

Voice, Choice, and WASH

A Household Survey of Water, Sanitation, and Hygiene in a Port Moresby Settlement



IMPROVING WATER, SANITATION, AND HYGIENE TETE'S RESPONSE TO THE COMMUNITY HOUSEHOLD SURVEY

Papua New Guinea (PNG) is the largest country in the Pacific in terms of land mass, population, and economic activity. Port Moresby alone has **800,000** inhabitants, with approximately **500,000** living in informal settlements. Although living conditions are different in each community, water, sanitation, and hygiene (WASH) challenges in Tete are indicative of those faced by settlement populations across the country. As PNG's urban population increases at a rate of 2% per year, population growth in settlements is closer to 5%–8% per year. Service providers are struggling to keep pace with the influx of people moving into urban centers, and settlements in particular.

The Government of Papua New Guinea recognizes the need to improve WASH conditions and is working closely with the Asian Development Bank, its development partners, and the private sector to improve infrastructure and service delivery. Implementing effective, scalable initiatives in the water and sanitation sector requires a nuanced understanding of local conditions and community needs. However, collecting data in PNG's settlements presents a unique set of challenges. There are practical, logistical, and security issues to overcome, and there is a lack of information regarding the population, services, and geography. Crucially, limited engagement with government and civil society organizations means that settlement populations have few opportunities to raise their concerns, and virtually no voice to advocate for improved services.



Tete residents
at a nearby
spring water
source

The Tete settlement in Port Moresby is home to **8,000** people living in approximately **1,000** households. It has one public standpipe (tap), which runs for a few hours each day at unpredictable times. Lack of water, coupled with a limited number of effective toilets and poor knowledge of good hygiene practices, generates considerable impacts on public health and labor market productivity.

In November 2017, PNG's Department of National Planning and Monitoring (DNPM), with support from Eda Ranu¹ and the Asian Development Bank's technical assistance for Support for Water and Sanitation Sector Management² commissioned a household survey to assess WASH conditions in Tete. The survey sought to help residents participate in the design and implementation of a proposed water supply pilot project. The pilot project will support the development of a scalable model to improve WASH conditions in settlements. It aims to demonstrate the impacts that improved WASH services can have on residents, and to show that settlement populations can provide a viable revenue source for utilities as service levels improve.

¹ Eda Ranu is Port Moresby's water utility, which is a state-owned enterprise (SOE).

² Asian Development Bank. 2017. *Papua New Guinea: Support for Water and Sanitation Sector Management*. Manila (TA 9298-PNG).

METHOD

The survey collected sex-disaggregated data from 152 households distributed across Tete. It used interviews and site visits to assess three focal areas: (i) background information on Tete and its population; (ii) access to, collection of, and payment for water; and (iii) health and hygiene. This brief summarizes key survey findings that will be used to design the corresponding pilot.

WATER

Community members use a variety of water sources, typically spending 15 or more minutes reaching their primary water source and 2 or more hours queuing for water each day.

THE TETE SETTLEMENT

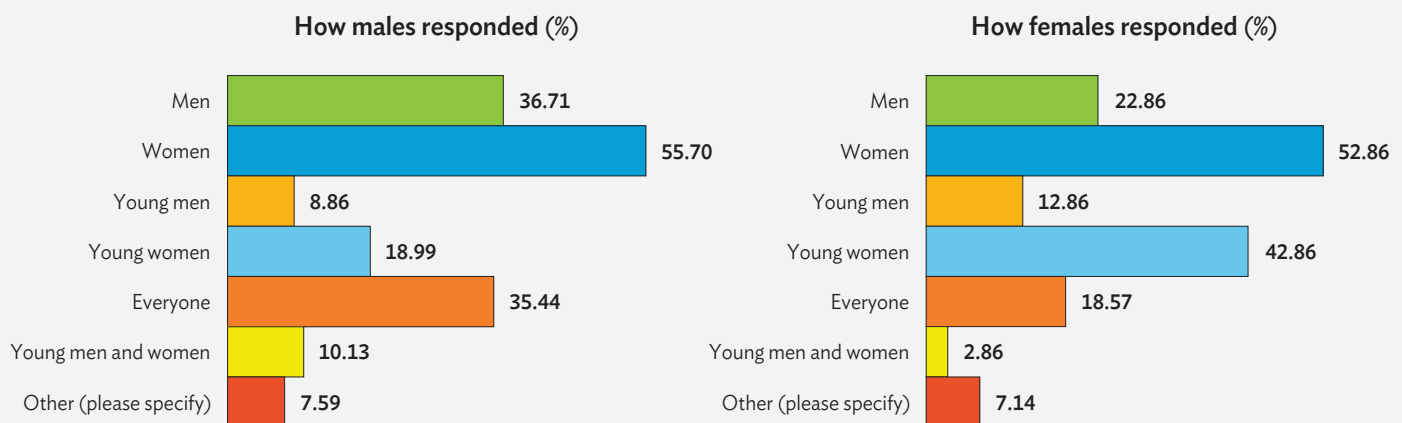
Residents in Tete work hard to feed their families and look after their children. The majority come from PNG's Highlands region and work as street vendors or drivers, and some work in the public sector. Women in Tete typically earn less than men, with 44% of women and 28% of men earning less than K200 per week.³ Completing primary school was the highest level of education for approximately 84% of the community.

