



PACIFIC URBAN UPDATE 2016

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Welcome to the 2016 edition of the Asian Development Bank's (ADB) Pacific Urban Update. ADB works with governments, utilities and communities to improve urban services including water, sanitation and solid waste management across the region. Significant challenges remain in addressing services for the growing number of urban residents now living in informal and squatter settlement housing across the Pacific. ADB's work in the urban sector directly contributes to Sustainable Development Goal 6, "Ensure availability and sustainable management of water and sanitation for all" and SDG 11 "Make cities and human settlements inclusive, safe, resilient and sustainable." This update highlights some of our core activities, the impacts they produce, and what we aim to achieve in the future.



Xianbin Yao
Director General
Pacific Department

ADB URBAN OPERATIONS IN THE PACIFIC, 2016

■ Ongoing
■ Completed in 2016
■ Proposed

Koror-Airai Sanitation Project	\$28.66 M
TA: Water and Sanitation Sector Management	\$0.50 M
Koror-Airai Sanitation Project (additional financing) (2017)	\$10.00 M
TA: Strengthening Land Use Planning and Building Standards (2017)	\$0.50 M

Omnibus Infrastructure Development Project	\$19.51 M
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Ebeye Water Supply and Sanitation Project	\$9.00 M
TA: Majuro Water and Sanitation Project (2017)	\$0.50 M
Majuro Water and Sanitation Project (2018)	\$6.00 M

TA: Strengthening Urban Infrastructure Investment Planning in the Pacific	\$0.70 M
TA: Strengthening Disaster and Climate Risk Resilience in Urban Development in the Pacific	\$0.65 M

South Tarawa Sanitation Improvement Sector Project	\$23.95 M
TA: South Tarawa Water Supply Project	\$0.95 M
South Tarawa Water Supply Project (2018)	\$35.00 M
TA: Preparing the Kiritimati Island Infrastructure Project (2017)	\$0.40 M

TA: District Towns Water and Sanitation Project (2017)	\$0.75 M
TA: Support for Water and Sanitation Sector Management in Papua New Guinea (2017)	\$0.70 M
Water Supply Scheme for Tete Settlement (2017)	\$1.50 M
District Towns Water and Sanitation Project (2018)	\$60.00 M

TA: Supporting the Urban Development Sector (2017)	\$0.80 M
Urban Sector Development Project (2019)	\$10.00 M

Dili Urban Water Supply Sector Project	\$6.00 M
TA: Strengthening Water Sector Management and Service Delivery	\$1.31 M
District Capitals Water Supply Project	\$11.00 M
TA: Urban Services Improvement Sector Project	\$1.42 M
TA: Pilot Demonstration Activity: Design of Sanitation Output-Based Aid Pilot in Manatuto	\$50,000
Dili Solid Waste Management Project (2017)	\$24.00 M
Urban Water Supply Project (2018)	\$20.00 M
Urban Water Supply Sector Project, Phase II (2019)	\$39.00 M

Port Vila Urban Development Project	\$38.87 M
Preparing the Port Vila Urban Development Project, Phase 2 and the Luganville Urban Development Project TA (2017)	\$0.50 M
Port Vila Urban Development Project, Phase 2 (2018)	\$12.00 M
Luganville Urban Development Project (2018)	\$12.00 M

Project Design Advance: Urban Water Supply and Wastewater Management Project	\$2.65 M
Urban Water and Wastewater Management Project Tranche 1 (2016)	\$255.04 M
Tranche 2 (2019)	\$255.04 M
TA: Urban Development Planning and Institutional Capacity Building	\$1.65 M

Community Sanitation Project	\$2.00 M
Nuku'alofa Urban Development Sector Project	\$12.00 M
TA: Integrated Urban Sector Resilience Project (2017)	\$0.68 M
Integrated Urban Sector Resilience Project (2018)	\$45.00 M

Note: Numbers presented are total indicative funding including cofinancing and excluding government contribution.

M= million, TA = technical assistance.

Overview

The Asian Development Bank (ADB) operates in 14 developing member countries (DMCs) in the Pacific region. Most Pacific DMCs are small, remote and fragile, and face natural constraints and external shocks that make achieving sustainable and inclusive growth challenging. Their smallness and isolation increase the costs of providing services, while their high exposure to climate change and natural disasters, and their small size and narrow economic base make them extremely vulnerable to shocks.

Providing essential services to growing urban populations, including for coordinated investments in water supply, wastewater infrastructure and services and solid waste management, is an operational priority in Pacific DMCs, based on the strategic agendas set out in ADB's Pacific Approach 2016–2020.

The *Pacific Urban Update 2016* discusses the program, projects, and technical assistance (TA) active in Pacific DMCs during 2016, including projects and TA which closed in 2016. Selected pipeline program, projects, and TA proposed for 2017–2020 are also discussed.

The Urban Context of Pacific Developing Member Countries

Of the 14 Pacific DMCs, six (the Cook Islands, Fiji, the Marshall Islands, Nauru, Palau, and Tuvalu) have over half of their population living in urban areas.¹ With the exception of Samoa, urbanization rates are increasing in all Pacific DMCs. Residents are increasingly attracted to towns, as these urban areas become centers of commerce, seats of government, and places of opportunity and hope.² 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 the settlements, with insecure land tenure further hindering efforts to improve services to residents.

The 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, dysentery, conjunctivitis, tinea, and ringworm. Large household sizes are 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.³ These household sizes increase the likelihood of communicable diseases being transmitted. In addition, households often expand without corresponding improvements in basic water and sanitation facilities. “Having adequate infrastructure for water supply and sanitation also underpins sustainable growth in tourism in tourism-oriented Pacific economies.

Diarrheal Diseases in the Pacific

In Pacific island countries, the incidence of diarrheal diseases is 20% greater than the world average and over four times higher than in developed countries, such as Australia and New Zealand. Of all the cases of diarrheal diseases worldwide, 88% are attributable to inadequate sanitation, unsafe water, and poor hygiene.^a Diarrheal disease is the second leading cause of death in children under 5 years old, killing 760,000 children in this age group every year. It is also a leading cause of malnutrition in children.^b

^a World Health Organization. 2008. *Sanitation, hygiene and drinking-water in the Pacific Island countries: converting commitment into action*. Manila.

^b World Health Organization. Diarrheal Disease. *Fact Sheet No. 330*. <http://www.who.int/mediacentre/factsheets/fs330/en/>

¹ Central Intelligence Agency. The World Factbook. Urbanization data extracted from individual country pages. <https://www.cia.gov/library/publications/the-world-factbook/>

² ADB. 2016. The Emergence of Pacific Urban Villages: Urbanization Trends in the Pacific Islands. *Pacific Studies Series*. Manila.

