

PLANNING FOR CLIMATE-RESILIENT WATER AND SANITATION IN URBAN INFORMAL SETTLEMENTS

research project

WHAT HAVE WE LEARNED SO FAR?

RESEARCH APPROACH

Research objective: to investigate how urban planning processes in Melanesia be strengthened through participation and integration to improve the resilience of WASH service delivery in informal settlements within the urban footprint.

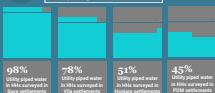
- 1. Urban policy review**
Stakeholder interviews and document analysis
- 2. Settlement ID**
Spatial analysis and literature review
- 3. Community data collection**
Household surveys, site visits and photovoice
- 4. Resilience assessment**
Water and sanitation service delivery models
- 5. Political economy analysis**
Not yet finished

Multidisciplinary and multi-institutional team across Vanuatu, Fiji and Brisbane

RESEARCH OUTPUTS:
<http://www.watercentre.org/hassearch/hassearch/impacts/online-for-resilient-urban-wash-in-urban-settlements-in-pacific-islands/>

CURRENT WASH SITUATION

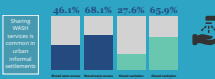
Rates of water piped into homes by the utility are high in settlements in Suva



Flush or pour flush to septic tanks are the most common sanitation user interface in Suva, Port Vila and Honiara. In Port Moresby, dry pit toilets are the most common



Emptying, disposal and treatment services are not commonly reported



Maintaining good hygiene for health and well-being is dependent on water and sanitation access



Almost one-quarter of survey respondents reported septic tank or pit overflowing or leaking

CLIMATE RESILIENCE

Worried about future climate events impacting WASH?
16% in Suva
68% in Port Vila

Based on our HH survey responses (n=161)

Climate-resilient WASH should be:

- F ==> designed, maintained and operated to remain **FUNCTIONAL** under stress and shocks
- A ==> is **ADAPTIVE** - managers, services providers and users learn about relevant risks and responses, and apply lessons
- C ==> Maintains and (where needed) buffers **CONNECTIVITY** (geographical & social) along service delivery chains
- E ==> is **EXPLICIT** in recognition that existing vulnerabilities can exacerbate climate impacts.
- D ==> Has **DIVERSITY** and **DISBURSMENT** built into WASH service delivery models

Climate change impacts can restrict or reduce access to WASH services in informal settlements

Good quality access to WASH services can increase residents overall resilience to shocks and stress



Drought has affected 0% of HH WASH in Port Vila and 1.5% in Suva settlements

Flood has affected 13% to 17% of HH WASH in Port Vila settlements

Cyclone has affected ~1% of HH WASH in Suva settlements and 25% of HH toilets in settlements

Only one household in Suva reported sea level rise impacts to WASH

INTEGRATING URBAN PLANNING & WASH

There are opportunities for more collaborative and integrated urban planning, water and sanitation service delivery model planning, and climate change resilience planning in urban informal settlements in Melanesia - including spatial analysis tools, task forces and improved instruments

Next steps: develop and share tools and activities for settlement residents' climate exposure histories; explore planning support systems; and plan effective advocacy methods

Stakeholders say:

- Tenure insecurity can be a barrier for upgrading services in urban informal settlements
- Responsibility for improving services between departments & providers can be unclear
- More information and data sharing is needed
- Proactive and up-to-date urban planning and instruments (town plans, by-laws, policies) are required to address WASH issues



Infographic prepared by R. San design with input from R. Souter, C. King, G. Robinson, E. Tuniga, H. Makandawa and K.A. Korta. Research conducted by WCC, USP and UNCS funded by Australian Department of Foreign Affairs and Trade. For more information contact r.sander@griffith.edu.au
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