



Murray–Darling Basin Plan: Implementation review 2023

Interim report Overview

This interim report has been prepared for further public consultation and input. The Commission will finalise its report after these processes have taken place.

The Productivity Commission acknowledges the Traditional Owners of Country throughout Australia and their continuing connection to land, waters and community. We pay our respects to their Cultures, Country and Elders past and present.

The Productivity Commission

The Productivity Commission is the Australian Government’s independent research and advisory body on a range of economic, social and environmental issues affecting the welfare of Australians. Its role, expressed most simply, is to help governments make better policies, in the long term interest of the Australian community.

The Commission’s independence is underpinned by an Act of Parliament. Its processes and outputs are open to public scrutiny and are driven by concern for the wellbeing of the community as a whole.

Further information on the Productivity Commission can be obtained from the Commission’s website (www.pc.gov.au).

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Opportunity for comment

The Commission thanks all participants for their contribution to the review and now seeks additional input for the final report.

You are invited to examine this interim report and comment on it by written submission to the Productivity Commission, preferably in electronic format, by 20 November 2023.

Further information on how to provide a submission is included on the inquiry website:
www.pc.gov.au/inquiries/current/basin-plan-2023

The Commission will hold further discussions with participants and prepare a final report after further submissions have been received. The Commission will forward the final report to Government in December 2023.

Commissioners

For the purposes of this inquiry and interim report, in accordance with section 40 of the *Productivity Commission Act 1998* the powers of the Productivity Commission have been exercised by:

Joanne Chong	Commissioner
Chris Guest	Associate Commissioner

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Overview

Key points

- * **The Murray–Darling Basin Plan (the Basin Plan) is a significant reform that aims to deliver a healthy, working Basin to benefit the environment, Basin communities, and current and future generations. Under the Plan, Basin governments agreed to recover 2,750 GL/y of water for the environment (~20% reduction in water for consumptive use) and an additional 450 GL/y through efficiency measures.**
- * **Some progress has been made implementing the Basin Plan since 2018. Water resource plans – which set out how much water can be taken from the system and how it is managed (and are fundamental to implementing the Basin Plan) – are now all in place in Victoria, Queensland, South Australia and the ACT. Environmental water management frameworks are also in operation, and water recovered for the environment – and partnerships to deliver this water – have improved river flows and connectivity, and ecosystem and biodiversity outcomes.**
- * **But the Basin Plan will not be fully implemented on time or on budget. Key supply measures (infrastructure works and rule changes that offset water recovery) will not be delivered and projects to ease constraints on river operations are progressing slowly (a shortfall of ~315 GL/y is possible). The program to recover an additional 450 GL/y of water via efficiency measures will also fall well short of the target (only 26 GL/y has been recovered). And 13 water resource plans in New South Wales, due in 2019, are still not in place.**
- * **A new agreement to deliver the Basin Plan will, if legislated, provide more time and allow new supply measures and voluntary water purchases. But this will not be enough to implement the Basin Plan in full. Weak accountability and other underlying risks to Basin Plan implementation remain. Existing funding is also not sufficient.**
- * **The Australian Government must take greater responsibility for implementing the Basin Plan, in partnership with Basin states.**
 - Constraints-easing measures are critical to achieving environmental outcomes from recovered water; they are complex projects and should be progressed separately to the 2,750 GL/y target.
 - The Minister for Water should report to the Australian Parliament by June 2024, and annually after that, on the cost-effectiveness and feasibility of existing and new Commonwealth-funded supply projects.
 - The Australian Government should develop a renewed approach to water recovery, including staged voluntary purchases. Waiting until reconciliation (now proposed for the end of 2026) to address the shortfall will perpetuate uncertainty for Basin communities and risks further increasing the cost of water recovery.
 - Future water recovery should occur alongside a commitment from Basin governments to assist communities, where warranted, to transition to a future with less available water. Adjustment assistance should build on the evidence about what programs work and the regional economic context.
 - A new government-owned corporate entity that operates at arm's length from governments is an option for undertaking water recovery and implementing some supply projects.
- * **Recognising First Nations values and delivering on First Nations interests requires Basin governments to improve how they partner and share decision-making with Aboriginal and Torres Strait Islander people. Basin governments should publicly report on how water resource plans deliver on First Nations objectives and outcomes, and strengthen the capacity of Aboriginal and Torres Strait Islander people to engage in Basin Plan activities.**

About the Murray–Darling Basin Plan and our task

What is the Murray–Darling Basin Plan?

The Murray–Darling Basin Plan (the Basin Plan) was put in place in 2012 to deliver a healthy working Murray–Darling Basin (the largest river system in Australia). Established under the *Water Act 2007* (Cth), the Basin Plan was developed in response to increasing concerns about overallocation of water in the Basin (it was put in place during the worst drought recorded, when inflows into the Murray River were at record lows) and a recognised need for a whole-of-Basin approach to manage the Basin's water.

The Basin Plan sets the balance for water management – sharing available water between the environment, towns, irrigated agriculture and other industries, so the Basin's rivers and groundwater can be sustainably managed. To do this, it sets out how much water can be taken from the Basin each year. This volume, or limit, known as the Sustainable Diversion Limit (SDL) is designed to leave enough water for the rivers, lakes and wetlands in the Basin to improve environmental health. There is an SDL for the Basin as a whole, made up of SDLs for individual valleys and shared targets for connected systems.

The SDLs are implemented through water resource plans developed by Basin states. Water resource plans set out how much water can be taken annually from each catchment, how much water is made available for the environment, requirements for surface and groundwater connectivity, and how water quality standards and critical human water needs will be met.

Meeting the SDLs requires the Australian Government to recover water entitlements from existing water users and provide these to the environment. This water recovery process is known as 'Bridging the Gap' (bridging the difference between the Baseline Diversion Limits and the SDLs), and can include voluntary water purchases and water-use efficiency programs. In 2012, the Basin states (Victoria, New South Wales, South Australia, Queensland and the ACT) and the Australian Government agreed that 2,750 GL/y of surface water rights from across the Basin (about 20% less than the Baseline Diversion Limits) would be recovered for the environment by 30 June 2024.¹

To provide flexibility, the Basin Plan has an adjustment mechanism – the Sustainable Diversion Limit Adjustment Mechanism (SDLAM) – which can be used to change SDLs in the southern Basin. SDLAM incorporates 'supply' and 'constraints-easing' projects and 'efficiency measures'. Supply and constraints-easing measures allow water recovery targets to be offset, and efficiency measures represent additional water recovery.

Basin states put forward a package of supply measures, and in 2017 the Murray–Darling Basin Authority (MDBA), with modelling of these projects, determined the projects would achieve equivalent or improved environmental outcomes being sought by the Basin Plan with 605 GL/y less water. Amendments to the Basin Plan SDLs to reflect this – as well as a 70 GL/y reduction in the northern Basin water recovery target² – were made in 2018, resulting in a new target of 2,075 GL/y (figure 1). These amendments effectively changed the 'Bridging the Gap' target to 2,680 GL/y – made up of a 2,075 GL/y water recovery target and the 605 GL/y offset expected via the SDL adjustment mechanism.

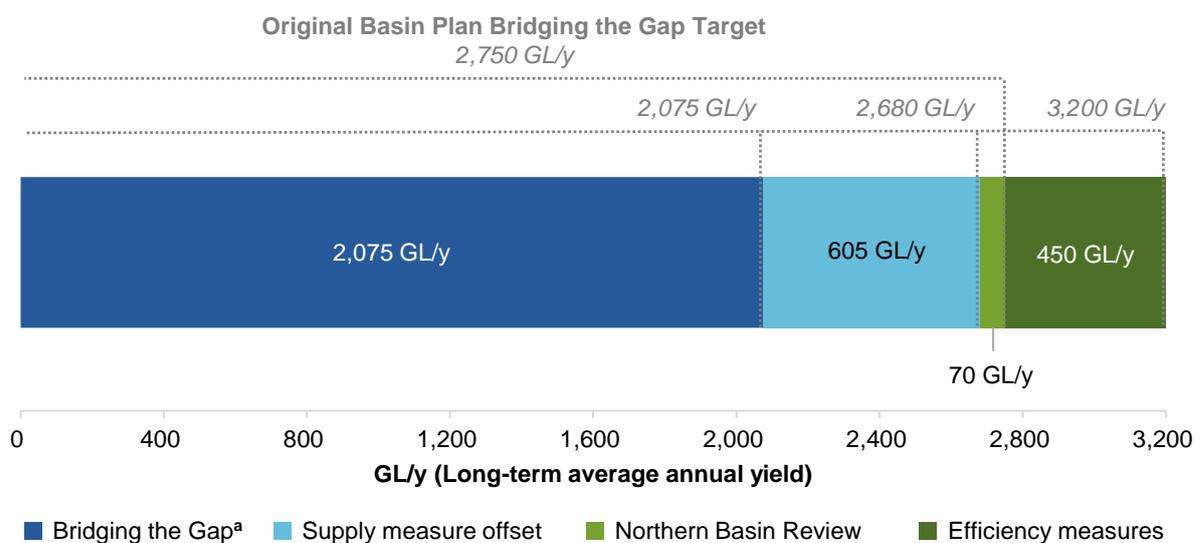
¹ In long-term average annual yield terms (LTAAY).

