii) poor coordination in the delivery of services and weak capacity of institutions, (iii) the role of hygiene as an integral part of improved sanitation, (iv) gender mainstreaming and universal access to basic services, (v) O&M and the sustainability of drainage and sanitation services, and (vi) mitigating adverse environmental impacts and adapting to climate change.



Improved access to integrated resilient urban services is in Greater Port Vila.

**Technical assistance amount:** \$0.50 million<sup>10</sup>

**Funding source:** ADB (Technical Assistance Special Fund): \$0.50 million

**Executing agency:** Ministry of Finance and Economic Management

**Implementing agencies:** Ministry of Internal Affairs; Port Vila Municipal Council

**Website:** <https://www.adb.org/projects/51175-001/main>

**Status:** Active

**Proposed Project amount:** \$23.20 million

**Funding sources**

ADB (concessional OCR lending/Asian Development Fund): \$13.70 million (including Disaster Risk Reduction of \$5.12 million)

ADB (Asian Development Fund): \$6.30 million (including Disaster Risk Reduction of \$5.12 million)

Global Environment Facility: \$2.50 million

Ireland Trust Fund: \$0.70 million

Government: To be determined

**Executing agency:** Ministry of Finance and Economic Management

**Implementing agencies:** Ministry of Internal Affairs; Port Vila Municipal Council

**Website:** <https://www.adb.org/projects/52031-001/main>

**Status:** Proposed in 2020

**Proposed additional financing:** \$10.00 million

**Status:** Proposed in 2021/2022

Greater Port Vila is the economic hub and capital city of Vanuatu. In 2016, it had a total population of about 81,712. The Port Vila Municipality had a population of about 51,437. The projected population of Greater Port Vila in 2030 is 111,808. The proposed project will contribute to the city's long-term vision—Greater Port Vila is safe, inclusive, resilient, and a vibrant economic hub based on sustainable development.

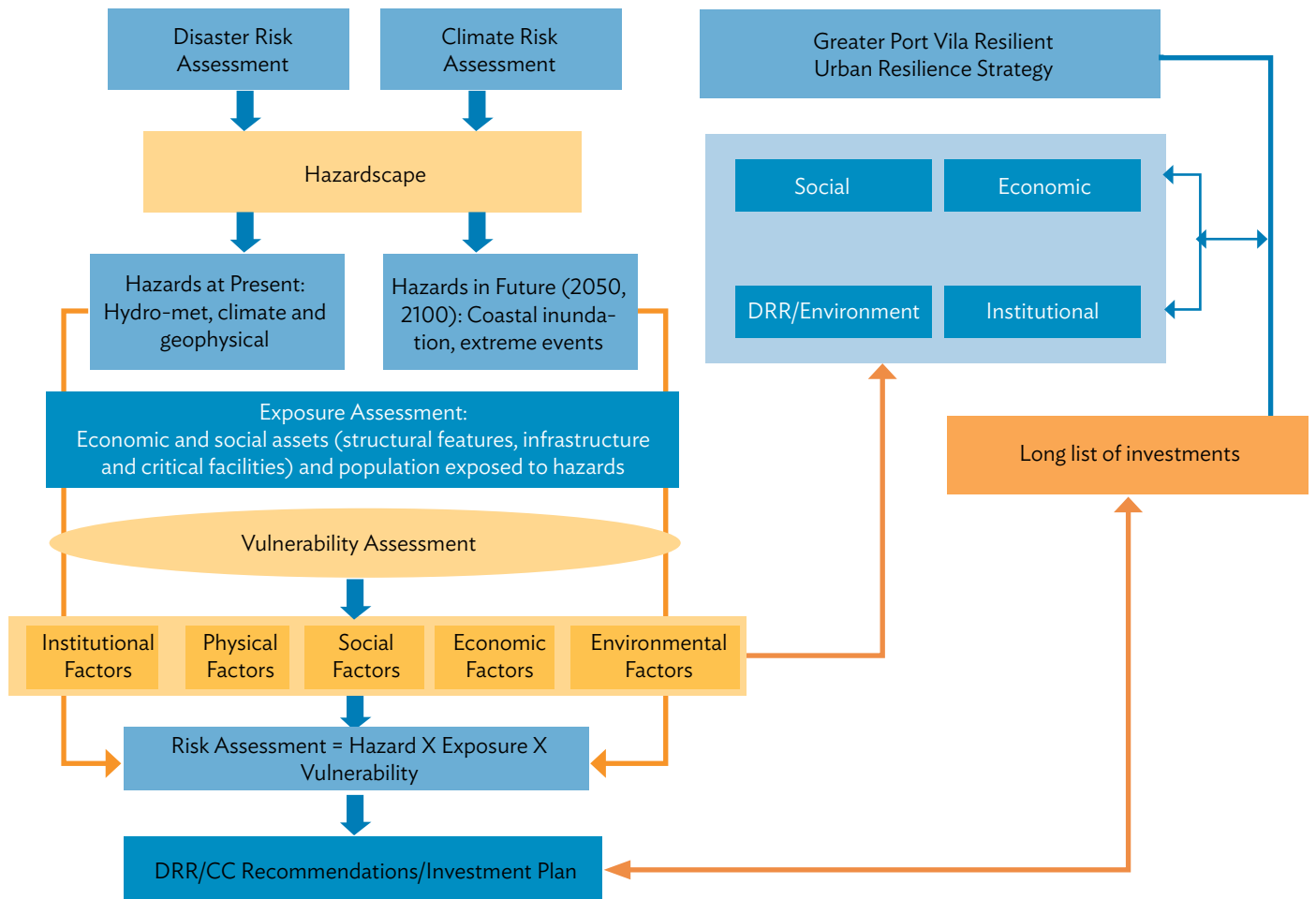
Vanuatu has been ranked as the country most at risk from natural hazards in the annual World Risk Report.<sup>11</sup> Its geographical location in the equatorial cyclone belt makes it highly exposed to climate-related natural hazards, while its islands and atolls are vulnerable to sea level rise. The island country is also located on the Pacific volcanic ring, making it heavily exposed to volcanic activity, earthquakes, and tsunamis. ADB is currently assisting the Government of Vanuatu in preparing the proposed project through an ADB TA project grant.

