

Future Drought Fund Investment Strategy 2024 to 2028

Submission by the One Basin CRC

6 December 2023

Opportunities for Collaborative Approaches to Deliver the Future Drought Fund Investment Strategy 2024 to 2028

With winding back of extension functions in state agricultural and natural resources agencies from the 1980s, and the more recent closure of Land and Water Australia in 2009, there has been a fragmented approach to land and water RD&E (research, development and extension) in Australia. A lack of scale in programs has undermined attempts to connect research to extension and deliver impacts at scale. The result has been a diminishing capacity for land and water managers (both public and private) to innovate in the face of considerable change including climate change, agricultural market pressures and technology innovation. This has likely contributed to decreased rates of productivity growth in agriculture; a reduction in on-going regional jobs in the extension sector; and a reduced resilience to climate and other shocks.

The longevity and scale of the Future Drought Fund makes it well-suited as a catalyst for addressing this fragmentation by building collaborative effort in promoting drought resilience. Parallel initiatives which might be leveraged include the One Basin CRC, the Commonwealth Environmental Water Holder's (CEWH) Flow MER Program, and CSIRO's Drought Mission, which have similar planning time-frames and complimentary objectives to the FDF program. Our experience in the One Basin CRC, is that there is a strong appetite for collaboration in the face of significant challenges and limited capability of any one organisation to be effective on its own.

This submission highlights five collaborative opportunities (below) which can contribute to the FDF draft investment strategy. There are no doubt other opportunities which we would be happy to explore.

The opportunities presented here will benefit from collaboration across multiple research and extension organisations that leverage existing national-scale partnerships aligned with the FDF program. For example, the One Basin CRC is itself a partnership of 85 organisations with a focus on the Murray-Darling basin but a much broader reach and interest. The One Basin CRC has an existing coordination arrangement with the four FDF Drought Resilience Adoption and Innovation Hubs with a footprint in the Murray-Darling Basin. Over the next five years, the One Basin CRC leads the Knowledge Exchange Program for the CEWH's Flow MER program and the CEWH has indicated interest in opportunities for collaborative efforts across multiple initiatives in relation to First Nations engagement in land and water science and innovation. CSIRO is a partner in the One Basin CRC and we discuss collaborative opportunities including with their Drought Mission. Other candidates for a consortium to deliver these five opportunities might include universities, government and private land and water research organisations.

In considering these five opportunities, we suggest that FDF also reflects on the best procurement models to deliver the benefits of collaboration. Importantly, this will require coordination across partnering organisations to navigate differing planning cycles, funding rules and reporting lines. A competitive bidding process is unlikely to provide the optimum outcome in terms of building impactful partnerships aligned by common purpose and attracting co-investment.

1. A Digital Platform for Research, Development and Extension in Drought Resilience

In response to the complex challenges faced by the agricultural sector, especially in drought-affected areas like the Murray-Darling Basin, we propose the development of a digital Research, Development, and Extension (RD&E) platform. Leveraging advanced technology and data management strategies, aligned with the strategic imperatives of the Future Drought Fund (FDF), focusing on enhancing agricultural resilience and productivity.

The agricultural landscape, notably in the Murray-Darling Basin, confronts the dual challenges of adapting to climate-induced fluctuations and maintaining optimal productivity. A significant gap exists in the absence of a unified system for managing and disseminating critical agricultural data and insights. Aligned with the FDF's emphasis on innovative data solutions and digital tool development, a digital RD&E platform represents a timely solution to augment knowledge management capabilities, resonating with FDF's vision for future drought resilience hubs.

Envisioned as a central resource, the RD&E platform would consolidate essential data for drought resilience, soil management, and landscape sustainability, thereby addressing information accessibility and management gaps.

Transforming extension services, the platform is designed to make research findings practical and accessible, especially for farmers, thereby elevating the utility of this research for all stakeholders.

