

ARSENIC CONTAMINATION IN GROUNDWATER OF WEST BENGAL, INDIA

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Abstract

Occurrence of Arsenic in groundwater, in excess of the permissible limit of 50ug/l in the Ganges-Brahmaputra fluvial plains in India covering mainly West Bengal, and parts of Jharkhand, Bihar, Uttar Pradesh, Assam and Manipur, is a large scale ground water quality disaster. These fluvial plains contain Holocene aquifers of recent alluvial sediments brought down from the Himalayan region. The cause of mobilization of arsenic is understood to be of geogenic origin, released from soil under condition conducive to dissolution of arsenic from solid phase on soil grains to liquid phase in water which might have been further enhanced by bacterial activities and percolation of fertilizer residues. The arsenic menace in West Bengal demands an understanding of the contamination processes and mitigation measures through R and D Studies.

Keywords: Arsenic-rich ground water, Fluvial plains, Arsenic mobilizations, Food chains, R and D Studies.