

Toward Improved Management of Communal Water Kiosks Through Pre-Paid Meters: Public Perception of the Change

A Case Study of the Mitsidi-Sanjika Water Users Association in Blantyre

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Summary

While the Blantyre Water Board (BWB) is currently in the process of scaling up a pre-paid water metering system in the whole of Blantyre, information about the challenges posed by the pre-paid meters to BWB users is scarce. This case study aims to bridge this gap by identifying such challenges and proposing solutions before the system is fully scaled up.

1.0 Background

1.1 Low Income Areas (LIA)

Blantyre is the commercial capital found in the southern region of Malawi. The city has a population of 800,264 with a growth rate of 2%. Most of the population lives in unplanned areas surrounding the city centre (NSO, 2019). The poverty rate is 23.6%, and 4.8% of its population is classified as ultra-poor, most of whom live in the unplanned areas. Blantyre’s pre-eminence in Malawi declined after Lilongwe city became a capital city. However, Blantyre remained the main industrial and commercial centre with over 21% of formal employment in 1977. This made Blantyre attractive to rural residents surrounding the city and hence increased cases of rural-urban migration cases. The situation worsened over the years as its capacity to absorb migrants weakened, which led to the development of several unplanned settlements. These are areas that have been settled without any prior physical planning and include squatter areas and villages incorporated around city boundaries. Such areas are also called Low Income Areas (LIAs). Poverty rates are high in these areas and compounded with the problem of over population LIA communities face. There are also significant challenges regarding access to safe water and sanitation services.

Low Income Areas

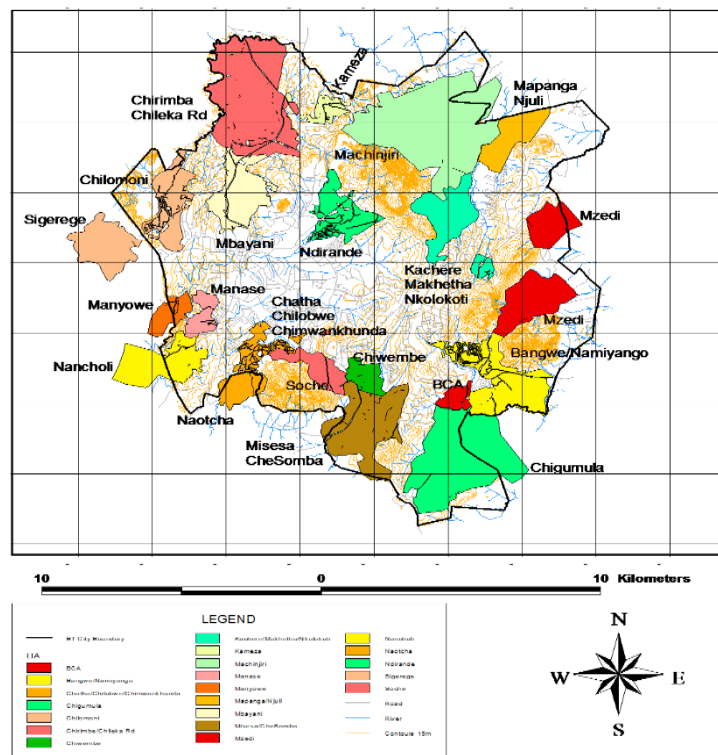


Figure 1: Map of Low-Income Areas

1.2 Management of Communal Water Kiosks

In the early 1990s, Blantyre's water utility company, the Blantyre Water Board (BWB), began constructing water kiosks in LIAs in collaboration with Blantyre City Council (BCC) and other developmental partners, notably UNICEF. These water kiosks are public water sources with taps for communal use and they are the primary water supply source to the majority of residents of LIAs. People go to the kiosk, fetch the water in buckets of 20 liters (ndowa) and pay a tariff to the water seller (kiosk attendant). Due to the substantial cost of managing a high number of kiosks, BWB decentralized management of most of them to communities themselves.

In this arrangement, communities purchased water in bulk from BWB and sold in retail to their individual users. Unfortunately, political differences among different members of these communities led to mismanagement of many of the water kiosks in the LIAs, and unpaid monthly BWB water bills began accumulating. As a result, BWB stopped supplying water to the kiosks demanding that arrears be paid by the communities in order for supply to resume. It thus became clear that there was a need to explore alternative management models for water kiosks in the LIAs with more potential to be sustainable than the community management.

1.3 WUAs and the Role of Water For People

Water For People collaborated with BWB and BCC to find a lasting solution for kiosk management problems. The proposed solutions focused around the establishment of formal and legal structures to be entrusted with management of communal water kiosks. Water For People proposed two management models: the Water Users Association (WUA) model and Private Operator model.

After extensive analysis and discussion between stakeholders, the WUA model was chosen as the model to be promoted in LIAs. A WUA is a nonprofit, community-based organization entrusted with the responsibility of operating and managing communal water kiosks in a designated area on a pooled arrangement basis. Ensuring that water bills are paid to BWB in timely fashion is a core part of WUAs' responsibility and this includes contributing to expanding infrastructure to reach unserved communities.