The proposed project focuses on urban resilience and supporting reforms to help strengthen the urban sector. It also provides a strong institutional foundation for sector development and control, as well as operation and maintenance of urban assets in Port Vila. The proposed project is a sector lending project, envisioned to have four outputs: (i) resilience in urban planning and management is strengthened; (ii) resilient urban infrastructure is constructed in Greater Port Vila; (iii) urban resilience is enhanced through local partnerships; and (iv) project management and operation and maintenance are strengthened.

<sup>10</sup> Through the Pacific Urban Development Investment Planning and Capacity Development Facility.

<sup>11</sup> Alliance Development Works. 2018. *World Risk Report 2018*. <https://reliefweb.int/sites/reliefweb.int/files/resources/WorldRiskReport-2018.pdf>.

**Figure: Risk-Informed Approach to Urban Planning and Control**



CC = climate change, DRR = disaster risk reduction.

Source: Asian Development Bank. 2019. *Disaster Risk Assessment/Climate Risk and Vulnerability Assessment for Port Vila Integrated Urban Improvements Project*. Consultant's final report prepared by Tonkin and Taylor, Ltd.

The project is an example of preparing risk-informed urban development strategies and projects, which takes a combined approach to climate change and disaster risk reduction—experience that can be shared and applied elsewhere in Vanuatu and regionally in the South Pacific (Figure).





## **PROJECT READINESS FINANCING**

### **Luganville Urban Water Supply and Sanitation Project**

The PRF will help the government prepare Luganville Urban Water Supply and Sanitation Project and facilitate a smooth transition to project implementation and expedite contract awards and initial disbursements. The PRF will finance consulting firms and individual consultants.

**Project Readiness Facility amount:** \$3.50 million

#### **Funding sources**

ADB (concessional OCR lending/Asian Development Fund): \$3.00 million

Government: \$0.50 million

**Executing agency:** Ministry of Finance and Economic Management

**Implementing agencies:** Ministry of Internal Affairs Department of Local Authorities; Luganville Municipal Council

**Website:** <https://www.adb.org/projects/51335-002/main>

**Status:** Active



### **Luganville Urban Water Supply and Sanitation Project**

Improved access to safe and reliable water supply and improved sanitation.

