

BUILDING A VIABLE GOVERNANCE MODEL FOR PERI-URBAN PIPED WATER SUPPLY IN PAPUA NEW GUINEA

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WaterAid and Water PNG

PAPUA NEW GUINEA



#WaWF23

Papua New Guinea's Peri-Urban Challenge

- PNG's population is rapidly growing, currently estimated at 9.9 million and increasing to 13.9 million by 2050.
- The population of urban and peri-urban dwellers will double to 24% of the population by 2050, placing significant strain on water and sanitation services.
- There are 171 registered settlements in Port Moresby alone, with over 400,000 people living in settlements and urban villages.



WASH service provision in Peri-urban areas

PNG Urban population with improved water supply 2000 and 2020

Proportion of urban population using improved water supplies	2000	2020
Safely managed	-	-
Available on premises	35%	86%
Available when needed	47%	46%
Free from contamination	-	-
Piped	76%	53%
Non-piped	12%	34%

source: Joint Monitoring Program, 2021

- State owned utility Water PNG serves urban areas in 21 towns across the country.
- Water PNG classifies settlements as NRW with “limited service” provided.
- Access to piped water has declined since 2000, and the proportion of non-piped water has tripled from 10% in 2000 to 34% in 2017.

Typical Water supply Situation in Settlements

- Water supply is typically by self supply (hand dug wells, bores, surface water, rainwater), illegal connections to Water PNG piped supply (or through informal vendors)
- Some settlements/urban villages have a “limited” piped supply. Typically installed as part with funding from politicians through on off payment to the utility.
- Service is substandard, no payments made, low pressure, long queuing of women, assault and conflict from queuing practice common.



Women and children queuing for trickling water at 9 Mile settlement, NCD.

Source: World Bank

Non-Revenue Water

- Failure to pay for water is one of the biggest challenges to the sustainability of Water PNG.
- Utility estimated NRW at 40-55% of total water produced, due to illegal connections within the state-leased properties and unbilled supply to settlements and traditional villages
- Utility is also losing revenue to alternative suppliers such as informal vendors and on sellers. By *not* supplying water to customers in settlements and urban villages, in Port Moresby alone K5 million (\$A1.8m) in revenue is lost every year.



Informal carted water vendor selling water for K1.50-K2 per Jerry can. August 2020, Pari Village, NCD

Memorandum of Agreement

- MoA negotiations were long and complicated. WaterAid acted as a broker between parties.
- Water PNG needed confidence that payment for bulk water will be received (due to previous non-payment)
- MKA have to have confidence they can effectively cover costs from the community (needs effective governance model)
- To support the conditions of MoA reliable provision of bulk water needed and strong governance to operate and maintain.

