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Pacific WASH

WEBINARS







The Role of Water Utilities in Supporting Rural WASH

5 July 2023



We will begin shortly. Participants, kindly note the following for this seminar

Please rename your Zoom name to:

Name, Org or Project (e.g. Las Fernando, ADB)



Please turn your mic off during the presentation



Raise hand when you want to talk







We have a Q&A portion after the presentation



Pacific WASH

Webinar schedule

Time (AEST)	Speaker
10.00am	Welcome – Dean Taylor, Utility Advisor, ADB
10.05am	Opening Remarks – Lusia Sefo-Leau , CEO, PWWA & Hideaki Iwasaki, DDG ADB Pacific Department
10.15am	 Presentations: 1. Dean Taylor – Utility Advisor, ADB 2. Marieke Adank – Senior Programme Officer, Change Hub IRC 3. Ana 'I K M 'Ake – Tonga National Consultant, ADB 4. Alisi Senikuta – Community Engagement Officer, Water Authority Fiji
11.05pm	Panel discussion
11.25pm	Closing, poll and group photo

WEBINARS



Welcome from Pacific Water and Wastewater Association CEO

Lusia Sefo Leau



WEBINARS



Welcome from Asian Development Bank Pacific Department Deputy Director General

Hideaki Iwasaki



Introducing the Speakers & Panelists



Marieke Adank Senior Programme Officer Change Hub, IRC WASH



Ana 'I K M 'Ake *Tonga National Consultant* Asian Development Bank



Alisi Senikuta Community Engagement Officer Water Authority Fiji



Quddus Fielea Deputy CEO (Engineering Manager) Tonga Water Board



Dean Taylor - Facilitator *Utility Advisor* Asian Development Bank



Introduction to webinar

Dean Taylor



Pacific Water Management - overview

Country	Urban utilities	Rural WASH
Cook Islands	Cook Islands Water and Waste Water Association	Ministry of Infrastructure and Planning, Ministry of Health
Fiji	Water Authority of Fiji	Ministry of Waterways and Environment, Ministry of Health and Medical Services
Kiribati	Public Utilities Board	Ministry of Line and Phoenix Islands Development.
Marshall Islands	Water and Sanitation Division, Ministry of Works, Infrastructure and Utilities	Ministry of Health and Human Services
Micronesia (Federated States of)	Chuuk Public Utilities Corporation, Pohnpei Utilities Corporation, Kosrae Utilities Authority, Yap State Public Service Corporation, Southern Yap Water Authority	National level: Department of Resources and Development – Division of Environmental Protection and Emergency Management. State level: Department of Health in each State.
Nauru	Nauru Utilities Corporation, Ministry of Health – Department of Public Health.	Nauru Utilities Corporation (NUC), Ministry of Health – Department of Public Health.
Palau	Palau Public Utilities Corporation	Ministry of Health – Environmental health Division
Papua New Guinea	Water PNG Limited, Lae City Authority, Other Municipal Authorities/local government	Department of Water and Sanitation (DWS), Provincial and Local Level Governments
Samoa	Samoa Water Authority	Ministry of Natural Resources and Environment, Samoa Water Authority, Village Water Committees, Independent Water Schemes Association
Solomon Islands	Solomon Islands Water Authority	Ministry of Health and Medical Services, Rural Water Supply and Sanitation Division, Community-Based organisations
Tonga	Tonga Water Board	Ministry of Health, Ministry of Infrastructure, Village Water Committees
Tuvalu	Tuvalu National Utility Limited	Department of Water and Sanitation – Ministry of Public Utilities and Industries, Community-Based Organisations/village committees
Vanuatu	Vanuatu Utilities and Infrastructure Limited	Department of Water Resources – Ministry of Lands and Natural Resources, Community-Based Organisations/village committees.

Challenges for utilities engaging in rural WASH

- Geographic challenges with extending services
- Access to resources water sources, suitable land for infrastructure, skilled workforce
- Financial constraints cost recovery and financial sustainability of services
- O&M considerations

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- Climate change & disasters impacts and infrastructure resilience
- Governance & regulatory frameworks



Today's webinar

- Utilities around the world are increasingly supporting rural WASH
- There are numerous opportunities for both communities and utilities when water utilities move into supporting rural WASH.
- Questions to keep in mind:
 - In what capacity are utilities best placed to support rural WASH?
 - What enabling environment factors are needed/need addressing to enable effective utility engagement?
 - Who is best placed to lead this government, utilities, community?
 - What can utilities do now to support communities?



