Environmental water delivery

Northern Basin initiatives

Sustainable diversion limit adjustment mechanism

Water recovery

Water resource plans

Australian Government

MURRAY–DARLING BASIN AUTHORITY

December 2022 Report Card

The Basin Plan Report Card (the Report Card) provides an independent overview of progress implementing key activities under the Basin Plan for the 6 months from July to December 2022. The Murray–Darling Basin Authority (MDBA) has a role to monitor progress toward achieving a healthy, productive Murray–Darling Basin.

A wetter than average spring/summer across most of the Basin brought flooding to important wetlands and floodplain areas. Storm events and flooding also caused widespread damage to crops, infrastructure and property, and the inundation of some Basin towns created distress for many communities. Storage levels across the Basin reached or exceeded peak capacity, with frequent water releases occurring to protect the dam infrastructure and, where possible, to mitigate downstream flood impacts.

This Report Card shows Victoria, Queensland, South Australia and the Australian Capital Territory water resource plans remain accredited and in operation. In addition, water recovery to Bridge the Gap remains near completion. Planning and delivery of environmental water across the basin continues to support the health of rivers, floodplains and wetlands, and over the past 6 months small amounts have been used to improve reduced water quality resulting from low oxygen levels caused by flooding, whilst not exacerbating the impact of floods.

ERRATA: This report card was updated on 17 February to correct typographical errors on page 2 and 11.

Recovering and delivering water for the environment, and the ongoing accreditation and implementation of water resource plans are critical steps in achieving a sustainable Basin. The Report Card also shows areas where challenges persist. The accreditation and commencement of 16 out of 20 New South Wales water resource plans remain outstanding, along with substantial works scheduled to deliver water recovery through supply, constraints and efficiency measures.

The Murray–Darling Basin Authority continues to listen to feedback from communities through the Basin Community Committee, our regional engagement officers, staff located across our 6 regional offices and our stakeholder relationships. Communities are seeking greater transparency about how the Basin Plan is implemented. First Nations from across the Basin want to share their traditional knowledge and are deeply concerned about the condition of Country.

About the Report Card

The Murray–Darling Basin Authority (MDBA) is a statutory authority of the Australian Government, established to provide independent, expert advice on the implementation of the Basin Plan. An important part of the MDBA's role is to assess and monitor the implementation and effectiveness of the Basin Plan and provide this information transparently to the community.

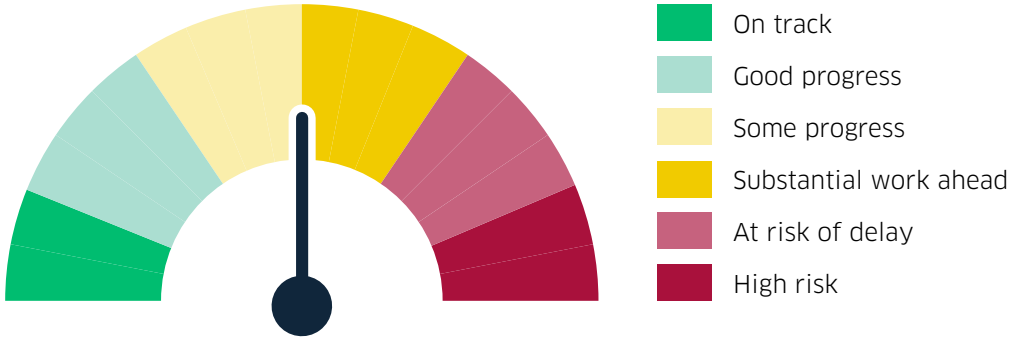
This Report Card is the ninth in the series, providing a short, timely and accurate update on progress in implementing the Basin Plan. The Report Card includes stakeholder insights the MDBA has heard over the past 6 months from a wide range of sources, including the Basin Community Committee, regional engagement activities, peak bodies, social media, and the MDBA's public hotline and email inbox.

The Report Card does not assess on-ground Basin conditions or environmental and social trends occurring in the Basin. The MDBA's 2020 Basin Plan Evaluation, released in December 2020, provides the latest, most comprehensive report on this, along with recommendations for improvements to strengthen the social, cultural, economic and environmental outcomes being sought through the implementation of the Basin Plan.

The July 2022 Report Card assessed that key implementation activities of the Basin Plan were at various stages of progress. Since July 2022, there has been improvement in the submission of New South Wales water resource plans, however, some projects such as the sustainable diversion limit adjustment mechanism (SDLAM) continues to be more challenging to implement and remains at risk.

