



MD–WERP Newsletter May 2023

Message from the Governing Panel

After 18 months of strong guidance, Greg Manning has moved to another role, and I am privileged to have taken on the role of MDBA's Governing Panel member for Murray–Darling Water and Environment Research Program (MD–WERP), and at such an important time in the life of the program.

It's hard to believe we are nearly halfway through the year already!

2023 is a busy and exciting year for the MD–WERP teams. With the program nearly finished its second year of implementation, we are starting to see research results ramping up, which gives us the opportunity to share these results with interested parties across governments.

The success of many MD–WERP projects will depend on our ability to ensure the right people are aware of, and have access to, the knowledge being developed. To that end, our communications and engagement activities continue to spread the word about our work, and we are particularly focussing our energies on working with key influencers in the policy space.

Following the success of last year's event, we are looking forward to again gathering in Canberra this July for the second MD–WERP Symposium. The symposium will give us an opportunity to share research progress, knowledge and experiences and build collaborations between researchers and end users especially in Basin jurisdictions.

You can read more about our plans for this year's symposium below.

The MD–WERP Governing Panel is committed to transparency when it comes to the new science and knowledge the program is developing. Recently, 5 project reports led by our program partner the CSIRO were released. These projects were part of the program's strategic examination of climate adaptation and hydrology in the Basin.

They are fine examples of the important research the MD–WERP and its partners are undertaking to inform decision-making and ultimately help to ensure a sustainable Basin and river system for future generations.

The commitment and dedication of our MD–WERP staff, the strong collaboration with our program partners, and the high level of interest and input we receive from our stakeholders is second to none. Please continue to follow the progress of MD–WERP as we provide updates as more of our project goals are achieved.

Tony McLeod Acting Executive Director, Basin Science and Knowledge MDBA Governing Panel delegate

Welcome to our latest e-newsletter and an update on what's been happening in MD–WERP in 2023.

In this edition:

- New reports in climate adaptation and hydrology
- The recreational and tourism value of healthy rivers
- 2023 MD–WERP Symposium

MD–WERP projects deliver positive outcomes

The impacts of climate change on water supply, the identification of important aquifers across the Basin and improved modelling to better understand the impacts of low flows are among the findings in 5 key MD–WERP project reports published recently. Initiated by the MD–WERP and led by the <u>CSIRO</u>, the 5 published reports are:

T1.FS1 Synthesis of indirect impacts of climate change in the Murray–Darling Basin

This report documents the potential indirect impacts of climate change on water supply, demand and management. It identifies areas for further investigation, with future MD–WERP studies to focus on catchment interception by farm dams, increased bushfire frequency and intensity, non-stationary dominant hydrological processes and hypoxic blackwater events.

<u>T2.6.2 Summary report on classification of river reaches, and spatial dataset of river reaches</u> <u>classification by regulation, flow continuity and dominant hydrological processes</u>

This project aims to investigate why river system models perform poorly when predicting low flows. The report includes datasets to provide context which will help water managers better understand the issue.

<u>T2.7.2 A composite dataset used for the development and validation of a predictive flood</u> <u>inundation and volume model, and a technical report associated with the dataset</u>

This document describes the development of a composite dataset, combining Digital Elevation Model (DEM), the hydrodynamic modelling results and the gauged data. This report and the associated dataset will support future MD–WERP studies to improve the prediction of flood inundation extent, depth and duration, and floodplain volumes. The technical report includes description and metadata for the dataset.

<u>T2.8a.2 Water forecasts to quantify risks in the southern Murray–Darling Basin for informing</u> <u>water management decisions</u>

This report describes results from a case study demonstrating the potential ensemble streamflow and demand forecasts to quantitatively estimate risk in Hume Dam releases to manage Lake Mulwala water levels.

