

REPORT TO RAGG AVENUE COMMUNITY

RESEARCH ON WATER AND SANITATION IN UNDERSERVED URBAN AREAS IN MELANESIA PACIFIC 2023

Overview of the Research Project

The UrbanWaSH project is a research project conducted by the International WaterCentre in collaboration with Griffith University and the University of the South Pacific (USP), through funding support from the Australian Government. Its main goal is to support improved planning of water, sanitation, and hygiene (WASH) services in underserved urban areas, where these services are often suboptimal and not resilient to increasing hazards driven by climate change.

This research is being conducted in three cities across Melanesia: Port Vila, Vanuatu; Suva, Fiji; and, Port Moresby, Papua New Guinea. In Suva, Fiji the household survey has been completed in 4 communities: Namadi, Veidogo, Muslim League, and Ragg Avenue.

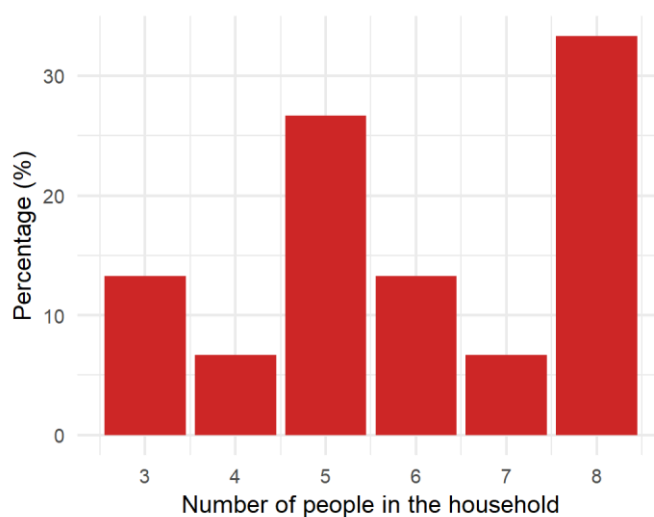
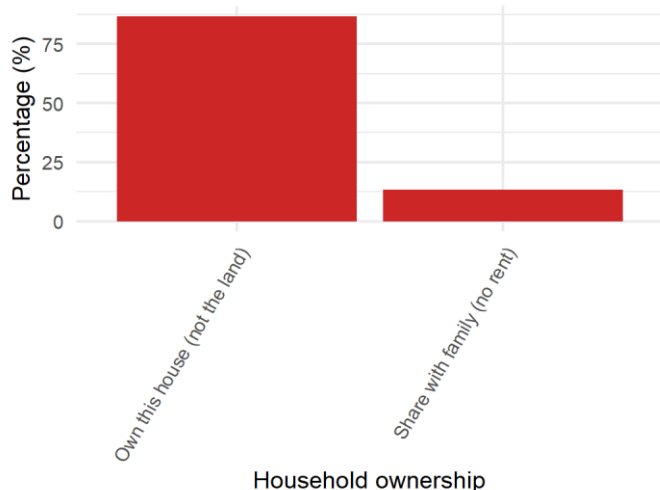
Among the various activities performed in this research project, a household survey was conducted to better understand how people access water and sanitation services, their perceptions, preferences, and challenges faced when using those services, and previous exposures and impacts of hazards driven by climate change. The household survey was conducted in **Ragg Avenue in October 2023**, by researchers from USP and the International WaterCentre/Griffith University. This report provides a brief summary of selected research findings.

We thank community members for the very valuable assistance in learning about their water, sanitation, and hygiene practices and preferences.