² The reduction in the northern Basin water recovery was on the condition that the Australian, Queensland, and New South Wales Governments implement the northern Basin toolkit measures to ensure effective management of environmental water in the northern Basin.

The Basin Plan also allows for the recovery of an additional 450 GL/y of water rights via efficiency measures to pursue enhanced environmental outcomes, provided they deliver neutral or improved socioeconomic outcomes. These efficiency measures are additional to the 2,680 GL/y (figure 1).

Water recovery under Bridging the Gap, the SDL adjustment mechanism (supply measures, constraints-easing measures, and efficiency measures) and the northern Basin toolkit are all essential to ‘resetting the balance’ of water uses in the Basin.

Figure 1 – Basin-wide surface water recovery and SDLAM targets



a. Bridging the Gap relies on 2,075 GL/y of surface water recovery and the supply measure offset.

The Basin Plan is an Australian Government instrument, which sits alongside the Murray–Darling Basin Agreement – a water management and sharing agreement between Basin governments with roots back to 1914 – and state-based water management arrangements.

The Australian Government is responsible for resetting the balance and administers water recovery programs to both bridge the gap and deliver the additional 450 GL/y. The MDBA is responsible for implementing the Basin Plan and monitoring and evaluating the outcomes.

Basin states are responsible for delivering the supply, constraints-easing, and northern Basin toolkit measures. Supply and constraints measures are primarily funded by the Australian Government and overseen by a subcommittee of the Basin Officials’ Committee (BOC). BOC is the peak body of Basin government officials, with the chair appointed by the Australian Government.

Under the Basin Plan, water recovery under ‘Bridging the Gap’ and the water resource plans were to be completed by July 2019. All supply, constraints-easing and efficiency measures were to be in place by 1 July 2024.

The Australian Government committed \$5.95 billion to recover 2,750 GL/y under ‘Bridging the Gap’, \$1.21 billion for supply measures, and \$1.775 billion is committed to efficiency measures and constraints-easing projects through the Water for the Environment Special Account (WESA). Just over \$2 billion of funds committed to implementing the Basin Plan remain unspent (table 1).

Table 1 – Funding for resetting the balance as of 31 May 2023^a

	Committed (\$m, nominal)	Spent (incl. contracted) (\$m, nominal)	Remaining (\$m, nominal)
Bridging the Gap – Purchase	2,832	2,832	-
Bridging the Gap – Infrastructure	3,120	2,978	142
Supply measures	1,212	485	727
Efficiency measures	1,575	384	1,191
Constraints-easing	200	128	72
Northern Basin toolkit	180	144	36
Total	9,119	6,951	2,168

a. Data covers the period 2007 to 2023.

What we have been asked to do and our approach

Under the Water Act, the Commission is required to undertake five-yearly assessments of the effectiveness of the implementation of the Basin Plan and water resource plans. This is the Commission's second such assessment (the first assessment was undertaken in 2018).

Our terms of reference ask us to look at whether the Basin Plan is on track to be implemented on time, and where it is not on track, what needs to change. This includes advising and recommending future actions and opportunities to simplify the framework of the Basin Plan to ensure effective achievement of its outcomes.

We approached the task by looking at:

- how the actions of governments are tracking against the timeframes set out in the Basin Plan
- whether the arrangements in place will deliver the objectives of the Basin Plan and enable its impacts and outcomes to be evaluated
- whether actions to implement the Basin Plan are effective and efficient
- whether changes are needed to ensure effective and efficient implementation of the Basin Plan going forward
- whether the governance arrangements are adequate.

We also considered how the Basin Plan could better adapt to a changing climate, better recognise the values of Aboriginal and Torres Strait Islander people and incorporate the best available science.

We did not revisit questions that fundamentally underpin the Plan, such as whether it is necessary to recover water for the environment, or questions that other agencies have been tasked and resourced to answer (such as how much water can sustainably be taken from the Basin).

We engaged widely on the Basin Plan, including with Australian Government agencies, state and territory basin governments, Murray–Darling Basin communities, and Aboriginal and Torres Strait Islander people, communities and organisations.

We held seventeen public forums across the Murray–Darling Basin. Around 330 people attended.

Some context

There is a lot of other monitoring and reporting on the Basin Plan. The MDBA reports on Basin Plan implementation progress in Basin Plan Report Cards and every five years undertakes a Basin Plan

Evaluation (looking at what's working, what's not and where improvement is needed). The last Basin Plan Evaluation was undertaken in 2020.

There will also be a full review of the Basin Plan in 2026 and a review of the Water Act (scheduled for 2024, but now expected to be delayed until 2027).

Many people in Basin communities are frustrated and fatigued by the recurrent reviews and consultation processes and lack of progress in implementation. Communities are also concerned about the lack of coordination between the implementation of the Basin Plan, and the operation of other Australian and state government mechanisms that affect its success.

A new agreement was recently announced

On 22 August 2023, the Australian Government announced a new agreement of Murray–Darling Basin ministers to deliver the Basin Plan in full over a longer time period (it has been apparent for some time that the Basin Plan will not be delivered in full or on time by the June 2024 reconciliation date). The Victorian Government is not party to the agreement.³ The agreement:

- allows more time – until 31 December 2026 – for the delivery of existing supply, constraints and northern Basin toolkit projects and – until 31 December 2027 – for the 450 GL/y target (the last date contracts can be entered into)
- allows Basin states to bring forward *new* supply projects (provided they are proposed by July 2025 and can be delivered by 31 December 2026)
- allows for a broader range of water recovery options – including voluntary water purchases – to be used to meet the 450 GL/y target for enhanced environmental outcomes
- aims to minimise the socio-economic impacts on communities and will provide for community adjustment assistance for the impacts of water purchases toward the 450 GL/y.

The agreement requires amendments to the Water Act and the Basin Plan. The Water Amendment (Restoring Our Rivers) Bill 2023 (the Bill) was introduced to Parliament on 6 September 2023 and was referred to the Senate Environment and Communications Legislation Committee. The committee's report is due on 8 November 2023. The Bill was amended on 18 October 2023, shortly before this interim report was finalised. Where relevant, this interim report takes account of key aspects of the Bill – further consideration will be given to the Bill for our final report in December 2023.

A lot achieved, but key elements will not be delivered

There is some good news

While the Basin Plan, when first put in place, was heavily contested, it is now considered to be part of the landscape and central to securing a healthy and sustainable river system. For the most part, the conversation is no longer about whether or not there should be a Basin Plan, but rather whether there are

³ By not signing up to the new agreement, Victoria will not be eligible for project funding from July next year.

better ways to deliver the Plan. In a recent address to the National and Rural Press Club, the Chief Executive of the MDBA observed that:

... everyone shares a passion for the health of our rivers and importantly, no-one I have come across wants to do away with the Plan. Hand on heart, literally no-one has said ... 'throw it out'.
(McConville, 2022)

And many commented on what the Basin Plan has achieved to date. The National Irrigators' Council, for example, said:

The Plan has been a vital tool in balancing the needs of our communities, our environment and our productive sector. It hasn't always got it right, but it has achieved a great deal since its inception. Ensuring balance is needed so we can keep our rivers and communities healthy and thriving.⁴

