

The County Government of Tharaka Nithi Embarks on Providing Sustainable Solutions for Safe Water

County:	Tharaka Nithi		
Sector/s:	Environment and Natural Resources	Sub-sector/Theme:	Water Services and Irrigation
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Target Audience:	Counties, development partners, academic researchers exploring employment creation opportunities through community-led projects.		
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Introduction

Access to safe water is crucial for community well-being. According to UNICEF (2024), 59% of Kenyans have reliable access to safe drinking water, an improvement from 47% in 2000. County Governments, including Tharaka Nithi, have developed policies to improve water access, particularly in arid and semi-arid regions where water scarcity is a major challenge.

For many households, fetching water is time-consuming and physically demanding. Climate change has worsened water shortages, making it essential to implement sustainable solutions. The high cost of developing and maintaining water infrastructure has led to increased reliance on public-private partnerships (PPPs) to bridge the gap.



A photo of Chuka Bulk Water Supply Scheme

To expand water access, Tharaka Nithi County sought support from the Ministry of Water and Irrigation. With this support, key water supply schemes—including the Chuka and Chogoria Bulk Water Supplies—were handed over to the Nithi Water and Sanitation Company (NIWASCO) for maintenance and service provision by August 2024.

These bulk water systems were designed to improve water distribution efficiency and reduce non-revenue water losses.

However, despite these improvements, many households and trading centers remained underserved. In response, the County embarked on drilling and rehabilitating boreholes in semi-arid areas. While this provided a temporary solution, long-term sustainability became a challenge.

The lack of structured maintenance led to frequent borehole breakdowns, as communities lacked both technical capacity and financial resources for upkeep.

Implementation of the practice

Under the County Integrated Development Plan (CIDP) 2023-2027, the County Government prioritized cost-effective strategies to ensure sustainable water access. This led to a partnership with eWATER Services, a UK-based company specializing in water management technology, and Maji Popote, a local private service provider.

A legal framework was established in collaboration with the Water Services Regulatory Board (WASREB) to support this initiative. The agreement facilitated a long-term PPP, ensuring that borehole rehabilitation and management were backed by a reliable, technology-driven approach.



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H.E. Muthomi Njuki, EGH, County leadership representatives and partners during the launch of one of the water kiosks in Nkondi Ward

In 2023, Governor Muthomi Njuki spearheaded the signing of a Memorandum of Understanding (MoU) with eWATER Services and Maji Popote. The partnership enabled:

- 1. Installation of smart water kiosks equipped with prepaid water access systems.**



A fully functional solar-powered smart water kiosk



A photo of a resident showcasing the prepaid smart token given to registered users for accessibility.

These kiosks feature automated dispensing units linked to a digital payment system, allowing users to access water seamlessly. Each registered user receives a smart token that can be loaded with funds via M-Pesa, ensuring affordability and convenience. The automated system regulates water flow, preventing wastage and ensuring equitable distribution.

2. **Maji Popote to manage operations and maintenance, ensuring round-the-clock functionality.** Their responsibilities include regular servicing of kiosks, responding to technical issues, and ensuring adequate water supply at all times. They also facilitate community training programs on kiosk usage and water conservation practices.
3. **A digital monitoring platform to track water usage, ensure transparency, and reduce losses.** The platform provides real-time data on water dispensed, payment transactions, and operational status of kiosks. This helps in identifying areas of high demand, predicting maintenance needs, and minimizing non-revenue water losses through efficient management.

eWATER Services funded infrastructure development, including borehole rehabilitation and kiosk installation, while Maji Popote committed to overseeing daily operations, maintenance, and revenue collection.

Results of the Practice

By January 2024, over 100,000 liters of treated water had been dispensed, reaching more than 1,250 households. To date, over two million liters have been distributed—bringing clean water closer to families and ending the long, exhausting treks in search of safe drinking water. Phase one of the project included piloting smart water kiosks at three key sites: Nkondi Water Supply (Nkondi Ward), Njukini Giekuri Water Supply (Nkondi Ward) and Barrier Murigi Kaareni Water Supply (Igambang'ombe Ward).