³ Government of the Marshall Islands. 2010. *Majuro and Kwajalein Atoll Household Water Survey Report*. Majuro; and Government of Kiribati. 2015. *Population and Housing Census. Preliminary Report*. Bairiki, Tarawa.

Water Resources in Pacific Developing Member Countries

Water resources in Pacific DMCs are often limited to the supply of rainwater, 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),⁴ 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.

Geography and Water Resources of Pacific Island Countries

While some Pacific island countries (such as Fiji, Papua New Guinea, and Solomon Islands) are large and high volcanic islands with abundant groundwater and surface water, other countries (such as the Marshall Islands, Kiribati, Nauru, and Tuvalu) are predominantly low-lying atolls, some with an average altitude of just 2 meters above mean sea level. These countries have small land masses and very limited freshwater, making them prone to drought and storm surges.

Groundwater lenses may be the only source of freshwater on these atolls. Lenses are convex layers of fresh groundwater that float on top of denser saltwater, around 1-2 meters below sea level. These fragile lenses may be as thick as 20 meters or as thin as 10 centimeters, and rely on regular recharge by rainfall.



⁴ W. Burns. 2002. *Pacific island developing country water resources and climate change*. The World's Water 2003 (2002): 113-132.

The Impact of El Niño and La Niña on Water Resources in the Pacific

El Niño and La Niña are the two phases of the El Niño–Southern Oscillation, which is the most important driver of year-to-year climate variability in the Pacific region. El Niño and La Niña events drive changes in circulation, winds, and rainfall, and the different phases can cause droughts and floods.^a

The strong El Niño event that came to a close in mid-2016 brought drought to several countries in the Pacific, with the Marshall Islands, the Federated States of Micronesia, and Palau declaring states of emergency. La Niña conditions are anticipated in 2017, and are expected to bring wetter than normal conditions to most Pacific countries, except for Kiribati, Nauru, and Tuvalu where drier conditions are anticipated.^b Rainfall patterns will affect the ability of these countries to fill rainwater tanks and recharge the freshwater lenses that lie beneath the coral atolls. Higher rates of waterborne disease are often encountered during drought, as the population resorts to alternative water sources that may be unsuitable for drinking, such as contaminated groundwater wells.

^a Pacific Climate Futures. Understanding climate variability and change. <http://www.pacificclimatefutures.net/en/help/climate-projections/understanding-climate-variability-and-change/>

^b Pacific Climate Futures. Extracted from individual country fact sheets at <http://www.pacificclimatechangescience.org/>

Moving Forward

Of the 14 Pacific DMCs, 7 met the Millennium Development Goal (MDG) for water, while three met the MDG for sanitation. The new Sustainable Development Goals (SDGs), which follow on from the MDGs, include a goal (SDG 6) 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.”⁵ The SDG targets are important drivers for providing improved water and sanitation services and delivering urban services more broadly. ADB supports Pacific DMCs in their efforts toward meeting the SDGs by 2030.

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 in 2016 have been focused on

- (i) increasing access to safe water and sanitation;
- (ii) upgrading and rehabilitating transmission and distribution networks, and reducing nonrevenue water;
- (iii) climate-proofing water and sanitation infrastructure;
- (iv) capacity development of water utilities, utility reform and strengthening the financial performance of utilities;
- (v) promoting stakeholder engagement and empowering communities in decision-making with respect to water and sanitation services; and
- (vi) Improving solid waste management services

⁵ UN. Sustainable Development Goals for water and sanitation. <http://www.un.org/sustainabledevelopment/water-and-sanitation/>

Millennium Development Goal for Water and Sanitation

Millennium Development Goal (MDG) Target 7C: By 2015, halve the proportion of people without sustainable access to safe drinking water and basic sanitation

An “improved” drinking water source is one that, by the nature of its construction and when properly used, adequately protects the source from outside contamination, particularly fecal matter. An improved sanitation facility is one that hygienically separates human excreta from human contact.^a

Although several Pacific developing member countries (DMCs) met the MDG for access to improved water and sanitation, the 14 countries combined did not meet the overall MDG targets for the region. This was mainly because Papua New Guinea, which contributes two-thirds of the total population of Pacific DMCs, had limited or no progress for the water and sanitation indicators.

Even for those countries that met the targets, or otherwise made good progress, the MDG indicators often mask poor levels of service provided to customers. Piped water supplies are considered to be improved even if the supply system is only intermittent (about 45% of utilities in the Pacific are unable to supply water 24 hours a day, 7 days a week).^a In addition, under the MDG, an “improved water supply” does not necessarily imply that the water is safe to drink from the tap since no consideration is given to water quality. In 2013, 38% of Pacific utilities maintained no residual chlorine concentration in their networks, suggesting inadequate disinfection and the potential for recontamination during storage.^b

Access to improved sanitation, such as flush toilets, does not give any indication as to the quality of access a user has to toilets, e.g., cleanliness, crowding, ease of access for children and the disabled, and whether the toilet is safe and accessible at all times. It also does not take into account the functionality of the sewerage system, whether sewage is treated, and whether wastes are prevented from contaminating water supplies downstream. For these reasons, the MDG results for Pacific DMCs are used alongside a more comprehensive range of indicators for assessing water and sanitation access rates and service standards.

The Asian Development Bank supports Pacific DMCs in working toward their own water and sanitation goals, as defined in country development plans, and also toward the new Sustainable Development Goals (SDGs), including **SDG 6: Ensure access to water and sanitation for all.**

^a World Health Organization / UNICEF Joint Monitoring Program for water supply and sanitation. Definitions and methods: wat/san categories. <https://www.wssinfo.org/definitions-methods/watsan-categories/>

^b Pacific Water and Wastes Association. 2013. *Pacific Water and Wastewater Utilities Benchmarking Report*. Moto'otua. The 2013 benchmarking exercise included 24 water utilities from 14 Pacific countries (13 of which are ADB Pacific DMCs) and 2 United States protectorates in the Pacific region.



