



## RESEARCH IN PROGRESS

### Operating guidelines for the operation of Dartmouth Dam

**The development of interim operating guidelines for the operation of Dartmouth Dam (2001–ongoing)**

ILWS Strategic Research Area Sustainable Water

**Funding:** Murray Darling Basin Authority (formerly Commission)

**Investigators/researchers:** A/Prof Robyn Watts, Dr Alek Zander, Dr Catherine Allan, Dr Darren Ryder (UNE) and Dr Adrienne Burns (UNE)

#### Description:

For the past eight years A/Prof Watts has led a team of social and biophysical researchers who have collaborated with the Murray Darling Basin Authority on variable flow trials from Dartmouth Dam.

In working towards a strategy to increase within-channel flow variability in the Mitta Mitta River, four discrete variable flow trials were implemented and monitored between 2001 and 2008. The trials were undertaken within existing operational rules, practices and procedures for Dartmouth Dam.

The water transferred between the dams was for consumptive use and was not an environmental water entitlement.

The research generated several key lessons relating to management of flows. Results of each trial influenced the hypotheses posed in the next trial, allowed the refinement of the indicators used to test hypotheses, and informed the planning decisions on dam releases. The studies demonstrate that there are opportunities for managers to re-assess and explore flexibility

within existing river operating rules for improved environmental or enhancing social and economic objectives and requirements.

#### Outputs:

The results of this research have been presented at workshops with MDBA staff and other organisations and at conferences both in Australia and internationally.

Publications include 5 technical reports, 2 journal papers, a book chapter and several articles in local media.

#### Outcomes:

In collaboration with the MDBA the researchers developed new Interim Operating Guidelines for Dartmouth Dam that were first trialled in 2009/10. The research has influenced a shift to active adaptive management that has helped achieve environmental, social and economic objectives downstream of the dam. The research is also contributing to a broader review of River Murray Operations and is beginning to influence the operations of other dams in the Murray-Darling Basin.



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