SWIFT

Consortium for Sustainable Water, Sanitation & Hygiene in Fragile Contexts

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SWIFT water ATMs: experience and impact in Turkana and Wajir counties of Kenya

The challenge for rural water revenue collection, management and transparency

In most rural water supply schemes, the predominant delivery model has been community based, where members elect a Water Management Committee (WMC). The WMC oversees the collection of water user fees, daily operations and minor maintenance of the facilities. Water is often distributed through public water kiosks where the WMC employs an attendant to man and operate water collection. Several problems have been observed with this management model in rural counties, such as Turkana and Wajir. One of the most frequent setbacks of these systems, which are often based on voluntary time by community members, except for periodic "allowances", is a lack of transparency in money collection. This therefore raises accountability issues, which prevent the management systems from being sustainable.

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Transparency and accountability issues

The lack of transparency and the arbitrary setting of non-transparent tariff structures dents confidence in these systems and undermines the viability of the system in the long run. The kiosk attendants do not often account for the money collected from the kiosks at the end of the day and do not pass on the revenues collected to the WMC. In turn, WMC members can sometimes misappropriate the revenues returned from those water kiosks.

A study by Oxfam in 2016/17 mapping 1,196 water supply schemes in Turkana and 261 in Wajir counties of northern Kenya found that 33% were dysfunctional and not delivering services as intended. These findings are corroborated by Kwena & Moronge (2015); Lockwood& Smits (2011); Sutton (2004); Government of Kenya (2009) & United Republic of Tanzania (2016) whose findings indicate that between 30-45% of rural water supply systems in Africa are non-functional or operating below capacity at any given time.

Users' needs are not met

In the long-run, while water users pay for water, no funds are available to buy spares, carry out repairs or schedule maintenance operations. Without funds, water committees are unable to invest in regular operations, maintenance and expansion of existing water supply. This ultimately leads to the breakdown and complete non-functioning of water schemes. But the WMC, as water service providers, are not held to account based on their performance or on the fact that they are collecting money from the public to offer a service.

When water systems fail, the most vulnerable in the community, such as women and children, are adversely affected. As the primary care-givers, women bear the brunt of unreliable water services. They are the ones who walk long-distances to fetch water when nearby water points fail to deliver. Young girls are particularly affected when they cannot access water to maintain personal hygiene and are forced to miss school days as they accompany their mothers to look for water. Women and girls are further exposed to the risk of being assaulted as they travel to look for water.

Photo: Fatima - Water ATM, Hadado Town, Kenya. Credit: Katie Nelson, Oxfam.

A different approach is needed

It is difficult to accept that people die due to lack of water, even in arid areas, and it is even more difficult to accept when water systems have been designed but not maintained. Service providers, be they the local WMC, private sector service provider or county-owned, must address these challenges. It is of critical importance to have a system in place to bring more accountability in revenue collection and management. There is a need for service provision control and monitoring. A 3-step system is needed which requires developing service delivery indicators, collecting and analysing information, presenting information and discussing information and decision making with users. Service providers need to provide water users with information on how much money is collected and how it is used. They need to provide receipts for financial transactions and make revenues and expenditures public. The system of accountability needs to be integral, people need to know what their money is spent on.

Improving efficiency, transparency and accountability using water ATMs

Working in governance and resilience-oriented WASH programming in Kenya, Oxfam has supported communities in Turkana and Wajir counties to pilot the use of pre-paid water metering systems, also called water ATMs. These ATMs improve service and accountability using technology, revolutionising the system and providing substantial benefits to both water service providers and community water users.

Some of these benefits include:

- **guaranteed revenue collection** since water is pre-paid for before use;
- **availability of extensive management tools** through report generation on water scheme functionality, volume of water supplied and revenues collected;
- **ability for water users to manage their water budgets** more easily, they only use what they have paid for;
- **efficient logistics**, there is no need for manpower to undertake meter reading and meter disconnection;
- **reduced operational costs** arising from reduced logistics costs or eliminated costs such as administrative costs related to client billing and revenue collection (i.e. no bill printing costs, postage services);
- **improved cash flow and reduced debtor accumulation**: service providers receive cash in advance and cash collection from water users known to be bad debtors is improved by 100%.
- **faster response in case of an emergency** as water allowance can be set up through the ATMs for the most vulnerable households. There is no handling of cash and water gets to the people who need it the most in a transparent an accountable manner.

