

Poonam Sewak



# Turning to Technology

Safe Water Network develops affordable safe drinking water solutions for rural communities in need. *WQP* Assistant Editor Williette Nyanue spoke to Poonam Sewak, development and partnerships manager for Safe Water Network, about the organization's new tablet-based water and health education campaign.

**Williette Nyanue:** What inspired the tablet-based water and health education campaign?

**Poonam Sewak:** Safe Water Network operates more than 30 "iJal Stations" in Andhra and Uttar Pradesh [India] and provides access to drinking water that meets Indian and World Health Organization standards. We believed that once an iJal Station was set up, providing safe drinking water at affordable rates, there would be no dearth of demand. However, we found low demand due to lack of willingness to pay when free alternatives are easily available; lack of correlation between health challenges and water quality; and beliefs established through generations of use of current water sources.

Consumer awareness of water quality and associated health challenges therefore was critical. Innovative marketing is essential to engaging with rural consumers, as the task of convincing them to purchase safe drinking water is difficult due to lack of literacy and awareness of waterborne diseases. The conventional communication methods involved street plays and storytelling, which were largely people dependent and difficult to standardize and scale. We needed to establish a standard mode of communication that could be scaled without the loss of critical messages [that] would be credible too.

Extensive consumer interaction and research identified the Indian rural consumer as both aspirational and tech savvy. This insight led to the use of tablets as a tool to engage the key stakeholders. There is a series of tools to communicate effectively—use of electronic tablets for KOLs, audiovisuals and flipcharts in order to mobilize the rural community—plus a public demonstration of handheld electrolyzers to certify water quality, culminating in a "Water Health Report Card" for the village as well as individual households [that] brought their water to the public meeting for testing.

**Nyanue:** What are the water concerns in rural India?

**Sewak:** Some remote and smaller villages have challenges with access to drinking water. Many other rural habitations are affected by water quality challenges due to anthropogenic or geogenic contaminants. In addition to microbial contamination from livestock waste or lack of proper sanitation, there are dissolved contaminants in water like iron, arsenic, fluoride, high nitrate, etc. These lead to waterborne diseases like diarrhea, dysentery, vomiting, fluorosis, iron toxicity, arsenic toxicity, blue baby syndrome, etc.

**Nyanue:** How is tablet technology helping to improve access to clean water?

**Sewak:** Depending on the water quality challenge, standard spiels are created and preloaded on tablets to educate communities and key opinion leaders. Success of tablet messaging has helped create a standardized package that can be scaled uniformly across the geography. Tablets also fulfill the need of the rural communities to have technology at their fingertips, which increased involvement and induced quick grasp of the water-health relationship. This helped drive the desired consumer behavior change that induced enrollment (10% to 50%) at the end of the demonstrations.

**Nyanue:** Why is awareness about the benefits of safe drinking water so important?

**Sewak:** Creating access to safe water is not a technical problem alone. It requires human behavior change, building local capacity, logistics, funding, reliability of operation and, above all, willingness to pay to sustain the ongoing operations. Safe drinking water sends children back to school, empowers women, keeps away the crippling effects of skeletal fluorosis, improves community health and fosters economic development; hence, appropriate community awareness programs, along with door-to-door surveys, have been our core approaches to solving the drinking water quality problems in our project villages. It also leads to increased adoption and consumption at household level in the villages.

**Nyanue:** In what other ways is technology being utilized to spread awareness?

**Sewak:** We are using technology in the following spheres: tablets for messaging and behavior change; water quality testing for total dissolved solids and fluoride; reverse osmosis process for purification of fluoride-contaminated water; and use of RFID (radio frequency) cards preloaded with money for purchase of water and tracking consumer off take, giving lists of discontinued users to bring them back to using iJal. *wqp*

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For more information on this subject write in 1007 on this issue's reader service card.

## Wyoming, EPA to Investigate Water Quality Concerns

The state of Wyoming will investigate drinking water quality in 14 domestic water wells located in the town of Pavillion's oil and natural gas field in order to clarify water quality concerns and assess the need for further action to protect drinking water resources after well sampling results documented constituents of concern. The Wyoming Department of Environmental Quality and the Wyoming Oil & Gas Conservation Commission will lead the study. The state intends to conclude its investigation and release a final report by Sep. 30, 2014.



## Study Finds Stray Gases in Water Wells Near Shale Gas Sites

A Duke University-led study found that homeowners living within 1 km of shale gas wells appear to be at higher risk of having their drinking water contaminated by stray gases. Scientists analyzed 141 drinking water samples from private water wells in Pennsylvania's gas-rich Marcellus shale basin. The study documented not only higher methane concentrations in drinking water within 1 km of shale gas drilling, but higher ethane and propane concentrations as well.

## UN Calls for Global Action on Drought

United Nations Secretary-General Ban Ki-moon called for a collective global response to drought and a shift from crisis management to drought preparedness and resilience. Ban called for the full implementation of the outcomes of the High-Level Meeting on National Drought Policy in Geneva in March. He also called for implementation of last year's agreement at the Rio+20 conference on sustainable development to avoid and offset land degradation.

## Groups Urge White House to Make Water a National Priority

The Committee for an American Clean Energy Agenda submitted an executive order to make water a national priority and move the nation to a clean energy future to the White House for the consideration of President Obama. The draft executive order would require the completion of a national water census; the first "U.S. Water Budget"; and a plan for a shift by 2030 from fossil fuel and nuclear power to clean energy, increased energy efficiency and enhanced energy storage technologies in key watersheds.



## Social Stock Exchange Launches in London

The Social Stock Exchange (SSE) launched in London as a new initiative designed to connect public financial markets with social impact investment. The SSE gives investors access to information on publicly listed businesses with strong social and environmental purpose, and guarantees full, transparent disclosure on the impact of those businesses. *wqp*



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