Households in Tete typically comprise eight or more people, and only 65% of housing structures are built from permanent materials. Although 90% of interview respondents claim that they own their land, many fear eviction by the government, which impacts their willingness to invest in improving living conditions. A perception of insecure land tenure, limited community representation, and a history of nonpayment for water are the central barriers to improved WASH conditions.

SOURCES AND COLLECTION

The main sources of water for Tete are (i) a public standpipe, (ii) small springs at the southwestern end of the settlement, (iii) hand-dug wells, and (iv) trips to purchase water in town. Women collect water most often, typically on a daily basis from the standpipe, while men use vehicles to collect water in bulk, from town (Figure 1). Eda Ranu owns the infrastructure and supplies water to both the town and the standpipe in Tete, meaning that it provides about 80% of all water used in Tete.

Figure 1: Who Normally Collects Water in Tete?
(Husat isave pulumapim wara blong haus blong yu long olgeta taim?)



Source: Tete household survey, November 2017.

³ Currency unit: kina (K). K1.00 = \$0.31; \$1.00 = K3.25 as of 28 March 2018.

PAYMENT AND IMPROVED SERVICE DELIVERY

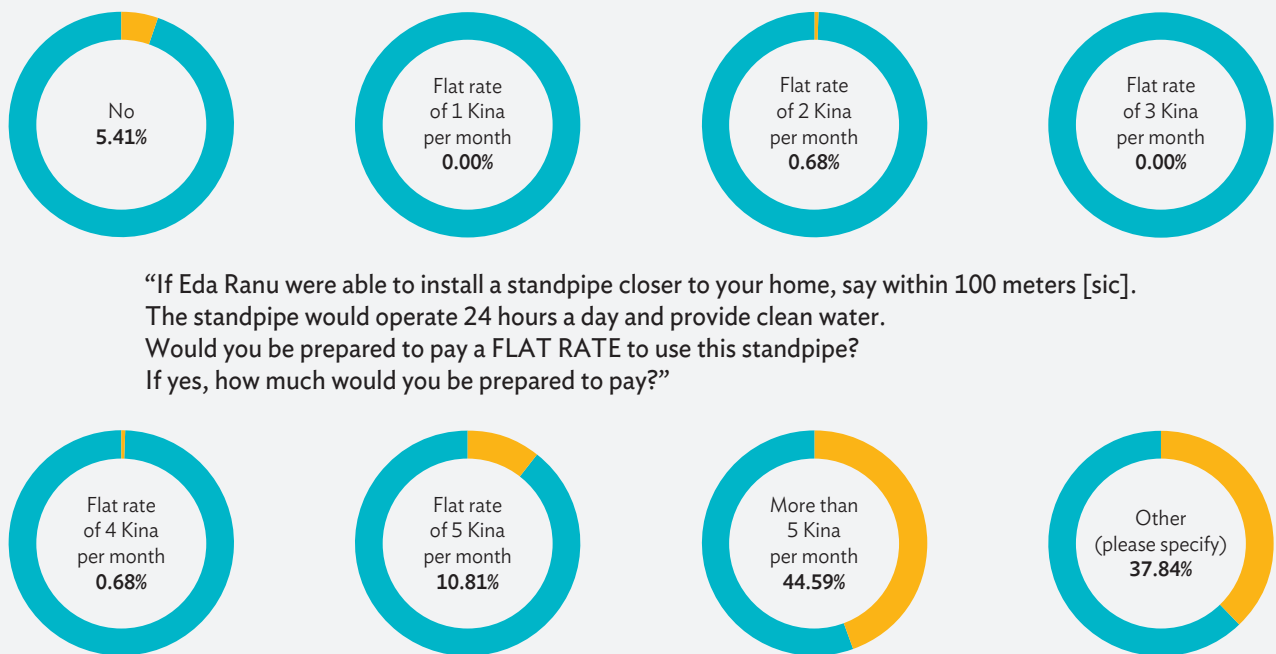
The survey collected varied responses on how much people pay for water, who they pay, and whether or not they pay monthly bills. Lack of uniformity in survey results may be due to a range of response incentives. What is clear from the survey is that most people in Tete (about 80%) do pay for water, and that 35% of those that pay spend more than K30 per week on water, though this is seldom paid to Eda Ranu.