Achievement of Water and Sanitation Millennium Development Goals in Pacific Development Member Countries^a

Country	Year	Population	Water Total Improved (%)	Progress Toward Water MDG Target ^b	Sanitation Total Improved (%)	Progress Toward Sanitation MDG Target
Cook Islands	1990	17,614	99.9	Met target		
	2015	20,840	99.9		97.6	Met target
Fiji	1990	728,339	86.0	Met target	56.8	Met target
	2015	892,727	95.7		91.1	
Kiribati	1990	71,040	49.6	Good progress	28.0	Moderate progress
	2015	105,555	66.9		39.7	
Marshall Islands	1990	47,288	92.0	Met target	64.6	Good progress
	2015	58,567	94.6		76.9	
Federated States of Micronesia	1990	96,331	91.0	Limited or no progress	19.4	Good progress
	2015	104,460	89.0		57.1	
Nauru	1990	9,157		NA	65.7	Limited or no progress
	2015	10,563	96.5		65.6	
Palau	1990	15,089	90.0	NA	46.5	Met target
	2015	21,295			100.0	
Papua New Guinea	1990	4,157,903	33.8	Limited or no progress	20.2	Limited or no progress
	2015	7,631,819	40.0		18.9	
Samoa	1990	162,865	88.9	Met target	92.7	Limited or no progress
	2015	193,228	99.0		91.5	
Solomon Islands	1990	311,849		NA		NA
	2015	584,482	80.8		29.8	
Timor-Leste	1990	751,488		Good progress		Limited or no progress
	2015	1,172,668	71.9		40.6	
Tonga	1990	95,165	98.6	Met target	94.4	Limited or no progress
	2015	106,379	99.6		91.0	
Tuvalu	1990	9,004	89.8	Met target	73.1	NA
	2015	9,942	97.7			
Vanuatu	1990	146,633	62.4	Met target		Good progress
	2015	263,888	94.8		57.9	
Total	1990	6,619,765	46.2	Not met target	29.3	Not met target
	2015	11,176,413	54.1		31.6	

^a Individual country data extracted from World Health Organization / UNICEF Joint Monitoring Program for water supply and sanitation. <http://www.wssinfo.org/>

^b Method of assessment: "Met target" if 2015 coverage within 1 percentage point of target; "Good progress" if change in coverage between 1990 and 2015 exceeds 2/3 of target, "Moderate progress" if 1/3 to 2/3 and "Limited or no progress" if less than 1/3.

Regional Initiatives

TECHNICAL ASSISTANCE **Strengthening Disaster and Climate Risk Resilience in Urban Development in the Pacific**

Build the resilience of social and economic development to climate change and natural hazard events in Pacific developing member countries.

Technical assistance amount	\$0.65 million
Funding source	Japan Fund for Poverty Reduction
Executing agency	Asian Development Bank
Implementing agencies	Various
Status	Closed in 2016

ADB's approach to assisting the Pacific (2010–2014) identified effective disaster management and risk reduction as well as climate change adaptation as being critical to achieving sustainable growth in the region. This regional TA aims to strengthen the ability of social and economic development in Pacific DMCs to respond to climate change and natural hazard events. The outcome will be that climate and disaster risk information is integrated into urban development and infrastructure planning in Pacific DMCs.

The TA will ensure that integrated climate and disaster risk screening tools for planning are operational, and that integrated tools for mainstreaming disaster and climate risks into urban and sector planning are shared with regional stakeholders. The TA will also help Pacific DMC planners apply newly acquired climate and disaster risk mainstreaming skills.

Regional Stakeholders in Water and Sanitation

The Pacific Region Infrastructure Facility (PRIF) is a multipartner coordination, research and technical assistance facility for improved infrastructure in the Pacific. PRIF agency partners include ADB, Australian Department of Foreign Affairs and Trade, European Union, European Investment Bank, Japan International Cooperation Agency, New Zealand Ministry for Foreign Affairs and Trade and the World Bank Group.

The PRIF partners are providing support for water and sanitation projects, by building on and improving sectoral support in Pacific Island Countries such as Kiribati, Samoa, Solomon Islands, and Vanuatu. PRIF is also undertaking some analytical work on behalf of the development partners to assist in planning and coordinating their investments in the water and sanitation subsectors, particularly in the areas of rural water and sanitation and water security in fragile atoll environments. ADB currently chairs the PRIF water and sanitation sector working group (SWG).

The PRIF Urban Development (and Solid Waste Management) SWG helps to shape, lead, influence and report on development partners project activities in the urban development space. Recognizing the depth and spread of social, economic, environmental and technical issues facing the Urban Development sector, the SWG is focusing initially on targeted research or studies that support PRIF partners in their individual sector investments and partnerships. The SWG will target a modest achievable action plan which adopts a long-term view, with the intention of developing priority activities to target available PRIF research and technical assistance funds.”

ADB is also providing support to strengthen the Pacific Water and Wastes Association (PWWA). The PWWA is a regional association of 27 water and wastewater utilities, with a mission to deliver quality water related services that enhance the wellbeing of people throughout the Pacific region. The PWWA plays a key role in knowledge exchange between agencies in the region, and conducts annual performance benchmarking that the utilities rely on to continually improve performance. While the outputs from benchmarking exercises provide a good indication of relative utility performance, analyses of performance gaps and weaknesses at the individual utility level continue to help Pacific developing member countries to identify appropriate interventions and target development assistance.

The PWWA is partnering with the World Bank for ongoing benchmarking support through IBNet, the World Bank's international benchmarking network for water and sanitation utilities. The partnership is intended to improve the availability and quality of information, and to promote transparency in the sector, across the Pacific region.

ADB is currently supporting the PWWA by providing expertise to strengthen institutional capacity to facilitate peer-to-peer information exchange, including the preparation and implementation of the PWWA's strategic reform and development plan as well as a new constitution. ADB also provides support for the preparation and mainstreaming of the PWWA's communication strategies.

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	\$0.70 million
Funding source Asian Development Bank (Asian Development Fund)	\$0.70 million
Executing agency	Asian Development Bank
Implementing agencies	Various
Status	Ongoing

The TA will provide support to Pacific DMCs, on a demand-driven basis, to better plan and prioritize urban investments. These investments will promote the development of inclusive, environmentally sustainable, and economically competitive urban centers, in line with ADB's Urban Operational Plan 2012–2020. The TA will finance the development and/or updating of urban development strategies in select Pacific DMCs, as the basis for identifying priority urban sector investments. The TA will also leverage support from the Cities Development Initiative of Asia (CDIA) in Pacific DMCs that already have in place urban investment plans or national infrastructure investment plans prepared with assistance from the Pacific Region Infrastructure Facility (PRIF). CDIA support will be used to prepare prefeasibility studies for priority urban investments. Prefeasibility studies can then be used to potentially secure follow-on project preparatory TA.