To date, Water For People in Malawi has facilitated the formation of 10 WUAs managing 730 water kiosks across the 21 LIAs of Blantyre City. In order to enable the WUAs to effectively manage the kiosks, Water For People, in close collaboration with BWB and BCC, ensured that each WUA underwent a capacity building process of at least 3 years. This follows government guidelines and includes both formal and informal mentorship sessions.

WUAs are legally registered under Malawi's Trustees Incorporation Acts. Community members elect board WUA board members in a democratic process, and in turn, board members recruit salaried secretariats who are responsible for the daily operation and maintenance of the water kiosks. This staff includes a kiosk attendant in every water kiosk that sells water to users on a bucket basis.

2.0 Challenges Faced by WUAs

2.1 Traditional Challenges

On average, each WUA manages 50 communal water kiosks. Each kiosk is fitted with a water meter that measures the volume of water supplied by BWB to a particular water kiosk. Traditionally, these meters have been postpaid water meters. In the postpaid water metering system, BWB charges the WUAs on a monthly basis according to their consumption. This means that every month, a BWB inspector visits each water kiosk to collect its meter reading so that it can be translated into a water bill to be paid by BWB customers (the WUAs).

One of the main challenges that BWB has been grappling with in their service delivery is Non-Revenue Water (NRW). NRW refers to water that has been produced but not sold and no money has been collected. This can be due to either water losses between production and distribution through leaks (sometimes referred to as physical losses) or to commercial losses where water is stolen through illegal connections or provided to a customer that does not pay BWB the corresponding due amount (often caused by customers tampering with the meters).

Another challenge is related to the postpaid meters themselves. Often WUAs have complained to BWB over inaccurate water bills not tallying with the amount of water that they have consumed. This occurs because for BWB to produce accurate bills, BWB inspectors must visit every water kiosk in a very short time to collect meter readings for the month. This is often not possible due to the vastness of the supply areas and high number of water kiosks to visit, and inspectors estimate water consumed instead of relying on actual meter readings.

2.2 Addressing Traditional Challenges

In an effort to address these challenges, in 2017 BWB embarked on a city-wide project to replace post-paid meters with pre-paid meters. Rather than consuming water and being charged for it afterward (as with postpaid meters), with pre-paid meters, customers (via the WUAs) must pay for the water in advance before consuming. The meters are programmed to alert customers when their pre-paid water credit is low and to stop the flow of water once it is exhausted. Furthermore, the system has a feature that enables customers to view their history of consumption to help them manage their water usage.

By introducing the pre-paid water meters, BWB aims to eliminate inaccurate water billing and decreases NRW by enhancing revenue collection, preventing illegal water usage, and minimizing non-payment of water by customers. In addition, the pre-paid system may contribute to save water as customers (including WUAs) will be likely to purchase strictly the amount of water they will need.

2.3 New Challenges

Due to financial constraints, roll out of the pre-paid meters is being carried by BWB in phases, successively targeting different areas of Blantyre. To date, only a few areas have had pre-paid meters installed. One such area is Chilomoni Township which also happens to be the jurisdiction area of Mitsidi-Sanjika WUA. This WUA manages 87 communal water kiosks that have had the postpaid meters replaced with pre-paid meters.

For the purpose of this study, information was collected through in-depth interviews (IDIs) and key informant interviews (KIIs) with the WUAs board members and staff to understand their

perception regarding the newly introduced pre-paid meters and associated challenges. The following perceived challenges were identified:

- Increase in Value Added Tax (VAT):** In 2016, BWB introduced VAT on water at the rate of 16.5%. After pre-paid meters were installed, the WUAs reported the VAT was increased to 25%. According to interviewees, this is quite excessive and endangers the WUAs' financial sustainability.
- Variable meter rental charge:** Regardless of the type of meter used, BWB adds meter rental charges on every water bill to users. These are the charges meant to help BWB cover billing costs. With the previous postpaid meters, meter rental was a fixed amount charged to the WUA once per month. The interviews revealed that that with the new pre-paid meter, meter rental is not charged once per month but rather per transaction for every water credit purchase. Because the number of times per month that the WUA purchases water fluctuates from month to month, so do meter rental charges (i.e. more frequent water purchases result in higher meter rental charges). This hampers the WUAs' financial management because it is difficult to estimate in advance the number of purchases it will need make over a certain period.

"We would have loved if the meter rental charges were fixed just as with the post-paid water metering system in order for us to plan and budget adequately."

- Phillip Mghandira, Mitsidi-Sanjika

- Increase in water tariff:** Communal water kiosks were introduced as a means to provide an affordable water supply service to LIA residents who cannot afford their own private household connection. As such the tariffs that BWB charges to the WUA is supposed to be fixed at a low amount compared to private household connections. However, according to interviewees, this has changed with the introduction of pre-paid meters. The WUAs receive less water for the same amount of credit purchased. This means that the water tariff charged by BWB is increasing.



Figure 2: Pre-paid water unit slip

- Inefficiency of the credit purchasing process:** In the pre-paid water metering system, it is possible for water resellers such as WUAs to purchase pre-paid water credit in bulk and then transfer to individual water kiosks based on demand. Instead, the reality is that each time a particular water kiosk runs out of water credit, the WUA must submit an individual cheque to buy credit for that particular water kiosk. Each individual cheque must be approved by more than one person at BWB and the WUA, adding to the inefficiency of the process.