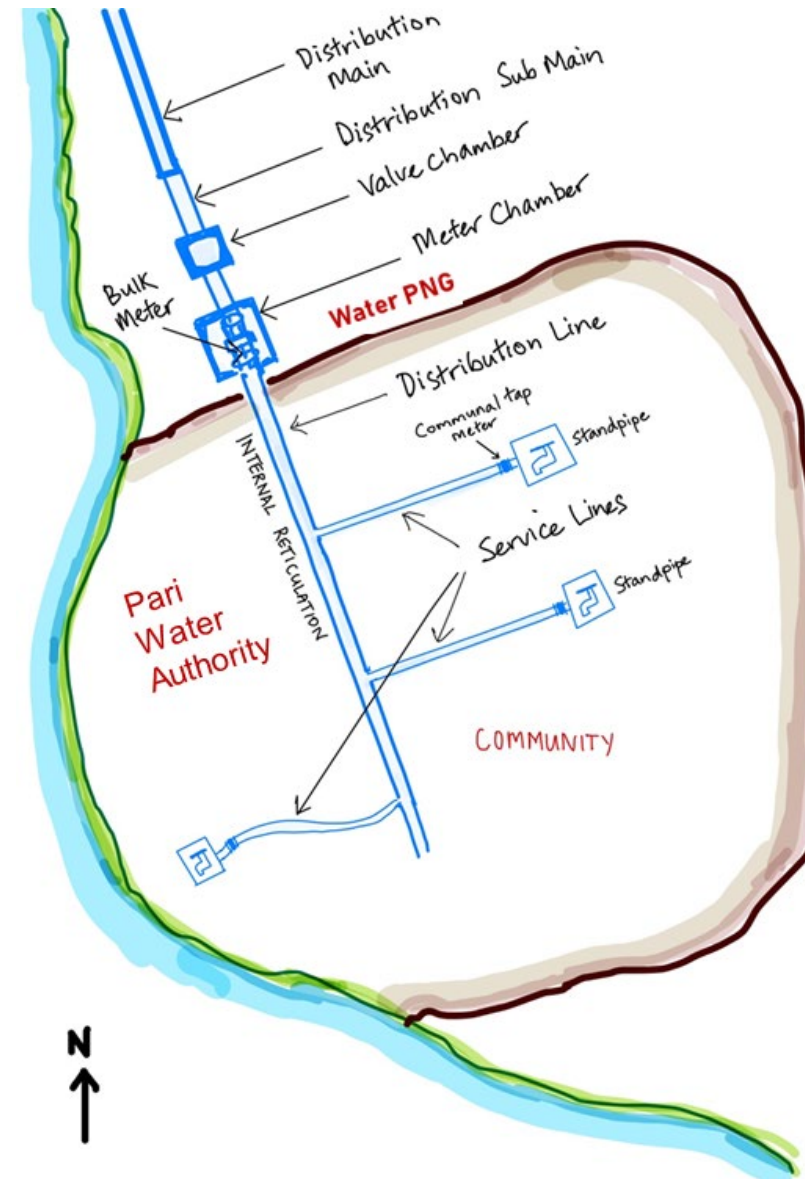


Chairman of the Motu Koita Assembly Mr. Dadi Toka and Water PNG CEO Mr. Parkop Kurua sign the MoA (October 2022)

Business Model for Establishment of Pari Water Services

MOA = “Transitional Utility” or “delegated management”

- A professionalized water service provider established under section 36 Motu Koita Act (Pari Water Services)
- Business entity purchases utility water and on-selling, through network of water kiosks.
- PWS is responsible for entire system after bulk meter
- Motu Koitabu Assembly (MKA) is asset owner and responsible of coordination of financial recovery from the authority and payment to Water PNG



Establishment of Pari Water Services

- It is necessary to move away from a village WASH committee to a professionalised entity with paid staff.
- Pari Water Services is a registered business entity under MKA (within National Capital District Council).
- Pari Water Services have paid staff including a water services manager and part time accountant.

Responsibilities include:

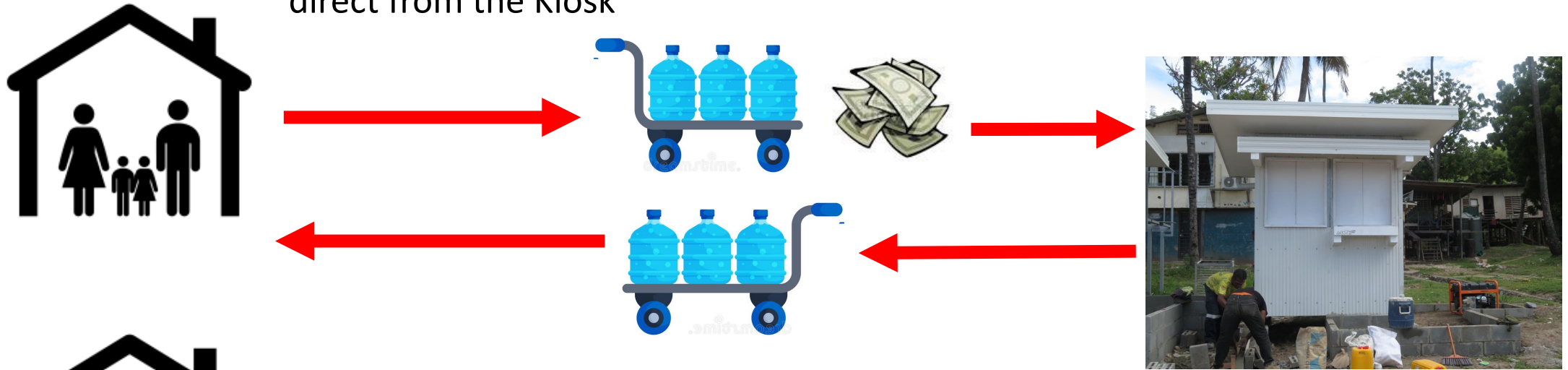
- Coordinating bulk water provision with Water PNG
- Support resellers (Kiosk operators)
- Raising O&M tickets for contractors
- Approving payments
- Resolving community conflict
- Ensuring reliable and quality water supply for customers.



Pari Water Service Manager Ms. Ata Vagi and Water PNG discuss the internal reticulation in Pari Village, November 2022

Hybrid mode of delivery

Mode of delivery 1: HH purchases the water via container direct from the Kiosk



Mode of delivery 2: household formally requests service line. Kiosk operator facilitates installation of meter in meter cage (through Pari Water Services). Household buys water at kiosk and operator applies credit to countdown meter.

Pre-Paid Water Kiosk

- Small building with kiosk operator
- Operator opens tap after payment
- Water prices displayed openly
- Centrally located
- Piped water with 5kl storage capacity
- Tender for operators
- Act as shops for selling other essential items
- Operators are agents of PWS rather than employees. Take percentage of sales, oversight by authority and MKA
- Trained and professionalized in finance, customer relations and have knowledge of the network to facilitate maintenance requirements with PWS and trained contractors.



Challenges

- Illegal connections are a major threat to reliable piped water in PNG, reducing networks pressure and diminishing the service to all users.
- Growing settlement areas outside of village boundary have huge water demand and are threat to distribution line to Pari. A new dedicated distribution line is needed to ensure bulk supply.
- The pilot is a new way of working, strong partnership and coordination required, ongoing community engagement and change management
- Need to thoroughly understand the systems (both formal and informal). It's all about people!



16 x Illegal connections to the Water PNG Distribution main on Pari Road (June 2022)

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