For more information, please contact the USP Project Manager, Ms. Camari Koto, on phone number +679 721 1992 or at camari.koto@usp.ac.fj

RAGG AVENUE DEMOGRAPHIC DATA

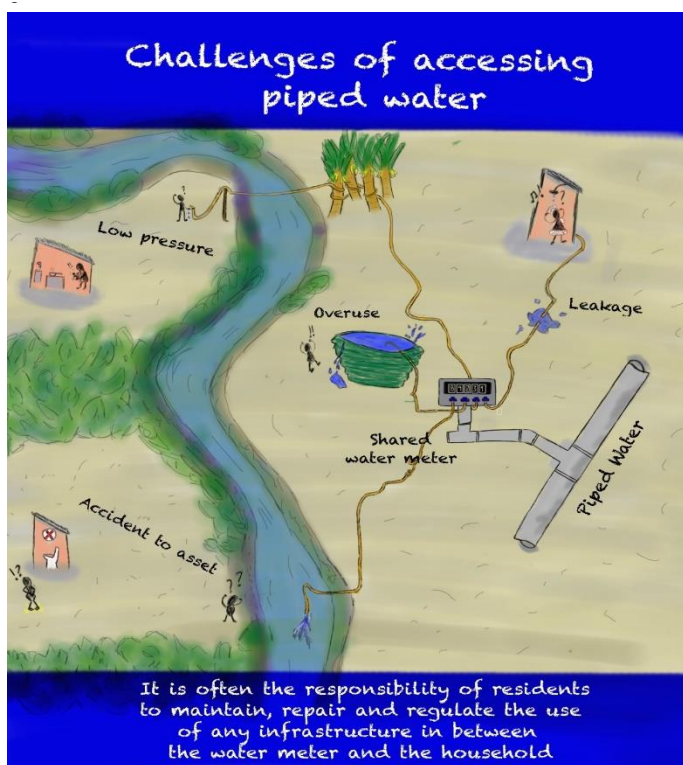
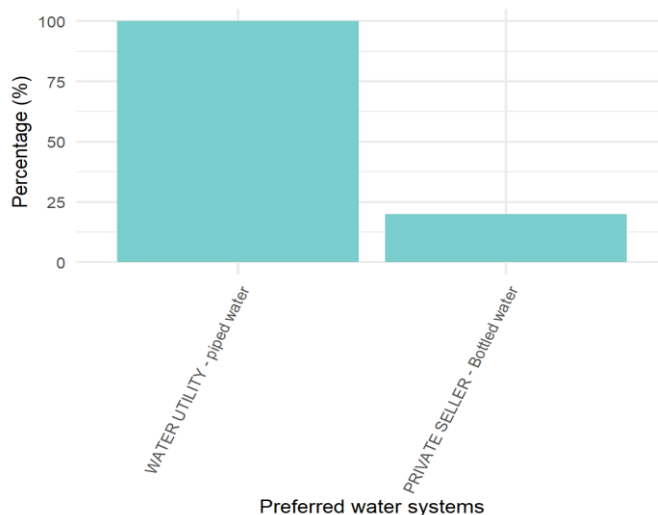
- **Number of surveyed houses:** 15 houses were surveyed, around 24% of all houses in the area.
- **Residents per household:** Most houses have from 3 to 8 people, with most common scenarios having 4 or 8 people.
- **Gender:** Around 60% of respondents were female and 40% were male.
- **Education:** One third of respondents have attended school until Year 7 or 10, with another third completing Years 11 to 13. Around 15% have completed an undergraduate degree.



- **Land Tenure:** Ragg Avenue is a zone of customary land.
- **Household Tenure:** Most respondents (86.7%) own the house but not the land, with only 2 respondents (13%) sharing with family (no rent).

RAGG AVENUE WATER SYSTEMS

- **Location and type of main water source:** All households rely on piped water and have a tap indoors.
- **Number of water sources:** All respondents except one person rely on only one water source and use it for all end uses, including washing, showering, and drinking.
- **Treatment before drinking:** Around 40% of the respondents treat the piped water through boiling before drinking. Other types of treatment, such as filters or solar disinfection were not reported to be a common practice.

