

REPORT TO VEIDOGO 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.

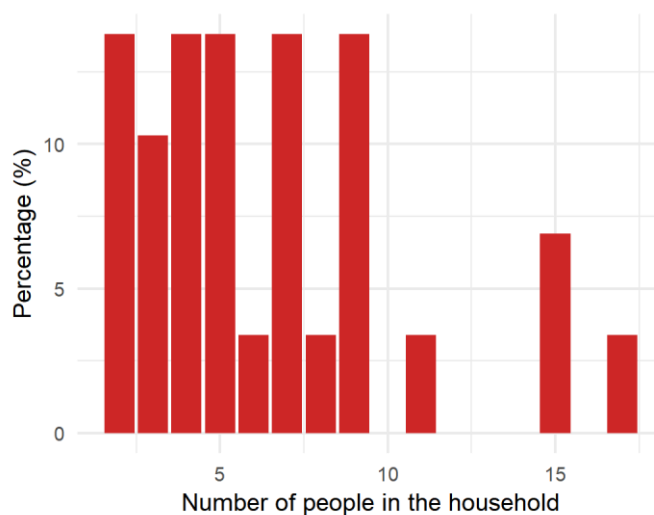
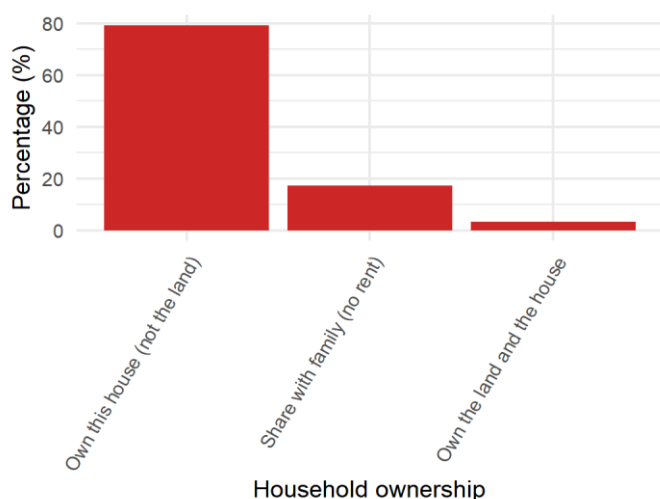
Among the various activities performed in this research project, a household survey was conducted to better understand how people access water and sanitation services, their perceptions, preferences, and challenges faced when using those services, and previous exposures and impacts of hazards driven by climate change. The household survey was conducted in **Veidogo 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

VEIDOGO DEMOGRAPHIC DATA

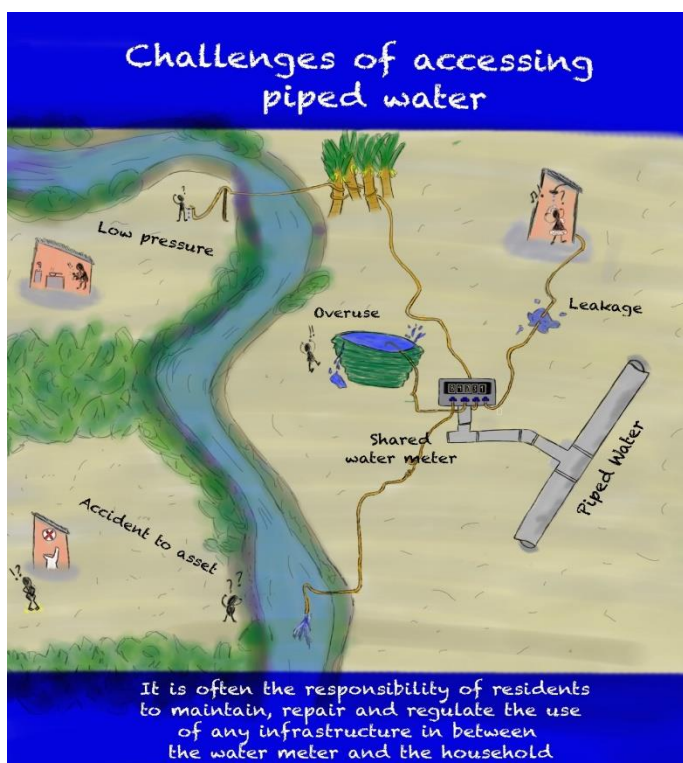
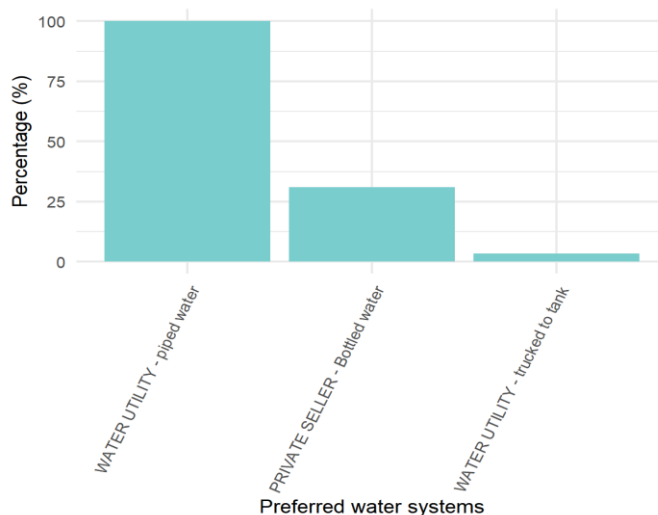
- **Number of surveyed houses:** 29 houses were surveyed, around 29% of all houses in the area.
- **Residents per household:** Most houses have from 2 to 9 people, with reports up to 17 people per house.
- **Gender:** Around 69% of respondents were female and 31% were male.
- **Education:** Most of respondents (48%) have attend school up to year 7 to 10. Only 10.3% completed an undergraduate degree.



