

# W. Mike Edmunds Memorial Lecture

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Prof Alan MacDonald of the British Geological Survey to deliver the first W. Mike Edmunds Memorial Lecture on the theme of 'groundwater and climate resilience'

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**3 November 2016, 5:00pm**

**Blue Boar Lecture Theatre, Christ Church**

In a career spanning almost 50 years, Professor W. Mike Edmunds made an extraordinary contribution to water science and water resource management globally. Mike led advances in geochemistry – particularly hydrogeochemistry and palaeohydrology – authored over 150 scientific publications and mentored numerous water professionals in the process.



In recognition of his outstanding work, Mike received many accolades including the Whittaker Medal (1999), the O.E. Meinzer Award (2009), and the Vernadsky Medal (2010). Mike is remembered not only for his scientific achievements, but for his passion, warmth and generosity of spirit which touched the lives of many. This lecture aims to honour his legacy by promoting good hydrogeological science to the service of society: something Mike was deeply passionate about.

## **Groundwater and climate resilience**

The first Mike Edmunds Memorial Lecture will address 'groundwater and climate resilience'. As the world's largest store of usable freshwater, groundwater is central to how humans are responding to the challenges posed by climate change. Currently, groundwater abstraction comprises more than 35% of global water use and this is forecast to increase as people seek to mitigate the effects of climate extremes on food and water security. However, this raises the question of how resilient groundwater is to change. In rural Africa, most households depend on groundwater to meet basic water needs, with few affordable alternatives particularly during the dry season. In Asia,

groundwater underpins agricultural productivity, again with few realistic alternatives if groundwater resources were to prove unreliable.

In this talk, Prof Alan MacDonald will explore the resilience of groundwater to change and the challenges posed by climate change and increasing abstraction. Drawing on recent and ongoing research projects in Africa and South Asia, he will show how, with an understanding of hydrogeology, it is possible to plan for the future.

### **About the speaker**

Prof Alan MacDonald is a Principal Hydrogeologist at the British Geological Survey and Honorary Professor of Groundwater at the University of Dundee. His work focuses on applied groundwater science, particularly in Africa and South Asia in the context of environmental change, water security and poverty reduction. Alan has 25 years research experience and has published 70 peer-reviewed papers, two groundwater books and more than 100 BGS Technical reports. He also collaborated with Mike on a number of publications. Alan leads international groundwater research at BGS and manages a small team of groundwater scientists and several PhD students based in Edinburgh