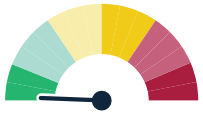
This report card covers the period from 1 July to 31 December 2022.

Guide to the ratings



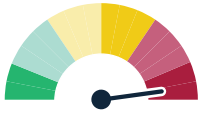
Assessment

The MDBA assessed the progress of the key activities of Basin Plan implementation. These activities are interconnected, and the Basin Plan needs all themes to progress to meet the requirements of a healthy and sustainable Basin.



Water resource plans

Plans from Victoria, Queensland, South Australia and the Australian Capital Territory are accredited and in operation. The MDBA has provided guidance to Basin state governments on the process to amend water resource plans so the plans can evolve and adapt to new information and improvements.



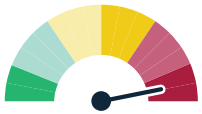
New South Wales water resource plans

The Basin Plan requires Basin states to develop water resource plans by 1 July 2019 to give effect to the long-term average sustainable diversion limits. The New South Wales water resource plan for the Border Rivers Alluvium was accredited and commenced on 24 September 2022. Formal accreditation and commencement of the New South Wales Fractured Rock water resource plan was announced on 18 November 2022 followed by the Murray–Darling Basin Porous Rock and Macquarie–Castlereagh Alluvium water resource plans on 24 December 2022. Of the remaining 16 water resource plans requiring accreditation, 9 plans have been submitted for formal assessment. The remaining water resource plans have been submitted for review ahead of formal submission.

Water recovery

Bridging the Gap

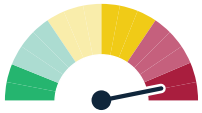
Bridging the Gap water recovery remains close to completion, with approximately 98% of surface water and 92% of groundwater recovered. There was no Bridging the Gap water recovery between 1 July and 31 December 2022. The quantity of the Gap will be finalised once New South Wales water resource plans have been accredited and the SDLAM determination in 2024.



Sustainable diversion limit adjustment mechanism (SDLAM) – efficiency measures

Meeting the 30 June 2024 deadline to implement efficiency projects to recover 450 gigalitres (GL) is now highly unlikely with the recent statutory review of the Water for the Environment Special Account indicating that it is not possible to recover 450 GL by 30 June 2024. As of 31 October 2022, only 4.5 GL of the additional 450 GL has been recovered, with a further 21.4 GL contracted for delivery.

Assessment (continued)



Sustainable diversion limit adjustment mechanism (SDLAM) – supply and constraint measures

There remains substantial work to implement many of the SDLAM supply and constraints projects by 30 June 2024. Some projects will not be completed by this time and there are challenges to successfully achieving the originally envisaged environmental outcomes. The Murray–Darling Basin Authority's (MDBA's) 2022 SDLAM Assurance Report published on November 2022 concluded that 22 of the 36 projects are likely to be operable, 8 are on the cusp of delivery and 6 will not be delivered as proposed by 30 June 2024. There has been no change to the previously reported rate of progress, and a reconciliation between the 2017 volume of the SDL adjustment provided for in the Basin Plan and the volume achieved will be required in 2024.

Northern Basin initiatives

Meeting the 2024 timeframes for delivery of environmental projects are becoming more challenging. It is now unlikely that some projects will be delivered by 30 June 2024, resulting in an increase to the risk of implementation in comparison to the previous reporting period. Work is on track for the protection and coordination of environmental water and options to support event-based environmental water delivery.

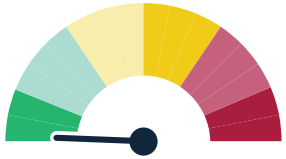
Environmental water delivery

Delivery of environmental water was reduced across winter–spring 2022 to avoid exacerbating the impact of floods. In a few locations targeted flows were delivered to improve water quality, providing refuge for native fish to retreat from low oxygen levels associated with flooding. A range of improvements are still being delivered (e.g. Pre-requisite Policy Measures improvements; Enhanced Environmental Water delivery). Realising the environmental outcomes of environmental water delivery will continue to be limited without the relaxation of constraints, particularly during moderately wet years like 2020 and 2021.

Priority 1
Water resource plans

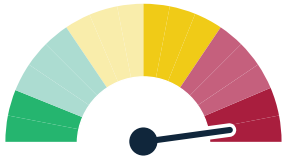
Water resource plans are an integral element of implementing the Basin Plan, as they set the rules for how much water can be taken from the system, so that the sustainable diversion limits in each area are achieved over time. The plans also make sure that state and territory water management rules meet the Basin Plan requirements and include arrangements that strengthen water management at a local level.