Fiji

POPULATION (2015): **892,727**
 ACCESS TO IMPROVED WATER SUPPLIES: **95.7%**
 ACCESS TO IMPROVED SANITATION: **91.1%**
 UTILITIES: [Water Authority of Fiji](#)

Project Design Advance: Urban Water Supply and Wastewater Management Project

Ensure inhabitants of some of Fiji's most densely populated areas have access to regular and safe piped water and an environment-friendly sewerage system.

Project amount	\$2.65 million
Funding source Asian Development Bank (Ordinary capital resources)	\$2.65 million
Executing agency	Ministry of Finance
Implementing agency	Water Authority of Fiji
Status	Ongoing



The project design advance will help the government deliver the concept design for a design-and-build-contract, the conceptual and detailed engineering designs for wastewater treatment expansion and sewerage works, and the bidding documents for all works. The advance will support the technical evaluation of bid proposals as well as other preparatory work for the project. It will allow the government to complete detailed engineering designs and preliminary designs before the proposed urban water and sanitation upgrade project becomes effective.

Urban Water and Wastewater Management Project

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

Project amount	\$405.14 million
Funding sources	
Asian Development Bank (Ordinary capital resources)	\$153.20 million
Green Climate Fund	\$31.04 million
Government of Fiji	\$150.10 million
European Investment Bank (collaborative cofinancing)	\$70.80 million
Status	Ongoing

The project will involve building and renovating infrastructure to improve access to safe water and sewerage systems in the greater Suva area. A new river water intake station on the River Rewa will be constructed, and the Kinoya wastewater treatment plant and associated sewer coverage will be improved.

Disaster Risk and Climate Change Considerations in the Water Sector

Due to their small size, remoteness, fragile economic structures, and unique geography and environment, Pacific island countries—especially the smallest, most resource-poor countries, and outer island groups—are exceptionally vulnerable to natural hazards. Disasters brought about by tropical cyclones, storm surges, and floods have the potential to erode many years of gains in economic development, as critical infrastructure is damaged. This includes infrastructure that helps deliver water and sanitation services. Such damage diverts resources away from development spending and toward disaster response and reconstruction efforts. A report from the World Bank states that, of the 20 countries with the highest average annual disaster losses scaled by gross domestic product, 8 are Pacific island countries.^a

Climate change will affect existing disaster risks by exacerbating their frequency and intensity, bringing about more extreme weather events, such as severe cyclones, droughts, and flooding. While climate change projections vary among Pacific developing member countries (DMCs), there is increasing proof of long-term change in a number of key climate variables. These variables include increases in mean and extreme high temperatures, sea level and ocean acidification, and the frequency and intensity of extreme rainfall events. Climate change may result in salinization of freshwater resources, while water and sanitation infrastructure will be increasingly exposed to storm surges and extreme events.

In the Pacific, the Asian Development Bank (ADB) has supported the scaling up of activities to promote climate change adaptation and disaster risk reduction at both country and regional levels. All ADB activities in Pacific DMCs include climate change adaptation measures, which may include climate-proofing water supply and sanitation infrastructure, and building DMC capacity to integrate climate resilience measures and disaster risk management into country programs and projects. ADB also supports Pacific DMCs to access climate funding, with recent success in obtaining a climate adaptation grant of \$31 million from the Green Climate Fund for the Fiji Urban Water Supply and Wastewater Management Project.

^a World Bank. 2012. Acting Today for Tomorrow: A Policy and Practice Note for Climate- and Disaster-Resilient Development in the Pacific Islands Region. Washington, DC; <http://documents.worldbank.org/curated/en/2012/01/16795680/acting-today-tomorrow-policy-practice-note-climate-disaster-resilient-development-pacific-islands-region>

TECHNICAL ASSISTANCE Urban Development Planning and Institutional Capacity Building

Improve the wellbeing of Fiji's urban population through efficient, effective, and sustainable management of urban development in the Greater Suva area.

Technical assistance amount	\$1.65 million
Funding sources	
Asian Development Bank (Technical Assistance Special Fund)	\$1.30 million
Water Financing Partnership Facility	\$0.35 million
Executing agency	Ministry of Finance
Implementing agency	Ministry of Local Government, Housing, Squatter Settlement and Environment
Status	Completed in 2016

This capacity development TA will achieve efficient, sustainable, and inclusive urban development. The outcome was strengthened policies and plans for national urban development. The Urban Growth Management Plan for the Greater Suva area was updated by the Department of Town and Country Planning. The Suva-Nausori Water Supply and Sewerage Master Plan was reviewed, and high-priority investments were assessed by the Water Authority of Fiji. An urban management board for the Greater Suva area was established by the Ministry of Local Government, Urban Development, Housing and Environment.

Kiribati

POPULATION (2015): **105,555**

ACCESS TO IMPROVED WATER SUPPLIES: **66.9%**

ACCESS TO IMPROVED SANITATION: **39.7%**

UTILITIES: **Public Utilities Board**

South Tarawa Sanitation Improvement Sector Project

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

Project amount	\$23.95 million
Funding sources	
Government of Australia	\$13.95 million
Asian Development Bank (Asian Development Fund)	\$10.36 million
Water Financing Partnership Facility	\$0.61 million
Executing agency	Ministry of Finance and Economic Development
Implementing agency	Ministry of Works and Public Utilities
Status	Ongoing

High population density, poor hygiene practices, and inadequate sanitation infrastructure have contributed to a high prevalence of waterborne disease among the South Tarawa population, and to the degradation of the natural environment. The project will support improvements to 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.

TECHNICAL ASSISTANCE South Tarawa Water Supply Project	
Improve health among South Tarawa communities by increasing access to improved drinking water.	
Technical assistance amount	\$0.95 million
Technical assistance funding source	
Asian Development Bank (Technical Assistance Special Fund)	\$0.80 million
Water Financing Partnership Facility	\$0.15 million
Status	Ongoing
PROPOSED South Tarawa Water Supply	
Project amount	\$35.00 million
Funding sources	
Asian Development Bank (Asian Development Fund)	\$15.00 million
Other sources	\$20.00 million
Status	Proposed for 2018

The proposed South Tarawa Water Supply Project is reflected in the investment pipeline for Kiribati. The project will continue on from the ongoing South Tarawa Sanitation Improvement Sector Project. It will contribute to improved health and reduction of chronic waterborne illness and disease among South Tarawa communities. Project preparatory TA will cover the due diligence for the project and assist the Public Utilities Board (PUB) and the Ministry of Public Works and Utilities (MPWU) to prepare for the South Tarawa Water Supply Project. The TA is required to assist the PUB and the MPWU to plan, design, and prioritize investments to improve water supply services in South Tarawa. The TA will be used to assess the technical suitability; the economic, financial, and social viability; capacity and institutional issues; and the environmental and social soundness of the project. It will also help identify and implement selected measures to strengthen the project implementation capacity of the PUB and the MPWU.

