

An Eight-year Study Report on Groundwater Arsenic Contamination and Health Effects in Eruani Village, Bangladesh and an Approach for its Mitigation

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ABSTRACT

Based on our several surveys during 1997-2005 along with our medical team to Eruani village of Police Station Laksham, Comilla district, Bangladesh having an area and population 2.2 sq. km and 6690, respectively, we report here the arsenic contamination situation in hand tubewells in the village, and consequent clinical manifestations of arsenicosis among the villagers, including dermatology, neuropathy, and obstetric outcome. The analysis of biological samples from patients as well as non-patients establishes huge arsenic body burden in the villagers. Even after 8 years of arsenic exposure known to Eruani village, children are still drinking arsenic contaminated water and many of them have skin lesions. There are social problems due to arsenical symptoms. We have observed even during our last survey in Eruani village, there is not enough awareness about the different aspects of arsenic toxicity among the villagers and most of the villagers were drinking arsenic contaminated water. In these circumstances we put forward an approach to mitigate the arsenic problem in Eruani village. We have studied the viability of different safe water options like dugwell, deep tubewells, and rainwater harvesting, surface water with watershed management in this village. Finally, from our 18 years field experience we feel, for any successful mitigation program, the stress should be on creating awareness among the villagers about problems of arsenic, role of arsenic safe water, better nutrition from local fruits and vegetables, and above all active participation of women along with others in the struggle against arsenic menace.