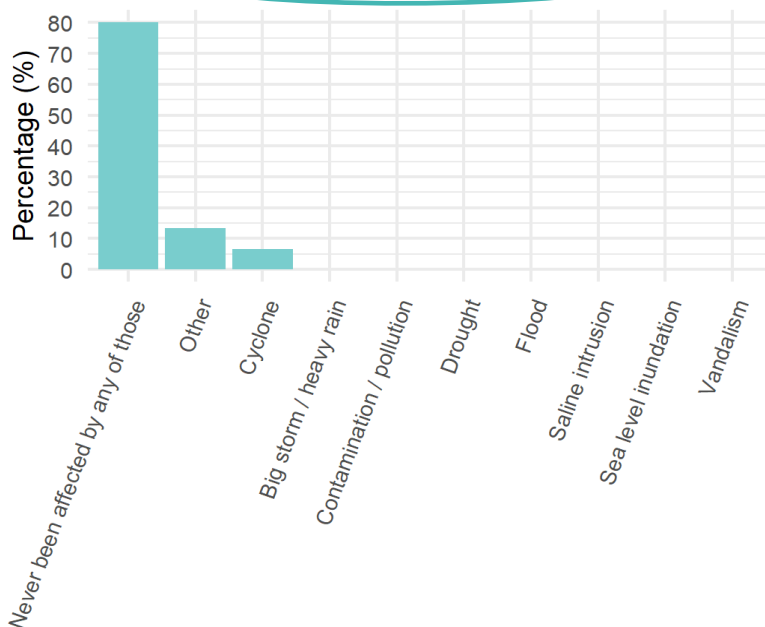


- **Sharing water meters:** Most respondents do not share water meters with other neighbouring households. Sharing with family members (20%) was more common than sharing with non-relatives (6.7%). Payment of water bills is often shared (90-100%) among households.
- **Perceptions and preference of the water system:** Only one person (6.7%) was not satisfied with his/hers current water service, with most of the respondents (86.7%) being very happy. While all the respondents prefer to rely primarily on piped water due to *reliability, accessibility, and convenience*, 20% would prefer to drink bottled water.

Regular cleaning of containers used to storage water, such as rainwater tanks, or the structure used to collect water, such as roofs and gutters can make a difference in making a clean water turn into a contaminated one.

Whenever feasible, treat the water before drinking either boiling or using filters.

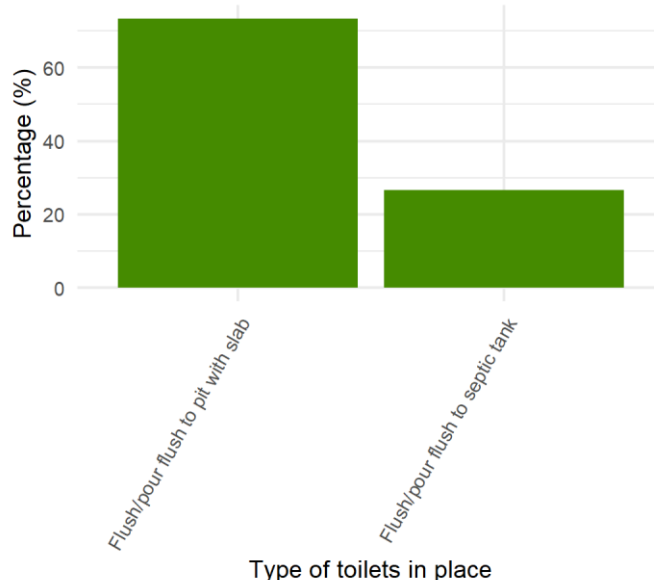
- **Hazards affecting water supply:** Though most respondents (80%) reported that never had their water service interrupted due to a climate hazards, around 14% reported that accidents damaged infrastructure. One person reported having their water supply affected by cyclone.
- **Reasons for water service interruption:** The main reported cause for limited access to water was damage to infrastructure, particularly somewhere on the water distribution network (downstream the meter to the water utility) or in the plumbing system (upstream the meter to the household). Quickly pinpointing the location of damage and informing relevant people responsible for repairs is key to ensure a minimal negative impact during those times.



