



Committee Secretary
Senate Select Committee on the Multi-Jurisdictional
Management and Execution of the Murray-Darling Basin Plan

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To whom it may concern,

RE: Goyder Institute for Water Research submission to the Senate Select Committee on the Multi-Jurisdictional Management and Execution of the Murray-Darling Basin Plan

Thank you for the invitation to provide input into the inquiry of the Senate Select Committee on the Multi-Jurisdictional Management and Execution of the Murray-Darling Basin Plan. I am writing on the basis that the Committee is examining ways to improve collaboration within the basin. The focus here is on the critical role of research for achieving the desired outcomes of the Basin Plan and collaborative approaches for undertaking and adopting research. This includes a summary of new opportunities that aim to address the major challenges through a collaborative model that involves industry, government and academic institutions and communities.

The importance of the ongoing sustainable management of water resources within the Murray-Darling Basin to Australia is widely appreciated. The challenges are significant – a need to maintain and enhance vital ecological, economic and social values with limited water resources in a climate that is changing. To overcome these challenges and achieve the desired outcomes of the Basin Plan, it is critical that new knowledge is developed and that policy, management and technological solutions are identified and adopted by governments, industries and communities. This is recognised in the Basin Plan, which identifies the development and application of new knowledge as a key strategy for managing or addressing key risks to the condition, or continued availability, of basin resources (Section 4.03).

The Goyder Institute for Water Research

The South Australian Government established the Goyder Institute for Water Research to develop such knowledge and ensure that the knowledge is incorporated into water policy. The Institute is a partnership between the South Australian Government, the Commonwealth Scientific and Industrial Research Organisation,



Flinders University, The University of Adelaide, The University of South Australia and The International Centre of Excellence in Water Resources Management. It brings together leading scientists to provide expert and independent research and scientific advice to inform government water policy and identify future threats and opportunities to water security. Central to the achievements of the Institute is the collaboration between researchers and policy-makers. The collaboration is facilitated through the governance arrangements of the Institute, which include a Management Board, a Research Advisory Committee, Project Advisory Committees and project teams. Collectively, the governance arrangements facilitate a collaborative approach to identifying knowledge gaps, undertaking research and adopting research outputs.

An important focus area of the Institute is the Murray-Darling Basin. A brief summary of the Institute's completed projects that relate to the Murray-Darling Basin Plan is provided in Appendix 1. This work included assessments of the likely economic, social and environmental responses to various water recovery targets. These projects identified several ecological risks associated with water recovery targets, with two current initiatives of the Institute focused on identifying solutions to overcoming these risks:

- a project (*Ecological Connectivity of the River Murray*) that is informing the integrated operations of existing and new floodplain infrastructure to maximise the ecological outcomes of environmental water provisions and mitigate water quality risks (new infrastructure is planned as part of the Sustainable Diversion Limit Adjustment Mechanism to achieve equivalent environmental outcomes with less environmental water).
- a new scientific trials and investigations program funded by the Australian and South Australian Governments (*Healthy Coorong, Healthy Basin*) focused on addressing scientific knowledge gaps and provide the scientific evidence-base to inform what management actions are required to restore the ecological character of the Coorong.

In reviewing the National Water Reform, the Productivity Commission highlighted the Goyder Institute as a key achievement of the South Australian Government under the National Water Initiative. The Commission observed recent decreases in the level of investment into water research (lowest since the 1980s despite the significant water challenges) and concluded that ongoing research and capacity building is central to Australia's ability to deliver the sustainable management of water resources in the face of challenges from climate change, population growth and increasing community expectations. They concluded that governments, industry and research institutions should work collaboratively to advance knowledge, build capacity and develop technological and innovative solutions. They identified mechanisms to support this, such as Cooperative Research Centres and the Goyder Institute. In the Murray-Darling Basin there is currently no long-term, basin-wide, collaborative and coordinated research, knowledge adoption and capacity building program.

The One Basin Cooperative Research Centre and Centre for Drought Resilience Research

The Goyder Institute has been working with the University of Melbourne, the University of Southern Queensland, Australian National University and Charles Sturt University on two complementary initiatives to fill this gap - the *One Basin Cooperative Research Centre* (see attached prospectus and <https://onebasin.com.au/>) and *Centre for*



Drought Resilience Research. The *Centre for Drought Resilience Research* was proposed in response to the consultation draft of the *Drought Resilience Funding Plan* of the *Future Drought Fund* of the Australian Government. If funded, the Centre will focus on the three strategic priorities within the Murray-Darling Basin that are not supported by existing research funding programs: economic resilience for an innovative and profitable agricultural sector; environmental resilience for sustainable farming landscapes; and social resilience for resourceful and adaptable communities. The *One Basin Cooperative Research Centre* will be long-term research partnership that will accelerate growth in the Basin. It will bring together leading industry, government and research organisations and regional communities to develop science-based solutions for critical water challenges, in particular for the agricultural sector that is critical for the prosperity of regional communities.

In addition to the economic, social and environmental benefits, if funded these two initiatives will build on the collaborative model of the Goyder Institute and address key limitations to the delivery of research in the Murray-Darling Basin and Australia by:

- providing a coordinated approach to research across the basin to ensure priority issues are addressed, including addressing key knowledge gaps identified by the Productivity Commission, the Murray-Darling Basin Royal Commission and within the Basin Plan (Section 4.03);
- providing a whole of basin and the long-term approach to ensure that the major long-term challenges are overcome;
- providing education and training for our future research, government and industry leaders and building capacity within regional communities;
- bringing together all stakeholders (industries, communities, all state and commonwealth government agencies and research organisations) to find innovative and co-developed policy, management and technological solutions;
- providing a platform for rebuilding trust between basin communities, industries and governments by taking a collaborative, co-designed and inclusive approach to research; and
- demonstrating best-practice approaches for enhancing economic, social and environmental values in water basins that can be applied throughout Australia and the world.

Thank you for the opportunity to provide input into the Senate Select Committee on the Multi-Jurisdictional Management and Execution of the Murray-Darling Basin Plan. I wish you all the best for completing your inquiry and look forward to seeing the outcomes. Please also feel free to contact me for clarification on information provided or for requests for additional information.

Yours sincerely,

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