- **Land Tenure:** Veidogo is in a private land tenure ship.
- **Household Tenure:** Most respondents (79.3%) own the house but not the land, with only 1 respondent (3.4%) owing both land and house.

VEIDOGO WATER SYSTEMS

- **Location and type of main water source:** Only 1 respondent (3%) has the main water source located outside of the household. All households rely on piped water.
- **Number of water sources:** All respondents rely on only one water source and use it for all end uses, including washing, showering, and drinking.
- **Treatment before drinking:** Around 55% 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.

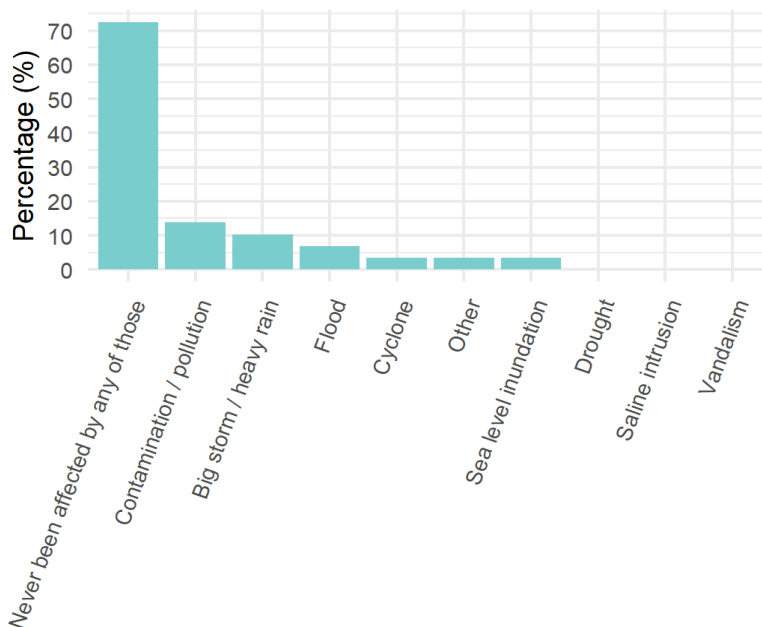


- **Sharing water meters:** Most respondents share water meters with other neighbouring households, most of the time (79%) occupied by other family members instead of non-relatives (48.3%). Payment of water bills is often shared (90-100%) among households.
- **Perceptions and preference of the water system:** Only one person (3.4%) was not satisfied with his/hers current water service, with most of the respondents (69%) being very happy. While all the respondents prefer to rely primarily on piped water due to *reliability, accessibility, and convenience*, 31% 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.

