

Book Reviews

Impact of Human Activity on Groundwater Dynamics

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This is the latest in the IAHS publication series, arising from an international symposium held in Maastricht, The Netherlands in July 2001. The 53 papers are drawn from many parts of the world with diverse hydrogeological backgrounds, not all of which are relevant to New Zealand. The papers are all of high quality and very well presented, but some are tantalisingly short, being little more than extended abstracts.

The five sections of the book and some interesting papers are:

- *Quantification of groundwater recharge*

There are several good papers in this section describing various approaches to estimating regional recharge. One is a good summary paper of UK practices by Hulme, Rushton and Fletcher. In my view, however, there is still too much emphasis on modelling and estimating rather than doing any direct measurement.

- *Urbanisation and land-use change*

Many of the papers describe semi-arid regions, but there is a good paper by Norman E Peters and Seth Rose describing the effects of urbanisation on the hydrology of the Atlanta area, Georgia, USA.

- *Groundwater-surface water interaction*

Parkin and others describe a novel approach to modelling river-aquifer interaction using a hybrid 3-D numerical model coupled with a neural network. Juhasz-Holterman explains how the production of potable water from a conjunctive well field/ river bank filtration system could be increased by on-line monitoring of river water quality and increasing river water take when the quality was high.

- *Aquifer characterisation and transport modelling*

The two papers which caught my attention were by Babajova, Dlapa and Pis on cadmium mobility in soils and another by Wakker, Castenmiller and Beckers from The Netherlands on aquifer storage and recovery. This latter topic is gaining increasing attention in water short areas (especially Australia) but is hopefully well into the future in New Zealand.

- *Groundwater contamination*

There were a couple of interesting Dutch papers on nitrates/pesticides in shallow aquifers, but this section suffered from the papers being overly brief.

The volume will be lodged in the library of the University of Canterbury and will be available to those who have interloan access.

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