



# RESEARCH SOLUTIONS FOR WATER

**At Federation University, our research has a real-world impact. We work with industry and government to deliver practical research that solves problems.**

Environmental management is a research priority area for Federation University and the quality of our research is ranked well above world standard under the national Excellence in Research for Australia framework. Managing our water resources and finding solutions to problems around water scarcity, efficiency and security is a key focus of our research.

Globally, the demand for water is increasing at a rate of around 1 per cent per year due to population growth, economic development and changing consumption patterns. At the same time, the global water cycle is intensifying due to climate change. This is creating challenges for communities, industry and governments in Australia and around the world.

As a regional university, we are able to move quickly to respond to the needs of industry and government. While our reach is global, we are connected with our local communities, giving us access to populations that are engaged, highly skilled and wanting to partner with us on research opportunities.

## **MAPPING THE STATE OF VICTORIA'S GROUNDWATER IN REAL-TIME**

Until recently, data on groundwater was located in vastly different sources and in formats that were difficult to use or inaccessible. This caused major challenges for rural and regional businesses, farmers and communities dealing with saline or poor-quality groundwater.

Focused on producing world-leading research that has a real impact on people's lives, Federation University took to solving the issue.

Deputy Vice-Chancellor (Research and Innovation), Professor Chris Hutchison, said researchers collaborated with 11 regional, state, national and international organisations with strengths in groundwater science, data collection and management, data modelling and visualisation, ICT, high-speed computation and data distribution, and groundwater management.

"The result was the Visualising Victoria's Groundwater (VVG) web portal – an innovative technology offering a real-time, centralised site for Victoria's groundwater information," Professor Hutchison said.

"The portal consolidates data from over 400,000 bores from four authoritative sources, together with Victorian aquifer information, and features that include spatial visualisations, hydrogeological models, historical records and maps."

VVG has been used in seven shire planning studies, ranging from wind farm Environmental Effects Statements, to wastewater treatment sites, and for other planning applications in resources, transport and waste management.

VVG is one example of how our research is making a real-world impact.

**[Federation.edu.au/research](https://www.federation.edu.au/research)**

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<sup>1</sup><https://www.unwater.org/publications/world-water-development-report-2018/>

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