Sanitation Challenges in the Pacific

Sanitation refers to the provision of systems that safely contain, treat, and dispose human excreta in a hygienic manner, to prevent fecal contaminants coming into contact with humans.

Improving sanitation in urban areas, particularly in informal settlements, is an ongoing challenge. This is reflected by universally lower rates of access to improved sanitation than to improved water supplies across Pacific developing member countries (DMCs). Site constraints for building sanitation infrastructure often include insecure land ownership, location of dwellings, land availability, water availability for toilet flushing and sewage conveyance, and susceptibility to flooding, tides, and high groundwater. Impacts of climate change—such as sea level rise, increased rainfall intensity, and storm surges—may place increased stress on existing sanitation infrastructure in many towns.

Flush toilets, which are connected to conventional sewer networks or to septic tanks, are still the overwhelming preference of governments and communities in the Pacific, despite water resource constraints, higher capital and operating costs (particularly for centralized sewers), and more specialized skills required for installation. The desired infrastructure is often in stark contrast to the reality on the ground. In many Pacific DMCs, there are hanging toilets piped to nearby drains or streams, pit latrines that flood regularly and/or are abandoned once they start to overflow, and shared facilities that are unclean and/or have long waiting times. In other cases, there are no facilities at all, leading to open defecation. Hygiene considerations, including the need for handwashing with soap, are often neglected.

The Asian Development Bank supports Pacific DMCs to plan and implement investments to improve sanitation. Creating enabling environments is critical in ensuring the success and sustainability of development assistance. This includes establishing and enforcing strong legislation surrounding the sanitation sector, creating policy dialogue and commitment, fostering financial arrangements that mobilize funds for implementation, building local capacity to support planning and implementation, developing affordable sanitation infrastructure (including its operation and maintenance), and generating sociocultural acceptance of technologies and practices. ADB provides technical assistance to DMCs to create and strengthen enabling environments in the lead-up to, and throughout, the implementation of sanitation projects.

PROPOSED TECHNICAL ASSISTANCE **Preparing the Kiritimati Island Infrastructure Project**

Supports the implementation of components of the Line and Phoenix Islands Integrated Development Strategy.

Technical assistance amount	\$0.40 million
Technical assistance funding source Asian Development Bank (Technical Assistance Special Fund)	\$0.40 million
Status	Proposed for 2017

Marshall Islands

POPULATION (2015): **58,567**

ACCESS TO IMPROVED WATER SUPPLIES: **94.6%**

ACCESS TO IMPROVED SANITATION: **76.9%**

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	\$9.00 million
Funding sources Asian Development Bank (Asian Development Fund)	\$5.00 million
Government of Australia	\$4.00 million
Executing agency	Office of the Chief Secretary
Implementing agency	Kwajalein Atoll Joint Utilities Resources
Status	Ongoing

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 cubic meters per day, will be built, along with two new saltwater wells with the capacity to fully meet the saltwater demand.

The sewerage system on 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 Kwajalein Atoll Joint Utilities Resources implement its reform strategy to build its financial, technical, and operational sustainability.

Alternative Water Sources in the Pacific

Water resource challenges are leading Pacific authorities to attempt to diversify their water supply portfolios. In Kiribati and the Marshall Islands, centralized sewerage systems use seawater for conveyance, freeing up valuable freshwater resources for potable use. Meanwhile, seawater and brackish groundwater is used for firefighting.

Desalination is emerging as an important technology for supplementing freshwater resources in Pacific developing member countries (DMCs). In Nauru, desalination is already the main source of potable water supplying the population. In other Pacific DMCs—including Kiribati, the Marshall Islands, Tonga, and Tuvalu—past emergencies, such as prolonged drought, led to the deployment of (often containerized) desalination plants to augment water supplies until conventional sources were restored.

Desalination is considered a climate-adaptive technology, given its capacity to diversify a water supply portfolio independently of climate change impacts (since it is not dependent on rainfall).^a However, its high energy demands and capital cost warrant careful consideration during project design. Cases of desalination units in the Pacific failing shortly after commissioning have been reported, usually as a result of poor maintenance planning, insufficient budget allocation for operation and maintenance (O&M), and a lack of available technical expertise. This reinforces the importance of detailed economic analysis and long-term planning for O&M—including availability and retention of skills and sufficient budgetary allocation—during the project design stage.

Seawater centralized sewerage systems, such as those used in Kiribati and the Marshall Islands, preclude municipal-scale wastewater recycling as a viable potable water supply option. Where the only alternative options for the supply of drinking water are imported water, water pumped over long distances, or bottled water, desalination may be the most economically attractive option for augmenting supplies in urban areas. The Asian Development Bank has incorporated lessons learned from past water supply projects in DMCs to help the Marshall Islands implement the Ebeye Water Supply and Sanitation Project, which will involve the design and construction of a desalination plant, producing around 1,600 cubic meters of water each day.

^a Intergovernmental Panel on Climate Change (IPCC). 2007. *Climate Change 2007: Synthesis Report*. Contribution of working groups I, II, and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (Core Writing Team, R.K. Pachauri and A. Reisinger [eds.]). Geneva (104 pp).

The impact will be reduced incidence of waterborne disease on Ebeye. This is aligned with the national development theme in the Marshall Islands, which is to empower people and communities to reduce the incidence of “access-related” poverty. The theme is pursued through improvements in all areas, including social services, economic development, environment, governance, and infrastructure, as articulated in the National Strategic Plan, 2015–2017.

The Majuro Water and Sewer Company has prepared a comprehensive investment plan, identifying critical water and sanitation activities in Majuro. The proposed project will finance priority investments identified in the investment plan. The TA will help prepare the proposed water and sanitation project.

PROPOSED Majuro Water and Sanitation Project

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

Technical assistance amount	\$0.50 million
Technical assistance funding source Asian Development Bank (Technical Assistance Special Fund)	\$0.50 million
Status	Proposed in 2017
Project amount	\$6.00 million
Funding source Asian Development Bank (Ordinary capital resources)	\$6.00 million
Status	Proposed for 2018

Federated States of Micronesia

POPULATION (2015): **104,460**

ACCESS TO IMPROVED WATER SUPPLIES: **89%**

ACCESS TO IMPROVED SANITATION: **57.1%**

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

The Omnibus Infrastructure Development Project closed in 2016. It has seen 6,200 residents in the coastal town of Kolonia, Pohnpei benefit from improved sewage treatment and water quality at the Kolonia Port. The project has also



Omnibus Infrastructure Development Project

Enhance public health and the environment, through assistance to improve water supply infrastructure in Kosrae and Yap, and wastewater infrastructure in Pohnpei.