- Imposition of an unrealistic target for arrears repayment:** Most WUAs inherited arrears (unpaid bills) from the previous kiosk operators. This is the case with Mitsidi-Sanjika WUA who pays such arrears according to a schedule mutually agreed with BWB. Since the introduction of pre-paid meters, however, BWB has reportedly been deducting a portion of every water credit purchase towards arrear repayment without consulting the WUA.

“We know we owe BWB some monies in arrears which we have been servicing based on clearly agreed schedules. However, with the introduction of the pre-paid meters, BWB has just decided to deduct 50% of the arrears per every transaction which is affecting our operations heavily. We cannot pay our workers on time, hence low morale to open and serve customers at a kiosk.”

- Phillip Ngadhila, Mitsidi-Sanjika WUA Administrator

2.4 Water Level of Service

WUAs manage water kiosks as a business, using profits from water sales to invest in infrastructure expansion and improvement of service quality. Unfortunately, because of the above-mentioned challenges, the pre-paid water metering system that is currently in place may have the opposite effect negatively impacting WUAs operations and reducing LIA residents’ access to water. Every year Water For People collects data from the LIAs of Blantyre to measure the progress made toward the ultimate goal of reaching every community, household, and public institution with sustainable water service delivery. The data collected is used to assess what is called water Level of Service (LoS). Water LoS means the existence of an improved water system that meets government standard.

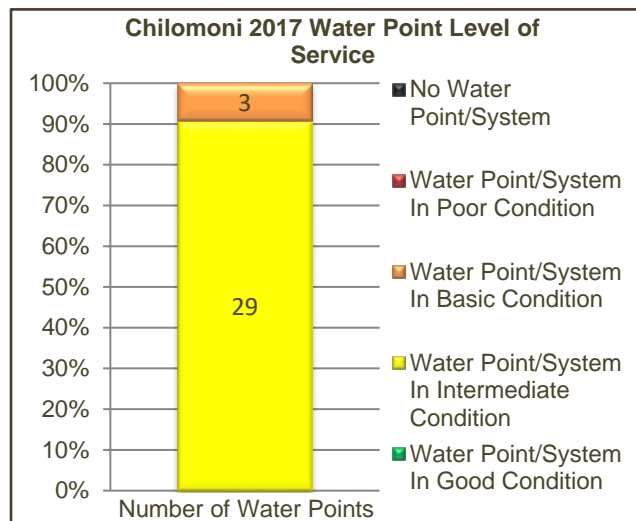


Figure 3: LoS in Chilomoni LIA, 2017

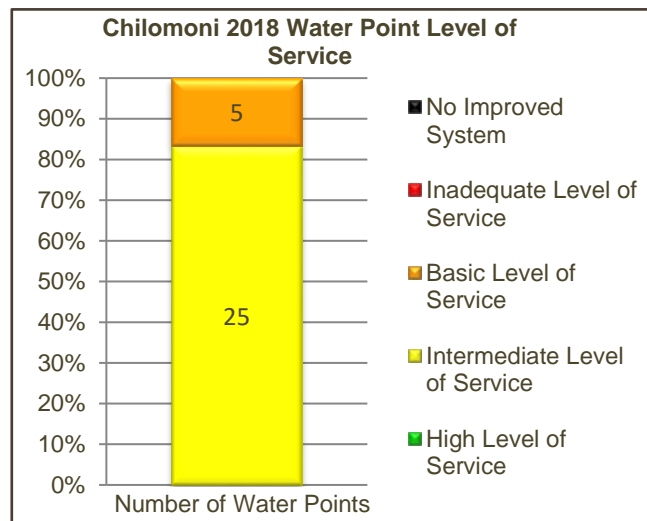


Figure 4: LoS in Chilomoni, 2018

The Water LoS had a significant drop of 7.3% from 2017 to 2018. The KII with Mitsidi-Sanjika WUA, which serves Chilomoni, indicated that the LoS dropped because water kiosks were not functional at the time of data collection as they had run out of water credit. This occurred by and large due to the challenges with pre-paid meters described above.

3.0 Recommendations

Based on Water For People’s annual monitoring data, discussions during annual Reflection Sessions, and Key Informant Interviews, Water For People recommends the following in order for pre-paid meters to be a vehicle for positive change in increasing access to water in LIAs:

- BWB should make it clear to WUAs how water is priced, clarifying how tax charges and the tariff itself are accounted for in the final price, rather than leaving WUAs speculating in uncertainty.
- BWB should consider setting meter rental charges at a fixed amount to be paid monthly so that WUAs can plan and budget in advance.
- BWB and WUAs must reach a new agreement on how arrears will be repaid.
- WUAs need to reorganize their business model to accommodate the pre-paid water metering system which requires them to budget for water to be purchased in advance of consumption, as opposed to the previous model where they pay for it after consumption.

4.0 References

National Statistical Office (NSO), May 2019. 2018 Malawi Population and Housing Census. Zomba.