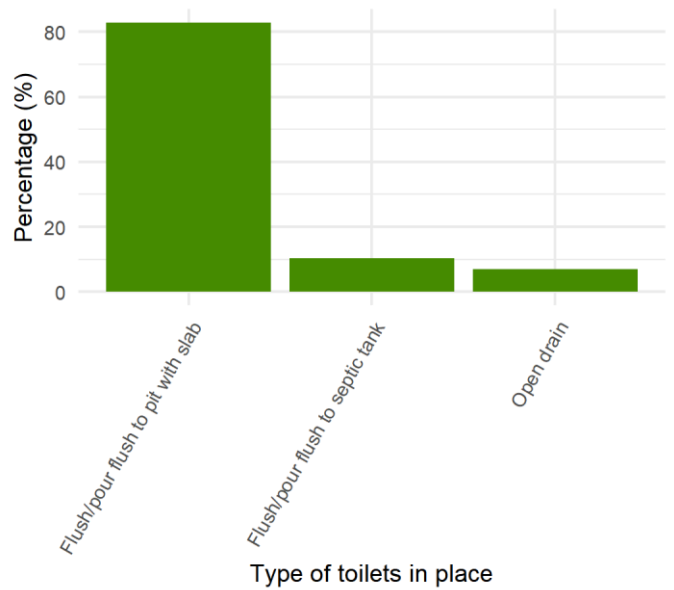
- **Hazards affecting water supply:** Though most respondents reported that never had their water service interrupted due to a climate hazards, around 14% reported that contamination affected their access to water. Heavy rain (10%), Flood (7%) and Cyclone (3.4%) were also reported to affect water access.
- **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