Water resource plans are developed by Basin governments, assessed by the Murray–Darling Basin Authority, and accredited by the Australian Government Minister responsible for Water. There are 33 plan areas in total, 19 for surface water and 19 for groundwater including 5 that cover both surface and groundwater.



Water resource plans

Plans from Queensland, South Australia, Australian Capital Territory and Victoria remain in operation. The MDBA has provided guidance to Basin governments on the process to amend water resource plans so the plans can evolve and adapt to new information and improvements.



New South Wales water resource plans

New South Wales has 4 accredited water resource plans out of 20 and have formally submitted an additional 9 plans to the MDBA for assessment. The remaining 7 plans have been provided to the MDBA for review ahead of formal submission.

Priority 1 (continued)
Water resource plans

Murray–Darling Basin Authority (MDBA) assessment

- All 13 water resource plans across Queensland, South Australia, Victoria and the Australian Capital Territory remain in operation. The MDBA has begun providing advice to some Basin states about amendments to bring forward. It is anticipated that Basin governments will work closely with the MDBA prior to any amendment being submitted for assessment.
- Water management will continue to evolve and changes to water resource plans are anticipated as new information comes to hand and management practices are improved. Amendments to plans will require assessment by the MDBA and accreditation by the Australian Government Minister responsible for Water. Water resource plan amendment guidelines have been developed to guide Basin governments in the development of amended plans.
- As of 31 December 2022, New South Wales has 4 accredited water resource plans, formally submitted 9 of the remaining 16 water resource plans to the MDBA for assessment and provided 7 water resource plans for review ahead of formal submission.
- The Inspector-General of Water Compliance's enforcement and compliance powers with respect to sustainable diversion limits are limited until water resource plans are accredited.

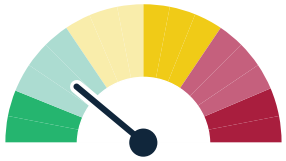
What we are hearing

- Calls from the Inspector-General of Water Compliance for New South Wales to submit water resource plans for MDBA assessment have generally been supported by Basin communities. Communities expect water resource plans to be delivered and there is a sense of frustration that this hasn't already occurred.
- First Nations people are providing feedback to New South Wales that they want improved engagement and involvement in the New South Wales water resource plans.

Priority 2
Water recovery

Sustainable diversion limits (SDLs) set how much water can be used whilst leaving enough water in the system to sustain natural ecosystems. The Australian Government implements a range of measures to achieve the SDLs set out in the Basin Plan. This has included a combination of water efficiency projects and purchasing of water entitlements in the market. The water recovered under the program is passed to the Commonwealth Environmental Water Holder as licences and must be used to achieve Basin Plan environmental watering objectives.

Bridging the Gap is the primary water recovery target in the Basin Plan. In 2018 this target was revised to 2,075 GL/y as a result of 2 amendments to the Basin Plan, one as a result of the Northern Basin Review and scientific reviews of groundwater systems, and the other to reflect the sustainable diversion limit adjustment mechanism (SDLAM). This revised target is dependent on the SDLAM projects being delivered by 2024.



Water recovery

Bridging the Gap water recovery remains close to completion, with approximately 98% of surface water and 92% of groundwater recovered. There was no Bridging the Gap water recovery between 1 July and 31 December 2022. The quantity of the gap will be finalised once New South Wales water resource plans have been accredited and the SDLAM determination in 2024.

MDBA assessment

- At a Basin scale about 98% of surface water recovery (against the Bridging the Gap target) is complete – 46 GL/y remains to be recovered to meet the Basin Plan target of 2,075 GL/y. For groundwater, 92% of water has been recovered – a further 3.2 GL/y of recovery is required to meet the Basin Plan target of 38.45 GL/y.
- While the total amount of water recovered across the Basin is higher than the overall target of 2,075 GL/y, there are local and shared water recovery targets in the Basin Plan that must still be met at the catchment-scale. There has been some over-recovery in some catchments.

Priority 2 (continued)
Water recovery

What we are hearing

- Basin communities in most regions support full implementation of the Basin Plan. Some concern has been raised over the potential use of water buybacks to address remaining shortfalls in water recovery. Conversely, the high cost and significant time taken to recover water through infrastructure projects has also been raised as an issue.

