

# INNOVATION AND COOPERATION BRING SUSTAINABLE WATER SUPPLY TO RURAL KENYA



Villagers in Kalawa fill jerrycans with fresh water from Grundfos AQtap water ATMs. Several parties – NGOs, county and local governments, a telecom company and Grundfos – worked together to bring 60 AQtaps to two large, rural counties of Makueni and Nakuru 3-4 hours' drive from Nairobi.

## THE SITUATION

What a difference reliable and easy access to clean water makes.

Before August 2016, thousands of people had no easy access to drinking water in the rural areas of Kenya in Nakuru and Makueni counties outside Nairobi.

“For me, I used to wake up at 5 a.m. to head to the river to fetch water for approximately one hour,” says Mary Kemto, a local woman. The journey back with heavy, jerrycans of river water could take two hours. “The only chore one ends up doing is fetching water. The children would be affected at many times. They would contract typhoid. Washing the clothes would be such a challenge due to the nature of the water. The quality of the tea was really as terrible as the water.”

Local high school principal Jacky Muthama says, “There was no safe source of water. The only source of water being the Chamakuzi Dam, which is outside the school compound and unsecured. This became a huge challenge, and even made some parents withdraw their girls from school.”

In the villages, vendors would sell water at water kiosks. These

were only open during limited hours of the day. A study showed that only about three in five households paid for their water use. With the traditional vendor-based collection method, the revenue collection rate was only about 35-40%. Non-revenue water – that is, water either lost from leakages, stolen, or unable to be accounted for – was also around 40%, as it is all over Kenya, according to Enock Oruko, Associate Director WASH, World Vision Kenya.

## THE SOLUTION

World Vision, the largest non-governmental provider of clean water in the developing world, teamed up with Grundfos to supply sustainable water collection points managed locally by communities. The Stone Family Foundation offered a grant to make the project possible. These organisations formed a public-private-partnership (PPP) with the county governments, local communities and telecom company Safaricom to realise the project.

Grundfos provided 60 AQtap “water ATMs” for 11 local water committees, or more than 20,000 people. These automated water vending machines supply water securely via a smart card-based payment system. Users load up “WaterCards” with credit, then use them to buy water via the ATM’s touch screen.

*“Our goal is to expand this effort throughout Africa until everyone everywhere has access to clean water that lasts.”*

- Dr. Greg Allgood, Vice President of Water, World Vision

Users make small, affordable payments for their water, ensuring that the water solution is sustainable. There is no cash. Money is then available to the local water committee for ongoing maintenance and repairs. Customers pay the price intended and can even use their mobile phones to load credits onto their WaterCards. In addition, water usage and payments are tracked by the system, providing both transparent data and a quick way to identify potential needed repairs, according to World Vision’s Dr. Greg Allgood, Vice President of Water.

Local resident Ruth Suvai – and Chair of the Kalawa Water Project – says, “Before we started using the AQtaps, a customer had to wait for the kiosk attendant to come and open the kiosk. With the change of AQtap, a customer can draw water any time. The system is more efficient. Now we are not handling cash. The money goes directly to the bank.”

#### THE OUTCOME

Today, not only is water locally available and affordable in these respective areas of Nakuru and Makueni counties, but now most people pay for it. Non-revenue water has been greatly reduced by about 40%, according to World Vision Kenya.

Water revenue has increased 62% – up by nearly two-thirds. With the efficient revenue collection comes improved sustainability of the water projects, as the running costs and expansion plans can now be met by the water committees, says the World Vision Kenya.

The community residents feel the benefits of the AQtaps in many ways.

Local resident Mary Kemto says, “Life has become easier. The food we eat now is clean. The water we drink is clean. We use clean water to do our laundry. These days I’m able to do other chores than fetch water. The water queues do not exist anymore.”

School-age students are spending more time studying and in school rather than fetching water – or staying home sick with water-related diseases.

“We have worked with communities and seen that this technology is good. It can really work for scale-up,” says Deborah Oyaro of World Vision Kenya.



Villagers can now get water at any time of day or night at the water ATMs. Previously they had to wait for an attendant to open a water kiosk for limited hours during the day.

World Vision Kenya’s Enoch Oruko says that scale-up throughout Kenya is possible because the AQtaps provide a market-based approach – made more efficient with the help of Information and Communication Technologies (ICT). “Now we are able to monitor how much revenue is collected, and how much water is sold. It’s a step forward with transparent systems and a breakthrough in WASH (Water, Sanitation and Health) governance,” he says. “It’s a major step forward.”

Enoch Oruko notes that Grundfos did more than provide the technology. The company provided training to World Vision’s WASH team and community members on the AQtap units and water management system. “This was very impressive – a major component of our collaboration,” he says. “It gave us as an NGO the opportunity to work with private partners. Grundfos is one of the greatest partners we’ve had in terms of innovation,” he says.

“World Vision and Grundfos have been able to expand this effort in Kenya with a grant from the Stone Family Foundation,” says Dr. Greg Allgood. “Our goal is to expand this effort throughout Africa until everyone everywhere has access to clean water that lasts.”

#### GRUNDFOS SUPPLIED

Grundfos supplied 60 [AQtap water ATMs](#) for 38 water points. Grundfos also trained local service partners and communities on the use of AQtaps and the digital water management system.

Read more about our [developing world water solutions](#).

See video