### Author's Accepted Manuscript

A conceptual model based framework for pragmatic groundwater-quality monitoring network design in the developing world: Application to the Chikwawa District, Malawi

Michael O. Rivett, Alexandra V.M. Miller, Donald John MacAllister, Andrew Fallas, Gift J. Wanangwa, Prince Mleta, Peaches Phiri, Nicholas Mannix, Maurice Monjerezi, Robert M. Kalin



PII: S2352-801X(17)30046-2

DOI: https://doi.org/10.1016/j.gsd.2018.01.005

Reference: GSD101

To appear in: Groundwater for Sustainable Development

Received date: 12 May 2017 Revised date: 10 January 2018 Accepted date: 10 January 2018

Cite this article as: Michael O. Rivett, Alexandra V.M. Miller, Donald John MacAllister, Andrew Fallas, Gift J. Wanangwa, Prince Mleta, Peaches Phiri, Nicholas Mannix, Maurice Monjerezi and Robert M. Kalin, A conceptual model based framework for pragmatic groundwater-quality monitoring network design in the developing world: Application to the Chikwawa District, Malawi, *Groundwater for Sustainable Development*, https://doi.org/10.1016/j.gsd.2018.01.005

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting galley proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

#### ACCEPTED MANUSCRIPT

# A conceptual model based framework for pragmatic groundwaterquality monitoring network design in the developing world: Application to the Chikwawa District, Malawi

Michael O. Rivett<sup>1,2\*</sup>, Alexandra V.M. Miller<sup>1</sup>, Donald John MacAllister<sup>1,3</sup>,
Andrew Fallas<sup>1</sup>, Gift J. Wanangwa<sup>4</sup>, Prince Mleta<sup>5</sup>, Peaches Phiri<sup>5</sup>, Nicholas
Mannix<sup>1</sup>, Maurice Monjerezi<sup>6</sup>, Robert M. Kalin<sup>1</sup>

<sup>1</sup>Department of Civil and Environmental Engineering, University of Strathclyde, Glasgow, G1 1XJ, UK

<sup>2</sup>GroundH<sub>2</sub>O plus Ltd, Quinton, Birmingham, B32, 1DY, UK

<sup>3</sup>Now at: British Geological Survey, The Lyell Centre, Research Avenue South, Edinburgh, EH14 4AP, UK

<sup>4</sup>Ministry of Agriculture, Irrigation and Water Development, Regional Irrigation and Water Development Office – South, Private Bag 13, Blantyre, Malawi

<sup>5</sup>Ministry of Agriculture, Irrigation and Water Development, Tikwere House, Liliongwe, Malawi

<sup>6</sup>Department of Chemistry, University of Malawi, Chancellor College, P.O Box 280, Zomba, Malawi

\*Corresponding author: Michael.Rivett@strath.ac.uk

#### Abstract

Significant need exists in the developing world to transition from occasional groundwater-quality surveys to routinely sampled groundwater-quality network monitoring programmes that provide better safeguard of resources. Networks contribute to the sustainable management of water resources, are integral to Water Safety Plans, and underpin delivery of Sustainable Development Goal 6. A framework for groundwater-quality monitoring

#### Download English Version:

## https://daneshyari.com/en/article/8870586

Download Persian Version:

https://daneshyari.com/article/8870586

<u>Daneshyari.com</u>