

Project fact sheet

Putting people at the centre

Towards transforming climate risk assessment for water security and delivery

Key points

- The Murray–Darling Basin is headed for a drier future, with rainfall projected to decrease, particularly in the south and in winter, with more time in drought and decreased soil moisture.
- While there is a lot of climate change information available, it is not in a form that facilitates effective discussions and partnerships around adaptation.
- In this project, researchers and One Basin CRC industry partners will co-design a new method of climate risk assessment and adaptation planning that emphasises community values when producing actionable climate information.
- The ‘people-centric’ method we develop will provide tailored information to different stakeholder groups and empower them to act by developing a shared understanding of climate risk and appropriate adaptation strategies.

The challenge

Despite the urgent need, there is only ad hoc climate adaptation in the Murray–Darling Basin. Existing methods for dealing with climate risk have been highly ineffective, as they present a ‘science-centric’ narrative that lacks connection with ‘everyday’ concerns of stakeholders. The large amount of ‘science-centric’ information

available is also of limited use to water resource planners and decision makers, generally resulting in decision paralysis. This is exemplified by the imbalance between abundant climate risk information and comparatively scarce climate adaptation. Without accepted, actionable climate adaptation strategies, the risk is that some basin stakeholders will not be prepared for future climate change impacts.

The opportunity

There is an opportunity to transform the way climate risk assessments are done in the Murray–Darling Basin, moving from the existing ‘science-centric’ approach to something that is ‘people-centric’. A ‘people-centric’ approach will enable stakeholders to understand what specific risks climate change presents to them and what actions they need to take to adapt. The community input and partnerships central to the proposed ‘people-centric’ approach are vital to successful adaptation of water management and planning under climate change.



Our research

The new approach to climate risk assessment will be developed in an iterative manner to maximise flexibility and opportunities for engagement, and with a broad range of stakeholders in different

parts of the basin to maximise value and impact. A series of stakeholder workshops will be held in different case study regions to establish a shared vision for a long-term thriving region, a shared understanding of how climate change could impact this vision, and what potential adaptation strategies could be used to achieve this vision.

Next, climate risks identified as important by stakeholders, as well as the effectiveness of corresponding adaptation strategies, will be quantified using fit-for-purpose modelling (with modelling tools being co-developed with stakeholders). The modelling results will be discussed with relevant stakeholder groups to develop adaptation plans.

Outcomes

- The development of a new approach to climate risk assessment that empowers stakeholders to develop climate adaptation strategies.
- For the different case studies, the development of a shared understanding of common values and desired future outcomes in a climate-affected future.
- The identification of common learnings from the case studies, including key barriers and accelerators to wider adoption of the 'people-centric' approach.
- Guidelines and tools for broader implementation of the 'people-centric' approach by a wider group of stakeholders.

Next steps

Next steps will involve the scoping of four case studies with several One Basin CRC industry partners: the Murraylands and Riverland Landscape Board, Goulburn Broken CMA, Northeast CMA. The initial scoping phase will primarily involve the research team gaining an in-depth understanding of the current climate change challenges specific to each industry partner (with a particular emphasis on understanding stakeholder values and

concerns). Then, industry partners and the research team will develop case studies, and the new "people-centric" climate risk assessment method will be developed and refined.

Key personnel

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Core partners

- Murray–Darling Basin Authority
- University of Adelaide
- University of Melbourne
- Australian National University
- North East Catchment Management Authority
- Goulburn Broken Catchment Management Authority
- Murraylands and Riverland Landscape Board.

One Basin CRC

Since our inception in mid-2022, the One Basin Cooperative Research Centre has brought together 85 partners across the Murray–Darling Basin.

Our purpose is to work together to grow value from water in a changing world.

From Queensland to South Australia, we are finding practical solutions to complex challenges, training the next generation of scientists, and nurturing regional communities.

Our collective goal is a productive, resilient and sustainable Murray–Darling Basin.

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