

# **Establishing a National Institution and Funding Program for Land and Water Research**

**A Submission to the Australian Government’s Strategic Evaluation of R&D by the One Basin CRC**

## **Executive Summary**

Australia faces complex and interrelated land and water challenges that are critical to the nation’s environmental, economic, and social sustainability. Climate change amplifies these challenges increasing variability and uncertainty in water availability with declines expected across much of Australia. Despite significant investment in land and water research, current R&D efforts are highly fragmented, leading to inefficiencies and missed opportunities for impact. This submission advocates for the establishment of a national institution and funding program dedicated to Land and Water Research, structured around a mission-driven approach to addressing national land and water priorities. The proposed initiative would enhance research capabilities, foster collaboration between industry, government, and research institutions, and drive innovation, commercialisation, and policy impact.

## **The Case for a National Land and Water Research Institution**

### **1. Addressing Fragmentation and Inefficiency in Current R&D**

The current landscape of land and water R&D in Australia is characterised by dispersed funding, overlapping research efforts, and limited coordination across jurisdictions, industries, and disciplines. While numerous agencies and institutions contribute valuable research, the absence of a centralised framework results in inefficiencies, duplication of efforts, and gaps in critical areas of national interest. A dedicated national institution would:

- Streamline investments and coordinate research activities to align with national priorities.
- Reduce redundancies and maximise the return on R&D funding.
- Enable long-term, strategic planning for research programs.

### **2. Tackling National Land and Water Challenges Through Mission-Driven R&D**

Australia’s land and water priorities—such as climate resilience, sustainable agriculture, biodiversity conservation, water security, and carbon sequestration—require integrated and solutions-focused research. A mission-driven approach would:

- Define clear national challenges and align funding to address them.
- Support multidisciplinary collaborations that bridge research, policy, and industry.
- Provide a framework for translating research into tangible outcomes for communities, businesses, and government.

- Prioritise investment in First Nations knowledge and practices, ensuring Indigenous-led research is integrated into national strategies.

### 3. Building National R&D Capability and Collaboration

A new institution and funding program would play a pivotal role in strengthening Australia's research capability by:

- Investing in the development and retention of skilled researchers in land and water sciences.
- Establishing partnerships across universities, government agencies, industry, and international research bodies.
- Creating mechanisms for knowledge exchange and technology transfer to enhance commercialisation pathways and policy integration.
- Supporting the cultural economy by fostering Indigenous-led enterprises that apply traditional knowledge to contemporary land and water challenges.

Land and Water Australia, a widely respected R&D program could be a model for such an institution<sup>1</sup>. Land and Water Australia was a statutory corporation established under the Primary Industries and Energy Research and Development Act of 1989 and was closed in 2009. It organized and funded research and development activities which improved the long-term productive capacity, sustainable use, management and conservation of Australia's land, water and vegetation resources.

### 4. Leveraging Public and Private Sector Investment

By providing a centralised and strategic investment vehicle, the proposed initiative would encourage greater co-investment from industry, philanthropic organisations, and international research funds. This would:

- Enhance the financial sustainability of land and water R&D.
- Facilitate joint ventures and cross-sector partnerships that drive innovation and economic growth.
- Increase Australia's global competitiveness in environmental and agricultural research.

### 5. Proposed Institutional and Funding Model

The establishment of a national Land and Water Research Institution and funding program would include:

- A **National Land and Water Research Authority** to coordinate mission-driven research, set priorities, and manage investments.
- A **dedicated funding program** supporting competitive grants, collaborative research initiatives, and capacity-building projects.
- **Regional innovation hubs** to support place-based research and localised adaptation strategies building on existing regional innovation capacity such as the Future Drought Fund Hubs and Regional Hubs in the One Basin CRC.

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<sup>1</sup> <https://web.archive.org/web/20090131232909/http://lwa.gov.au/Programs/>

- **Commercialisation adoption and impact programs** to accelerate the translation of research into practice, policy, and industry applications.

To ensure the financial sustainability and effectiveness of the Land and Water Research Institution, a range of funding models should be considered:

1. **Direct Government Appropriation**
  - Annual budget allocations through the Department of Industry, Science and Resources or the Department of Agriculture, Water and the Environment.
  - Long-term funding commitments through multi-year agreements to ensure stability.
2. **Industry Levies and Co-Funding**
  - Expansion of existing research levies in agriculture (e.g., via Research and Development Corporations).
  - New levy structures for water management, environmental restoration, or carbon sequestration.
3. **Public-Private Partnerships (PPP)**
  - Government co-investment with industry, agricultural bodies, and water utilities.
  - Matched funding models where government contributions are leveraged with private sector investment.
4. **Philanthropic and International Funding Integration**
  - Attracting investment from global foundations and climate finance mechanisms.
  - Partnering with international research bodies for co-funded projects.

## **Conclusion and Recommendations**

The establishment of a national Land and Water Research Institution and funding program is essential for overcoming the inefficiencies of Australia's fragmented land and water R&D landscape. By adopting a mission-driven approach, fostering collaboration, and leveraging investment, Australia can enhance its research capability, drive impactful innovation, and ensure the sustainable management of its land and water resources for future generations. A key priority must be the recognition and integration of First Nations knowledge and leadership, ensuring First Nations-led research and the cultural economy are central to the nation's R&D strategy. We urge the Australian Government to prioritise this initiative as a core component of its strategic R&D agenda.

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