



Project Well Aqua Welfare Society Arsenic-Safe Water



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www.projectwellusa.org

PROJECT WELL PROGRESS IN 2007

Project Well (PW) of California, with the help of local NGO Aqua Welfare Society (near Kolkata, West Bengal), has developed a self-supporting community-based mitigation program to provide arsenic-safe water to the villagers in West Bengal, India. Between 2001 and 2006, PW provided 48 dugwells to eight villages where more than 150,000 people are exposed to arsenic above the permissible limit in India. In 2007, 24 more dugwells were constructed, mainly in Gaighata where more than 100,000 people are exposed. The modified dugwells are free of pathogenic bacteria because of the dugwell design and the use of chlorine disinfectant.



PROJECT WELL PROGRESS IN 2008

In 2008, 20 more dugwells were constructed, bringing the total to 92. A surveillance program was set up using the Google Earth maps. PW monitors the dugwells year-round. Reports and pictures of all the dugwells are available on the PW website. Due to variable geological composition, in some areas it is difficult to dig down more than 14 feet manually—hence, about 10 percent of the dugwells become dry in the summer. In 2008, a new design of dug/bore well was introduced (dugwell #PW74). Both the quality and availability of water at this newly-designed dugwell is excellent.



WHAT HAPPENS WHEN ONE DRINKS WATER CONTAMINATED WITH ARSENIC:

*Exposure to arsenic in drinking water causes **cancer** of the lung, kidney, liver, skin and bladder.

*Recently, studies have attributed deaths in adulthood to exposure to arsenic in the womb and in early childhood. Acute myocardial infarction, childhood liver cancer and bronchiectasis (a chronic obstructive pulmonary disease) have all been linked to adult deaths. (PW is affiliated with the Arsenic Health Effects Research Group of University of California, Berkeley)



Capacity Building

In the course of surveillance, PW found that some dugwells were underused though the water was palatable. At other dugwells, due to location, the water had a slight earthen odor that could be easily removed by locally available earthen "mawtka" filters. To increase the number of users, capacity building became crucial. PW hired additional part-time staff: one awareness programmer who would use the surveillance data to increase users through health meetings in the communities, rural schools and colleges; two temporary field assistants from the affected villages to help during the health meetings; and one person for the data entry.

Public Awareness Programs

Over four months (November to February), 71 small-group health meetings were held to discuss the importance of chlorinating dugwells and practicing hygiene and sanitation, and the health effects of arsenic in drinking water. The local NGO, Aqua Welfare Society, also participated in a health meeting organized by the Gaighata Block Development office. Apart from these rural awareness programs other lectures were given at the 2007 Annual International Conference of Royal Geographical Society in London, and the 2008 Risk Analysis and Affordable Risk Management of Water Sources In Arsenic Mitigation meeting in Dhaka. A press conference was held in Kolkata in December 2008.



Picture of Skin lesions on the palm.



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- Dr. David Kalman and Cecil Hudson of Seattle, WA (1); Project Well (6)

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