Priority 3
Sustainable diversion limit adjustment mechanism

The Basin Plan sets sustainable diversion limits (SDLs), which are limits on how much water can be used for consumptive purposes in the Murray–Darling Basin, while leaving enough water to sustain the environment. In 2012, Basin governments agreed a mechanism to adjust these limits in the Basin on the basis that there are better ways to manage the system that still achieve equivalent environmental outcomes, with less water recovery.

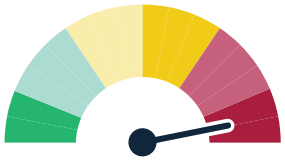
The SDL adjustment mechanism, adopted for the southern Basin only, involves 3 elements that work together – namely 'supply' and 'constraints' projects that improve river management and achieve equivalent environmental outcomes with less water recovery, and 'efficiency measures' that work to modernise water delivery infrastructure for consumptive users, with a proportion of the water savings transferred to the environment and the balance remaining with the proponent of the measure.

Southern Basin governments brought forward 36 supply projects in July 2017. The 2017 SDLAM determination found that these measures, as a package, could deliver an offset of 605 GL/y, meaning 605 GL/y less water would need to be recovered from consumptive users such as towns, communities, farmers and industries, while still achieving equivalent environmental outcomes sought by the Basin Plan. Southern Basin state governments are responsible for the design and implementation of these projects, with funding from the Australian Government.

Under the efficiency measures program, the Australian Government has set aside $1.5 billion to recover 450 GL of water by 2024. The SDL adjustment mechanism requires that 62 GL in efficiency measures be recovered for the full 605 GL supply measures adjustment to take effect. The Basin Plan requires that efficiency measures have neutral or improved socio-economic outcomes.

Under the Basin Plan, the Murray–Darling Basin Authority (MDBA) is required to assess whether the notified measures have been implemented as proposed and can achieve the adjustment determined in 2017. Leading up to this decision, the MDBA will conduct assurance on the progress and expected outcomes of the notified measures. If the notified measures are not implemented or are amended in a way that would impact on the outcomes as per the 2017 determination, the Authority must undertake a reconciliation of the mechanism, which may lead to a revision of the adjustment volume.

A framework outlining how the MDBA will approach this reconciliation has been developed in consultation with Basin Governments. This framework provides the Authority's proposed approach to the reconciliation decision, including the role of assurance, and clarifies the roles and responsibilities of the Authority and Basin Governments.



Sustainable diversion limit adjustment mechanism (SDLAM) – supply and constraints measures

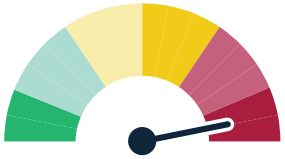
There remains substantial work to implement many of the SDLAM supply and constraints projects by 30 June 2024. Some projects will not be completed by this time and there are challenges to successfully achieving the originally envisaged environmental outcomes.

Priority 3 (continued)
Sustainable diversion limit adjustment mechanism

MDBA assessment

- The Australian Government and Basin state governments are continuing to work together to accelerate the planning and delivery of the SDL adjustment mechanism projects.
- Where Basin states have implemented SDLAM measures to date, they are achieving positive environmental outcomes, enabling more water to remain available for consumptive use.
- To track progress and improve transparency, Basin states governments self-assess SDLAM project progress on a quarterly basis. The SDLAM program quarterly progress updates are compiled and published on the Murray–Darling Basin Authority (MDBA) website on behalf of jurisdictions.
- The MDBA's 2022 SDLAM Assurance Report published in November 2022 found 22 supply measures of the 36 projects are likely to be operable, 8 are on the cusp of delivery and 6 will not be delivered as proposed by 30 June 2024. The MDBA expects that these estimates may change between the end of 2022 and 30 June 2024.
- The MDBA considers that the SDLAM package of measures, in its entirety, will not be operational by 30 June 2024. This is due to several of the major measures being significantly rescoped and still at design and concept stage with the due date for entering operation only 18 months away.
- Six measures, which are critical to a substantial proportion of the 605 GL/y offset, will not be delivered as proposed by 30 June 2024.
- Given the time remaining, the delivery of the outstanding measures will be a significant challenge to achieve by 30 June 2024, with some measures unable to be delivered within the timeframe or in the manner originally proposed in 2017, and the MDBA has concluded a reconciliation will be required. The conduct of a reconciliation provides for the adjustment of SDLs to reflect which measures are in place and operational.

