

# Groundwater Arsenic Contamination and Human Suffering in West Bengal, India and Bangladesh

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Groundwater arsenic contamination and human suffering are increasing in West Bengal, India and Bangladesh. Out of a total of 188 million people in West Bengal and Bangladesh, 136 million people live in arsenic-affected districts where groundwater contains arsenic levels above 50  $\mu\text{g/L}$ . This does not mean everyone living in contaminated areas is drinking contaminated water, but no doubt all are at risk. From our 99,153 water samples analyzed from West Bengal and 34,000 from Bangladesh by FI-HG-AAS, we estimated that around 6 million people in West Bengal and 25 million people in Bangladesh are at present drinking water contaminated with arsenic at levels above 50  $\mu\text{g/L}$ . To date from arsenic-affected villages we have screened 103,896 villagers and diagnosed 12,195 people with arsenical skin lesions. We have analyzed around 35,000 biological samples collected from the affected villages and found on average 90% of the samples contained elevated levels of arsenic. Thus it is expected many more are sub-clinically affected. In arsenic-affected areas tons of arsenic is falling on agricultural land irrigated using water from arsenic-contaminated tubewells for its cultivation. Our preliminary study showed the presence of elevated levels of inorganic arsenic in rice and vegetables, the staple food for villagers. During our 14-year field survey we have noticed that poor people with poor nutrition are suffering more. A socio-economic study in the affected villages indicated that villagers are living in very poor conditions. Arsenic-affected people are also facing serious social problems. To combat the arsenic crisis in West Bengal and Bangladesh we desperately need to increase awareness and educate our people about the problem and involve the community in all developmental work. Finally, we must use our vast surface water resources, rainwater and traditional water treatment techniques to provide safe water.