**Proposed project amount:** \$16.6 million

#### **Funding sources**

ADB (Asian Development Fund): \$3.00 million

ADB (concessional OCR lending /Asian Development Fund): \$8.00 million

Potential cofinancing: \$5.6 million

Government: To be determined

**Executing agency:** Ministry of Economic and Financial Management

**Implementing agency:** Ministry of Internal Affairs

**Website:** <https://www.adb.org/projects/51335-001/main>

**Status:** Proposed in 2021/2022

Luganville is Vanuatu's second-largest urban area with an estimated population of 20,500. It has grown at about 4.9% per year over the past 10 years and is estimated to increase to more than 40,000 by 2035. Less than 60% of households in greater Luganville have access to piped water supply, relying mainly on rainwater tanks and shallow groundwater wells that are vulnerable to drought, climate change, and contamination from poorly performing septic tanks and floods. No centralized wastewater collection or treatment exists in Luganville. Most households and businesses have on-site septic tanks, which are in poor condition (e.g., many are unsealed, and most are rarely emptied).

The PRF for Luganville will help the government undertake baseline investigations and prepare base designs, detailed designs, and associated specifications for the Luganville Urban Water Supply and Sanitation Project (LUWSSP); support due diligence and start-up activities for LUWSSP and other ensuing urban development projects in Luganville; and support the project's implementing agencies in early LUWSSP implementation activities. It includes three outputs: (i) project water supply components are procurement- and approval-ready; (ii) project sanitation components are procurement- and approval-ready; and (iii) project start-up and capacity building activities are completed.

The ongoing project is envisioned to include the following outputs: (i) implemented water supply, sanitation, and hygiene improvements; and (ii) strengthened the institutions managing water supply and sanitation.

## REFERENCES

Alliance Development Works. 2018. *World Risk Report 2018*. <https://reliefweb.int/sites/reliefweb.int/files/resources/WorldRiskReport-2018.pdf>.

Asian Development Bank. 2019. *Disaster Risk Assessment/Climate Risk and Vulnerability Assessment for Port Vila Integrated Urban Improvements Project*. Consultant's final report prepared by Tonkin and Taylor, Ltd.

———. 2012. *The State of Pacific Towns and Cities. Urbanization in ADB's Pacific Developing Member Countries. Pacific Studies Series*. Manila. <https://www.adb.org/sites/default/files/publication/29765/state-pacific-towns-cities.pdf>.

———. 2017. *Climate Change in Asia and the Pacific (Infographic)*. Manila. <https://www.adb.org/news/infographics/climate-change-asia-and-pacific>.

———. 2018. *Strategy 2030: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific*. Manila. <https://www.adb.org/sites/default/files/institutional-document/435391/strategy-2030-main-document.pdf>.

———. 2019. *Strategy 2030 Brochure: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific*. Manila. <https://www.adb.org/sites/default/files/institutional-document/435391/strategy-2030-brochure.pdf>.

Government of Vanuatu. 2015. *Vanuatu: Post-Disaster Needs Assessment Cyclone Tropical Cyclone Pam 2015*. <https://dfat.gov.au/about-us/publications/Pages/vanuatu-post-disaster-needs-assessment-tropical-cyclone-pam-march-2015.aspx>.

United Nations Department of Economic and Social Affairs, Population Division. 2017. *World Population Prospects: The 2017 Revision*. <https://population.un.org/wpp/DataQuery/>.

———. 2018. *World Urbanization Prospects: The 2018 Revision*. (Custom data acquired from: <https://population.un.org/wup/DataQuery/>)

World Health Organization/ United Nations Children's Fund Joint Monitoring Programme for Water Supply, Sanitation and Hygiene. 2019. Interactive database. <https://washdata.org/>.





## **Pacific Urban Update 2020**

This document provides an overview of ADB's active and proposed urban programs, projects, and technical assistance initiatives in the Pacific region as of December 2019. It explains how ADB's work in the Pacific urban sector supports its developing member countries in providing safe, efficient, and reliable urban services (including water supply and sanitation) that drive equitable socioeconomic growth and achieve sustainable results. It highlights some of ADB's core activities in the Pacific urban sector, the impacts these have on people's well-being and on economic growth, and what ADB aims to achieve in the future in accordance with its Strategy 2030.

## **About the Asian Development Bank**

ADB is committed to achieving a prosperous, inclusive, resilient, and sustainable Asia and the Pacific, while sustaining its efforts to eradicate extreme poverty. Established in 1966, it is owned by 68 members —49 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.