IRC

Utility-managed rural water services: models, pathways, performance and enabling environment

Presented by Marieke Adank

Supporting water sanitation and hygiene services for life



Background and presentation

- Observed trend in blurring boundaries between utility managed urban water and community (or local government) managed rural water supply
- Utilities increasingly provide water services in rural areas => "Utilitisation" of rural water supply
- This presentation:
- What are the pathways under which "utilitisation" of rural water supply takes place?
- What actors and factors drive "utilitisation" of rural water supply?
- Does utilitisation of rural water supply improve rural water services (coverage and service levels)?
- What are the challenges and how can (and have) these be overcome?
- Based on mapping of some 32 "models" of utility-managed rural water supply from 22 countries

Defining utilities

- Responsible for direct provision of water services to clients.
- Responsible for O&M, revenue collection and possibly asset development and replacement.
- Professional (paid) operational staff, as well as professional (paid) executive management
- Legally established corporate entity, with management of revenues and expenditure autonomous from local government.

3 pathways towards utilitisation

Pathway	Description of pathway	Infrastructure construction	Establishment of a new utility
Pathway 1	Urban Scheme expansion into rural areas	Yes	No
Pathway 2	Service Delivery Model (SDM) change	No	No
			Yes
Pathway 3	Introduction of a new SDM	Yes	Yes
Multiple pathways			





Case study: Uganda

- 2 utilitisation models:
- Expansion of National Water
 Company into rural areas (pathway 1, in blue)
- Change from community management to utility management: The umbrella organisations (pathway 2, in green)



Kabarole district Source: Huston et al, 2021

Case study: Vietnam

- Three different models:
- Pathway 1: E.g. Hai Duong
- Pathway 2: CERWASS
- Pathway 3: Private owner-operators managing small piped schemes

Key drivers for rural water supply utilitisation

- Driving actors
- Central government
 - Though mandate change of operators
 - Though stimulation of utilitisation of rural water supply
- Development partners
 - Through influencing central government
 - Through financial and technical support
- Utilities
 - Expending customer base

- Driving factors
- Population and economic growth, resulting in higher levels of water demand
- Expected improvements in
 - \circ service levels
 - \circ coverage
 - \circ cost recovery
 - o investments
- Expected addressing capacity issues
- Expected economies of scale
- Regulatory change
- Bulk water
- Supply driven

Improved rural coverage and service levels through utilitilisation?

- Yes,
- Reaching more people with (often) more reliable services
- But....
- Limited scaling of utilitymanaged rural water service delivery models
- Equity issues
- High(er) service levels not guaranteed



Challenges and overcoming these - Utility performance

- Many utilities face similar financial and capacity challenges as community-managed service providers in rural areas, including:
 - Attracting staff
 - Low consumption rate
 - High transaction costs of revenue collection
- To overcome these challenges:
 - Aggregation and consolidation of utilities, with economies of scale
 - National capacity building platforms and WOPs

Challenges and overcoming these - Enabling environment

- Utilities providing rural water services do not operate in a vacuum
- They need an enabling environment, including:
- Policies and institutional systems
- Capacity building mechanisms and systems
- Monitoring and planning systems
- Financial systems
- Regulatory and accountability systems

Enabling environment

- Policies and institutional frameworks are largely in place
- **Capacity building** mechanisms are generally stronger for utilities than for other rural water service providers.
- Examples of strong **capacity building mechanisms**:
 - Joint research for the water companies is coordinated and conducted by a separate institute, the KWR Watercycle Research Institute (Netherlands)
 - Sector learning through technical meetings and fora, synthesising work from utilities and influencing policy dialogues by utility association (Colombia)
 - Support from National Centre for Rural Water Supply and Environmental Sanitation to its provincial branches to roll out piped schemes into rural areas (Vietnam)
 - Water Operator Partnerships

Enabling environment

- **Monitoring** fewer, more centralised service providers is easier than monitoring many small ones. Nevertheless, strong monitoring systems are often lacking, especially for emerging models.
- Generally weak funding and financing systems, especially in lower- and middle-income countries.
 - Good-case example from Netherlands, England, Wales: Investments covered by (relatively) low tariffs is possible because of low NRW and access to cheap loans on the financial market and government setting favourable conditions for attracting private capital
- Different **regulatory** models, including regulation by agency, by contract, by local government, or self-regulation.
 - Good case example from Zambia: Regulator amended licence for Commercial Utilities to cover water supply for both rural and urban areas. A piped scheme that is assessed as being able to meet its operational and management costs may be put under a utility.
- In general: Enabling systems are stronger in the older and bigger regional utilities where consolidation and aggregation processes have resulted in large utilities with strong financial and regulatory systems.