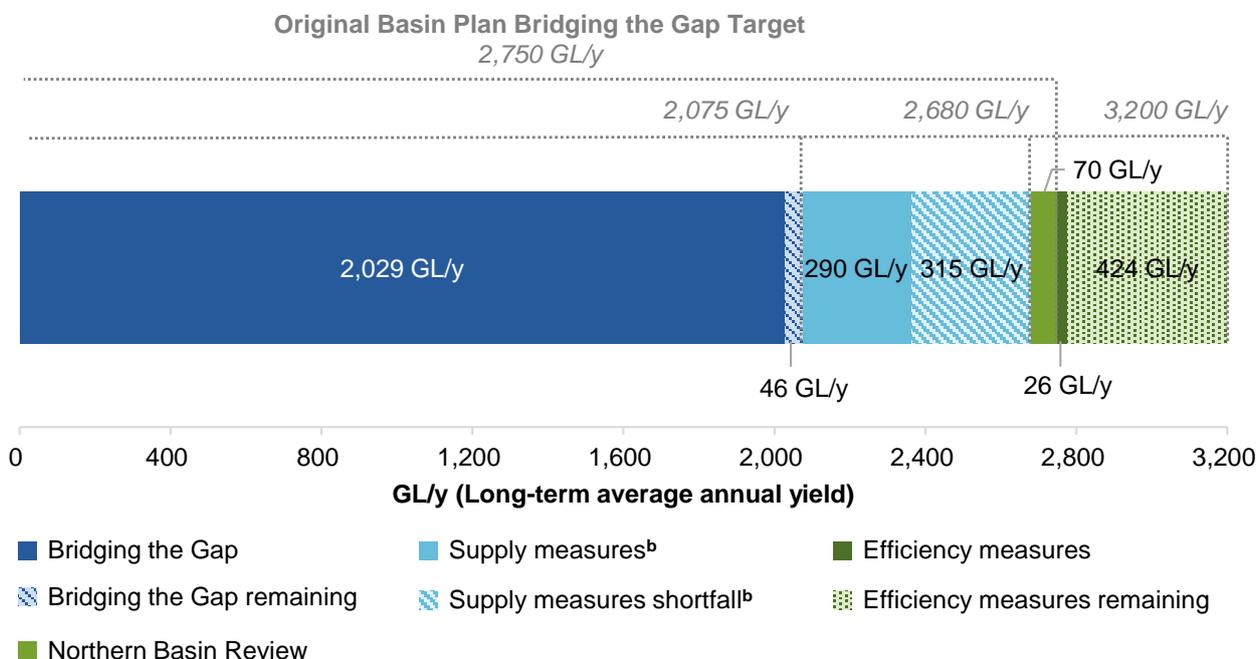
The 2,075 GL/y component of the 'Bridging the Gap' target is almost met

Most of the surface water needed to meet the 2,075 GL/y target has been recovered (figure 2) – however, more than half was recovered before the Basin Plan was finalised in 2012. Just 46 GL/y (about 2%) remains to be recovered.

For groundwater, 92% of water to meet the 'Bridging the Gap' target has been recovered. A further 3.2 GL/y of groundwater is yet to be recovered.

An open market tender is in progress to recover most of the outstanding 2,075 GL/y water recovery target.

Figure 2 – Surface water recovery and SDLAM progress, June 2023^a



a. The figure does not include nominal over-recovery; the full volume recovered under 'bridging the gap' volume is reported at 2,107 GL/y. Shaded cells indicate target not yet achieved. Includes water under contract to be delivered.
b. MDBA estimate of maximum supply measure shortfall.

⁴ Submission to the Department of Climate Change, Energy, Environment and Water Delivering the Basin Plan Ideas Consultation Process (p. 3).

Some, albeit limited, progress has also been made on other elements of resetting the balance since our last review in 2018 (figure 2).

- There are five more supply measures operational (representing approximately 60-90 GL/y of water recovery offset). The 14 operational supply measures are estimated to be delivering about half – 290 GL/y – of the 605 GL/y offset.
- On the 450 GL/y efficiency measures target, 12.2 GL/y was registered to the Commonwealth Environmental Water Holder (CEWH) at the end of June 2023 and another 13.8 GL/y was under contract.
- On the northern Basin toolkit package, four environmental works projects have been approved for an ‘accelerated gateway model’. Three of these projects are currently completing onsite field surveys. Seven other projects are completing preliminary investigations and public consultation.

Significant progress made on environmental water management frameworks ...

The Environmental Watering Plan, as the main instrument for achieving the best possible outcomes from the water available for the environment, is central to the Basin Plan. And significant progress has been made implementing this Plan.

The key components of the Environmental Management Framework, including the Basin-Wide Environmental Watering Strategy, Long Term Environmental Watering Plans and annual environmental watering priorities are now all in place. Pre-requisite policy measures are implemented and a Northern Basin Environmental Watering Group (to coordinate the planning and delivery of water for the environment in the northern Basin) has been established.

The CEWH is well regarded in Basin communities. The CEWH has successfully engaged with local communities and built partnerships with irrigation infrastructure operators, including through its Local Engagement Officers. These partnerships and collaborations have been instrumental to the CEWH’s credibility and its success in facilitating the delivery of environmental outcomes. The Renmark Irrigation Trust, for example, said:

The Trust’s partnership with the Commonwealth Environmental Water Holder, which aimed to bring Trust and Renmark Paringa Council owned floodplain land back to health, has ... been a win/win arrangement; good for the riverine ecosystem, good for our business and local economy and good for our community. (sub. 24, p. 2)

... and benefits from water for the environment are evident

Providing and managing water for the environment is resulting in environmental benefits to the Basin, particularly at the local level. Environmental water has improved native vegetation and wetland conditions, the protection of rare and threatened biodiversity and the migration and breeding of native fish, frogs and waterbirds. Improved river flows and connectivity have helped water quality and environmental water holdings have been used to sustain targeted nurseries and ecosystems during dry periods, so that they can recover. And there are differences in outcomes between sites that are prioritised for environmental water and those that are not. The ACT Government provided the example of Blackfish.

In 2019, environmental flows between Bendora and Cotter Dams supported a large breeding event of the Blackfish that is highly significant following the population decline that resulted from the 2020 bushfires. Blackfish populations above Corin Dam, without environmental flows, have not recovered from the bushfires and remain at risk. (sub. 85, response to information request, p. 5)

The MDBA described environmental water planning and management as ‘a clear success and arrangements are world leading’, noting that the Basin Plan ‘has made a major contribution and water for the environment

is now a secure and enduring element of river management' (sub. 61, p. 17). Many participants commented on the benefits of water for the environment (box 1) and spoke about changing attitudes towards environmental watering since the Basin Plan commenced.

Box 1 – The benefits of water for the environment: what some participants said

Commonwealth Environmental Water Holder

In extremely dry years (2017–20), Commonwealth environmental water played a pivotal role in breaking cease-to-flow events, maintaining flows to enable fish breeding and waterhole replenishment, as well as supporting core riparian and wetland habitat to promote a quick recovery of ecosystems once conditions improved. (sub. 69, p. 11)

The National Irrigators' Council

Over 2100 gigalitres has been transferred to the Commonwealth Environmental Water holder (CEWH) and is being put to use. Over the last couple of years, the CEWH has delivered bird and fish breeding events throughout the Basin and that should be celebrated. ... The CEWH needs to do more to celebrate and communicate its wins, so the public gets a real and true picture of progress. (sub. 62, p. 21)

The Australian River Restoration Centre

To date, the Basin Plan has improved the health of some wetlands and rivers through the implementation of water sharing plans and the delivery of water for the environment. (sub. 13, p. 1)

The Victorian Government noted that at Barmah Forest, a Ramsar-listed wetland, water for the environment has 'improved overall health, protecting, and improving habitat and conditions for fish, waterbirds, frog and turtle species'. The site now supports 30% of the national population of the endangered Australasian Bittern, while turtle populations are recovering and are now considered 'stable'. At the Ramsar-listed Hattah Lakes, environmental watering combined with natural floods has resulted in a huge increase in waterbird breeding (sub. 74, p. 4).

Water resource plans are in place in all Basin states, except NSW

Water resource plans are now all accredited and in operation in Victoria, Queensland, South Australia and the ACT.

While there were delays in the assessment and accreditation of other states' water resource plans, in New South Wales things are well behind schedule – just seven of its 20 water resource plans are accredited.

The absence of accredited water resource plans in New South Wales is a significant risk to the implementation of the Basin Plan (taking more water than the SDL has consequences for the environment and users of water resources in the Basin). But it is not possible for the Inspector-General for Water Compliance (IGWC) to assess New South Wales compliance with the long term annual SDLs without accredited water resource plans. This also extends to Basin Plan requirements around water quality and critical human needs. At the River Reflections Conference in 2022, the IGWC commented that:

While NSW WRPs remain outstanding, full compliance with the Basin Plan cannot be achieved. ... I can't enforce the rules in the plans that don't yet exist. ... The single most important

compliance matter in the Basin Plan is SDL compliance. ... NSW's level of accountability under the Basin Plan is not equal to that of other Basin states and the territory, each of who have accredited WRPs. (cited in sub. 75, p. 17)

But despite the importance of having all accredited water resource plans in place for delivering the Basin Plan, there are no real consequences for New South Wales being so late with their water resource plans. Step-in provisions for the Australian Minister for Water to request the MDBA to develop water resource plans are available but have not been used.

And improvements made to governance and reporting arrangements

Since 2018, there have been some improvements to Basin Plan governance and reporting arrangements.

