washplus Weekly
Supportive Environments for Healthy Communities

Issue 145 | May 9, 2014 | Focus on Information and Communications Technology (ICT)

This issue contains recent reports, videos, and blog posts on WASH (water, sanitation, and hygiene) and ICT. Organizations working in WASH are using ICT to improve data on WASH services and improve the evidence of the impacts of WASH projects. Resources in this issue include a useful summary of WASH and ICT conference presentations, a video of a text messaging system in Uganda for reporting water supply problems, and examples of country applications from Burkina Faso, Ghana, Kenya, Nepal, and Zimbabwe.

The May 9 and May 16 issues of the Weekly will focus on cookstoves and menstrual hygiene management, respectively, so please contact WASHplus if you have recent studies or resources that can be featured on these topics

GENERAL/OVERVIEW

ICT & WASH: A Synthesis of Conference Presentations for Mobile Technology in the Water, Sanitation, and Hygiene Sector, 2013. B Mann, Tetra Tech. (Link)
ICT is quickly changing relationships in the WASH sector. Distances are becoming shorter and ICTs are now being used to facilitate the measurement and monitoring of interventions with data from customers, operators, and government. Using these new rich sources of data promises to guide equitable decision making for WASH services.

Can Mobile Data Improve Rural Water Institutions in Rural Africa? 2014. P Thomson, University of Oxford. (Link)
In 2013 Oxford University conducted a 12-month smart hand pump trial in rural Kenya that tested a new pump maintenance service model. The trial in Kyuso District in eastern Kenya, covering 66 hand pumps (corresponding to around 15,000 water users, depending on season) showed that near real-time, mobile-enabled data significantly improve operational performance. This data also have the potential to promote financial sustainability and are a mechanism that can enable institutional redesign of rural water services.

Changing Relationships: ICT to Improve Water Governance, 2013. WaterAid. (Link)
ICT is quickly changing relationships, facilitating the measurement and monitoring of interventions, and enabling practitioners at a local level to use evidence to guide decision making for the equitable and sustainable extension of WASH services. Despite this promising outlook, several challenges exist to achieve the full potential of ICT.

WASH: Lessons from Three Field Pilots, 2013. M Ball. (Link)
The application of ICT to support the delivery of water and sanitation services is a growing area of interest in the WASH sector. To study how these tools might be incorporated into existing management structures, the authors conducted field pilots of a mobile phone based application for transmitting water quality data in three distinct water supply structures: a large provincial utility in Vietnam, rural NGO operations in Cambodia, and district health authorities in Mozambique.

A Brief Overview of Sanitation App Developments, 2013. MA Prat, SHARE. (Link)
This note gives an overview of the types of apps (mainly prototypes) that have been developed so far in the sanitation sector and identifies the need for further development of ICT tools.

mHealth's Potential as a Water, Sanitation, Hygiene (WASH) Catalyst, 2014. L Bailey, TechChange. (Link)
Client education and behavior change communication, data collection and reporting, financial transactions and incentives, and supply chain management are potential categories for mHealth applications.

Children, ICT and Development: Capturing the Potential, Meeting the Challenges, 2014. D Kleine, UNICEF. (Link)
This report explores the ways in which ICTs can contribute to meeting child-focused development goals. The diffusion of ICTs has been highly uneven, and it is clear that digital divides not only trace but can also further deepen existing social divides, between income-rich and income-poor, between urban and rural dwellers, between women and men, and girls and boys.

Systematic Review on What Works, What Does Not Work and Why of Implementation of Mobile Health (mHealth) Projects in Africa. *BMC Public Health*, Feb 2014. C Aranda-Jan. (Link)
mHealth in Africa is an innovative approach to delivering health services. In this fast-growing technological field, research opportunities include assessing implications of scaling-up mHealth projects, evaluating cost-effectiveness, and monitoring impacts on the overall health system.

VIDEOS

M4W – Increasing Functionality of Water Sources, 2014. N Ochole, SNV. (Video)
The M4W project aims to improve water and sanitation in rural parts of Uganda by enabling access to information by various stakeholders and players in the water and sanitation sector. Each water point is labeled with a unique identifier enabling members of the community to report faults by sending text messages.

Sanitation Investment Tracker (SIT), 2013. MA Prat, 2013. (Video)
The Sanitation Investment Tracker is a suite of mobile phone applications to track investments in household-level sanitation.