Conclusions

- Utilities will play an increasing role in provision of rural water services in the years to come.
- However, utility management is not a "panacea" for overcoming rural water supply challenges
- There is a need for strengthening utility performance and enabling environment (especially regulatory and financial systems) in order to have successful utilitisation of rural water supply

IRC

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The thematic overview paper on which the presentation have been based, can be found here: <u>https://www.ircwash.org/resources/utility-managed-rural-water-services-models-pathways-drivers-performance-and-areas-support</u>

Supporting water sanitation and hygiene services for life



Tonga Village Water Committee Pilot Case Study

'Ana 'Ake WASH TA Consultant – Tonga, ADB



CONTENT

- Main Findings of the Pilot
- Gaps and Challenges
- Success Stories



Project (TA 5661) vision

Reduction in water-borne diseases

Reduction in transmission of infectious diseases

People practice appropriate health-protecting hygiene behaviors and enabling environment strengthened to sustain good WASH behaviors

Reliable and sustainable water supply for all

Improved and sustainable sanitation for all

Handwashing with soap practiced by all



1. Improved WASH practices in households & public areas

3

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2. Strengthened enabling environment for improved service delivery

WASH promotional campaigns

Governmentand Utilitybased support

- Behavior change/hygiene promotion activities – households, communities, schools
- Communication strategy and planning
- Installing handwashing facilities

- Sector coordination
- Policy dialogue and regulation
- Institution building, capacity development,
- Operational & financial performance of utilities

- Asset management
- Water Safety Planning
- Business Continuity Planning
- Safety for sanitation workers



WASH Convention Outcomes 2022

- 1. Create a baseline of WASH activities for future reporting
- 2. Map current and future investments in WASH activities
- 3. Outline donor, NGO and civil society WASH priorities and opportunities
- 4. Collect information and build WASH sector coordination as the basis of a WASH sector roadmap
- 5. Provide an overview and summary of rural water supply challenges
- 6. Identify common health issues and links to WASH services







Aim of the Pilot

- Objectives:
- 1) Proposing legislation change to Clause 3 of the Water Supply Regulation from all male members to be inclusive of female members
- 2) Mapping of water assets in three piloted communities Fo'ui, Te'ekiu and Fatumu
- 3) Testing for E. coli in village water system and drinking water catchments with MoH, TWB, Geology
- 4) Collect data on drinking water sources to find source of drinking water contamination with the view to developing interventions and campaigns with communities for safe drinking water Rainwater tanks

METHODOLOGY

• 10% random sample study of the 3 villages based on the 2021 Census

TIMELINE

• 6 months







Fo'ui, Te'ekiu and Fātumu – Pilot Village



Drinking Water Survey Findings

Main Soure of Drinking Water

70 60 50 40 30 20 10 0 Fo'ui Te'ekiu Fatumu

■ Piped water supply ■ Own cement or other tank ■ Neighbor / community cement or other tank ■ Bottled water





Water Resources Management Legislation

Water Supply Regulations 1963: Established Village Committees to operate & maintain village groundwater supply systems.

Public Health Act 1992: States the responsibilities of the MOH to monitor the water resources. Tonga Water Board Act 2000: States the mandate of the TWB to supply water for all purposes. Environmental Impact Assessment 2003: Provides a framework to prevent the making or arbitrary decisions regarding land use.

Waste Management Act 2005: Regulates the collection & disposal of solid wastes & management of all waste.

Environment Management Act 2010: Details the power of the Ministry of Environment to monitor & protect the environment (including water).

Spatial Planning Act 2012: Details the power of the MLSNR.

Water Resources Act 2020: Comprehensive provisions in relation to ownership, management & regulation of water resources.



Water Resources Management Players, Roles & Responsibilities

Water Resources Section, Natural Resources Division, MLNR

- Monitor groundwater resources (quality, quantity & sustainability).
- Estimate water demand & supply capacity per community.
- Integrated Water Resources Management (IWRM).
- Rural Water Supply & Sanitation Section of the Ministry of Health
 - Responsible for the operations of rural water supplies.
 - Monitor the biological quality of the water.
 - Inspect the quality of sanitation systems of all developments.
 - Water and Sanitation Hygiene (WASH) Cluster Lead

Tonga Water Board (TWB)

• Responsible for the distribution of groundwater to residents of the urban areas.