As a part of PNG’s Community Service Obligation (CSO) policy, state-owned enterprises (SOEs) like Eda Ranu are required to provide services to those who need them, whether or not they can pay. The SOE can then recover the cost of providing services from the state. Although Eda Ranu does provide basic services under the CSO, it has never claimed associated costs from government. While the CSO ensures that SOEs deliver the mandatory minimum level of service, it does not create incentives for Eda Ranu to improve service levels—leading to missed opportunities to scale up revenue and recuperate operating costs.

“What is clear from the survey is that most people in Tete (about 80%) do pay for water, and that 35% of those that pay spend more than K30 per week on water, though this is seldom paid to Eda Ranu.”

Residents in Tete recognize that water is a vital resource and are willing to pay more for improved services. When asked if they would be willing to pay a flat rate for a 24-hour water connection within 100 meters from home, 95% answered yes. Interviews also suggest that residents prefer to pay Eda Ranu directly, as opposed to paying community water committees or representatives. Although there are a number of challenges to overcome—including how best to deliver services, collect payments, and navigate delicate community trust issues—reshaping the relationship between Eda Ranu and the Tete community is key to improving living conditions in the settlement while increasing revenue for the SOE.

Figure 2: Willingness to Pay for Improved Water Services (% of responses)



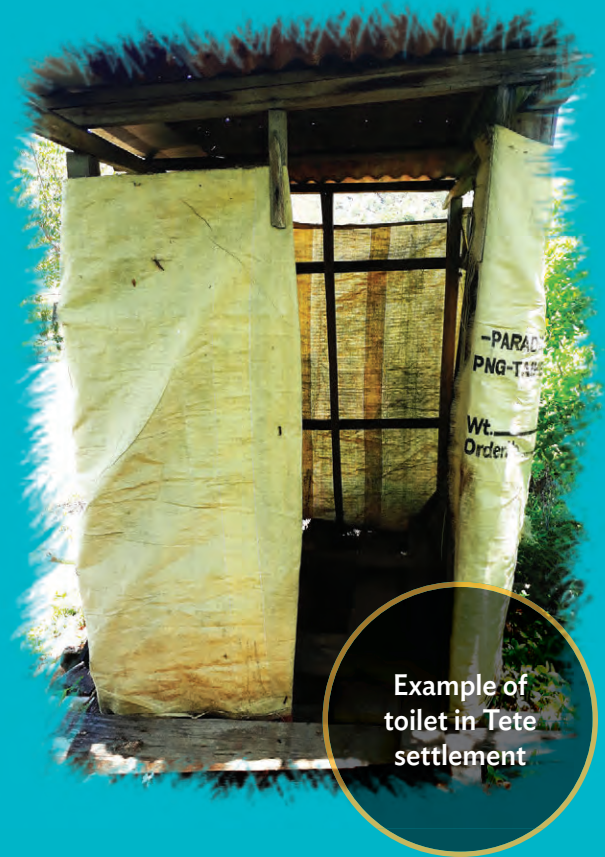
Source: Tete household survey, November 2017.

HEALTH AND HYGIENE

Effective toilets and hygiene behavior support better health outcomes. Although 96% of residents in Tete have access to a toilet, very few toilets act as effective barriers to the transmission of disease. About 70% of Tete’s residents had diarrhea in the year leading up to the interview, with children aged 0–15 years experiencing it most often. Limited access to water is a key barrier to effective hygiene behavior, including hand washing, infant feces management, and menstrual hygiene management.

SANITARY FACILITIES

Maintaining effective health and hygiene behavior in Tete is a constant challenge. The WASH survey inspected 151 toilets and found that, although 77% were in “usable” condition, only 37% had a permanent superstructure, 16% could be locked from the inside, and 18% could be locked from the outside. Further, 11% of toilets were full and had evidence of feces on the floor. Predictably, 82% of residents said that access to water would help improve their toilets.