Reported hazards affecting water supply systems

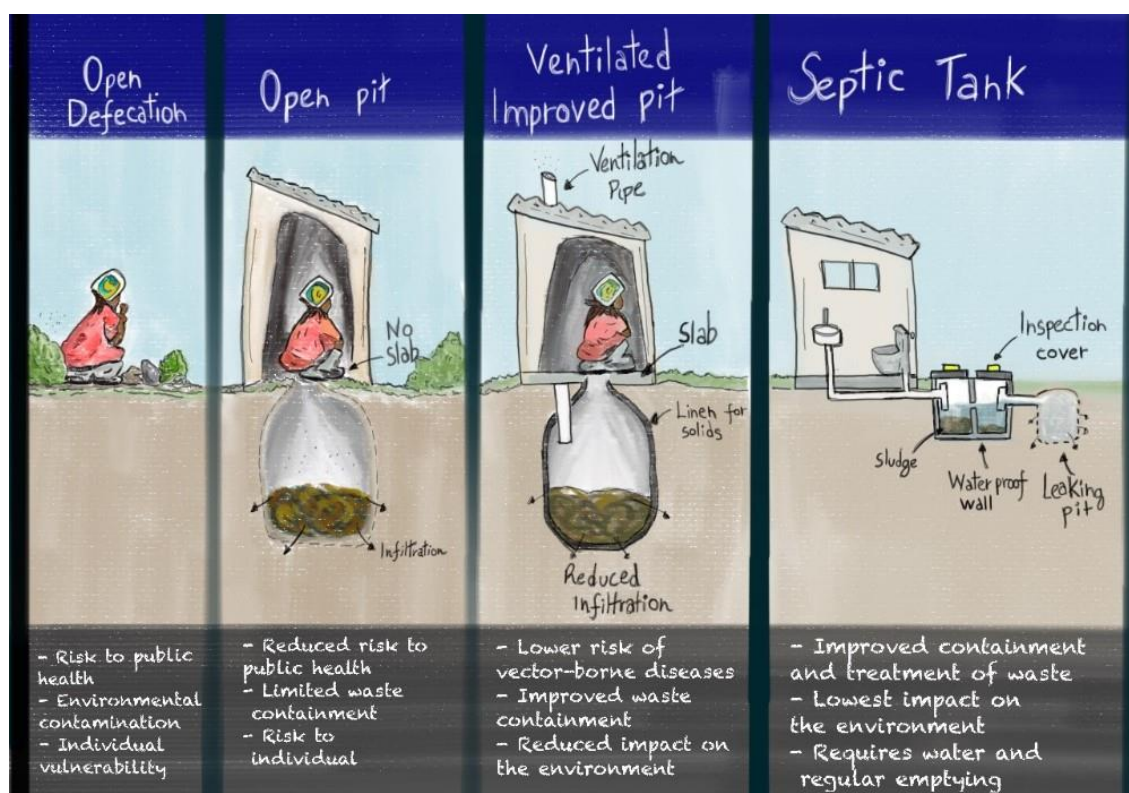
RAGG AVENUE SANITATION SYSTEMS

- **Household own toilet:** 93% of surveyed households have their own toilet.
- **Type of toilets and containment system:** Most households (73%) have a water-based latrine with a slab connected to a pit, while 27% have a septic tank.
- **Toilet preference:** 53% of respondents would like to have a toilet connected to the sewers and 33% would like to septic tank. One person would prefer to keep their water-based latrine with a slab. *Safety/Cleanliness, Accessibility and Reliability* were the main reasons for preferring septic tanks.



Examples of the toilets surveyed in Ragg Avenue

- **Toilet sharing:** The toilet is often not shared with other households occupied by family members (92.3%) or non-relatives (100%). Toilet was mostly shared with 4 to 13 people.
- **Hazards affecting the sanitation system:** All respondents have reported never being affected by climate-driven hazards.