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Water Resources Management Players, roles & Responsibilities (cont...)

Village Water Committees

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• Responsible for the operation and maintenance of village water supply systems.

NGO's (Tonga Trust, Civil Society, Tonga Red Cross, MORDI, etc.)

• Responsible for implementation of water projects including installation of groundwater pumps, rainwater tanks and water reticulation systems.

Ministry of Finance, National Planning (MFNP)

• Responsible for negotiation with Donor Development Partners & attracting funding for water activities.

Waste Authority Limited (WAL)

• Responsible for removing waste & ensuring protection of water resources.









WATER TESTING RESULTS 2023

Village Pilot E.coli Contamination Results





Electric Conductivity and Coliform in Tap Water Testing

Coliform EC





Gaps and Challenges

Operational Management

Management of water resources is difficult due to the vast administrational distribution of roles and responsibilities shared among the Ministries and Departments responsible for the management of the village water supplies.

Public Awareness

Public awareness on water management at village level is almost non-existent. People are not aware of the high amount of water being wasted due to leaky pipes in and outside homes. They are not aware of the sustainability of the underground water supply. Maintaining clean water tanks is lacking.

Working Together

There is still room for improvement and for everyone to work together for the greater good.

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Fātumu Village Solar Panels vs Te'ekiu Village Solar Panels

Pilot Village Baseline with Average Water Per Person and Per Household Per Day





Average per H/H p/day



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Success Stories







Reviews to be made

- Review the Water Supply Regulation under the Public Health Act 1963

 clause 3 which reads
 - The Committee shall consist of 10 men and the Town Officer, who shall be the chairman, making 11 members in all.
- Review recommendation to read 10 members and not 10 men so that women in current committees are legally recognized







JDB

Key Findings

1. The findings acknowledge the criticality of water as central to human, ecosystem, and economic well-being, and highlight the need to address the regulatory gap for sanitation and hygiene, the need to address emerging risks, and the significant challenge of funding needed for improvements to water and wastewater infrastructure, particularly in rural areas. The findings fall into five broad areas:

- 1. The fragmented nature of the regulatory environment for WASH and water supply leaves sanitation in a grey zone with no one agency given full management or accountability for improvements.
- 2. Limited national coordination across jurisdictions and water and sanitation systems leads to inefficient, siloed decision-making that can hamper resilience.
- 3. Water and in particular sanitation and hygiene services, have not been given appropriately high priority as a critical lifeline sector.
- 4. Technical capabilities are concentrated in a few pockets of the water sector and vary between the key agencies. Village Water Committees (VWCs) in particular often lack qualified staff, tools, technical expertise, and reliable information needed to manage new risks.
- 5. There is significant underinvestment in rural water infrastructure and resilience due in part to lack of widespread community ownership and a reluctance to raise rates.



GHD | DFAT | 12546166 | Identification of Options for a Partnership Program to Strengthen Water Management and WASH Service Delivery in Tonga, page iii

Thank you.





WASH in Rural Areas: Rainwater Harvesting Tank Initiative

Alisi Senikuta

Community Engagement Officer

Water Authority Fiji







Our Vision Clean Water and Sanitation for a Better Life



We are committed to optimising water and wastewater services through: Resilience Innovation Safe Working Practises Engaging Stakeholders Capacity Building Being Environmentally Focussed Modenization



Our Values

W - we do the right thing A - accountability : we are

accountable for what we say and do

T - team: we work as a team

E – energy: we bring positive energy to whatever we do

R - we respect our fellow workers, customers and other utilities



Water Authority Fiji Presentation

<u>WASH in Rural Areas:</u> <u>Rainwater Harvesting Tank</u> <u>Initiative</u>



Clean Water & Sanitation for a Better Life



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VISION

Clean Water and Sanitation for a Better Life

VALUES

A

Т

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R

Our key values are:

- W we do the right thing
 - accountability; we are accountable for what we say and do
 - team; we work as one team
 - energy; we bring positive energy to whatever we do
 - we respect each other, our customers, other utilities and government

MISSION

We are committed to optimising water and wastewater services through:

- 🗸 Resilience
- \checkmark Innovation
- ✓ Safe Working Practices
- Engaging Stakeholders
- Capacity Building
- Being Environmentally Focussed
- \checkmark Modernization



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customers and other utilities

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- Government funded initiative that started in 2016
- Focused in our rural and remote communities in Fiji
- It has benefited many Fijians and have help reduced our water carting services in rural areas especially during heavy downpour.