Sustainable diversion limit adjustment mechanism



Sustainable diversion limit adjustment mechanism – efficiency measures

Meeting the 30 June 2024 deadline to implement efficiency projects to recover 450 gigalitres (GL) is now highly unlikely with the recent statutory review of the Water for the Environment Special Account indicating that it is not possible to recover 450 GL by 30 June 2024. As of 31 October 2022, only 4.5 GL of the additional 450 GL has been recovered, with a further 21.4 GL contracted for delivery.

MDBA assessment

- As of 31 October 2022, 4.5 GL/y of water has been recovered through efficiency measures. An additional 21.4 GL/y is contracted. To meet the 450 GL/y efficiency target by 30 June 2024 the 21.4 GL/y and an additional, 428.6 GL/y will need to be delivered.
- The Basin Plan requires the total adjustment to remain within a 5% increase or decrease of the total surface water SDL. The efficiency measures program therefore needs to recover a minimum of 62 GL/y for the full 605 GL supply offset under the sustainable diversion limit adjustment.
- Five off-farm projects have been approved and are progressing through $346.9M in funding and have been assessed to recover 23.3 GL/y. Projects approved are as follows:
  - Victoria Goulburn–Murray Water (GMW), Water Efficiency Project
  - New South Wales Murrumbidgee Irrigation, Automation Finalisation Project
  - South Australia, Marion Water Efficiency Project
  - Victoria Lower Murray Water, Water Efficiency Project
  - New South Wales Nap Nap Station, Water Efficiency Project.

What we are hearing

- The community knows that these key elements of the Basin Plan will not be delivered on time and are calling for a clear plan to manage and finalise implementation.
- Views on how to respond are widely divergent – many are concerned about a return to water buybacks and the consequent impacts on their communities. Others have highlighted that water recovered through infrastructure is more expensive than purchasing on the open market, and view buybacks as the only way to get the water needed to sustain the Basin.

Priority 4
Northern Basin initiatives

There are several initiatives underway in the northern Basin to better manage water for local communities, the environment and future generations. This includes a range of diverse projects, known as the 'toolkit measures'.

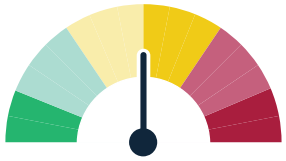
Six toolkit measures are:

1. Targeted water recovery.
2. Protection of environmental flows.
3. Event-based mechanisms.
4. Improved coordination and management of environmental water.
5. Removal of physical constraints in the Gwydir catchment to improve flows to the wetlands.
6. Environmental works and measures to improve environmental outcomes across the northern Basin, providing increased opportunities for native fish movement.

The Northern Basin Review (2017) resulted in a 70 GL reduction to the 390 GL water recovery target in the north, on the basis that the New South Wales and Queensland governments adopted a range of 'toolkit measures' with assistance from the Australian Government.

The Basin Plan was amended in 2018 to reflect this outcome, and at that time the Basin Commitments Package was also announced with bipartisan support for further initiatives. Following the Menindee fish death events and the subsequent 2019 Vertessy Independent Panel review, the Australian Government announced an additional response package, which included significant funding to improve northern Basin monitoring and compliance, protect native fish and improve river management.

Together, these initiatives are intended to protect water for the environment, improve compliance with water laws, improve river management across the northern Basin, and create opportunities for local communities, including First Nations Australians.



Northern Basin Initiatives

Meeting the 2024 timeframes for delivery of environmental projects is becoming more challenging and it is now unlikely that some projects will be delivered by 30 June 2024. Work is on track for the protection and coordination of environmental water and options to support event-based environmental water delivery.

MDBA assessment

- Of the 6 toolkit measures, 3 are on track for delivery by June 2024:
  - Event-based mechanisms – Commonwealth Environmental Water Office has demonstrated that market-based mechanisms can be used to deliver

environmental water from Queensland to Narran Lakes and arrangements are established for future use as needed.

- Coordination of flows – an intergovernmental forum (Northern Basin Environmental Watering Group), including First Nation participation, has been established to coordinate joint flow events for whole-of-north outcomes. Joint flow events in 2018, 2019, 2020/21 improved river health and achieved outcomes for communities.
- Removal of constraints in the Gwydir catchment – extensive landholder/water manager engagement and on-ground investigations has been undertaken and is planned throughout 2023.