The IGWC was established in 2021 to provide oversight, monitoring, compliance and enforcement of the Basin Plan and parts of the Water Act.⁵ The establishment of the IGWC is generally considered to be an important positive change that has improved effectiveness and accountability of compliance activities. The National Irrigators' Council, for example, said 'the tough cop on the beat helps build confidence in the system and its participants' (sub. 62, p. 19).

The BOC adopted a new committee structure and transparency has increased. Basin governments have also improved how they engage, including by establishing more direct, local relationships. The MDBA, for example, undertook 'listening tours' and in 2021 achieved its 2019 goal of having one third of staff regionally based. However, notwithstanding these efforts to improve engagement practices, concerns about the quality and value of Basin Plan engagement processes remain (sections 4 and 5).

Several online water information portals have been put in place by Basin state agencies since 2018. The Bureau of Meteorology now provides near real-time water information by combining information from various state water agencies, dam operators, the MDBA and the CEWH. And in 2020, the NSW Government launched an online portal, WaterInsights, which contains daily river reports, meteorology information and various graphs and maps designed to inform decisions around commercial water usage.

The usability and accessibility of some existing information sources have also improved.

But resetting the balance remains far from complete

Supply projects are unlikely to deliver the 605 GL/y offset (even with more time)

The MDBA estimates that the supply measure package could fall short by 190–315 GL/y, if reconciliation takes place prior to June 2024. Seventeen of the 36 supply and constraints-easing measures⁶ are not expected to be in operation (table 2). And despite the prospect of additional time for Basin states to deliver existing and possibly new supply projects, the 605 GL/y offset is still unlikely to be achieved.

⁵ The IGWC was established in response to the Commission's 2018 recommendation to establish a Basin Plan Regulator (with the transfer of MDBA's regulatory functions).

⁶ The notified Menindee Lakes project incorporates the lower Darling constraints-easing project; it is counted in both figures.

Table 2 – Status of southern Basin supply and constraints projects
Progress as at July 2023

Project status	Total	Operational	Likely to be operable by June 2024	Unlikely to be operable by June 2024	Will not be operable by June 2024
Supply projects (excl. constraints)					
NSW	7	1	3	2	1
VIC	9			5	4
SA	4	4			
Shared	11	9	2		
Total	31	14	5	7	5
Indicative expected offset (GL/y)	523	278.1	73.7	40.6	130.6
Southern Basin constraints-easing projects					
NSW	3				3
VIC	1				1
SA	1		1		
Shared	1				1
Total	6		1		5
Indicative expected offset (GL/y)	82.4		20.6		61.8
Project total	37	14	6	7	10
Total indicative expected offset (GL/y)	605.4	278.1	94.3	40.6	192.4

There are a number of reasons why the additional time, while necessary, will not be enough to deliver the 605 GL/y offset in full.

- Some key projects are not viable, including the Menindee Lakes project (it was initially estimated to contribute an offset of about 100 GL/y).
- Implementation costs are higher – some supply projects may no longer represent value for money.
- Most projects to ease constraints are at least 5-10 years from delivering outcomes.
- The likelihood that there are new supply projects that represent value-for-money, can make a meaningful contribution to the offset and be implemented by the end of 2026, is low.
- Accountability for implementing projects is weak – there are no real consequences for Basin states not delivering on supply projects.

Remaining funding for supply and constraints will not be enough

The 2021 review of the WESA found that the estimated cost of the constraints and supply measures programs (largely drawing on the original 2016-17 business cases) was around \$145 million higher than the available funding; and the actual costs of these projects are expected to be even higher than the business cases anticipated.

If new supply projects can be found to reach the 605 GL/y target by 2026, significant additional funding will be needed.

Earlier warnings about the significant risks did not result in change

The Commission's 2018 assessment of Basin Plan implementation highlighted the need for changes to avoid the significant risk that supply and constraints-easing measures would not be implemented as proposed. We recommended an independent advisory panel on supply projects to assess net benefits and the credibility of timeframes and milestones, and to recommend which projects should – and should not – be funded to proceed to implementation. We were also explicit about the requirement to 'make good' if a project failed – that is, that water needs to be recovered to make up any shortfall.

While the recommendation was agreed to in part, no independent panel was established, and there have been no apparent changes to funding approval processes by the Department of Climate Change, Energy, Environment and Water. And critically, no supply projects have been formally amended or withdrawn by the BOC, despite evidence that some projects are no longer viable.

Basin governments' policies put in place over the last few years have also contributed to delayed water recovery projects. The Australian Government, for example, progressively reduced the scope of water recovery options (including ceasing open-market water purchases and legislating a limit of 1,500 GL/y on water purchases towards bridging the gap) and gave priority to slower, riskier and more expensive forms of water recovery. Such policy decisions also reduced the incentive for Basin governments to make progress on projects by undermining the credibility to any threat to make up any shortfalls against the 'bridging the gap' target through additional water recovery.

With a large shortfall looming, what should be done?

Constraints-easing measures should be separated from the supply measure package

Basin rivers are subject to a range of constraints that limit the flow rates that river operators can provide downstream. These constraints may be physical (such as flood-prone infrastructure) or operational (river management rules designed to minimise flooding of private land).

There are potentially significant environmental and operational benefits to be achieved by easing or removing constraints. Getting the most value out of environmental water relies on flow rates that allow rivers to connect to floodplains. Constraints-easing projects can enhance this connectivity by changing river operating rules and negotiating arrangements with landholders. However, the challenges of these projects were underestimated. They will not be finalised by the end of 2026.

Including constraints as supply measures has restricted the ability of Basin governments to adjust these projects in response to community concerns over the proposed flow rates. These projects should be withdrawn from the supply package and pursued under a standalone program. With most constraints-easing

projects needing at least another 5–10 years to implement, the program requires a dedicated, collaborative focus from Basin governments to set it up for success.

Subject to making meaningful progress on existing projects, the Australian Government should assess the costs and benefits of further constraints easing, and consider allocating additional WESA funding towards constraints easing.

Finalising ‘Bridging the Gap’ requires more leadership, transparency and accountability

The limited progress made on the 2,680 GL/year target since 2018 means there is still considerable work to do to complete ‘Bridging the Gap’. The focus of the Australian governments should be on making progress towards this target – using the full range of water recovery options – before pursuing the 450 GL/year efficiency measures target. Operating parallel water recovery programs in a tight water market risks causing sharp price rises and community uncertainty and angst.

The Australian Government should be more transparent about which supply projects will continue to receive funding and why

The 2023 amendments to the Water Act and the Basin Plan – if passed – will extend the timeframe for all supply and constraints-easing projects to the end of 2026, and allow for new supply measures to be proposed (up until July 2025). The Australian Government is responsible for deciding whether existing – or any new – projects will receive funding over the period to end 2026. However, there is no transparency, or explicit accountability mechanism, for how these decisions are made.

Ahead of making these decisions, the Australian Government needs to rigorously assess:

- the likelihood of individual supply projects succeeding – funding agreements should only be extended for projects that can realistically be delivered by 31 December 2026 and
- the cost-effectiveness of supply projects relative to other forms of water recovery.

The Australian Minister for Water should table in Parliament an annual report on funding provided for supply, constraints-easing and northern Basin toolkit projects – with the first report by June 2024. This report should cover all available information on project prospects, including:

- the status of the projects
- funding arrangements, including the amounts expended to date
- reasons for deciding to continue, amend or withdraw project funding, including evidence on the cost-effectiveness of projects relative to other forms of water recovery
- the expected shortfall against the water recovery offset (if any) and planned actions to make good.

The Water Act should be amended to require this annual reporting.⁷ The Basin Plan should also be amended to require the Australian Government to withdraw supply projects from the package – where they are not viable or do not represent value for money – after a reasonable period (say three months) has elapsed for BOC to amend, rescope or withdraw the project.

⁷ Shortly before this interim report was finalised, the Restoring Our Rivers Bill was amended to require the Minister for Water to table in Parliament annual progress reports about water recovery targets.

The Australian Government should not delay making good on the likely shortfall from the 605 GL/y offset

It will take time to recover water to make up the likely significant shortfall from the 605 GL/y offset, and the costs of doing so are expected to increase with time. The Australian Government should not wait until reconciliation to progress, develop and implement other options. To do so would further delay Basin Plan implementation, risk increasing costs to taxpayers and prolong uncertainty for Basin communities.

The Australian Government should develop, without delay, a renewed water recovery program which includes staged, voluntarily purchase of water entitlements.

Some participants argued for an immediate return to open tender water purchases as a way to recover water that delivers environmental outcomes more reliably than offset options. Lifeblood Alliance, for example, said:

Open tender, voluntary water purchases must be resumed as a key cost-effective and transparent mechanism for meeting water recovery targets across the Basin. Reliance on infrastructure projects, both on and off farm, to recover water must be reduced, as these projects are high cost and low return in terms of environmental outcomes. (sub. 55, p. 2)

However, many others raised concerns about the socioeconomic impacts of previous water purchases and opposed further purchases. The Murray River Group of Councils, for example, said ‘buybacks damage communities’ (sub. 22, p. 11).