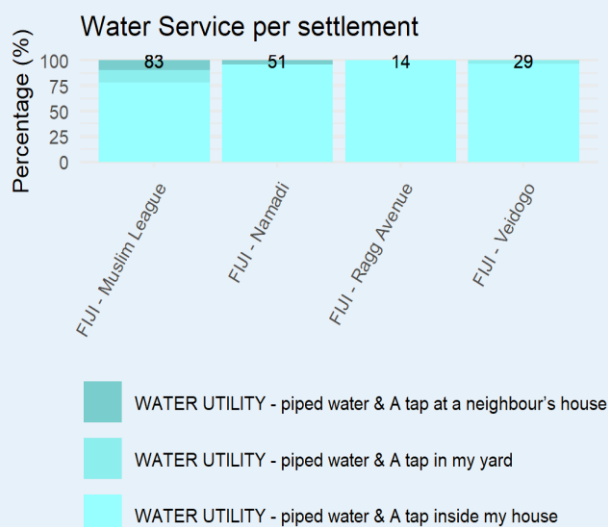
Around 10% of respondents had a misunderstanding of the system they use. The most common mismatch was perceiving a pit or a holding tank as a septic tank. Septic tanks have key design features to enhance treatment of the waste, such as T-shaped inlet and outlet, which favours sedimentation of particles and separation of fats in the surface.

SIMILARITIES & DIFFERENCES ACROSS LOCATIONS IN SUVA

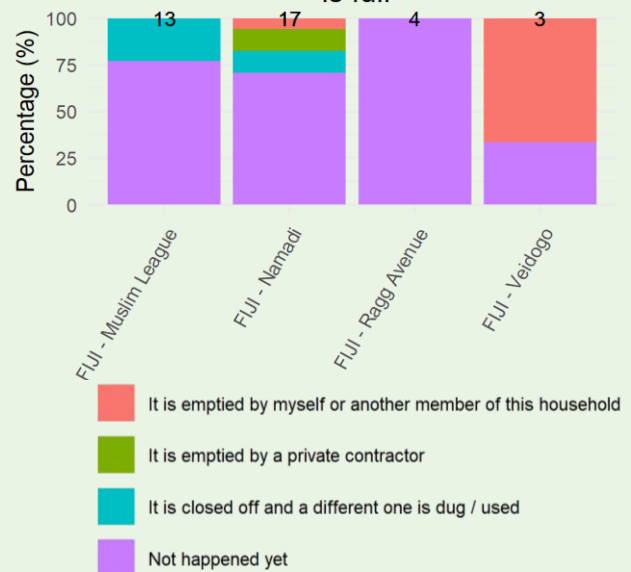
Even though **all households** get the **bulk of their water from pipes** (as seen in the many blue shades on the chart below), **many folks do not access piped water** from inside their household.

Some houses have their own meters and taps inside, while many share meters and taps outside in the yard. In cases where **water meters are distant from the houses** (more commonly in cases where it is shared), the **risk of damage to the pipes is higher, increasing upkeep requirements** to the residents.

So, when we discuss improving water supply, it's not just about installing pipes; it's about ensuring **everyone can conveniently and safely access and use that water!**



Action after septic tank is full



People in the settlements often go for and have preference for septic tanks systems. When you run them right, septic tanks can do a **better job treating wastewater** than pit latrines. You've got to keep up with regular desludging, which means scooping out the sludge that accumulates in the containment unit.

If your **septic tank doesn't need regular emptying**, that **could be a red flag**. It might mean your tank is **too big** or **there are some leaks**. Even if it's not messing with your daily routine, **dealing with this issue is important** to protect the **environment and public health**.

POINTS OF ACTION AND TAKEAWAYS

- **Some urban areas** in Suva are **thirsty for better access to water and improved sanitation** – it's a *work in progress!*
- Beyond just infrastructure, **communities play a key role** in choosing the right systems that will stand the test of time. It's a *team effort for sustainable solutions*.
- Brace yourselves – **cyclones, flooding, and heavy rain** can **wreak havoc** on our **water and sanitation systems**. *We need to be ready and take action* to tackle these challenges head-on. No time for a rain check!



LEARN MORE ABOUT THE PROJECT

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