T2.8b.2 Groundwater level trends and aquifer prioritisation in the Murray–Darling Basin

This report describes prioritisation of aquifers and analysis of trend groundwater levels across the Murray–Darling Basin. The key findings show that when combining aspects related to historical trends in groundwater levels, aquifer importance and sensitivity indices and metrics. of groundwater footprint/stress, 9 SDL resource units are identified as potential priorities to improve water management. These reports form important research underpinning the focus of MD–WERP – that is, to deliver practical research on issues that are critical to the future of the Murray–Darling Basin. This research is designed to strengthen the evidence base for water and environment management decisions to improve outcomes for the Basin and its communities.

SPOTLIGHT: The Recreational and Tourism Value of Healthy Rivers

Do improvements in riverine ecosystem health increase tourism and recreational visitation rates to locations throughout the Murray–Darling Basin?

With tourism expenditure across the Basin estimated to be around \$11 billion a year, it's a critical question which is being examined by an MD–WERP project.

The *Recreational and Tourism Value of Healthy Rivers* project – led by MD–WERP partner La <u>Trobe University</u> – aims to quantify the link between healthy rivers and visitation rates for local towns and special interest sites such as national parks and wetlands across the Basin.

Increases in recreation and tourism expenditure in Basin economies as a result of increased visitation rates are also being examined.

The project team is looking at a range of factors including visitation rates, the condition of rivers, lakes, wetlands and floodplains, tourism infrastructure and travel distances to establish the links.

Information from <u>Tourism Research Australia</u>, Basin tourism operators, published literature, and even photographs taken by visitors to the Basin in recent years are also providing input into this important MD–WERP project.

The project has a wide range of exciting objectives, including:

- increasing our understanding of the relationship between healthy rivers and recreation/tourism visitor numbers
- generating an understanding of which Basin communities would benefit from a boost in tourism following improved conditions in rivers, lakes, wetlands and floodplains
- estimating location-specific increases in visitor numbers that would follow from improvements in local riverine conditions
- enhancing our understanding of how water delivery decisions and e-watering can contribute to increased tourism and recreation expenditure in Basin economies
- providing useful information for Tourism Research Australia, local government, local Chambers of Commerce and tourism operators regarding the impacts of a range of factors on visitation rates
- increasing the capacity of the <u>Commonwealth Environmental Water Holder</u> and the <u>Murray–Darling Basin Authority</u> to assess how tourism/recreation visitation and expenditure can benefit from water allocations and e-water releases.
- improving monitoring of the social and economic benefits of Basin Plan implementation and water recovery.

The project is another great example of the Australian Government, through the MD–WERP, collaborating with a range of researchers and organisations to ensure a healthy and sustainable river system for future generations.

The project report is expected to be available in 2024.

2023 MD–WERP Symposium

Researchers, policy makers, Basin governments, and other key stakeholders will gather in Canberra this July for the 2nd MD–WERP Symposium.

The symposium will provide a collaborative and energetic platform for interaction between researchers and end users. There will be a particular focus on what has been discovered from the program's research and how it can be used by policy makers.

The 2-day event – **to be held on 19 and 20 July** - follows the success of last year's inaugural symposium, when more than 150 participants developed a path forward for the knowledge and data gathered through the dozens of MD–WERP projects.

A range of important topics were discussed at last year's event, ensuring stronger links between MD–WERP and other research and analysis projects, boosting community knowledge and awareness, and better engagement and collaboration with First Nations' recognising their knowledge of the Basin and its environment.

The symposium will provide an opportunity for MD–WERP researchers and policy makers, including Basin jurisdictions, to delve into the research projects and their progress, and to workshop opportunities and barriers to using the research outputs.

The symposium is also a chance to hear from the MD-WERP Governing Panel and build together the story on how science can best inform policy including for the review of the Basin Plan in 2026 while connecting with other researchers and stakeholders to foster collaboration.

Invitations will shortly be sent to researchers, Commonwealth and state government end users, and stakeholders from other research programs. If you haven't received the placeholder, please email us to express your interest in the symposium.

You can read more about last year's inaugural MD–WERP Symposium and its outcomes at https://getinvolved.mdba.gov.au/md-werp-annual-symposium-2022.

Contact Us

We welcome your feedback or questions at any time. Please contact the MD–WERP Implementation Team on (02) 6279 0529 or email <u>MDWERP@mdba.gov.au</u>