Project amount	\$19.51 million
Funding sources	
Asian Development Bank (Asian Development Fund)	\$14.71 million
Asian Development Bank (Ordinary capital resources)	\$4.80 million
Executing agency	Department of Transport, Communications and Infrastructure
Implementing agencies	Pohnpei Public Utilities Corporation; Chuuk Public Utilities Corporation; Department of Finance and Planning (Division of Construction and Engineering) and KUA (Kosrae); Department of Public Works and Transport; and Gagil Tomil Water Authority, Yap
Status	Completed in 2016

resulted in less frequent overflows from the Kolonia sewage network. The rehabilitation and expansion of the Gagil-Tomil water supply is providing a safe and reliable water supply to the 1,500 residents of Tomil-Gagil in Yap. Water supplies were also expanded to about 300 households in Maap, which were previously unserved.

Nauru

POPULATION (2015): **10,563**

ACCESS TO IMPROVED WATER SUPPLIES: **96.5%**

ACCESS TO IMPROVED SANITATION: **65.6%**

UTILITIES: [Nauru Utilities Corporation](#)

PROPOSED Urban Development Project

Improve access to safe and affordable housing and urban services in Nauru

Technical assistance amount	\$0.50 million
Technical assistance funding source	
Asian Development Bank (Technical Assistance Special Fund)	\$0.50 million
Status	Proposed in 2019
Project amount	\$3.50 million
Funding source	
Asian Development Bank (Asian Development Fund)	\$3.50 million
Status	Proposed for 2020

Palau

POPULATION (2015): **21,295**

ACCESS TO IMPROVED WATER SUPPLIES: **Not available**

ACCESS TO IMPROVED SANITATION: **100%**

UTILITIES: [Palau Public Utilities Corporation](#)

Koror-Airai Sanitation Project

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

Project amount	\$28.66 million
Funding sources	
Asian Development Bank (Ordinary capital resources)	\$26.90 million
Asian Development Bank (Asian Development Fund)	\$1.76 million
Executing agency	Ministry of Finance
Implementing agency	Palau Public Utilities Corporation
Status	Ongoing, with proposed additional financing in 2017

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 (PPUC). 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 Water and Sanitation Sector Management

Improve the operational performance of the water supply and sewerage systems of the Palau Public Utilities Corporation.

Technical assistance amount	\$0.50 million
Funding source	
Asian Development Bank (Technical Assistance Special Fund)	\$0.50 million
Executing agency	Ministry of Finance
Implementing agency	Ministry of Finance
Status	Ongoing

The TA is strengthening the PPUC's capacity to plan, deliver, operate, and manage the upgraded water supply and sewerage services. It is also assisting the PPUC to provide strategic oversight of both specific and general sector issues, by providing a highly experienced water and wastewater advisor over 24 months. The water and wastewater advisor will help the PPUC strengthen its water and wastewater operation, by

providing strategic oversight, guidance, and quality assurance. The water and sewerage advisor will assist the government and the PPUC to strengthen the delivery of public water and wastewater services in Palau. At the strategic level, the water and sewerage advisor will provide policy and planning advice to further the development and operation of Palau's public water supplies and wastewater systems.

Tourism, Water, and Sanitation in the Pacific

In 2014, there were roughly 3.5 million foreign arrivals to Pacific destinations, and the numbers are growing annually.^a This leads to increased growth in gross domestic product (GDP), particularly in economies that are heavily dependent on tourism, such as the Cook Islands (where tourism receipts are estimated to constitute about 60% of GDP), Palau (54%), Vanuatu (36%), Fiji (20%), and Samoa (18%).^b

Tourism exerts pressure on all types of public infrastructure, but handling increased needs for water supply and sanitation can be particularly challenging given water availability and broader environmental fragility. In Palau, most visitors spend the bulk of their time and money in the state of Koror. The poor condition of sewerage infrastructure has significant economic costs, including direct and indirect health-related costs as well as sewage overflow cleanup costs. Threats of a serious disease outbreak can also cause lasting damage to a destination's reputation, as can scattered reports about wastewater effluent odor in tourist areas. The fragility of Palau's water system, which largely relies on surface water sources, was well illustrated in early 2016, when the country declared a state of emergency due to drought, which resulted in water shortages and rationing.

ADB is working together with the Government of Palau to implement the Koror-Airai Sanitation Project, which will reduce significant public health and associated environmental risks of poor sanitation, as well as creating opportunities to leverage growth in tourism and other sectors. The project will do so by substantially reducing sewage overflows, improving the responsiveness of operators to emergencies, and ensuring that effluent discharged to the environment is properly treated. With the economy depending so heavily on tourism, these measures will help to protect local incomes. A technical assistance on Water and Sanitation Sector Management is also assisting the government and the Palau Public Utilities Corporation by providing policy and planning advice for the development and operation of the country's public water supplies and wastewater systems.



^a Pacific Asia Travel Association visitor arrival database, as reported in John Koldowski et. al. 2015. *Pacific Economic Monitor*. December, available online at <http://www.adb.org/sites/default/files/publication/175735/pem-december-2015.pdf>.

^b Pacific Asia Travel Association estimates, as reported in Christopher Edmonds and Bing Radoc. 2015. *Pacific Economic Monitor*. December.

Papua New Guinea

POPULATION (2015): **7,631,819**

ACCESS TO IMPROVED WATER SUPPLIES: **40.0%**

ACCESS TO IMPROVED SANITATION: **18.9%**

UTILITIES:

[Water Papua New Guinea](#)

[Eda Ranu](#)

PROPOSED TECHNICAL ASSISTANCE **Support for Water and Sanitation Sector Management in Papua New Guinea**

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

Technical assistance amount	\$0.70 million
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Funding source Asian Development Bank (Technical Assistance Special Fund)	\$0.70 million
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Status	Proposed for 2017
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The capacity development TA aims to assist the Department of National Planning and Monitoring, and Water Papua

New Guinea (Water PNG) to strengthen the management and delivery of water sanitation infrastructure, and to ultimately increase access to improved water and sanitation, particularly in urban settlements. This TA is also a precursor to the proposed District Towns Water and Sanitation Project preparatory TA and ensuing loan.

