



We acknowledge the Traditional Owners of the lands in the Murray-Darling Basin and pay respect to their Elders, past, present and emerging.

Murray Darling
Association

27 September 2023

Mike Stewardson
CEO, One Basin CRC

*Productive, resilient, and
sustainable irrigation regions*

OUR VISION:

Australia's irrigation regions are the most productive, resilient and sustainable in the world

OUR PURPOSE:

We work together to grow value from water in a changing world



**ONE
BASIN
CRC**

ONE BASIN CRC PARTNERSHIP



END-USER ORGANISATIONS



COMMERCIALISATION PARTNERS



KNOWLEDGE AGENCIES

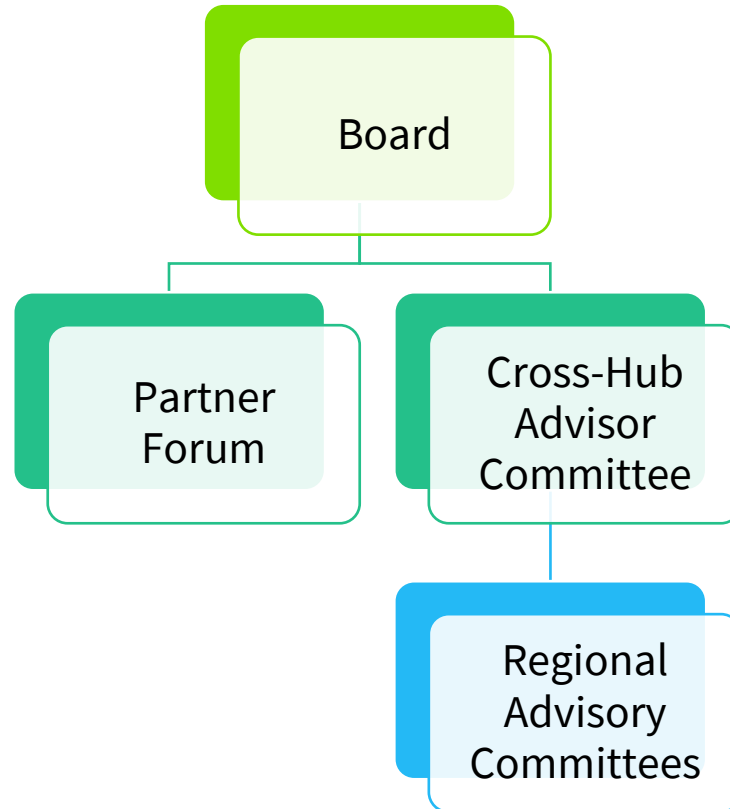


LOCAL GOVERNMENT PARTNERS



- **Relationships:** We commit to establishing and maintaining meaningful relationships with the local Aboriginal communities.
- **Respect:** Respecting the experiences and perspectives of Aboriginal First Nations peoples is integral to genuine engagement with these groups.
- **Opportunities:** We commit to creating sustainable opportunities for Aboriginal First Nations peoples in the CRC.







85 organizations with diverse interests



Budget envelope



Skills and capacity of our partners



Commitments to the commonwealth







- Developed during august-December 2022
- Two-day workshop at each of our four Regional Hubs
- Online workshop
- On-line survey
- Feedback on draft challenges
- Final challenges approved by steering committee and board

OUR CHALLENGES



BUILDING
CAPACITY TO
RESPOND TO
CLIMATE
CHANGE
TOGETHER



CREATING VALUE
FROM DIGITAL
TECHNOLOGIES TO
SUPPORT THE
IRRIGATED
AGRICULTURE SECTOR

ENHANCING
WATER SUPPLY
SYSTEMS TO
DELIVER FOR
MULTIPLE USES



REALISING VALUE
FROM AND WITHIN
RURAL INDUSTRIES
AND COMMUNITIES



OUR INVESTMENT PRIORITIES



BUILDING
CAPACITY TO
RESPOND TO
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TOGETHER