Each site features solar-powered smart water kiosks installed within 150-200 meters of homesteads. Registered users receive prepaid smart tokens, which they load via M-Pesa to access water. Revenue collected from users is reinvested in maintenance, ensuring sustainability without reliance on government subsidies.

Beyond household supply, the project has benefited local businesses, schools, and health centers, ensuring a steady water supply for essential services. The digital monitoring system has also enhanced efficiency by tracking water usage patterns and identifying areas for improvement.

Lessons learnt:

- Engaging the community throughout the implementation process fosters ownership, ensuring long-term sustainability and better project adoption.
- A clear strategy for transitioning operations and maintenance to local entities is essential for ensuring continued service after Maji Popote's contract period ends.
- Water supply systems are critical infrastructure, requiring strong community sensitization and security measures, such as collaboration with the Water Police Unit, to prevent vandalism.
- County leadership endorsement enhances public acceptance. Community trust in water projects improves when County leadership actively supports and communicates the benefits of initiatives, particularly when international organizations are involved.

Recommendations

- Upgrading existing boreholes with solar power and sufficient storage tanks can facilitate the adoption process by eWATER and Maji Popote, accelerating implementation in other Counties.



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- For large-scale water treatment plants, collaborations with the National Irrigation Authority (NIA) and Tana Water Development Agency (TWWDA) can significantly aid in resource mobilization for construction, maintenance, and expansion. This ensures that water projects serve more households at the sub-county and ward levels.

Further reading:

<https://www.ewater.services/>

<https://www.facebook.com/GovernorTNC>

www.tharakanithi.go.ke

<https://www.unicef.org/kenya/water-sanitation-and-hygiene>



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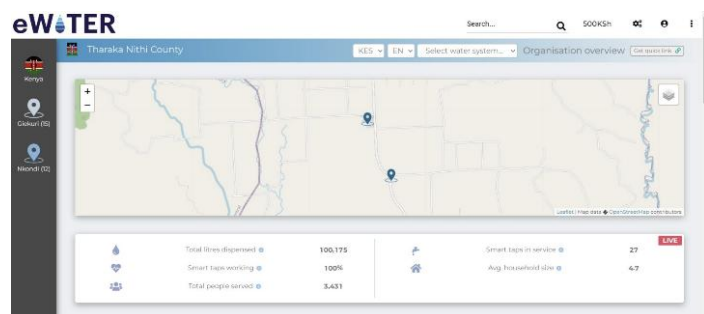
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eWATER Services poster operations and maintenance contacts



A photo of an operational smart water kiosk



Performance dashboard indicating increased consumption of domestic water



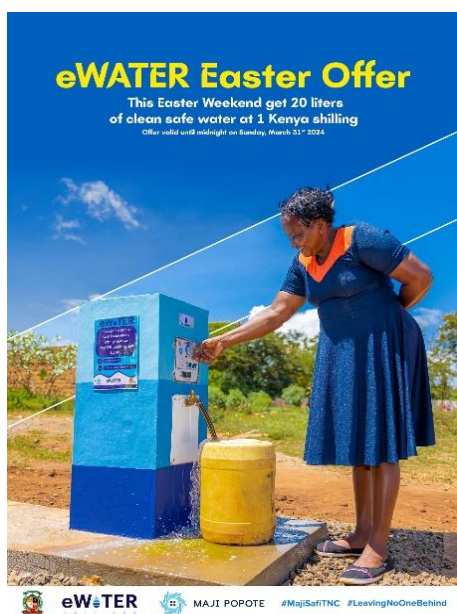
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A photo of a technician installing a smart water kiosk



eWATER Services kiosk serving members of the public



Sample offer for eWATER services during Easter of 2024



Payment guidance poster on the side of a eWATER Services Kiosk