While structural adjustment in Basin communities has generally been driven by broader economic and industry trends, water purchases have placed pressure on communities, and smaller, remote, irrigation-dependent communities have been affected by purchases more than others (box 2).

All options, including staged, voluntary water purchases, should be on the table for the Australian government to reset the balance in a cost-effective way. As earlier water recovery programs showed, purchasing water is the most cost-effective way for governments to obtain water for the environment. However, purchasing large volumes of water in a short space of time risks market disruption and significant socioeconomic impacts on communities. Market liquidity constraints also means that purchasing water quickly risks increasing the cost of purchases to taxpayers (limiting how much water can be recovered for the environment from a given budget).

Careful design and engagement with communities is required, including to manage risks to irrigation network viability. The Australian Government should start a considered process now.

Irrespective of design and staged implementation, some Basin communities may be adversely impacted by any voluntary water purchase program. Future water recovery should take place alongside a commitment from Basin governments to assist communities, where necessary and warranted, to transition to a future with less available water. Adjustment assistance should be based on the lessons – and learn from the mistakes – of past programs, and the regional economic context.

The water recovery program should also be coupled with a monitoring program to assess the broader community impacts of water recovery in the Basin and help target and design effective structural adjustment assistance.

Box 2 – Socioeconomic impacts of water purchases on Basin communities

Water purchased by the Australian Government to meet commitments under the Basin Plan has had negative socio-economic impacts on some Basin communities. However, overall the economic performance of the Basin has improved – the gross value of irrigated agricultural production in the Basin increased by about 12% between 2013 and 2018, despite the volume of water used in irrigation declining by over 16% over the same period.

People who sold water entitlements were compensated at market prices, with proceeds often funding on-farm capital works, or market exits. Larger and more diverse regional centres in the Basin have largely adjusted to less water. However, there have been negative socio-economic flow-on effects in some small irrigation-dependent communities, particularly following major irrigators selling large parcels of entitlements. Some Basin communities saw agricultural employment fall rapidly, without offsetting growth in other employment areas (the negative effects have only been slightly tempered by improvements to tourism resulting from improved ecological outcomes).

The size and speed of water purchases also appears to influence whether communities adapt relatively quickly (through other economic development and diversification) or experience more severe and lasting economic disruption.

Delivering the 450 GL/y target by 2027 will cost more than budgeted

The additional 450 GL/y cannot be delivered within the existing budget, and recovering this volume of water by 2027 (the timeframe proposed in the Restoring Our Rivers Bill), while also recovering water to meet the 2,680 GL/y target, may cause significant disruption to the water market.

The Bill proposes that water purchases be allowed to contribute to the target. This is a positive step; it will improve the prospects of making progress toward the target, and reduce the budgetary cost of recovering the 450 GL/y (compared to relying on 'efficiency measures').

However, the cost of meeting the target will be substantial. The cost of water rights has risen significantly in recent years, and the Australian Government has said it will provide 'significant transitional assistance' where voluntary water purchases have flow-on impacts on Basin communities. Given this, getting to 450 GL/y by 2027 is expected to require significant additional funding.

The Commission previously raised concerns about the assumptions underpinning the 450 GL/y water recovery target, including the lack of any review point to assess the feasibility of the 'enhanced environmental outcomes' in schedule 5 of the Basin Plan and the value for money of the overall program. Some of the environmental benefits of this additional water are also contingent on the delivery of constraints easing projects – which are still 5–10 years from delivery.

Given these factors, it makes little sense for the Australian Government to rapidly pursue the 450 GL/y target when a significant shortfall in the Bridging the Gap target is expected.

The 2026 Basin Plan review will consider the environmentally sustainable level of take and surface water and groundwater SDLs – this review is also an opportunity to assess how best to deliver the enhanced environmental outcomes that the 450 GL/y target is designed to meet.

Rethinking the model for water recovery?

Since the Basin Plan came into effect, the policies adopted by Basin governments, by limiting options, have increased the cost of water recovery.

There is a large water recovery task ahead for the Australian Government and there are risks with a department undertaking this task. Tender processes tend to be slow and clunky and political pressures can influence purchasing decisions. A number of participants raised concerns about a government department not being well equipped to undertake purchases with a commercial focus or work with entitlement holders on projects.

One option is to establish a Commonwealth corporate entity (at arm's length from government) to purchase water entitlements (and potentially manage the delivery of some supply projects)⁸ which are then transferred to the CEWH. Such an entity may be able to engage with the market more nimbly and quickly than a government department, undertake water purchases and other water recovery projects that do not fit neatly into Commonwealth procurement and grant rules, and help depoliticise water recovery. The entity would be accountable to the community, the Australian Parliament and Basin governments. It would mean there is a clear and visible party responsible for water recovery.

Previous experience with Water for Rivers, a joint venture company established in 2003 to deliver a water recovery program for the Snowy River – which included water purchases and infrastructure projects – underpins this model.

Recognising the values of First Nations people

There are more than 100,000 First Nations people from more than 40 Nations living in the Murray–Darling Basin. First Nations people have deep connections to their land, waters and waterways and tens of thousands of years of knowledge about caring for water and river country.

There are several mechanisms under the Basin Plan for First Nations people to provide input into the development and implementation of water management arrangements – including in the areas of water resource planning, environmental management and knowledge building.

Basin state governments have improved how they work, engage and partner with First Nations people in the Murray–Darling Basin over the last five years. Some developments include:

- the Murray–Darling Basin Indigenous River Rangers Program (through the program, First Nations organisations improve waterway health and manage Country)
- the appointment of an Aboriginal member to the MDBA Board, fulfilling the legislated requirement for Indigenous representation
- the National Cultural Flows Research Project – a project supported by the MDBA and other Australian Government agencies to improve knowledge of cultural flows and ways of integrating cultural flows into Basin water management.

However, almost everyone with an interest in the Basin (including irrigators, governments and environment organisations) agree that the Basin Plan needs to do more to recognise the values and deliver on the interests of First Nations people (box 3).

⁸ The role of the new entity in supply and constraints-easing projects would depend on how quickly the entity could be established and the lifespan of remaining projects.

Box 3 – Calls to do more: recognising the values and delivering on the interests of First Nations people

Murray–Darling Basin Authority

The deep significance of First Nations' knowledge passed down over the generations is ever more pressing and more precious as our climate changes. We all need to work harder to provide a greater place for First Nations people in water management. (sub. 61, p. 7)

National Irrigators' Council

... we are very supportive of further involvement of Indigenous Australians in managing the Basin, including but not limited to, addressing cultural flows. ... NIC would welcome an enhanced First Nations engagement regime to further improve our connections with Indigenous peoples across the Basin. (sub. 62, p. 26)

National Parks Association of NSW

The independence and views of the numerous Aboriginal Nations with a connection to the Basin and its water should not be compromised. Water carries great cultural, spiritual, environmental, social and economic significance to these people ... Despite the National Native Title Council (2014) stating it believed the Water Act was failing in its management objectives for Aboriginal people some ten years ago, not much has changed. (sub. 41, p. 6)

Wentworth Group of Concerned Scientists

.... the next Plan needs to address Aboriginal water rights and interests as a matter of urgency. More support is needed to build capacity of Indigenous land and water ranger programs to manage wetland Country. (sub. 81, p. 6)

River Lakes and Coorong Action Groups

We need to celebrate the wisdom of First Nations people in caring for the land and the water for millennia while it has only taken 235 years of settlement to destroy the system. We need to acknowledge the deep connection of First nations people to the land and to their totems and the intrinsic need to protect them. (sub. 15, p. 4)

MLDRIN

Solutions to the climate crisis must be informed by the knowledge and wisdom of cultures that have survived (and thrived) during significant changes to the climate over the past 60,000 years. ... climate responses in the Plan must be genuinely co-designed with Basin Nations. (sub. 92, p. 25)

The policy landscape has also changed since the Basin Plan was introduced in 2012 (and since the Commission did the last review of the Basin Plan). Notably in 2020, all governments, along with the Coalition of Aboriginal and Torres Strait Islander Peak Organisations, signed the *National Agreement on Closing the Gap*. Under the Agreement, governments committed to work in genuine, formal partnerships with Aboriginal

and Torres Strait Islander people for shared decision-making (priority reform 1) and to transform government organisations so they work better for Aboriginal and Torres Strait Islander people (priority reform 3).⁹

Improving outcomes for First Nations people is also identified by the MDBA as one of the four priority themes for the 2026 Basin Plan Review.