Access to water, soap, and washing facilities can improve community health, even in cases where sanitary facilities are in poor condition. The majority of respondents indicated that they use soap to wash their hands, and that many people wash their hands after using the toilet or before eating a meal. However, 81% of the site visits found that toilets did not have washing facilities, and only 10% of households had soap close to the toilet or wash basin.

“ 81% of the toilets observed did not have handwashing facilities, and only 10% of households had soap close to the toilet or wash basin. ”

MENSTRUAL HYGIENE MANAGEMENT

Menstrual hygiene is affected by the lack of washing facilities, a lack of privacy, and limited access to clean absorbent materials, either due to limited availability or prohibitive costs. Although 96% of women use sanitary pads when they can afford them, a significant number said they use cloths, which they cannot wash regularly due to lack of water. Privacy is also a considerable issue, as many women use outdoor washing facilities or toilets that are often in poor condition or cannot be locked from the inside. The survey indicated that men are not comfortable discussing menstrual hygiene, with only 55% willing to discuss it during interviews.





Children in
Tete community

INTEGRATING SURVEY RESULTS INTO THE TETE COMMUNITY WATER PILOT

Settlement communities have become an established feature of the urban landscape in PNG. Implementing a WASH pilot in Tete can increase access to water, support Eda Ranu to build financial sustainability, and improve community health. A successful model can be further developed and scaled up to reach other settlement communities.

The pilot needs to develop an integrated management approach that ensures all stakeholders understand their roles and responsibilities. It needs to be designed in such a way that the utility can improve service levels over time as community members demonstrate willingness to pay. Ultimately, the key indicator of success will be the rate at which Tete residents pay for (and receive) an improved water service.

Build long-term partnerships.

The pilot should be implemented as a long-term partnership, and not a “quick fix” infrastructure activity. To deliver lasting results, it needs to ensure deep coordination between the Tete community, Eda Ranu, DNPM, the National Capital District Commission, the Department of Health, and WASH sector implementers in PNG, including development partners and civil society.



Survey personnel training in preparation for the survey in Tete settlement

Enable community management.

Establishing or supporting an entity that focuses on managing Tete's water system can help build community ownership and trust. Such a group may help identify necessary water services and the ideal locations for facilities, maintain community infrastructure, and support Eda Ranu to implement payment and collection systems. The entity should comprise trusted community members, including representatives from each block, and have a direct relationship with the Tete Residents Association and Eda Ranu.

Select appropriate payment methods.

The pilot should leverage a pro-poor approach that puts the customer first. This should include a flat rate billing system that allows residents to plan for their payments. Given the strong preference of Tete residents to pay Eda Ranu directly, the utility should consider options for collecting bills in person or working with local trade stores and banks as trusted intermediaries.

Focus on a scalable pilot design.

The pilot should be designed in such a way that water services can improve over time, as payment levels increase. The initial focus should be on establishing reliable water sources that provide at least 50 liters per person per day at a maximum distance of 100 meters. All pipelines should be sized such that they can offer future household connections to residents that are willing to pay connection costs and have established a good payment history.

Work with partners to improve health and hygiene.

Better water services in Tete will improve the quality of life for residents. To maximize the benefits that an improved water supply can provide, Tete will also need a comprehensive health and hygiene program. The program should be implemented as part of the pilot and should leverage a modified Melanesian approach to community-led total sanitation. Doing so will support residents to learn together, and to appreciate how their own health outcomes are interlinked with good WASH practices. This should lead to a demand for improved and effective toilets that are locally appropriate and affordable.

Promote coordination and learning.

Stakeholder coordination is essential to the success of the Tete WASH pilot. DNPM should establish a peri-urban subcommittee to support communication and knowledge sharing. Regular meetings of the subcommittee can help document and share lessons learned, ensure that stakeholders can access all available resources, and enable future projects to build on the pilot.

ACKNOWLEDGMENTS

The Asian Development Bank (ADB) is working closely with the Government of Papua New Guinea (PNG) and its development partners to improve water supply, sanitation, and hygiene conditions. The proposed PNG Water Supply Scheme for Tete Settlement Project is slated for approval in 2018. ADB will leverage financing from the People's Republic of China Poverty Reduction and Regional Cooperation Fund to deliver improved water services and health outcomes in Tete. The pilot project will be used to inform interventions in urban settlements across PNG and the Pacific region.

This brief was prepared by ADB's Pacific Department, and is based on a report by Ken Marshall, international consultant. ADB and the Department of National Planning and Monitoring would like to thank the Tete community and Eda Ranu for their support in both conducting and participating in the survey.

Cover photo: Schoolchildren in one of the villages in Western Highlands Province, Papua New Guinea.
Note: All photos are from ADB.



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