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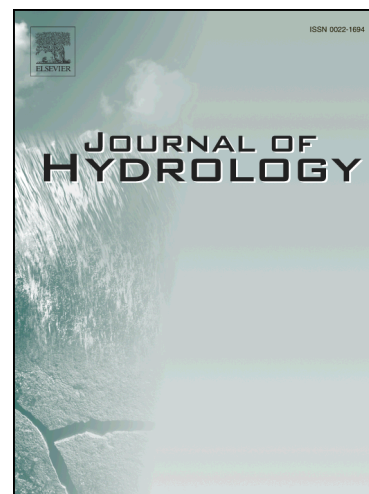
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Delineating Sources of Groundwater Recharge in an Arsenic-Affected Holocene Aquifer in Cambodia Using Stable Isotope-Based Mixing Models

Laura A. Richards^{1*}, Daniel Magnone², Adrian Boyce³, Maria J. Casanueva-Marengo⁴, Bart E. van Dongen¹, Christopher J. Ballentine⁵, David A. Polya¹

¹School of Earth and Environmental Sciences and Williamson Research Centre for Molecular Environmental Science, The University of Manchester, Williamson Building, Oxford Road, Manchester, M13 9PL, UK

²Present address: School of Geography, University of Lincoln, Brayford Pool, Lincoln, Lincolnshire, LN6 7TS, UK

³Scottish Universities Environmental Research Centre, East Kilbride, G75 0QF, UK

⁴Present address: Department of Analytical Chemistry, Institute of Biomolecules, Faculty of Sciences, University of Cádiz, Cádiz, Spain

⁵Present address: Department of Earth Sciences, University of Oxford, South Parks Road, Oxford OX1 3AN, UK

*Corresponding author: laura.richards@manchester.ac.uk

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Abstract

Chronic exposure to arsenic (As) through the consumption of contaminated groundwaters is a major threat to public health in South and Southeast Asia. The source of As-affected groundwaters is important to the fundamental understanding of the controls on As mobilization and subsequent transport throughout shallow aquifers. Using the stable isotopes of hydrogen and oxygen, the source of groundwater and the interactions between various water bodies were investigated in Cambodia's Kandal Province, an area which is heavily affected by As and typical of many circum-Himalayan shallow aquifers. Two-point mixing models based on δD and $\delta^{18}O$ allowed the relative extent of evaporation of groundwater sources to be estimated and allowed various water bodies to be broadly

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