

Progress in implementing recommendations of the Independent Assessment of the 2018-19 Fish Deaths in the lower Darling – December 2021

On 22 January 2019, the Australian Government established an independent expert panel to respond to fish deaths. The fish deaths occurred in December 2018 to January 2019 in the lower Darling River. Professor Robert Vertessy of the University of Melbourne led the panel's response. On 10 April 2019, then Minister for Agriculture and Water Resources, David Littleproud released the [Independent Assessment of the 2018-19 Fish Deaths in the lower Darling](#).

The panel made 27 “practical recommendations addressed to Basin policy makers and Basin managers separately, that, if adopted, would enhance the ability of State and Australian government agencies to discharge their responsibilities more effectively within the policy settings of the Basin Plan and Murray–Darling Basin Agreement.” Many of the recommendations were directed at the States, and require a collective response by Governments.

Status of recommendations

As at December 2021:

- 9 recommendations have been implemented
- 7 are still being implemented
- 11 are subject to state actions or not supported

Implemented

Panel recommendation	What has been done
NSW and the Australian government should finalise arrangements to support structural adjustment of lower Darling farm enterprises with permanent/perennial crops that depend on high reliability water entitlements, including appropriately targeted strategic water acquisition and compensation for the reconfiguration of farm businesses	Implemented March 2020.

Panel recommendation	What has been done
<p>NSW, QLD and the Murray-Darling Basin Authority (MDBA) should publish their joint plans for implementation of the northern Basin Toolkit Measures, and set an aggressive timeline for delivery. Immediate priority should be given to those measures that support native fish population recovery and connectivity.</p>	<p>10 Toolkit projects have now been approved, either for immediate implementation or progression to the business case development phase. As part of this commitment, the Australian Government has made over \$90 million available to NSW and Queensland to accelerate the implementation and further development of these projects.</p> <p>Some approved projects were expected to begin on-ground delivery in 2021 and are designed to employ local and indigenous people, source local goods and improve environmental outcomes in the northern Basin. Find out more on the Northern Basin Toolkit here: https://www.awe.gov.au/water/policy/mdb/basin-plan/northern-basin-toolkit</p>
<p>Commonwealth and State governments should significantly increase investment in research and development, co-opting the science community, to address long-standing gaps in our knowledge of riverine hydrology and ecology. A priority focus of those new arrangements should be applied research that serves the information needs associated with Basin Plan implementation</p>	<p>The Australian Government has committed:</p> <ul style="list-style-type: none"> • \$20 million to the Murray-Darling Water and Environment Research Program. The program brings together scientists, researchers, First Nations groups and private sector specialists to tackle four research themes: climate adaptation, hydrology, environmental outcomes, and social, economic, and cultural outcomes. • \$3 million to the Ecosystems Functions Research Program. The collaborative research project between CSIRO, the Department of Agriculture, Water and the Environment and the MDBA aims to improve understanding of ecosystem functions responses to flow and other stressors, and the connection to the health and condition of water-dependent ecosystems. • \$8m to the Goyder Research initiative will establish a research hub in the Coorong, Lower Lakes region in South Australia to provide evidence based knowledge on water management issues in the region.
<p>NSW should continue emergency responses such as the use of aerators and fish translocations, noting that these are short-term emergency measures and may not prevent additional fish death events if adverse conditions persist or re-occur</p>	<p>Following the initial fish kill events at Menindee, aerators were deployed in the lower Darling River from January to April 2019. Aerators now form part of the toolkit measures available for managing water quality risk to native fish.</p>
<p>NSW and MDBA should jointly undertake a risk assessment to identify parts of the Darling Basin that are most at risk of future fish death events. This</p>	<p>The Native Fish Emergency Response Plan, which forms part of the Native Fish Management and Recovery Strategy, was released on 14 October 2019. The Plan concluded on 30 June 2020, and a whole of Government workshop was held to review the year's actions and emergency</p>

Panel recommendation	What has been done
<p>information should be used to inform the development of future early warning systems and emergency response plans</p>	<p>response procedures. An Interim Native Fish Emergency Response Plan for 2020-21 has been completed in collaboration with the Native Fish Recovery Strategy steering committee.</p> <p>The MDBA has in place mechanisms to identify water quality risks prior to the high-risk season(s), and works with Commonwealth and State agencies to identify and map risks.</p>
<p>Basin governments should ensure that the Basin Native Fish Management and Recovery Strategy is adequately resourced and involves authentic collaboration with government water scientists, academics and consultants, local communities and Aboriginal stakeholders. This strategy should build on efforts such as the lapsed Native Fish Strategy and current State programs</p>	<p>The Australian Government invested \$5 million in the Native Fish Management and Recovery Strategy – a Basin-wide strategy to enhance the management of native fish populations. The MDBA coordinated the development of the Native Fish Recovery Strategy, in collaboration with Basin states and communities, which was released on 23 June 2020.</p> <p>The Recovery Reach Program (Action 2 of the Strategy) is the primary means of implementing on-ground actions under the Strategy. Recovery Reaches will coordinate actions in designated areas that benefit native fish and engage the local community.</p>
<p>The Commonwealth Environmental Water Holder, the MDBA, the Victorian Environmental Water Holder and the NSW Department of Environmental and Heritage should cooperatively undertake a risk assessment to determine how best to manage environmental water during prolonged dry spells, taking into account uncertainty in future inflows</p>	<p>The MDBA committed to undertake multi-year check-in and risk assessments to assist with managing environmental water during prolonged dry spells and takes into account uncertainty in future inflows. The Southern Connected Basin Environmental Water Committee (SCBEWC) is the forum that supports coordination of delivery of environmental water.</p> <p>Throughout 2019-2020 SCBEWC conducted risk assessments to consider how seasonal conditions, water quality risks and watering activities were tracking, and if watering plans needed adjustment to reflect emerging seasonal risks. This multi-year check-in and risk assessment approach will assist with managing environmental water during prolonged dry spells and takes into account uncertainty in future inflows.</p>
<p>The MDBA’s recently announced Climate Change Research Program should be adequately resourced and supported by relevant specialist science agencies and universities. A much better understanding of how climate change threatens Basin water availability and aquatic ecosystems must be obtained ahead of the 2026 Basin Plan review</p>	<p>MDBA Climate Change Research Program is underway. Through the Murray-Darling Basin Water and Environment Research Program, the MDBA is currently collating and developing science collaborations with other agencies to connect climate change science and adaptation initiatives across the Basin. The Climate Research Implementation Plans are expected to be released in early 2022.</p>
<p>NSW should initiate a project to establish a “demonstration reach” in the lower Darling, where</p>	<p>The MDBA committed to administer funding for the Demonstration Reach in the Lower Darling project (part of the Native Fish Recovery Strategy). A Lower Darling Recovery Reach was</p>