How do the "Water ATMs" work?

Water service providers (WSPs) (e.g. Wajir water company, Lodwar water company or Kakuma water providers) issue a water access smart card to registered water users / community members. Before installation and during operations, WSPs carry out community level mobilization and training meetings on the use of those smart cards for accessing water at the local community kiosk.

The smart cards can be topped up by the users through a local vendor who has been appointed by the WSP and carries a point of sale device (POS). Customers go to the vendor and present their card. The vendor places it on the POS and keys in the amount that will be topped up. Once the transaction is complete, the screen displays a message letting the user know that the transfer was successful. Plans are also underway to set up a mobile money system called MPESA in Kenya to top up smart cards remotely.

Once the smart card is topped up, users can get water from the kiosk. If for instance a user has topped up Ksh.100 and the WSP has set water tariff at ksh.2 per 20 L, they will be able to access 1000 L of water from the kiosk whenever they want. They simply swipe the card on the dispenser and it will start flowing from the tap. The water dispenser is calibrated to release 20 L at a time unless stopped by swiping the card again. The machine is also calibrated in such a way that if it is stopped before delivering the 20 L, it will only charge users for the specific volume of water dispensed.

Each service provider has a designated staff, often the billing officer, who allocates a certain amount of credit to the local vendor. For example, the vendor can be allocated a credit of Ksh.10,000. The vendor can then go around topping up smart cards until he/she reaches this amount using the point of sale device. He/she then returns the physical Ksh.10,000 to the service provider and is paid a service commission. This way, the WSP can control the total sales that can be made by the vendor. The WSP can also ask the vendor to prepay for the water credits that will later be sold back to local people. The water tariff being set and controlled at the dispenser by the WSP, there is no possibility for the vendor to overcharge for water to make a personal profit.

Photo: Water ATM, Hadado Town, Kenya. Credit: Katie Nelson, Oxfam.

How the water ATMs are making a difference

The communities have identified the following as some of the key benefits of the water ATMs:

1. **Improved water access conditions** for the community, particularly for women and girls, who used to face long queues, waiting times, restrictive operational hours, as well as disputes while accessing water points in the past. Now water can be accessed any time at convenience.

2. **Increased revenue collections**, since there is no more handling of cash and less paperwork for WSP. WAJWASCO Limited reports a 400% increase in revenue collection from water kiosks operated using water ATMs

3. **Better remote monitoring** of the performance of water systems by WSPs and better understanding of the water purchase patterns on daily basis. The data collected by the system has been used make evidence based decisions to adjust water supply to the demand in each specific village.

4. **Innovative approach in times of emergency**. Instead of blanket cash transfers to drought-affected households, which can be misappropriated, credit can be loaded onto their smart cards for water access.

5. **Increased reliability** in access to safe water. Services are now available 24/7, users do not have to wait for someone to open the water kiosks for 5-7 hours a day.

6. **Reduced water wastage**. Water spillage is now a direct loss for the user (and not for the WSPs anymore). Consequently, this has encouraged behaviour change to lower spillage and improve water usage.

7. **Improved business practices** for water utilities hitherto struggling with operational efficiency. The Public-Private Partnership management contract between the private service provider Maji Milele Ltd and the publicly owned water utilities WAJWASCO and LOWASCO has led to improved business practices in semi-arid lands - a region that has been ignored for business potential.

> *In the past water users had to wait in long lines to access water. People at the back of the queue would often spend an entire day to get their turn to fetch. Sometimes, when they reached the water point, there would be no water left and they would have to go home without water. Because of this, people would sometimes fight in the queues. Some people who travelled far would be at a disadvantage and so would the elderly, the disabled and the children.*

Oxfam's ambitions with the water ATMs

Oxfam strategy with the water ATMs is to provide technical and capacity building support for scale-up and replicate country-wide. The organisation is collecting evidence from the success and impact of the 31 systems installed. This will help to increase knowledge and to produce advocacy materials and policy briefs to promote national adoption of water ATMs by water utilities in Kenya.

Oxfam is working towards strategically engaging with critical institutions such as the Kenya Water Service Providers Association and the Council of Governors Best Practice and learning centre to advocate for wide-scale application of water ATMs for service delivery. The goal is to see the 91 water utilities and rural water supply schemes in Kenya adopt the water ATMs at scale.

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