Meaningful, respectful and reciprocal engagement

Despite improvements in engagement made over the last five years, First Nations people – many who have invested a lot of time participating in the Basin Plan and reviews of it – shared their continuing frustration with engagement processes, which they say are often rushed and tokenistic.

A particular concern is the New South Wales Government’s approach to engagement on water resource plans. Water resource plans must be ‘developed having regard to the views of relevant Indigenous organisations ... with respect to the objectives of Indigenous people and ... the outcomes they desire’. In practice, we heard that, while First Nations people were asked to provide feedback and input into plans, there was little evidence that the input was genuinely considered in decision-making.

Meaningful engagement is crucial to building trust and working in partnership. It is not enough to recognise First Nations values in Basin Plan implementation. Transparent, accountable mechanisms by which First Nations people can inform and share decision-making are important (they are also a key element of the priority reforms). Accountability should be improved, including by:

- requiring Basin governments to publicly report on:
 - how they engage with First Nations people on Basin Plan matters
 - how water resource plans deliver on the objectives and desired outcomes of First Nations people for management of water resources in the Basin.
- clarifying and embedding the requirement in the Basin Plan for water resource plans to incorporate First Nations values and interests in water.

The MDBA – in partnership with First Nations people – should develop a framework for monitoring how governments engage with First Nations people on Basin Plan matters.

Empowering First Nations people to participate in the Basin Plan

There is a significant and growing pull on First Nation groups and individuals to participate in government processes about the Basin and broader water policy issues, with little capacity development (or funding) to support First Nations people to navigate complex water governance, policy and management arrangements.

Under the National Agreement on Closing the Gap, governments acknowledge that ‘adequate funding is needed to support Aboriginal and Torres Strait Islander parties to be partners with governments’. Government funding (and other supports) to First Nations people to participate in Basin Plan implementation and review activities is largely ad-hoc. There would be value in Basin governments establishing a more structured and transparent process for providing support to First Nations people to participate in Basin Plan processes.

The MDBA and Basin governments are continuing to grapple with how to engage effectively with all First Nations people. Two groups – Murray Lower Darling Rivers Indigenous Nations (MLDRIN) and the Northern

⁹ The other central pillars of the Agreement are: Building the Aboriginal and Torres Strait Islander community-controlled sector (priority reform 2) and Improving and sharing access to data and information to enable Aboriginal and Torres Strait Islander communities to make informed decisions (priority reform 4).

Murray–Darling Basin Aboriginal Nations (NBAN) – were important in the earlier period of Basin Plan implementation (there are requirements in the Basin Plan for Basin governments to engage with MLDRIN and NBAN, and they have relied heavily on these organisations). However, NBAN has ceased operating. While MLDRIN has continued to actively engage in consultation processes and has made submissions to several reviews, some participants told the Commission that MLDRIN no longer has broad support by all First Nations. Many First Nations people said they felt under-represented or forgotten in key processes.

First Nations bodies can be an effective way for people to communicate concerns, advocate change, and respond to the ideas and proposals of others. The MDBA – in partnership with Aboriginal and Torres Strait Islander people – should consider the merits of establishing a new body for First Nations people in the Basin.

Progress on Aboriginal water ownership has been slow

Water ownership is important for realising Aboriginal and Torres Strait Islander people's cultural, social, economic, spiritual and environmental aspirations. While First Nations people represent about 5% of the Basin population, they hold less than 1% of available Basin water holdings.

Many participants expressed their support for Aboriginal and Torres Strait Islander people holding water entitlements for cultural purposes, to support their economic and social participation in, and contribution to, regional communities. This aligns with the national framework for cultural flows (developed as part of the National Cultural Flows Research Project), which sets out a method for determining, delivering and assessing cultural flows.

The Aboriginal Water Entitlements Program commenced in 2018 with \$40 million to support Aboriginal people in the Basin to purchase cultural and economic water entitlements. However, not a single Aboriginal Water Entitlement Program dollar has been spent on purchasing water. The Department of Climate Change, Energy, Environment and Water is currently consulting further with First Nations people on governance models to deliver the program (despite extensive past engagement on this issue). As highlighted by a number of participants to this inquiry, the \$40 million will buy far less water today than in 2018, and the more than 40 First Nations in the Basin have missed out on cultural and economic benefits of water ownership. While the department intends to implement the Aboriginal Water Entitlements Program in 2023-24, an implementation timeline has not been published and as a result uncertainty about the timing of this program persists.

Partnerships for water delivery show promise

All Basin governments have work to do to demonstrate – and meet – their commitments under the National Agreement for Closing the Gap. That said, we heard about partnerships between Aboriginal and Torres Strait Islander people and governments that were working well, including to deliver environmental water in ways that also achieve cultural benefits. For example, the Victorian Government's *Water is Life – Traditional Owner Access to Water Roadmap* sets out a pathway for how the Victorian Government intends to return water to Traditional Owners and increase their role in determining how environmental water is used for the purpose of healing Country.

There are opportunities for environmental watering to contribute to social or cultural outcomes (shared benefits) without compromising environmental outcomes. As one participant said:

There should be more partnership programs involving Aboriginal water managers and rangers, such as the Nimmie-Caira project, which is training traditional owners in management of watered sites. (Dr Anne Jensen, sub. 39, p. 3)

The Basin-Wide Environmental Watering Strategy is due to be updated by 2024. This is an opportunity for the MDBA – in partnership with Aboriginal and Torres Strait Islander people – to develop objectives and outcomes for shared benefits of environmental water use.

Recognising and valuing First Nations knowledges

The Basin Plan states that the ‘best available knowledge’ will be used in water resource management, which includes the local knowledge of Aboriginal and Torres Strait Islander people. A number of participants commented that there was scope for Basin governments to better draw on Aboriginal and Torres Strait Islander peoples’ knowledges and understanding of the river systems and natural resource management (box 3).

The success of formal partnership arrangements such as the Murray–Darling Basin Indigenous River Rangers Program and the First Nations Environmental Water Guidance Project should be built on to provide further opportunities for Aboriginal and Torres Strait Islander people to use their knowledge, cultural practices and connection to country to contribute to managing and restoring waterway health in the Basin.

The Australian Government’s \$20 million investment in the Murray–Darling Water and Environment Research Program is another key avenue to better understand First Nation’s values, and how water provides social, economic and cultural benefits to First Nation’s communities. It is important that Basin governments recognise that this knowledge is the cultural and intellectual property of Aboriginal and Torres Strait Islander people and respect relevant protocols and permissions around use of this knowledge.

Strengthening the Basin Plan

Bringing new knowledge into the Basin Plan framework

The Water Act requires the Basin Plan to be developed ‘on the basis of the best available scientific knowledge and socio-economic analysis’¹⁰. Adaptive management is also a requirement of the Basin Plan. And to this end, the Basin Plan requires various elements of the water management framework to be regularly reviewed or evaluated. Since the development of the Basin Plan, the relevant knowledge base has improved considerably, particularly in the areas of climate change and ecological water requirements.

A successful adaptive management approach to managing Murray–Darling Basin water resources requires generating new knowledge, reporting on that knowledge, and timely opportunities to update the water management framework to apply the knowledge. There is, however, evidence that not all aspects of the water management framework are adequately updated through the review processes to reflect the best available knowledge.

Climate change science should be further embedded in the Basin Plan ...

The Basin Plan was designed to rebalance the consumptive and environmental use of water and enable the Basin to better adapt to a changing climate, but this is an ongoing challenge. The Basin is expected to become hotter and drier, with more frequent and severe droughts and floods, and greater climate variability. Adapting to climate challenges and increasing resilience is one of the MDBA’s six priority areas for the future, and climate change will be a focus of its 2026 Basin Plan Review.

¹⁰ *Water Act 2007* (Cth), section 21(4).

Neither the Water Act or the Basin Plan are clear and explicit that the best available science about the impact of climate change on Basin water availability, including relevant climate change projections, should be part of the scientific knowledge on which the Plan should be based. The Commission is keen to hear participants' views about whether and how this should be addressed. For example, should section 21 of the Water Act be amended to make this clear, or are there better ways of embedding climate change science into the Basin Plan?

... and climate change resilience more measurable

The Basin Plan has objectives about ensuring water-dependent ecosystems are resilient to climate change, but the related targets are not sufficiently specific, making it difficult to assess progress against the objectives. There should be more clarity about how the climate change objectives are measured and assessed. The MDBA should set out how it evaluates whether these Basin Plan objectives are being met, including by setting out specific targets and indicators, and consider integrating this information in the Basin Plan.

Transparency and coordination of knowledge generation efforts could be improved

Greater transparency around the use of new knowledge in decision making is important for trust and confidence in the Basin Plan. It can also make it easier for scientific claims to be verified and alternative or better information to be identified and shared. Transparency would be improved by making publicly available the data, modelling outputs and government commissioned research that is used to make decisions about water management in the Basin. This should include data, modelling and research used to reset the sustainable diversion limits in 2026.