PROPOSED **District Towns Water and Sanitation Project**

Deliver improvements to water supply and sanitation services in Papua New Guinea's district towns

Technical assistance amount	\$0.75 million
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Technical assistance funding source Asian Development Bank (Technical Assistance Special Fund)	\$0.75 million
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Status	Proposed in 2017
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Project amount	\$60.00 million
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Funding source Asian Development Bank (Ordinary capital resources)	\$30.00 million
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Concessional OCR lending	\$10.00 million
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Other sources	\$20.00 million
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Status	Proposed for 2018
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Samoa

POPULATION (2015): **193,228**

ACCESS TO IMPROVED WATER SUPPLIES: **99%**

ACCESS TO IMPROVED SANITATION: **91.5%**

UTILITIES: [Samoa Water Authority](#)

Community Sanitation Project

Give vulnerable households sustainable access to better sanitation in targeted regions of Samoa.

Project amount	\$2.00 million
Funding source	Japan Fund for Poverty Reduction
Executing agency	Ministry of Finance
Implementing agency	Planning and Urban Management Agency
Status	Ongoing

The vast majority of Samoa households rely on septic tanks that do not function properly and/or leak. These tanks pollute local water bodies and impact public health. Samoa has high rates of diarrheal diseases, and the highest reported incidence of typhoid of all Pacific DMCs. Typhoid periodically reaches epidemic levels. It is especially prevalent in poor households in the low-lying settlements of urban Apia, the capital city. The Community Sanitation Project is helping improve public and environmental health in participating regions. It will establish and pilot an innovative way to deliver sanitation infrastructure to low-income households, and create institutional arrangements to subsidize this infrastructure.

Timor-Leste

POPULATION (2015): **1,172,668**

ACCESS TO IMPROVED WATER SUPPLIES: **71.9%**

ACCESS TO IMPROVED SANITATION: **40.6%**

UTILITY: [Responsibility lies with the National Directorate for Water Supply, a division of the Ministry of Infrastructure.](#)

Dili Urban Water Supply Sector Project

Improve water supply services for households, businesses, and institutions in Dili.

Project amount	\$6.00 million
Funding source	Asian Development Bank (Asian Development Fund)
Executing agency	Ministry of Public Works Transport and Communications
Implementing agency	National Directorate for Water Supply
Status	Due to close in 2016

The Dili Urban Water Supply Sector Project has improved water supply tertiary distribution by (i) reducing and controlling water losses in Dili; (ii) achieving more efficient hydraulic management of the Dili water supply system; and (iii) upgrading the leak detection, leak reduction, and subzone management skills of the technical and O&M staff of the National Directorate for Water Supply. The project used a zonal approach to totally rehabilitate the tertiary network and connections in five subzones, each with approximately 1,000 connections.

TECHNICAL ASSISTANCE Strengthening Water Sector Management and Service Delivery

Contribute to providing safe and reliable water supply to district capitals, Manatuto, and Pante Macasar.

Technical assistance amount	\$1.31 million
Funding source	Asian Development Bank (Technical Assistance Special Fund)
Executing agency	Ministry of Public Works Transport and Communications
Implementing agency	National Directorate for Water Supply
Status	Ongoing

The TA is linked to the ADB-funded District Capitals Water Supply Project, which is rehabilitating the urban water supply systems of Manatuto and Pante Macasar. The project is also introducing public-private partnerships for service provision, in the form of 2-year management contracts for the O&M of the rehabilitated systems. The TA is aimed at providing water sector officials at the national level, and in Manatuto and Pante Macasar, with the capacity development and institutional reforms needed to effectively manage, operate, and maintain urban water supply systems, including catchment area management. Lessons from the TA are also informing the national rollout of a new urban water sector management system for Timor-Leste, which can serve as model for reform of other infrastructure sectors in the country.



Nonrevenue Water in the Pacific

Water scarcity and financial constraints in Pacific developing member countries (DMCs) emphasize the need for more efficient use of existing resources. Nonrevenue water is defined as the difference between the amount of water put into the distribution system and the amount of water billed to consumers.^a Utilities in Pacific DMCs report very high nonrevenue water (in the range of 50%), about half of which is due to unbilled consumption. This corresponds to losses of about \$100 million each year, taking into account production costs and foregone revenue.^b Large network losses mean greater challenges in meeting consumer demands. Nonrevenue water losses also accentuate the struggles of utilities to strike a balance between setting appropriate water tariffs (sufficient to ensure their capacity to maintain and invest in new infrastructure) and being affordable to customers, especially poor households.

The Asian Development Bank works with utilities in Pacific DMCs to better manage nonrevenue water, including through infrastructure projects (such as pipeline rehabilitation and installation of meters), institutional and governance reforms, and the capacity development of utility managers and operational personnel.

^a R. Frauendorfer and R. Liemberger. 2010. *The issues and challenges of reducing non-revenue water*. ADB, Manila.

^b Pacific Water and Wastes Association. 2013. *Pacific Water and Wastewater Utilities Benchmarking Report*. Moto'otua.

District Capitals Water Supply Project

Help to provide a sustained 24-hour water supply to Manatuto and Pante Macasar. The project will reduce water-related diseases and raise household incomes, particularly for women.

Project amount	\$11.00 million
Funding source Asian Development Bank (Asian Development Fund)	\$11.00 million
Executing agency	Ministry of Public Works Transport and Communications
Implementing agency	National Directorate for Water Supply
Status	Ongoing

The District Capitals Water Supply Project will support the efforts of the Government of Timor-Leste to meet the MDGs, particularly improving the health of children under 5 years of age. By the end of the project, the national directorate for water supply will provide safe and reliable water supplies to the district capitals of Manatuto and Pante Macasar, and will lessen the workload of women. The project delivers a first step in the government's plan to provide 24-hour access to safe drinking water in all district capitals.

The aims of the project are (i) rehabilitation and expansion of water supply systems in Manatuto and Pante Macasar by the NDWSS, (ii) increased knowledge of efficient use of water and safe hygiene practices in project areas, (iii) sustainable O&M of urban water systems by the district department for water supply and sanitation, and (iv) efficient management of the project by the Ministry of Infrastructure and the national directorate for water supply.