- Two other measures are on track for complete or near complete delivery:
  - Protection of environmental flows –interim arrangements have been agreed to protect environmental water as it flows downstream and moves between catchments. Enduring arrangements, including through accredited water resource plans, are at risk of not being in place by 30 June 2024.
  - Targeted Water Recovery – there has been good progress with about 30 GL of 320 GL remaining to be recovered (plus 3.2 GL groundwater still to be recovered). The Commonwealth is developing a Water Recovery Strategy, in consultation with relevant Basin governments and community.
- The sixth toolkit measure, consisting of a series of environmental works and measures, is highly unlikely to be fully delivered by June 2024:
  - Four environmental works and measures projects are at high risk of not being delivered by June 2024 (New South Wales Reconnecting the Northern Basin, Queensland Fish Friendly Water Extraction, Queensland fishways and Queensland bifurcation weirs).
  - The remaining 5 projects are on track for June 2024 delivery, but any further delays (such as wet conditions) may create additional challenges in meeting the June 2024 timeframe.

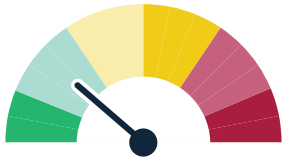
What we are hearing

- Northern Basin communities live through the 'boom and bust' of the northern system. Storages across the northern Basin are at full capacity and widespread flooding has provided full connectivity of the Darling (Baaka) River through to Menindee Lakes and downstream.
- Communities are eager for more information on implementation progress, including opportunities to provide input. The community wants these measures implemented to deliver the best possible outcomes.

Priority 5
Planning and delivery of environmental water

The health of our rivers is crucial for all Australians. Water for the environment is used to improve the health of rivers, wetlands and floodplains, which benefits communities and industries. Water is allocated to environmental water holders across the Basin, who make decisions about when, where and how much water is released for the environment. Stakeholders and partners including government agencies, advisory groups and community and First Nation groups contribute to many environmental watering decisions.

Six organisations hold water for the environment across the Basin. The Commonwealth Environmental Water Holder has the largest portfolio of water entitlements and works with other environmental water holders and river operators to manage environmental water across the whole Basin. The MDBA provides advice and guidance to support environmental water holders to plan when and where to release environmental flows, primarily through the MDBA Basin-wide Watering Strategy and the Annual Environmental Watering Priorities. The MDBA also manages water for the environment held under the Joint Government Living Murray program.



Environmental water delivery

Delivery of environmental water was reduced across winter-spring 2022 to avoid exacerbating the impact of floods. In a few locations small, targeted flows are underway to provide pockets of better water quality for native fish to retreat to while low oxygen levels associated with flooding persist and allow waterbirds to finish their breeding cycles after floods recede. A range of improvements are still being delivered (e.g. Pre-requisite Policy Measures improvements; Enhanced Environmental Water delivery). Realising the environmental outcomes of environmental water delivery will continue to be limited without the relaxation of constraints, particularly during the moderately wet years like 2020 and 2021.

MDBA assessment

- 2021–22 was a record year for environmental water delivery, with the largest annual volume of Commonwealth environmental water delivered to date, more than 2,000 GL achieving widespread environmental benefits.

Priority 5 (continued)
Planning and delivery of environmental water

- First Nations involvement and influence in environmental water management is growing. However, it is recognised that there is significant room for improvement and challenges to be addressed to empower First Nations' involvement.
- Very wet conditions have brought widespread environmental benefits across the Basin including to floodplain areas that have not been inundated for a significant period of time.
- Environmental water has been strategically delivered at times between high natural flows in order to support improved environmental outcomes (e.g. bird and fish breeding) but only where there are no detrimental impacts on people and property.
- Exceptionally wet conditions combined with careful use of water for the environment has created optimal conditions for waterbird breeding across many areas of the Murray–Darling Basin in 2021–22 and continuing into 2023. This is the most widespread waterbird breeding in more than 20 years, which is significant against a longer-term trend of decline over the last 35 years.

What we are hearing

- Where communities understand environmental water deliveries that have occurred, they value the environmental outcomes achieved as a result.
- Across the Basin, communities are concerned about the impact of climate change and what it will mean for them. Climate change will have significant impacts on water availability for both communities and the environment across the Murray–Darling Basin.
- There remains concern in communities that only during a major flood, overbank flows will reach the lower floodplains of the Mallee and lower Murray.

Office locations – *First Nations Country*
Adelaide – *Kaurna Country*
Canberra – *Ngunnawal Country*
Goondiwindi – *Bigambul Country*
Griffith – *Wiradjuri Country*
Mildura – *Latji Latji Country*
Murray Bridge – *Ngarrindjeri Country*
Toowoomba – *Jarowair and Wakka Wakka Country*
Wodonga – *Dhudhuroa Country*

mdba.gov.au 1800 230 067 engagement@mdba.gov.au

8611#