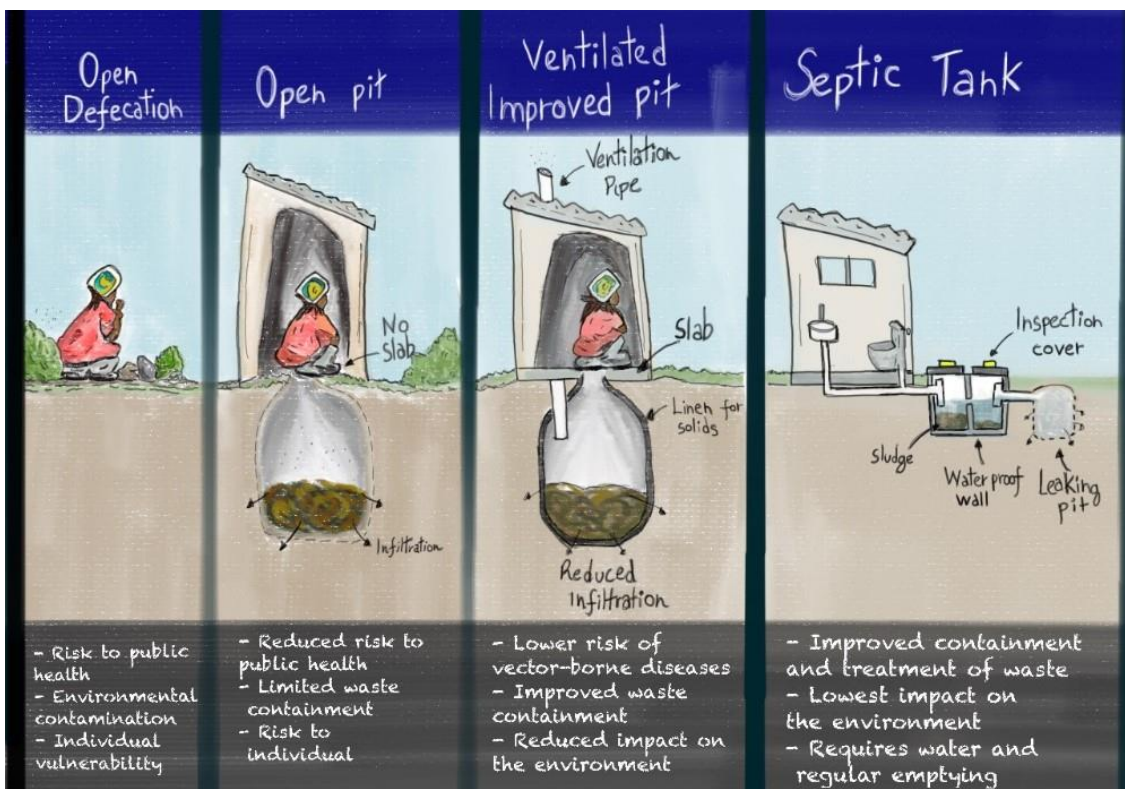
VEIDOGO SANITATION SYSTEMS

- **Household own toilet:** All surveyed households have their own toilet.
- **Type of toilets and containment system:** Most households (83%) have a water-based latrine with a slab connected to a pit, while only 10% have a septic tank. Two respondents reported that their toilets have no containment and go directly to the nearby river/open drain.
- **Toilet preference:** 62% of respondents would like to have a toilet connected to sewers, and 34.5% would like to have septic tank. *Safety/Cleanliness, Accessibility and Reliability* were the main reasons for preferring septic tanks.



Examples of the toilets surveyed in Veidogo

- **Toilet sharing:** The toilet is often not shared with other households occupied by family members (93.1%) or non-relatives (96.6%). Toilet was mostly shared with 4 to 7 people, with reports to up to 18 people sharing the same toilet.
- **Hazards affecting the sanitation system:** Around 24% of respondents reported having their sanitation system affected by climate-driven hazards. Heavy rain was the most common hazard affecting sanitation systems (13.8%), occurring frequently with flooding (75%). There was little report of contamination to the environment.



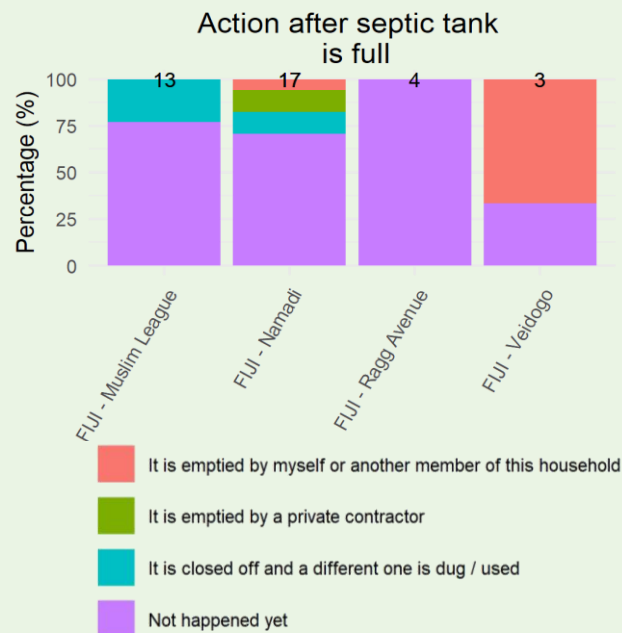
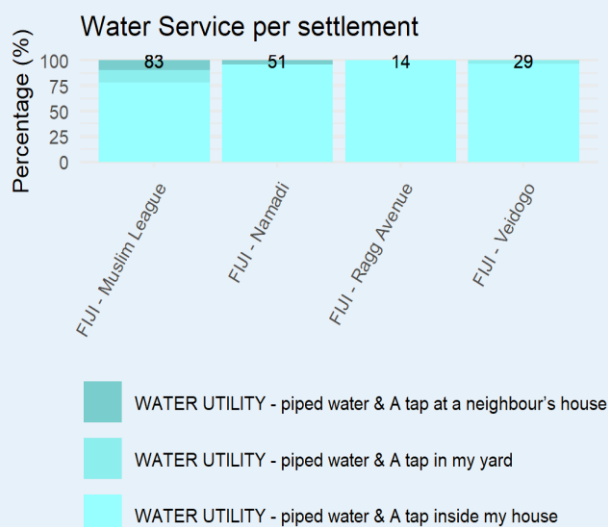
Around 10% of respondents had a misunderstanding of the system they use. The most common mismatch was perceiving a pit or a holding tank as a septic tank. Septic tanks have key design features to enhance treatment of the waste, such as T-shaped inlet and outlet, which favours sedimentation of particles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



People in the settlements often go for and have preference for septic tanks systems as their on-site sanitation option. 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

Ms. Camari Koto – camari.koto@usp.ac.fj
University of South Pacific –

Dr. Regina Souter – r.souter@griffith.edu.au
International WaterCentre

Dr. Benny Rousso – b.rousso@griffith.edu.au
International WaterCentre

