

**IMPACTS OF THE WATER AMENDMENT (RESTORING OUR RIVERS) ACT
2023 ON NSW REGIONAL COMMUNITIES**

Organisation: Centre for Technology in Water & Wastewater - University of
Technology Sydney

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14th April 2025

The Hon Roy Butler MP

Chair, Inquiry into the Impacts of the Water Amendment (Restoring Our Rivers) Act 2023

Legislative Assembly of New South Wales

Re: Impacts of the Water Amendment (Restoring Our Rivers) Act 2023 on NSW regional communities

Dear Mr Butler,

Thank you for the opportunity to provide a submission to this important inquiry into the impacts of the *Water Amendment (Restoring Our Rivers) Act 2023* on regional communities in New South Wales.

I make this submission in my capacity as Professor and Director of the Centre for Technology in Water and Wastewater (CTWW) at the University of Technology Sydney, on behalf of more than 20 academic members of the Centre. CTWW is an internationally recognised leader in applied research focused on sustainable water management, advanced treatment technologies, and integrated water reuse systems. Our multidisciplinary team—including engineers, scientists, and policy specialists—works closely with government agencies, utilities, and regional communities to address critical water challenges.

Our research is grounded in real-world application, including improving water efficiency in agriculture, developing resilient water infrastructure, and advancing innovative treatment technologies. Notably, CTWW has delivered several projects of direct relevance to this inquiry, including a collaboration with Murrumbidgee Irrigation to enhance measurement accuracy through flume gate metering (Project ICG001128, funded by Innovation Connections). This experience positions us to provide informed, evidence-based insights into the implications of the *Restoring Our Rivers Act* and to propose practical, regionally tailored strategies that balance environmental goals with socio-economic sustainability.

CTWW acknowledges the importance of environmental conservation and supports the underlying objectives of the 2023 amendments to secure sustainable environmental flows in Australia's river systems. Key changes—including revised completion dates for Sustainable Diversion Limit Adjustment Mechanism (SDLAM) projects, the extended timeline for the 450 GL recovery program, and new mechanisms for achieving its target—raise legitimate concerns about potential unintended impacts on regional communities and irrigation-dependent industries. We believe research and innovation can play a vital role in mitigating these impacts and addressing community concerns.

We recommend the development of a data-driven, adaptive water allocation framework. Such a framework would enable more flexible and intelligent management of environmental flows by distinguishing between high- and low-flow periods and accounting for regional variation within the Basin. This approach would maximise ecological benefits while minimising economic disruption. It

could also support more nuanced recovery mechanisms such as conditional buybacks, water leasing, or rotational access schemes, as alternatives to permanent entitlement transfers.

In addition, we urge a stronger policy emphasis on research and innovation to enhance the value-add of water use—both for economic activity and environmental health. Innovation can reframe the perceived trade-offs between ecological and economic outcomes. For example, CTWW is advancing novel methods for generating and applying nanobubbles to enhance water quality, offering potential benefits to river ecosystems even during low-flow periods. Similarly, new technologies in sensor-based, AI-enhanced technologies and satellite-driven decision-support systems can also increase the economic productivity and resilience of water use across agriculture, tourism, and environmental management.

Our broader research portfolio includes:

- Enhancing irrigation efficiency and water reuse;
- Real-time modelling of flow variability and water demand;
- Co-developing decision-support tools for water management under uncertainty; and
- Investigating socio-economic transitions in water-stressed regions.

These areas exemplify how research and innovation can deliver integrated, future-focused solutions to complex water policy challenges.

While the goals of the *Restoring Our Rivers* Act are critical to Australia's environmental future, the pathways to achieving them must reflect the lived realities of regional communities. A flexible, evidence-based, and community-engaged approach is essential to achieving both environmental and socio-economic resilience.

Thank you for considering this submission. I would also like to extend an invitation to you and members of your committee to visit our research centre at UTS TechLab. We would be pleased to share further evidence and demonstrate the potential of our work to help alleviate the social and economic impacts on regional communities.

Yours sincerely,



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