

### *Message from the Chair*

The end of the 2021–22 financial year marked the completion of the first full year of the Murray–Darling Water and Environment Research Program’s (MD–WERP) 4-year program. Since our last update in April 2022 both the research and policy teams have been busy and productive.

It is exciting to see some early positive results from MD-WERP projects, including the University of Adelaide’s unique investigation into the use of drones and machine learning technology to assist with counting waterbird populations. Check out an update on this project in this newsletter.

With dozens of projects underway across our 4 themes, our inaugural symposium in June was a fantastic opportunity to gain more information about and better understand some exciting research outputs.

Symposium participants:

- learnt what keeps water managers and policy analysts awake at night
- explored linkages between projects, institutions, and individuals involved in the program.

These explorations invariably provided new opportunities and revealed problems, both of which can then become our focus for improvement.

We are committed to staging an annual symposium to help us learn how to best shape the research to meet everyone’s needs.

Thank you to all those who took the time to attend the symposium and contribute to this productive event.

I am confident that the strategic and tactical research projects being funded by the MD–WERP will inform and support the upcoming programs for the Basin, including the Basin Outlook, the Basin Plan Evaluation, and the Basin Plan Review.

I’m heartened our researchers have such a practical orientation and are committed to demonstrating the benefit of their work to Basin stakeholders.

I hope you enjoy the updates provided in this newsletter and continue following our program as it evolves. Have a safe holiday break and see you in 2023.

Professor Rob Vertessy FTSE  
Chair, MD–WERP Governing Panel

Welcome to our third e-newsletter and an update on what's been happening in MD-WERP during 2022.

In the last newsletter we introduced the 4 research themes and gave an overview of what is involved in each. Now the program is well into implementation, we'd like to share further progress with you.

## Science drives Basin improvements

More than 100 researchers from 17 scientific institutions across Australia are working to build our knowledge of the Murray–Darling Basin and use that knowledge to improve Basin communities.

The Australian Government's 4-year [Murray–Darling Water and Environment Research Program](#) (MD-WERP) includes projects across the themes of climate adaptation; hydrology; environmental outcomes; and social, economic, and cultural outcomes.

The program has released its annual report which tracks the progress of individual projects and the wider program. You can read the [2021-22 annual progress update](#) online.

With the program launched 18-months ago, research is now well underway and some projects are producing exciting results which will soon translate into real-world improvements for Basin communities.

An important aspect of MD-WERP is that those who will use this research, such as government policy makers and river managers, have been directly involved during the process, which means the research has been designed to produce practical and user-friendly outcomes.

As many of the projects are dependent on the outcomes of each other, investing in connections between researchers, policy makers, and projects is critical to success. Finding linkages across themes allows for new information to influence other research projects as they progress.

## Deliverables published

The first 4 MD-WERP deliverables have been published under our Hydrology theme.

These documents are:

- Low flows discussions summary
- Flood inundation modelling summary report – a review of existing methods and data and description of proposed method
- Opportunities for water forecasts to inform water management decisions in the MDB
- Summary of main alluvial aquifers and groundwater use potential in the Murray–Darling Basin November 2021

You can read the reports [here](#). There are more reports in the pipeline that we hope to publish in the first quarter of 2023.

## Spotlight: MD-WERP Annual Symposium

A vital tool to build connections between researchers, policy makers, and projects is the annual MD-WERP Symposium, which this year brought together more than 150 people.

Participants joined the Canberra event online and in-person, with discussions including: the importance of integrating MD-WERP with other research programs; better incorporating First Nations knowledge across the program; writing science outputs in ways that makes it easier for policy makers to use; using community knowledge; and how transparency can help ensure continuity of the science base in changing government and policy environments.

[Watch the highlights of the symposium here](#)

The importance of forming linkages and synergies across the MD-WERP themes and the dozens of projects being delivered by the program was the key theme of the symposium.



*Professor Nick Bond, La Trobe University Consortium Lead, presents to the first annual MD-WERP Symposium on 15 June 2022 at the National Museum in Canberra.*

The symposium provided a unique and important opportunity for policy makers to hear what the latest research is telling us, and what the implications might be, particularly as we confront the challenges of a hotter and drier climate.

Each of the research themes updated on latest progress and showcased key projects including:

- Basin-wide modelling of habitat suitability for fish
- A framework for assessing flow-related values and vulnerabilities relating to climate change
- Enhancing floodplain inundation and volume prediction to support environmental watering and water resource planning
- Using drone technology and artificial intelligence to monitor waterbirds



*Symposium participants learnt about conducting culturally-safe research and Indigenous Cultural Intellectual Property (ICIP).*

More information about the symposium and presentations can be found on [Get Involved](#) . We are currently planning the 2023 symposium which will showcase more of the great work that has been happening over the prior 12 months.

Thank you for all your interest and involvement this year, and we look forward to sharing more outcomes from MD–WERP next year.

Thanks and happy holidays,

The MD–WERP Program Implementation Team.