Using Smartphones to Bring Better Services to Citizens in Ghana, 2013. The World Bank. (Video)
NGOs in Ghana are using smartphones and an ICT platform called Taarifa to help citizens

report lags in water and sanitation services to municipalities.

COUNTRY EXAMPLES

Burkina Faso – Monitoring Sanitation and Hygiene Infrastructure at Commune Level through Mobile Phones, 2014. SNV. (Link)
In 2013 SNV Burkina Faso developed a participative tool for monitoring sanitation and hygiene infrastructure in five communes (Barsalogho, Boala, Namissiguima, Pissila, and Tougouri). The system is currently being improved with the use of mobile phones, through a partnership between Akvo and SNV.

Ghana – Akvo FLOW and the Ghana Netherlands Water, Sanitation & Hygiene Program (GNWP), 2014. C Soedjak, Akvo. (Link)
The main partners in the GNWP consortium are Berenschot, Witteveen+Bos, and Simavi. Akvo FLOW is being used in the WASH for schools program—which forms an important part of the GNWP—to create baseline surveys on WASH facilities and practices, initially in 250 schools.

Kenya – Testing Mobile Phone-Based Sales to Increase Use of Safe Water Filters in Kenya, 2013. USAID. (Link)
A RAND project, with USAID funding, is using mobile phones to increase the sales and use of safe water filters in Kenya. The ceramic filters are microbiologically effective and often preferred by users over chemical disinfection (e.g., adding chlorine to water).

Kenya – Success Stories in Smart Water Management. *ITU News*, 2014. (Link)
Kyuso District in Kenya was chosen as the site for a pilot study on smart hand pumps. In Kyuso, 95 percent of the population lives in rural areas, and 60 percent falls below the US$1 per day poverty threshold. More than one-sixth of hand pumps were not functional over a period of weeks or even months. Households generally take more than 30 minutes to fetch water, and the supply is irregular. The researchers developed a technology in which a mobile data transmitter is attached to the handle of the pump. The device measures the movement of the handle to estimate the water flow. The device periodically sends information via text message back to a central office, allowing for maintenance to be done quickly when a pump is broken.

Nepal – Akvo FLOW in Nepal: Real Time Monitoring of WASH Services, 2014. J Lama, Dutch WASH Alliance. (Blog post)
Moving ahead from the usual paper-based monitoring, Biogas Sector Partnership-Nepal first piloted FLOW in May 2012 to monitor technical and socio-economic impact of rainwater harvesting projects in Pachkhal village development committees of Kavrepalanchowk District, Nepal.

Uganda – SMS Technology Bringing Clean Water to Uganda's Remote Areas, 2014. S Wakoba. (Link)
Text to Change, in collaboration with Akvo, recently received a grant from Grand Challenges Canada to use mobile technology to bring clean water to remote communities in Uganda. According to the firms, Akvo's FLOW will be used to map water sources while Text to Change's Vusion platform will be used to create a feedback network among water users, hand pump mechanics, and the District Water Office to make sure the water sources are functional and that there is constant provision of clean water to the communities.

Zimbabwe – The Role of Information Communication Technology (ICT) Towards Achieving the Millennium Development Goals (MDGs) on Water and Sanitation for Women in Zimbabwe. *International Journal of Multidisciplinary Academic Research*, 2(1) 2014. T Nyatsanza. (Link)
The study concluded that: ICTs can be used to support the scheduling of various water treatment and wastewater treatment processes, and the use of GPS (geolocation) enables women to access water and sanitation data from their cell phones and to locate water and sanitary points.

FROM THE ARCHIVE

mWASH: Mobile Phone Applications for the Water, Sanitation, and Hygiene Sector, 2012. M Hutchings, Pacific Institute. (Link)
The 10 case studies in the mWASH report present lessons critical for developing robust mWASH applications. The researchers conducted a global survey and identified more than 40 mobile phone projects worldwide, selecting 10 organizations for further study, including five in the WASH sector: FLOW, Human Sensor Web, Maji Matone, NextDrop, and Water Quality Reporter.

WASHplus Weeklies will highlight topics such as Urban WASH, Indoor Air Pollution, Innovation, Household Water Treatment and Storage, Hand Washing, Integration, and more. If you would like to feature your organization's materials in upcoming issues, please send them to Dan Campbell, WASHplus Knowledge Resources Specialist, at dacampbell@fhi360.org.

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