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All 27 semi-private municipal water utilities have participated in Water and Sanitation Project trainings on the mWater cloud-based data collection platform. Photo credit: Maxcy Ceant

Creating a Roadmap for Sustainable Water Service Delivery in Haiti

February 24, 2020

When the 2010 earthquake hit Haiti, the country had just undertaken a massive reform of its water sector. The recovery from the initial disaster and subsequent cholera outbreak shifted the focus from structural reform to disaster response. An outpouring of international assistance helped Haiti dig itself out of these disasters and rebuild its infrastructure. However, the country still struggles to deliver adequate and reliable water at the household level, and the 2009 effort to decentralize its water service has made little progress in improving services or creating self-sustaining local water utilities.

The [USAID Water and Sanitation Project](#) stepped in to address this gap in 2017 with the goal of sustainably providing water to 250,000 people and sanitation services to

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75,000. In doing so, USAID partners with other donors and the Government of Haiti to leverage infrastructure and cholera-related funding to fill a significant capacity gap that is essential to improving service delivery in the country. At the beginning of the project, only 6,300 households had paid connections to the public water utility systems in the five targeted project areas, including Cap-Haïtien, Haiti's second largest city. The previously dysfunctional billing and collections have been insufficient to cover salaries, let alone utility operations or service expansion.

Breaking the Cycle: From Dependent to Dependable

Through in-depth assessments of each of its five targeted urban areas — Canaan, Cap-Haïtien, Jérémie, Les Cayes, and Mirebalais — the USAID Water and Sanitation Project identified unique circumstances in each area that constrain water service delivery as well as many shared challenges, including: poorly trained and under-resourced staff; flat tariffs for water service that encourage clandestine connections over legal ones; non-revenue water loss; poor record-keeping and customer service; no routine preventative maintenance to ensure sustained functionality of infrastructure; and lack of equipment to make repairs. Using these detailed assessments, USAID facilitated stakeholder meetings to develop roadmaps and action plans that are focused on tackling the barriers to improving water service.

Toward that end, the project is now strengthening the semi-private municipal water utilities, known as Centres Techniques d'Exploitation or CTEs, in its target communes to build their management and revenue-generating capacity to improve sustainability and self-reliance. Project Director Daniel O'Neil calls this getting back to basics: "figuring out who their customers are, how to manage the system, to get the invoices out, and how to keep the water flowing so that customers learn to go back and rely on them." The project works closely with the central hub of Haiti's water system, the National Directorate for Water and Sanitation (DINEPA), and the regional water authorities, known as OREPAs, to develop and implement effective models for managing and overseeing the CTEs.

A nine-month collaboration among these institutions led to the development and customization of an "mWater" cloud-based system that is being used to upload data on the water production, operating costs, and sales revenues of the CTEs. All of the 27 CTEs in the country have been trained on the system, which enables real-time monitoring of the utilities' financial and operational systems and helps increase their self-reliance as businesses.

"mWater has helped us update and keep track of our internal data on leaks occurring within the system, and it allows us to share this information with multiple actors — OREPA, DINEPA and WATSAN [Water and Sanitation Project]," says Jocelyn Laurent, CTE Jérémie's technical director. "We're also able to identify and catalog leaks on the spot and create plans to address them at a later date. While we still have more work to do, the local population is happier with our service and efforts." Laurent is looking forward to using the platform to monitor water quality, capture customer concerns, and respond to their needs, including sending relevant water-related text messages to customers.

Jérémie's water comes from a spring-fed system in the mountains, but little of that

ample supply had been reaching customers because of poor management. The CTE currently has only 900 paying customers, but that is beginning to change. The goal is to have the CTE serve 25,000 people and receive enough revenue to cover staff salaries and basic operating costs. A three-month pilot in the commune tested a series of interventions to help the CTE break out of its cycle of dependence and decline and expand its customer base. The interventions included mapping the water system, identifying unlicensed connections, providing the CTE with the materials to make repairs, and establishing metered connections.