Coordination of knowledge generation, and knowledge sharing among researchers and policy makers, could also improve the quality of Basin water management decisions and improve the efficiency of research investment. The lack of a dedicated role focused on overseeing and coordinating knowledge generation across the Basin is a gap in the Basin management framework.

A risk based approach to amending water resource plans

Basin state governments play a key role in the Basin Plan by preparing and implementing catchment-level water resource plans. The Basin Plan sets out what these plans must include, such as how much water can be taken from the system and how water will be managed during extreme events.

Making, assessing and accrediting water resource plans is a slow and complex process. There are 55 requirements in the Basin Plan that need to be met. The scale and complexity of the requirements are a key reason for some of the delays.

A number of Basin states said the requirements in the Basin Plan made for a very resource-intensive process. The MDBA also noted that the number and complexity of the requirements has:

... led to highly complex WRPs that comprise multiple documents and incorporate a range of state instruments and strategies. This complexity, with cross-referencing across numerous state instruments, strategies and plans means WRPs are prone to drafting errors and internal inconsistencies resulting in an invalid instrument which cannot be accredited. (sub. 61, response to information request, p. 2)

While water resource plans are designed to evolve and adapt as new information becomes available, Basin state governments may be reluctant to update their plans if the process is complex and slow. This could undermine the Basin Plan and inhibit adaptive water policy.

In its upcoming review of the Basin Plan, the MDBA should work with stakeholders to review the 55 requirements, some of which should be simplified, removed or made less prescriptive. The principle of subsidiarity should be a guiding consideration given that a core purpose of water resource plans is to implement SDLs and many other parts of the plans are largely the responsibility of state governments. The prospect of this change should not hold-up the overdue NSW water resource plans, which for consistency with other states should meet the existing requirements.

Basin states should also be able to make a greater range of changes to water resource plans without the changes needing to be formally assessed by the MDBA. This includes amendments that are uncontentious and clearly comply with the Basin Plan. The Water Act and regulations would need to be amended to enable these low-risk changes to be fast-tracked.

Improvements to environmental water planning and management

Despite the positive outcomes and achievements from the use of environmental water, there is more to be achieved. Rivers are not regularly connecting to key wetlands on the floodplain, there are too many cease-to-flow events in the northern Basin and end of the system flow targets are not consistently being met. Arresting and reversing long-term declines in native fish and waterbird populations also requires sustained effort.

The focus for environmental management should now be on simplifying and embedding current best practice approaches into the Environmental Management Framework.

- The Basin-Wide Environmental Watering Strategy – which sets out the environmental outcomes expected in key areas – needs to be more relevant and effective (including, for example, providing clear guidance, under all water availability scenarios, on the priority for achieving flow connectivity at the system scale relative to watering within a Water Resource Plan Area).
- Basin annual environmental watering priorities are general in nature, do not change significantly on an annual basis, and provide limited value in prioritising environmental water use. The 2026 review of the Basin Plan should assess the value of these priorities and whether requirements for annual priorities should be amended or removed.
- First Nations peoples' objectives and outcomes for providing shared benefits from environmental water use should be included in the Basin-Wide Environmental Watering Strategy and long-term watering plans.
- A framework for the coordination of environmental water management with natural resource management should be developed (over the long-term) and included in the Basin-Wide Environmental Watering Strategy, and long-term watering plans should include actions to integrate the management of environmental water with natural resource management.

Water quality and critical human water needs

There remain long-standing concerns about water quality and critical human water needs in the Lower Darling. We heard that towns like Walgett show that the arrangements for meeting these needs in the northern Basin are not working. The Dharriwaa Elders Group told us that 'river foods, drinking water and water to swim in and enjoy have been taken from Walgett' and 'warrambuls, lakes and creeks and waterholes are regularly dry'. And that:

Critical human needs must be more clearly defined and given a high priority in water management – otherwise rivers could be understood as only existing for irrigation, water trading and other industrial purposes. We urge the Productivity Commission to ensure that critical human needs are prioritised by the Basin Plan, not only in the context of 'extreme events'. (sub. 86, p. 6)

The New South Wales Government has progressed a number of programs to manage these problems, but water resource plans and water quality plans remain outstanding. While these issues are largely the responsibility of the New South Wales Government, the Commission invites participants to comment on whether the Basin Plan should play a greater role in securing good quality water and meeting critical human water needs in these regions – and if so, to identify the key considerations and options for reform.

Water quality targets across the Basin will also need to be reviewed to reflect updated national guidelines and to ensure they are set at the right scale.

Governance and institutional arrangements

Accountability mechanisms, which are central to Basin Plan implementation, need to be strengthened.

Regular reports to the Australian Parliament by the Minister for Water that identify which supply projects will receive Commonwealth-funding and why (discussed earlier) will go a long way to bolstering accountability.

The rationale for tasking the IGWC with oversight of some, but not all, intergovernmental agreements is not clear. The Australian Minister for Water should prescribe by regulation additional intergovernmental agreements over which the IGWC should have oversight. The rationale for including or excluding agreements in the IGWC's remit should be made public.

The activities and decision of the BOC should also be made more transparent (including publishing decisions and reasoning for decisions) and there is a case for an independent chair.

And while very few participants wanted more engagement by governments on the implementation of the Basin Plan, there was a lot of support for more meaningful (and in many cases, local) engagement. More joined-up engagement efforts could reduce costs for participants and governments and allow for a more holistic consideration of some issues. A strengthened role for the Basin Community Committee in BOC decision making processes – such as a standing item at BOC meetings for the Basin Community Committee to provide advice on key issues and decisions from a community perspective – would allow communities to be part of decisions affecting them.

Monitoring, evaluation, and reporting

Effective reporting, monitoring and evaluation is critical to the successful implementation of the Basin Plan. While there is lots of reporting and monitoring – the 2020 evaluation by the MDBA found more than 100 outputs from monitoring and research programs – it is not necessarily providing the right information (and in fact, the MDBA found that despite all the information available, it did not have the information needed to undertake the evaluation).

A more strategic approach to monitoring and reporting is needed. Ahead of the 2026 Review of the Basin Plan, the MDBA should conduct a 'stocktake' of the Basin-related monitoring information currently being collected (both by governments and other parties). This would allow for important information gaps to be identified. It could also reveal areas of low-value reporting, duplication and overlap in reporting efforts, or areas where responsibility is unclear. The outcomes of this stocktake should inform the development of a new monitoring strategy.

One avenue for this work is the Basin Condition Monitoring Program, which the MDBA is developing to operate alongside other long-term monitoring programs and other focused monitoring programs.

Trading rules

While there has been significant work in recent years on reviewing the framework governing water markets in the Basin, and there are related reforms in the Restoring Our Rivers Bill, the trading rules in the Basin Plan have not been thoroughly reviewed since they were made. The rules aim to improve market integrity and transparency and limit restrictions on trade, but it is unclear whether they have been successful, particularly in removing unnecessary trade restrictions.

The Australian Competition and Consumer Commission, which is responsible for providing advice to the MDBA about the trading rules, should be asked to conduct a comprehensive review of the rules in time for its findings to inform the MDBA's upcoming review of the Basin Plan.

The Australian Government must take greater responsibility for implementing the Basin Plan

The Basin Plan is a significant, long term environmental reform. It has been described as 'one of Australia's most ambitious and complex reforms'. And while there is considerable support for the Basin Plan – it is considered central to securing a healthy and sustainable river system – and real progress has been made – it will not be implemented on time or on budget. Delivery delays reduce the environmental outcomes of the Basin Plan and Basin communities continue to face uncertainty.

The Australian Government's announcement of a new agreement to implement the Basin Plan, while including necessary timeframe extensions, does not address all the factors that have contributed to the lack of progress across the range of projects. Escalating costs, across both water recovery and the supply projects, also means resetting the balance will cost taxpayers considerably more than originally expected.

The key to protecting public investment in the Basin Plan, achieving environmental outcomes and providing Basin communities with greater clarity about their futures, is for the Australian Government to be more accountable for its funding decisions on the supply, constraints easing and toolkits projects during the next phase of implementation.

With an almost certain shortfall against the supply measures offset, the Australian Government also needs to start working on a dedicated water recovery program to finalise bridging the gap. Undertaking any purchases in a well-prepared, staged way is necessary to help minimise market disruption and negative socio-economic impacts on Basin communities. Future water recovery should occur alongside a commitment from Basin governments to assist communities, where warranted, to transition to a future with less available water. Adjustment assistance should build on the evidence about what programs work and complement existing regional development strategies.