TECHNICAL ASSISTANCE Urban Services Improvement Sector Project

Support the preparation of the Urban Services Improvement Sector Project

Technical assistance amount	\$1.48 million
Funding sources Asian Development Bank (Technical Assistance Special Fund)	\$1.30 million
Urban Environmental Infrastructure Fund	\$0.18 million
Executing agency	Ministry of Public Works, Transport and Communications
Implementing agencies	Ministry for State Administration; National Directorate for Water Supply
Status	Ongoing

The Government of Timor-Leste has asked ADB for project preparatory TA to prepare the Urban Services Improvement Sector Project. The TA is required to (i) assist the National Directorate for Water Supply to plan and prioritize investments to improve water supply services in Dili; (ii) assist the National Directorate for Basic Sanitation and the Dili District Administration to identify and prioritize investments to improve solid waste management in Dili; and (iii) assess the technical suitability, the economic and financial viability, capacity and institutional issues, and the environmental and social soundness of the project.

TECHNICAL ASSISTANCE (REGIONAL) Knowledge and Innovation Support for ADB's Water Financing Program

Pilot Demonstration Activity: Design of Sanitation Output-Based Aid Pilot in Manatuto

Support the pilot testing of output-based aid approaches to the delivery of sanitation services to vulnerable households.

Technical assistance amount	\$50,000
Funding source Water Financing Partnership Facility (multiple donors)	\$50,000
Executing agency	Ministry of Public Works, Transport and Communications
Implementing agency	National Directorate for Basic Sanitation
Status	Ongoing

Gender, Water, and Sanitation in the Pacific

When families lack access to an adequate supply of water, women and children are most likely to bear the economic and financial burden of seeking alternative sources of water. In the Pacific region, women are often primarily responsible for household activities such as washing clothes, cooking, and bathing children. Women in poor households, who are least able to cope with income being lost due to illnesses, are often responsible for caring for ill household members.^a When no household supply of water is available, women and children are usually responsible for fetching water, meaning time that could otherwise be spent in productive work is lost. Carrying heavy loads of water can also be detrimental to personal health. Open defecation may also increase the vulnerability of women and children in situations of domestic violence or abuse.

Strategy 2020, the long-term strategic framework of the Asian Development Bank (ADB), highlights gender equity as one of the five drivers of change for promoting and achieving inclusive and sustainable growth, reducing poverty, and improving living standards. The empowerment of women promises enormous gains—economic and social, direct and indirect—and ADB is helping Pacific developing member countries to capture these gains. As an agent of change, ADB promotes and supports gender equity through operations that deliver specific gender outcomes, such as improved access for women and girls to clean water, better sanitation, hygiene, and basic infrastructure. ADB also encourages agencies that implement projects to actively engage women from local communities in decision-making for water and sanitation investments. These activities are in line with Target 6a under the Sustainable Development Goal: By 2030, achieve 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.

^a World Bank. 2015. *Unsettled: Water and sanitation in urban settlement communities of the Pacific*. Vol. 2. Full report (English). Washington, D.C.

The Government of Timor-Leste requested a small grant under ADB's Pilot Demonstration Activity Facility, which is financed through the multidonor Water Financing Partnership Facility. The grant is supporting the design of an output-based aid sanitation pilot for Manatuto, located in the central part of the country, to ensure that vulnerable households have access to improved sanitation services. If the approach is successfully demonstrated in Manatuto, the government will expand the output-based aid approach to other municipalities in Timor-Leste.

Tonga

POPULATION (2015): **106,379**

ACCESS TO IMPROVED WATER SUPPLIES: **99.6%**

ACCESS TO IMPROVED SANITATION: **91.0%**

UTILITIES: [Tonga Water Board](#)

Nuku'alofa Urban Development Sector Project

Help Tonga to improve urban planning and management, and to deliver sustainable urban services in the capital, Nuku'alofa.

Project amount	\$12.50 million
Funding sources	
Asian Development Bank (Asian Development Fund)	\$6.06 million
Government of Australia	\$6.44 million
Executing agency	Ministry of Finance and National Planning
Implementing agency	Planning and Urban Management Agency
Status	Ongoing

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.

PROPOSED Integrated Urban Sector Resilience Project

Improve the living standards in Nuku'alofa and strengthen the resilience to disaster and climate change of the low-lying communities in Sopu and Popua

Technical assistance amount	\$0.68 million
Technical assistance funding source Asian Development Bank (Technical Assistance Special Fund)	\$0.68 million
Status	Proposed in 2017
Project amount	\$35.00 million
Funding source Asian Development Bank (Asian Development Fund)	\$15.00 million
Cofinancing	\$30.00 million
Status	Proposed for 2018

Vanuatu

Population (2015): **263,888**

ACCESS TO IMPROVED WATER SUPPLIES: **94.5%**

ACCESS TO IMPROVED SANITATION: **57.9%**

UTILITIES: **Union Electrique du Vanuatu Limited**

Port Vila Urban Development Project

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

Project amount	\$38.87 million
Funding sources	
Government of Australia	\$26.50 million
ATF (Australian technical assistance grant)	\$4.50 million
Asian Development Bank (Asian Development Fund)	\$5.00 million
Global Environment Fund	\$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
Status	Ongoing



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 masterplan, prepared through project preparatory TA. The masterplan 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 storm water 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.

PROPOSED Preparing the Port Vila Urban Development Project, Phase 2	
Continuing from the Port Vila Urban Development Project, the TA will prepare for improvements to water, sewerage and flood protection in Port Vila and Luganville	
Technical assistance amount	\$500,000
Technical assistance funding source Asian Development Bank (Technical Assistance Special Fund)	\$500,000
Status	Proposed for 2017
Project amount	\$12.00 million
Funding sources:	
Asian Development Bank (Asian Development Fund)	\$8.00 million
Cofinancing	\$4.00 million
Status	Proposed for 2018
PROPOSED Luganville Urban Development Project	
Improve water, sewerage and flood protection in Luganville	
Project amount	\$12.00 million
Funding sources:	
Asian Development Bank (Asian Development Fund)	\$8.00 million
Cofinancing	\$4.00 million
Status	Proposed for 2018



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Pacific Urban Update 2016

The Asian Development Bank (ADB) works across the Asia and Pacific region to strengthen communities and improve lives by supporting governments, businesses, and infrastructure to operate more effectively. The Pacific Urban Update 2016 discusses the program, projects, and technical assistance (TA) active in Pacific developing member countries during 2016, including projects and TA which closed in 2016. Selected pipeline program, projects, and TA proposed for 2017–2020 are also discussed.

About the Asian Development Bank

ADB's vision is an Asia and Pacific region free of poverty. Its mission is to help its developing member countries reduce poverty and improve the quality of life of their people. Despite the region's many successes, it remains home to a large share of the world's poor. ADB is committed to reducing poverty through inclusive economic growth, environmentally sustainable growth, and regional integration.

Based in Manila, ADB is owned by 67 members, including 48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.



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