

Maximising benefits from environmental water allocations

Michele Sabto

The complexity of the Murray–Darling Basin as a hydrological system is a major challenge for those charged with managing its environmental flows. Help is at hand in the form of a new report and decision support tool produced by CSIRO.



Credit: Ian Overton, CSIRO

The report, *Ecological Outcomes of Flow Regimes in the Murray–Darling Basin*, provides information that will assist water managers to improve and justify delivery of environmental water to ‘icon sites’. These include wetlands of international significance such as the Macquarie Marshes, Gwydir Wetlands and Narran Lakes.

National Water Commission CEO, Ken Matthews, launched the report at a Murray–Darling Basin Conference in Sydney in May 2010. He said the problem has been that as water plans have been drawn up, the amount of water needed to provide a given level of environmental protection has not been known.

To shed light on this issue, researchers from CSIRO’s Water for a Healthy Country Flagship pulled together 577 sets of data to investigate the relationships between watering strategies and the health of vegetation, fish and other biota. The report provides detailed information on the range of possible ecosystem outcomes from water allocation management strategies.

A major outcome from the project was the Murray–Darling Basin Floodplain Inundation Model. The model provides the first tool to assess and predict changes in floodplain habitat, wetland connectivity and ecosystem health in response to flooding regimes.

‘Initial model outputs show that only 25 per cent of the Basin floodplain has been inundated to some extent in the past nine years,’ says Ian Overton, of CSIRO Land and Water. ‘This highlights that the recent period of dry conditions has had serious implications across a significant portion of the floodplain.’

The research was part of a National Water Commission initiative funded through the Raising National Water Standards Program.

More information:

www.csiro.au/resources/Ecological-Outcomes-of-Flow-Regimes-Report.html

From **ECOS** online <http://www.ecosmagazine.com/?paper=EC155p6a>