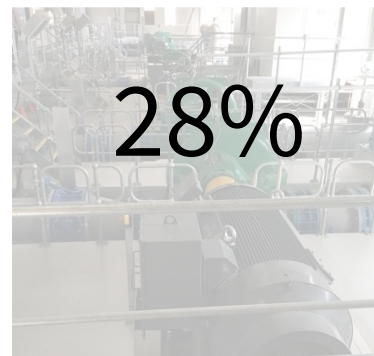


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REALISING VALUE
FROM AND WITHIN
RURAL INDUSTRIES
AND COMMUNITIES





- Working Groups (key interested partners)
- Interviews with partners
- Discussion papers
- Online workshops for each Challenge
- Partner feedback on discussion paper
- Approval with Partner Forum and Board



BUILDING CAPACITY TO CONFRONT CLIMATE CHANGE TOGETHER

Challenge 1: Co-develop, demonstrate and scale the tools and processes for partners and communities to confront climate change projections of a hotter, more variable future and co-design transition options that support productive, resilient and sustainable regions.

Proposed Research

- SECURITY: Building community water security foresight capability
- DELIVERY: Stress testing integrated water delivery operations
- TRANSFORM: Anticipating transformation for communities, agriculture and the environment
- ECOSYSTEM: Building community understanding of healthy waterways in the face of climate change
- INVESTMENT: Opportunities to mobilise investment for climate change adaptation and build resilience through community wealth
- FIRST NATIONS: Supporting First Nations-led research to address climate change
- LEADERSHIP: Understanding future leadership needs

CAPTURING VALUE FROM DIGITAL TECHNOLOGIES TO SUPPORT THE IRRIGATED AGRICULTURE SECTOR

Challenge 2: Enhance the value and adoption of digital technologies on farm and across the value chain to enable end-users to capture value from those technologies and boost profitability, sustainability and resilience of their businesses.

Proposed Research

- ADOPTION: Identify pathways to define and implement effective digital solutions
- VALIDATION and SCALING: Protocols and pilots to demonstrate application from whole farm to basin scale
- DIGITAL SYSTEMS FRAMEWORK: Value chain approach with co-benefits (agriculture, environment, community)
- EDUCATION AND TRAINING: What skills are needed across stakeholders within the Basin that will enhance development, implementation and support of next generation digital technologies
- SUSTAINABLE SOLUTIONS: Framework for determining the financial viability of different technologies and/or a suite of integrated technologies in various regions and at multiple scales
- SHARING: Frameworks, protocols and knowledge systems to connect people, data and models

ENHANCING WATER SUPPLY SYSTEM TO DELIVER FOR MULTIPLE USES

Challenge 3: Develop water infrastructure policy, design and operation options that allow water supply operators to increase the capacity of their water supplies to meet multiple water uses.

Proposed Research

- ALTERNATE WATER: Increasing access to alternative water sources for industries and communities
- WATER BANKING: Water banking to enhance drought resilience
- UNACCOUNTED WATER: Loss minimisation and the management of unaccounted water
- PUMPED SYSTEMS: Interventions to improve pumped water systems
- MULTIPLE BENEFITS: Enhancing information systems to support multiple productive, environmental, and cultural benefits
- INTEGRATED OPERATIONS: Integrated operational management of water delivery operations

REALISING VALUE FROM AND WITHIN RURAL INDUSTRIES AND COMMUNITIES

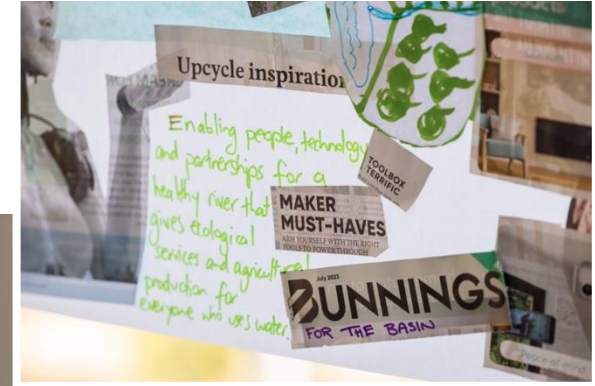
Challenge 4: Increasing value from the implementation of sustainable, resilient and inclusive strategies and innovations, through development of innovation knowledge and networks, market awareness, design, access and development and strengthening social licenses.

