KEEPING THE WATER FLOWING

UNC study highlights sustainability of World Vision's water systems in Ghana

In 2015, The Water Institute at the University of North Carolina, together with the international organization Water and Sanitation for Africa, published the results of an independent study examining the long-term functioning of water sources in rural Ghana. The results showed that water sources provided by World Vision had the highest rates of long-term functionality in the region and identified key factors linked to sustainability.

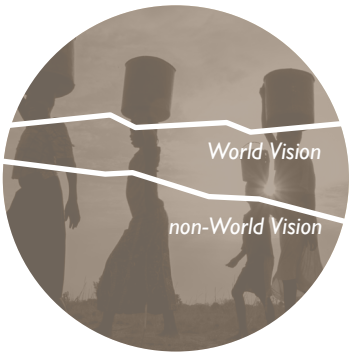
THE NEED FOR SUSTAINABLE WATER SOURCES

Access to safe drinking water and sanitation are critical to human health and development. However, more than 663 million people lack access to safe drinking water from an improved source, and nearly 1,000 children die every day from diseases related to contaminated water, poor sanitation, and unsafe hygiene practices. In rural sub-Saharan Africa, millions of households depend on boreholes with hand pumps for drinking water, yet 30 to 50 percent of these hand pumps may not be functional at any given time.

THE RESULTS: KEY FACTORS FOR SUSTAINABILITY

A recent study published by researchers at the Water Institute at UNC, in partnership with the intergovernmental agency Water and Sanitation for Africa, showed that having an identifiable water ccommittee, trained pump repair technicians with access to tools and spare parts, and charging a fee for use of the water were associated with the continued functionality of water points.

The study found that, overall, the functionality of water sources decreased over time; however, thanks to the aforementioned local investments, the functionality of World Vision-installed sources did not decrease significantly with age, even when these sources were over 20 years old.



The functionality rate of non-World Vision water sources decreased by 2 percent each year, while the functionality of World Vision-installed water sources did not decrease over time.

STUDY CHARACTERISTICS

- Study of 1,470 water sources in 570 communities in the Greater Afram Plains region of Ghana.
- Data were collected by Water and Sanitation for Africa, a pan-African humanitarian organization, as part of a project funded by the Conrad N. Hilton Foundation. Following the conclusion of this project, the data were anonymized and analyzed by researchers from the Water Institute at UNC.

WATER SOURCE CHARACTERISTICS

- 88% of sources were boreholes with hand pumps; 12% were other source types.
- 898 sources were constructed by World Vision, 672 by other implementers.

WORLD VISION'S COMMUNITY ENGAGEMENT MODEL

Ghana was selected for this study because the Conrad N. Hilton Foundation has funded World Vision's water efforts there for 25 years. World Vision's holistic development model is based on working in a community for an average of 10 to 15 years, a time commitment that helps ensure success by enabling staff to build trust with local leaders and families, then co-create and implement life-changing programs including water, sanitation, and hygiene improvements. World Vision hires local staff (including development experts) who have a passion for and connection with the local culture and needs, supporting the sustainability of activities and keeping water flowing even after World Vision ceases hands-on operations.

NEXT STEPS

Results from the above study identified the critical role of the local water committee and fee collection. The Water Institute has been working with World Vision on a qualitative study to better understand what leads to successful water committees. To date, the Water Institute team collected 637 recordings totaling 237 hours from three countries (Kenya, Ghana, and Zambia) with community members and key water sector actors. This deep-dive into World Vision's community engagement model has resulted in significant findings that have the potential to further improve World Vision's programming.

SOURCE
Fisher, M. B., Shields, K. F., Chan, T. U., Christenson, E., Cronk, R. D., Leker, H., Samani, D., Apoya, P., Lutz, A. and Bartram, J. (2015), Understanding hand pump sustainability: Determinants of rural water source functionality in the Greater Afram Plains region of Ghana. Water Resour. Res.. 51(10): 8431-8449. doi:10.1002/2014WR016770

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UNC WATER INSTITUTE

World Vision water

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