Adapted by Live & Learn Environmental Education from the World Health Organization's Guidelines For Detecting --Water Quality (2nd Edition), Followe 3: Surveillance and Control of Community Supplier for the Keeping Tour Detecting Water Refe Community Tradia.



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REQUIREMENTS

- Construction of tank base
- Installation of guttering
- Signed Statutory Declaration
- ID [Joint Card/ Voters ID]

- Who can apply?
- Customers living in rural areas that depend on rainwater as their source of
 - water
- Maritime islands
- Customers living in our Intermittent Supply Area.



Rainwater Harvesting & Free Water Tank

Who can epoly?

The project area to execute twiceless in forwarders areas and management two plants reports in the formation. The twinester barrenting and form water lands Scienceserit instances as available to test nod and areas concerners.

Applications are an easily been both or material at his and the end of the end of the provides of the provides

How to Apply?

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accountable for what we say and do

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customers and other utilities

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	Application received	Total inspected	Total Approved	Total Delivered
2016–2022	5967	5475	4769	4769

Note: Above data is only significant to the Central Eastern Division on the mainland of Fiji Islands.

Challenges

- COVID 19 restricted movement
- Phone contacts not updated
- Poor road conditions restricts delivery
- Delay in arrival of raw materials for making tanks contributes to delay in tank deliveries
- Remoteness of locations hinders accessibility and communication for tank deliveries.



52



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CARE AND MAINTENANCE OF WATER TANKS

- Trim tree branches on the roofs
- Clean roof tops including the gutters
- Clean inside of the tanks at least twice in a year.
- Prior to the delivery of tanks, there is usually a community awareness that is conducted to ensure that recipients of the initiative are also aware of the care and maintenance of the water tanks.
- The main objective of the awareness is to enable sustainability.



Adapted by Live & Learn Environmental Education from the World Health Organization's Guidelines For Driveling –Water Quality (2nd Educo), Followe 3: Surveillance and Control of Community Supplier for the Keeping Tour Driveling Water Safe Community Toukat.



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Photos



This tank base and gutters installations is the requirement for the RWHT. So, this can be approved for tank delivery



Above is an indication of a tank that has been delivered to a customer in a remote location that has met all the requirements of the RWHT initiative



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•



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customers and other utilities.

E – energy: we bring positive energy to whatever we do R – we respect our fellow workers. Benefits of RWHT – WASH in Rural Areas

- Improves water storage capacity
- Enables safe hygiene practices
- Reduces water carting services during heavy downpour
- Ensures access to water to everyone despite locality
- Helps improve sanitation conditions in the community
 - Helps improve and reduce the spread of water borne diseases





Our Vision Clean Water and Sanitation for a Better Life



Our Mission We are committed to optimising water and wastewater services through: Resilience Innovation Safe Working Practises Engaging Stakeholders Capacity Building Being Environmentally Focused Modenization



Our Values

Our Key values are: Customer Focus Learning and Growth Intergrituy Passion Accountalbility and Transperancy Adaptability Respect Teamwork Follow us or



VINAKA

ANY QUESTIONS





Clean Water & Sanitation for a Better Life.

Panel discussion



Menstrual Health Practitioner's Guide launched!

- Provides practical tips for addressing menstrual health as part of urban development, water, and sanitation work in the Pacific.
- You can download the Guide here: <u>https://www.adb.org/publications/addressing-</u> <u>menstrual-health-pacific-practitioner-guide</u>

Contact: Maria Tran



ADDRESSING MENSTRUAL HEALTH IN URBAN, WATER, AND SANITATION INTERVENTIONS IN THE PACIFIC PRACTITIONER GUIDE

JUNE 2023



ASIAN DEVELOPMENT BANK

WEBINARS

Poll

- Did today's webinar expand your knowledge/skills on the topic discussed?
- 2. Did you learn something in today's webinar that you can use in your work?





Group photo



Thanks for Watching

Available online:

https://events.development.asia/learning-events/groundwater-assessmentssupport-planning-and-resilience

Next Webinar:

16 August 2023

Topic and registration announced soon!