Proposed Research

- ADAPTATION and TRANSITION of agricultural and environmental systems and rural communities
- VALUING First Nations knowledge in Basin science and management
- INCENTIVES for the sustainable management of Basin resources
- EVALUATING the impacts of policies and programs on people, economy and environmental condition
- Approaches to GOVERNANCE, engagement and collaboration to support management and care of the Basin



2024 PROJECT CO-DESIGN ROUND



- 9 Projects already commenced
- 10 Project proposals waiting approval
- 6 PhD Projects awarded to students with 12 more just advertised
- Committed \$16m in cash and matching in-kind – mostly in regional areas

Technology options

mostly in the Technology and Opportunity Program

Water banking

Digital irrigation technologies

Evaporation minimisation

Irrigation land use changes
(??)

Alternate water:
Desalination of brackish g/w
Quickstart

Organic waste conversion

Foresight and decisions

mostly in the Foresight and Decisions Program

Foresighting (Security and Delivery)

Information (Transform and Sharing)

Evaluation: "Equity and vulnerability" Quickstart

Optimising water supply systems: multiple benefits and integration.

Modelling: "Shifting availability: the implications of climate change"

Application: "Building capacity to adapt"

Enablers

mostly in the Commercialisation and Capability Program

Incentives

Social enablers of adaptation

Leadership

First Nations Project

Governance

Enablers of digital irrigation technology

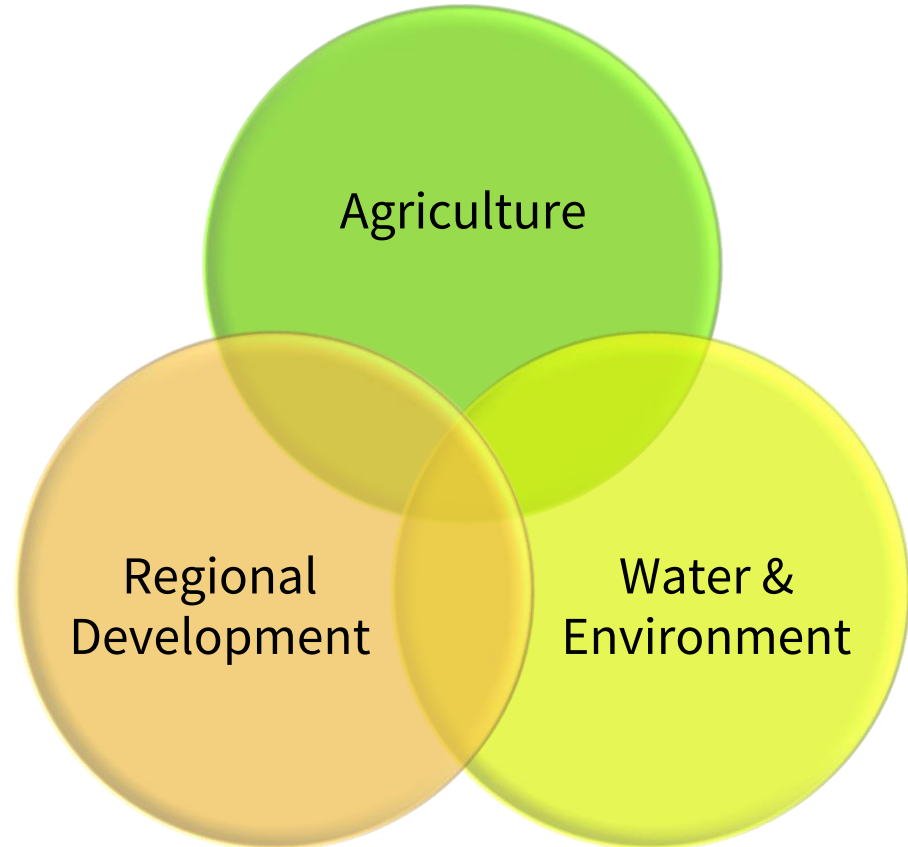
Education and training program

Water literacy: "citizen science" Quickstart

BUILDING COLLABORATION



- Sign-up to our newsletter at ... onebasin.com.au
- Engage with us via MDA - Mark Lamb
 - Shared challenges faced by local government





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