

This document shares the One Basin CRC projects as at 11 March 2025.

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Technology and opportunity

Project name	Type	Lead hub	Project leader	Timeframe
Irrigation demand forecasting for multi-scale multi-objective system storage control optimisation	Quickstart	Griffith	Joseph Guillaume, Australian National University	June 2023 – May 2024
Water infrastructure critical component anomaly detection and health prediction prototype	Quickstart	Griffith	Joseph Guillaume, Australian National University	June 2023 – May 2024
Water banking for enhanced drought resilience	Round 1	Loxton	Ilka Wallis, Flinders University	July 2024 – June 2027
Reducing uncertainties and enabling multiple benefits in water delivery operations	Round 1	Mildura	Serena Hamilton, Australian National University	April 2024 – March 2027
Digital irrigation advisory systems: Enabling extension and advisory services for agriculture	Round 2	Griffith	Margaret Ayre, University of Melbourne	October 2024 – December 2027
Digital irrigated agriculture workforce futures	Round 2	Mildura	Leigh Schmidtke, Charles Sturt University	October 2024 – December 2027
Integrated digital technology - redefining its value and user experience for irrigation	Round 2	Loxton	Paul Petrie, SARDI / PIRSA	October 2024 – December 2027
Understanding and reducing evaporation losses from farm dams in the northern Murray–Darling Basin	Round 2	Goondiwindi	Michael Scobie, University of Southern Queensland	March 2025 – March 2028

Foresight and decisions

Project name	Type	Lead hub	Project leader	Timeframe
Shifting availability: the implications of climate change	Quickstart	Mildura	Avril Horne, University of Melbourne	July 2023 – October 2024
Opportunities and risks associated with identifying, sourcing and treating brackish groundwater	Quickstart	Loxton	Michael Leonard, University of Adelaide	March 2024 – September 2024
Predicting the impact of climate change on irrigation demand across the One Basin	Quickstart	Loxton	Paul Petrie, SARDI/PIRSA	August 2023 – June 2024
Building capacity to adapt to a more variable water future	Quickstart	Mildura	Avril Horne, University of Melbourne	June 2023 – September 2024
Stories of One Basin: First Nations knowledge and Indigenous-led research to address climate change	Round 1	Goondiwindi	Peta Jeffries, Charles Sturt University	August 2024 – February 2027
Unlocking collaborations for transformation: Towards a platform for data and knowledge sharing	Round 1	Griffith	Tahmid Nayeem, Charles Sturt University	February 2024 – January 2027
Putting people at the centre: towards transforming climate risk assessment for water security and delivery	Round 1	Mildura	Holger Maier, University of Adelaide	April 2024 – June 2027

Adaptation and innovation

Project name	Type	Lead hub	Project leader	Timeframe
Organic waste conversion: novel biological products to increase agricultural production and reduce environmental impacts	Quickstart	Goondiwindi	Roger Knight, Western Murray Land Improvement Group	May 2023 – December 2023
Equity and vulnerability in a drying basin: water sharing policy and quality of life in towns	Quickstart	Goondiwindi	Vicki Martin, Alluvium	May 2023 – May 2024
Citizen science: integrating community groups into basin-scale fish tagging and recovery programs	Quickstart	Griffith	Lee Baumgartner, Charles Sturt University	June 2023 – November 2024
Water futures	Round 1	Goondiwindi	Margot Rawsthorne, University of Sydney	February 2024 – February 2027
Understanding future leadership needs	Round 1	Goondiwindi	Hannah Feldman, Australian National University	June 2024 – June 2027
Future governance for water limited communities	Round 1	Griffith	Melissa Nursey-Bray, University of Adelaide	August 2024 – December 2026
Incentivising and investing in climate adaptation and the adoption of sustainable basin management practices	Round 1	Loxton	Nicholas Pawsey, Charles Sturt University	April 2024 – March 2026
Decarbonising the Basin's irrigation regions	Round 2	Loxton	Behzad Rismanchi, University of Melbourne	February 2025 – February 2028
Future Basin economies: Innovative approaches to design and deliver economic investments wanted by Basin communities	Round 2	Griffith	Mark Morrison, Charles Sturt University	March 2025 - September 2027

PhD projects

Project name	Candidate	Regional hub	Host university	Start date
Cyanotoxin risk in recycled water used for food crop irrigation	Shayne Faulkner	N/A	Flinders University	January 2023
Designing effective foresight processes to anticipate and prepare for climate change in the Murray–Darling Basin	Camaria Holder	Mildura	Australian National University	August 2023
Ecological and physiological functioning of a native grain production system	Anita Bhusal	Goondiwindi (Narrabri)	University of Sydney	January 2024
Regenerative agriculture impacts and opportunities	Wiyanda Naufal	Goondiwindi (Narrabri)	University of Sydney	January 2024
Geospatial modelling of region-scale crop water-use to forecast climate change impacts on irrigation demand	Shahin Solgi	Loxton	Charles Sturt University	March 2024
Multi-objective model predictive control for pumped water distribution systems incorporating renewable energy	Lang Zheng	Mildura	University of Melbourne	March 2024
Understanding community-wealth building programs and community readiness to adopt change	Miltone Kimori	Griffith	Charles Sturt University	December 2024
Water futures: community change in the context of conflict	Kelsy Burns	Mildura	University of Sydney	April 2024