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SUSTAINABLE ENVIRONMENTAL SANITATION AND WATER SERVICES

Behaviour Change and Water Quality

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**Introduction**

While access to drinking water in India has increased over the past decade, the tremendous adverse impact of unsafe water on health continues. Twenty one percent of communicable diseases in India are estimated to be water related. The highest mortality from diarrhoea is in children under the age of five, and there is an urgent need for focused interventions to prevent diarrhoeal disease in this age group. Despite investments in water and sanitation infrastructure, many low-income communities in India and other developing countries continue to lack access to safe drinking water, proper sanitation and sewerage systems, garbage collection networks, and information and education on healthy hygiene and sanitation practices. Currently available strategies and technologies to make water safe to drink are unaffordable and inaccessible to most low-income households, particularly those without a regular piped water supply.

The Safe Water System : An Affordable, Appropriate Solution

The Safe Water System (SWS), an effective and inexpensive intervention to provide safe drinking water, was developed by the Centers for Disease Control and Prevention and the Pan American Health Organization. The basis of the SWS intervention is :

- Point-of-use treatment of contaminated water with locally produced sodium hypochlorite solution, packaged in locally available bottles with a 5 to 10 mL cap that serves as a dosing device.
- Safe water storage in plastic containers with a covered narrow mouth and a spigot to prevent recontamination.
- Behavior change techniques, including social marketing, community mobilization, and innovative information, education and communication.

The Delhi Pilot : Targeting Urban Slums

The World Health Organization has promoted the Safe Water System in India and Bangladesh in collaboration with CDC, and is currently partnering with Population Services International and Sulabh International Institute of Health and Hygiene to introduce SWS in India. A feasibility pilot funded by

WHO, to assess SWS' potential to reduce diarrhoeal diseases in low-income populations, with a special emphasis on children under the age of five years, is currently underway in eight slum communities in West Delhi (October 2001 to September 2003).

PSI has experience in social marketing of the Safe Water System worldwide, and is designing and implementing innovative behavioral change communications strategies based on qualitative and quantitative consumer research. PSI is creating demand for, and providing access to the disinfectant and vessel in the pilot communities. This demand creation is linked to a behavioral change communications campaign designed to raise awareness of clean practices around water use and storage, hygiene, sanitation and garbage disposal. The primary audience for key messages is families with children under the age of five. The campaign includes the use of mass media and local, culturally appropriate media.

The desired behavior changes that are part of the WHO/PSI safe drinking water communications strategy to reduce diarrheal disease are :

- Consumption of safe water, in a consistent and exclusive manner, by all family members, by regularly using the safe water system disinfectant to treat water and store it safely
- Adoption of hygienic practices that impact on water and food safety, in particular
 - Hand washing
 - Clean food preparation
 - Clean toilet habits, including sanitary disposal of feces
 - Proper garbage disposal
- Continuation of practices known to play a protective/beneficial role -
 - exclusive breastfeeding
 - measles vaccination
 - oral rehydration therapy
 - increased feeding for up to two weeks following a diarrhoeal episode

SIHH is working closely with PSI to train change agents (themselves slum residents) to execute a range of community IEC activities, including household visits and community events. Performance-based incentives are offered to volunteers to enhance sustainability.

**First State Launches of the Safe Water System :
Orissa and Rajasthan**

Orissa faces serious water quality issues periodically, such as when floods or cyclones displace entire villages and/or compromise the microbial quality of water sources. PSI has a strong presence in urban centers across Orissa, and a strong rural social marketing team. This reach, combined with the need for widely available water treatment options, has helped PSI identify Orissa as the first state for launching the Safe Water System disinfectant and vessel in May of 2002. From June of 2002, the Safe Water System has been social marketed in Rajasthan. PSI Rajasthan's inter-personal communication coordinators already focus on

prevention of diarrhoeal diseases through their activities. We are working towards identifying partner NGOs in these states to take the key behavior change messages further.

Conclusion

Project partners are actively seeking to share findings and experiences around efforts to reduce diarrheal disease morbidity and mortality from the Delhi pilot, via partnerships with international multilateral and bilateral agencies, governments, public health bodies and scientific forums.

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