

# RESEARCH DIRECTIONS

## It's raining, it's pouring

**Dr Ataur Rahman from the School of Engineering is undertaking a project that will support the revision of the Australian Rainfall & Runoff Handbook. Stages I and II of the project are funded by the Department of Climate Change and coordinated by Engineers Australia.**

'Regional flood estimation methods need to be upgraded to incorporate the latest advancements in flood frequency analysis, regionalisation techniques and 20 years of additional streamflow data gathered since the last update of this important engineering resource in 1987', says Dr Rahman. 'Flooding is perhaps the most costly type of natural disaster, causing widespread damage with flow on negative effects to business as well as the health and well being of communities. Flood frequency estimates are required for the planning of urban design, and other structures such as bridges, causeways, and dams. It is important to incorporate climate state variables in regional flood estimation models in order to achieve more realistic design flood estimation for water infrastructure planning and design in the future.'

The data collected by the team will form part of the National Committee on Water Engineering regional flood estimation national database. Significant data have already been collected for the states of Victoria, NSW, Queensland, Tasmania and South Australia. Selected prediction methodologies will be tested to determine the most suitable modelling technique. The national project is overseen by the ARR Technical Committee under the leadership of Associate Professor James Ball of the University of Technology, Sydney (UTS), who is the Chief Editor of Australian Rainfall and Runoff.



This project will contribute to the development of a quality controlled national database of streamflow records, incorporating data and relevant climatic and catchment characteristics from catchments across Australia. These records will provide valuable up-to-date information to engineers and developers for use in planning new developments.

**Project Title:** Australian Rainfall & Runoff – Project 5 Regional Flood Methods for Australia

**Funding has been set at:** \$93,691 for Stage I and \$103,385 for Stage II

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**January 2010**