“Providing the CTE with the tools to manage its network has worked beautifully,” says O’Neil. “It allows the CTE to get out working to fix the pipes and for the community to see the water utility fixing leaks. Each time we’ve repaired leaks in an area, they get a handful of people who come in and register for new connections. They realize that the CTE is serious about providing water.” The pilot is now being replicated in Mirebalais.

Reestablishing that credibility with the customer is the critical first step toward growing household connections. And it is those paid household connections that will in turn support the entire system. “CTEs have done such a poor job of providing safe water for so long,” says O’Neil, “people have stopped relying on them. No amount of outreach is going to do any good because you can’t market a bad product.” Once leaks are repaired and distribution improves, the CTEs can focus on changing the billing from fixed price to metered connections. This cuts down on clandestine connections and enables the utility to accurately gauge who is using what and bill accordingly. “If people can afford a connection, they’ll pay for it because it’s so much more convenient to have a faucet in your house than to walk even 20 meters down the street to get water,” O’Neil adds.

Local Ownership and Lasting Solutions

The private sector currently plays a strong role in the water service market and is likely to continue to do so in the near future as piped networks managing to provide water still do not deliver a reliably potable product. This means people with household connections use the piped water for cooking and cleaning but purchase treated water for drinking. Private firms also truck treated water into underserved neighborhoods. The goal is to strengthen public utilities in a way that complements what the private sector is doing.

CTEs also manage water kiosks that provide water for residents in mostly informal settlements who cannot pay for their own household connections. Many of these kiosks suffer from neglect and do not function at all. Recently, the Water and Sanitation Project awarded the first grant under its Enterprise Acceleration Fund to the faith-based organization [LivingWater](#) to improve the safety and reliability of water sold in downtown Cap-Haïtien. This is an interim step in a community that hasn’t had a functioning water distribution network in a decade. Working with eight private water providers, LivingWater will transform 12 different kiosks from manual to solar-powered systems to reduce energy costs, establish a water treatment system to ensure safer water, and provide management training to grow their businesses.

The goal is to provide “water entrepreneurs exactly what they need to improve

their business and serve a larger number of clients, with lower cost,” says Jameson Salomon, Living Water’s country director. “Our initiative will show to DINEPA a different and sustainable way to serve the population through entrepreneurship.” More Enterprise Acceleration Funds are expected to be awarded in the near future to other innovators tackling entrenched water and sanitation issues in Haiti — to expand water quality testing, develop interlocking blocks for latrines, and test different types of fecal management approaches.

While USAID is ensuring that any new or improved infrastructure is built to withstand the shocks and stresses of future natural disasters, the key to sustainability of Haiti’s water and sanitation sector is the work USAID is doing to make each utility more resilient, according to O’Neil. With operations, maintenance, and monitoring systems in place and supported with their own revenue streams, CTEs will no longer need to rely on donors or the central government to support them, even in the face of disasters.

The USAID Water and Sanitation Project is addressing the unique challenges identified in each of its five targeted urban areas. In Les Cayes, the project is working to make bill payment easier through a mobile money app and upgrading its generators from diesel to solar power. On the other end of the spectrum, Cannon needs its entire water distribution system rebuilt.

“The common theme is we’re trying to develop sustainable water utilities,” says O’Neil. “Although our focus is on our five target areas, by working through the four OREPA’s we’re actually having an impact on all 27 existing CTEs.” And he concludes, “if we pull this off, by the end of our two and a half years, Haiti will have clear models for how all the CTEs should be functioning.”

By Wendy Putnam



Additional Resources:

- [Seeking Sustainability in Water Service Delivery in Haiti](#)
- [USAID Haiti](#)

This article appears in Global Waters, Vol. 11, Issue 1; for past issues of the magazine, visit Global Waters’ homepage on Globalwaters.org.