Panel recommendation	What has been done
<p>multiple threats to fisheries recovery are mitigated to create beneficial conditions for long-term fish recovery. This demonstration reach should be a key feature of the Native Fish Management and Recovery Strategy and should heavily involve the local community, including Aboriginal stakeholders</p>	<p>established in 2019-20 in response to the recommendations of the Vertessy Report, including on-ground works and monitoring post the Menindee Fish deaths.</p> <p>The Lower Darling Recovery Reach will continue for the next 2 years as per the Recovery Reach program implemented under the Native Fish Recovery Strategy. The project includes a full-time Recovery Coordinator; monitoring recovery following fish deaths; integration with water planning and other initiatives; golden perch recruitment studies to drive recovery; habitat works (Restocking, screening trials, community carp removal events); and engagement and communications activities.</p>

Being implemented

Recommendation	What has been done
<p>NSW and the Australian government should re-evaluate the Menindee Lakes Water Saving Project to place a greater emphasis on improving water security and environmental outcomes in the lower Darling. Should the revised project contribute less to the agreed Sustainable Diversion Limits, the NSW government would need to commit to addressing the shortfall</p>	<p>The MDBA commitment was to support NSW to progress the Menindee Lakes project as part of the SDLAM. In April 2021 Basin Ministers agreed to New South Wales re-scoping the Menindee Lakes Water Savings (including the Lower Darling constraints) and Yanco Creek Offtake Regulator projects and engaging and working with communities to build support. The MDBA continue to support Basin states to progress SDLAM projects.</p> <p>A reconciliation continues to be likely given the risk that the SDLAM package of measures, in its entirety, may not being operational by 30 June 2024 due to some projects being delayed, and others, such as the projects at Menindee and Yanco being considered for rescoping.</p>
<p>NSW should initiate a program to remove barriers to fish movement and enhance mobility through improved passage at existing weirs and regulators</p>	<p>The Australian Government committed an additional \$5.24 million for the Toorale Water Infrastructure Project to better connect the Warrego and Darling Rivers. This funding will improve flows and build fishways.</p> <p>The Australian Government has provided \$1.1 million to NSW to progress planning for improved fish passage in the Lower Darling. It is also funding the fishway at Lake Victoria as part of the NSW program to fast-track delivery of supply and constraints measures. Improved fish passage at Menindee Lakes is being considered by NSW. This is part of the Better Baaka package of initiatives, which includes removal of the Menindee old town weir.</p>

Recommendation	What has been done
Basin governments should initiate a joint program to significantly accelerate river model development to evaluate different Basin policy options	Being implemented.
NSW and QLD should introduce more accurate continuous and real-time monitoring of diversions in the Barwon–Darling, to ensure protection of managed connectivity events. Compliance around all metering requirements and overland flow extractions should be strengthened expeditiously	<p>The Australian Government has committed:</p> <ul style="list-style-type: none"> • \$35 million to the Hydrometrics and Remote Sensing Program which seeks to improve the capability of the existing hydrometric network in the northern Basin to measure water diversions and in-stream flows. • \$25m to Northern Basin Metering Program that provides \$12.5 million each to New South Wales and Queensland to improve metering and expand access to water information. • \$5m to the Northern Basin Cameras project that will install cameras and water level sensors in the Barwon-Darling river system to live stream water levels and flows and monitor critical locations such as native fish refuges. The initial pilot site assessment and design reports were completed and accepted, in readiness for video cameras installation at Wilcannia Township and Wilcannia Rural – Moorabin.
Basin governments should ensure that the Native Fish Management and Recovery Strategy includes the appropriate elements of the Murray Cod National Recovery Plan pertaining to fish kills	Being implemented.
NSW should redress gaps in water quality monitoring (dissolved oxygen, temperature, algae) at high risk sites in the Barwon–Darling. This could include investigating and adopting emerging technologies such as remote sensing, and improving the use of real-time data to support early warning and forecasting	Being implemented.

The remaining recommendations are subject to state actions or were not supported.