Enhancing water security in the Murray-Darling Basin

Impact Case Study

July 2013

CSIRO's research is playing a crucial role in supporting decision making in Australia's largest river basin

the**challenge**

The Murray-Darling Basin is the largest river system in Australia. It generates **40 per cent ($15 billion)** of the gross value of agricultural production in our nation and supplies water to over two million Australians. Communities and industries in the Basin are critically dependent on a safe and reliable water supply and its rivers and streams support a unique set of ecological assets of significant environmental, social and economic value. In recent decades, demands on the Basin's increasingly variable flows have increased significantly, resulting in a loss of water security for communities, industries and the environment.[1]

the**response**

In 2006, CSIRO was mandated by the Australian Government to lead the Murray-Darling Basin Sustainable Yields Project (MDBSY). The project assessed the available water within the Basin – factoring in scenarios for future catchment development, groundwater extraction and climatic conditions to 2030. In 2011 CSIRO was commissioned to assess the multiple benefits of returning water to the Basin, and to place a monetary value on those benefits where possible. This work has supported the development of water plans, set new sustainable limits on water use and shaped the overall development of a Basin strategy. This research was the first of its kind in the world.

the**engagement**

The MDBSY project drew heavily on CSIRO's expertise, understanding and global leadership in water science and management. Involving more than 170 people from 15 organisations – the MDBSY remains the **largest single project ever undertaken by CSIRO**. CSIRO engaged closely with State and Federal agencies to connect state-based models and produce one large integrated model of the Murray-Darling Basin, enabling a complete and consistent analysis of the Basin's current and future water resources. The "multiple benefits" project also involved CSIRO bringing together at an **unprecedented scale** its own expertise with others in the national innovation system to deliver a quality assured, commercially credible and policy relevant product. CSIRO's involvement ensured that trusted scientific advice was provided to a highly contested public policy challenge.

the**impact**

The research has provided governments, industry and communities with **trusted information** to guide future resource planning, management and investment in the Basin. The research has directly informed development of the Basin Plan and investments made under the Federal Government's 'National Plan for Water Security'. ACIL Tasman[1] have estimated that the MDBSY project saved an estimated $2.8 billion in better risk management of water. The approaches developed by CSIRO have been **implemented in other major river basins** in Australia and are now being applied internationally.

[1] Data from *Assessment of CSIRO Impact and Value Report*, ACIL Tasman July 2010.

Contact us

FOR FURTHER INFORMATION
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