2. Engagement of First Nations in Land and Water Research and Extension

There is a widespread commitment across land and water RD&E organisation to engage First Nations people in their work. This is a focus across the Future Drought Fund, the One Basin CRC and other initiatives such as the CEWH FlowMER program and many land and water research programs maintained by governments and universities. Such engagement offers benefits for transitional owners as well bring traditional knowledge and perspectives together with western science to support the work of these organisations.

There are significant challenges to achieving successful partnerships between traditional owners and western RD&E organisations. This includes building relationships and trust, developing cultural competence amongst non-indigenous workers, and identifying productive programs for collaborative work.

Land and water RD&E organisation are mostly tackling these challenges alone, often 'reinventing the wheel' and placing excessive burden through repetitive consultation with First Nations organisation. There is an opportunity for greater coordination in the engagement of First Nations people in Land and Water RD&E.

We suggest that the Future Drought Fund contribute to establishing a partnership of organisations co-investing in engagement of First nations people and land and water RD&E. Such a partnership could have Aboriginal leadership and guidance. Partner co-investment could support the establishment of training programs, forums and guidance documents as well as building partnerships First nations and non-indigenous organisation. Preliminary consultation suggests there is interest in a national symposium led by First Nations people discussion First Nations Land and Water knowledge needs.

3. Challenge-Led Innovation for Drought Resilience

The FDF Investment Strategy calls for piloting a “challenge-oriented” approach to drought resilience Innovation in a particular region, industry or at a broader systems level. This is highly aligned with the approach adopted by the One Basin CRC. During the 2023-24 year the One Basin CRC partners has co-defined four challenges to be our focus for the first phase of the One Basin CRC, and focus areas for addressing these four challenges¹. More recently, we have worked with partners to co-design projects within these focus areas. We would be interested to explore how our experience could be leveraged by the Future Drought Fund to design a pilot in a challenge-oriented approach.

4. Leading innovation

With the proliferation of advice on potential innovations in land and water management, private and public end-users can be overwhelmed by claims and information, especially where sources of information have not built or maintained trusted relationships with end-users. The FDF is well placed to take a lead role, supported by other regional knowledge systems such as the One Basin CRC’s Regional Hubs, in identifying robust, beneficial (including public and private benefits), and timely research that supports innovation. Part of this lead role could include developing extension strategies, based on the research from collaborators noted above, considering technology, communications, end-user cultures and groups and knowledge of adoption barriers.

5. A National Network of Regional Innovation Systems

We believe there is enormous leverage potential if the FDF should connect its regional activities with other regional innovation initiatives to create a regional innovation network. There is a growing number of initiatives being developed in regional centres to support innovation, often with a core focus on land and water management. The FDF’s Drought Resilience Adoption and Innovation Hubs are a leading example of this. Other examples are the One Basin CRC’s four Regional Hubs in the Murray Darling Basin and the innovation precincts being established by regional universities such as the Charles Sturt University Innovation Hub.

There is great opportunity to find synergies through collaboration and coordination across these regional initiatives. For example, an innovation network, that links these initiatives

¹ More details of our Challenges and Focus Areas are available here
<https://static1.squarespace.com/static/5dcb6771a39a5c466f667690/t/64914001bebe087d137ec235/1687240709158/Research+program+planning+final.pdf>

together, could share experiences, methods, and tools for supporting regional innovation. It could also support the translation of successes from one region to another. Over the longer term, a network approach could support specialisation and closer collaboration across initiatives to access a wide range of expertise.

To establish this Regional Innovation Network, there is a need for relatively small investment in a central coordination function. The Future Drought Fund could provide foundation support for this. This coordination role could sit with an existing institution that has the necessary capability and relevant purpose such as Cooperative Research Australia or the Regional Australia Institute.

Contact: Prof Mike Stewardson
CEO, One Basin CRC
mike.stewardson@onebasin.com.au
Mob: 0407 809 106