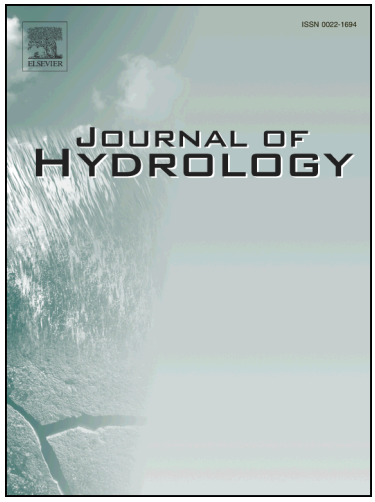

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Influence of geology on groundwater-sediment interactions in varied arsenic enriched tectono-morphic aquifers of the Brahmaputra River Basin

Swati Verma[1*], Abhijit Mukherjee[1,2], Chandan Mahanta[3], Runti Choudhury[3], Kaushik Mitra[1]

[1]Department of Geology and Geophysics, Indian Institute of Technology (IIT) – Kharagpur, W.B., 721302, India

[2]School of Environmental Science and Engineering, Indian Institute of Technology (IIT) – Kharagpur, W.B., 721302, India

[3]Department of Civil Engineering, Indian Institute of Technology (IIT) – Guwahati, Assam, 781039, India

*Corresponding Author, email: swati.geo09@gmail.com

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Abstract

The present study interprets the groundwater solute chemistry, hydrogeochemical evolution, arsenic (As) enrichment and aquifer characterization in Brahmaputra river basin (BRB) concerning three geologically and tectono-morphically varied distinct regions in northeastern India. These study regions consist the northwestern (NW) and the northern (N) region, both located along the western and eastern parts of Eastern Himalayas and southern (S) region (near Indo-Burmese Range and Naga hills) of the Brahmaputra basin which shows distinct tectonic settings and sediments provinces in the Himalayas orogenic belt. Stable isotopic composition (δ^2H and $\delta^{18}O$) in groundwater suggest that some evaporation may have taken place through recharging water in the study areas. The major-ion composition shows that groundwater