Outstanding water resource plans must be a priority for the New South Wales Government. And crucially, all Basin governments must materially improve how they work, partner and share decision-making with Aboriginal and Torres Strait Islander people, not only on water resource plans, but a range of other Basin Plan matters. Changes are also needed to improve how the Basin Plan adapts over time, including to new knowledge, climate change and contemporary views of Basin communities and the wider Australian community.

Findings and recommendations

Chapter 2. Resetting the balance



Interim finding 2.1

Resetting the balance has slowed because of weak governance in a changing water market

Resetting the balance in the Basin has slowed since 2018 and will not be completed by the original deadline of July 2024. Limited progress has been made toward environmental water recovery targets, including under the additional 450 GL/y efficiency measures program. This is largely because of government policy decisions, alongside rapid growth in water entitlement prices.

Key supply projects will not be completed on time. Accountability for implementing the supply projects is unclear, and Commonwealth funding agreements have failed to drive effective project implementation by Basin state governments. Key projects are unviable, but Basin governments are not transparent about the need to rescope or withdraw these projects, or the implications of failing to deliver projects on time.

These delays have substantially increased the financial costs of meeting Basin Plan water recovery targets, prolonged the uncertainty Basin communities face, and reduced the potential environmental outcomes of the investment in the Plan.



Interim finding 2.2

Past program design has not suited the complexity of constraints-easing projects

Constraints-easing projects have progressed slowly, with complex property-level modelling and extensive landholder engagement needed to identify and manage the impacts of higher flow rates. Including constraints in the supply measure package has led to a focus on the water recovery offset, rather than the environmental and operational benefits of easing constraints.



Interim finding 2.3

Slow progress on the northern Basin toolkit reflects unclear accountability for delivering program outcomes

Delays implementing the northern Basin toolkit measures are a result of inadequate accountability for delivery, as well as a lack of oversight and review of the measures. Public information about project progress is sparse, and there is no framework in place to monitor the relative environmental merits of these projects as they progress, or demonstrate their outcomes once implemented.



Interim finding 2.4

The 605 GL/y supply measure offset is unlikely to be delivered by December 2026

The 605 GL/y supply measure offset is unlikely to be delivered in full by December 2026 because:

- key projects, including the Menindee Lakes project, will not be delivered as designed
- constraints-easing projects cannot be completed in full by December 2026 (which may also limit the offset achieved by other supply measures)
- there are unlikely to be enough new supply projects that are implementable by December 2026, represent value for money and can make a substantial contribution to the water recovery offset.

A significant water recovery shortfall in the southern Basin is likely in 2026.



Interim finding 2.5

The costs of achieving the enhanced environmental outcomes (schedule 5 of the Basin Plan) through water recovery have risen substantially

The budget available to recover the 450 GL/y will not be adequate to achieve the target even if water purchases are allowed. Recovering water towards the supply measure shortfall and 450 GL/y targets at the same time over a three-year period would risk significant disruption to water markets and Basin communities.

The 2026 Basin Plan review is an opportunity to assess how to deliver the enhanced environmental outcomes that the 450 GL/y target is designed to meet.



Interim recommendation 2.1

The Australian Government should be more transparent, and have greater authority, over decisions for supply, constraints-easing and northern Basin toolkit measures

The Australian Minister for Water should table in Parliament an annual report about the progress of all supply, constraints-easing and northern Basin toolkit projects. The reports should include:

- the status of the projects
- funding arrangements, including amounts expended to date
- reasons for deciding to continue, amend or withdraw project funding, including evidence on the cost-effectiveness of projects relative to other forms of recovery
- the expected shortfall against the water recovery offset (if any) and planned actions to make good.

The first report should be tabled by 30 June 2024. The *Water Act 2007* (Cth) should also be amended to require the Minister to table these reports.

The Basin Plan should be amended to require the Basin Officials Committee to notify the Murray–Darling Basin Authority of material changes to supply measures within three months of those changes occurring.

The Basin Plan should also be amended to require the Australian Minister for Water to withdraw a Commonwealth-funded supply measure if the Minister considers that the measure will not enter into operation by the deadline in s. 7.12(6) of the Basin Plan.

These amendments to the Water Act and Basin Plan should be made as soon as possible.



Interim recommendation 2.2

Reset and extend implementation of constraints-easing projects

Basin governments should remove southern Basin constraints-easing projects from the supply measure package.

The Murray–Darling Basin Authority should develop an implementation roadmap that includes:

- pathways to incremental improvements in flow rates in each river, including evidence on the benefits of gradual increases in flow rates
- a process to provide procedural fairness to affected landholders
- a sequence for constraints-easing projects that prioritises the major tributaries prior to the River Murray.

Subject to making meaningful progress on incremental constraints easing, the Australian Government should assess the costs alongside the environmental and operational outcomes of further constraints easing, and consider allocating additional Water for the Environment Special Account funding towards constraints easing.



Interim recommendation 2.3

Implement an assurance mechanism for the northern Basin toolkit

The Australian Government should implement a monitoring framework, together with public reporting, to provide assurance of environmental outcomes for completed northern Basin toolkit projects. As part of the 2026 Basin Plan review, the Murray–Darling Basin Authority should stocktake the outcomes of the northern Basin toolkit projects along similar lines to the Sustainable Diversion Limit Adjustment Mechanism reconciliation.



Interim recommendation 2.4

Develop a renewed approach to water recovery

The Australian Government should develop a renewed approach to water recovery to manage the risk of a supply measure shortfall.

This approach should consider all water recovery options, including voluntary water purchases. However, purchasing should be undertaken gradually, to avoid driving rapid water market and community adjustment, and aligned with irrigation network rationalisation where necessary to avoid impacts on irrigation network viability.

The Australian Government should update its water recovery strategy so it is clear how this renewed water recovery program will proceed. The strategy should outline:

- the sequencing of different water recovery targets, based on the progress of supply and constraints measure implementation
- how different water recovery options will be used, based on the availability of projects, their cost-effectiveness and likely socioeconomic impact
- when and how community adjustment programs will be implemented, based on socioeconomic monitoring
- requirements for monitoring, evaluation, reporting and improvement on program design.

**Information request 2.1**

The Commission is considering the merits of establishing a new corporate Commonwealth entity to address the anticipated water recovery shortfall.

The independent entity would initially adopt the existing Australian Government responsibility for water recovery, with a commercial approach to program delivery in closer partnership with Basin entitlement holders and irrigation networks. It would operate at arm's length from government and be in place for a fixed time period.

The Commission invites views on the merits and the design of the entity, including:

1. the likely strengths and weaknesses of a government-owned corporate entity compared to current arrangements
2. the role of the Ministerial Council in providing high-level direction to the entity
3. the scope of its functions, including whether it should have a role implementing supply, constraints-easing and toolkit measures
4. the entity's guiding principles, such as ensuring value for money and minimising community impacts from water recovery.

Chapter 3. Environmental water planning and management

**Interim recommendation 3.1****Improving the effectiveness of the Basin-Wide Environmental Watering Strategy**

The Murray–Darling Basin Authority's next update to the Basin-Wide Environmental Watering Strategy should include:

- an objective that environmental watering should seek to contribute to social or cultural environmental outcomes (where compatible with environmental outcomes)
- First Nations peoples' objectives and outcomes, under all water availability scenarios, for shared benefits from environmental water use (where compatible with environmental objectives) at the Basin-wide scale
- clear articulation, under all water availability scenarios, of the relative priority of key Basin environmental assets to achieving the overall environmental objectives of the Basin Plan and the expected outcomes set out in the strategy
- clear guidance, under all water availability scenarios, on the priority for achieving flow connectivity at the system scale relative to watering within a water resource plan area
- risks to achieving environmental objectives, in a changing and more variable climate.

Over the longer-term, a framework for the coordination of environmental water management with natural resource management should be developed by the Murray–Darling Basin Authority and Basin state governments and included in the Basin-Wide Environmental Watering Strategy.



Interim recommendation 3.2
The adaptive management of long-term watering plans

In the next iterations of long-term watering plans, Basin state governments should include:

- First Nations peoples' objectives and outcomes under all water availability scenarios for shared benefits from environmental water use (where compatible with environmental objectives) for each water resource plan area
- planning and management actions to integrate the management of environmental water with natural resource management (such as habitat restoration or weed and pest control).



Interim recommendation 3.3
Basin annual environmental watering priorities require review

As part of the 2026 review of the Basin Plan, the Murray–Darling Basin Authority should assess the value of Basin annual environmental watering priorities and whether the Basin Plan requirements for these annual priorities should be amended or removed.



Interim recommendation 3.4
Delivering shared benefits from the use of environmental water

First Nations peoples' objectives and outcomes for providing shared benefits from environmental water use for inclusion in the Basin-Wide Environmental Watering Strategy and long-term watering plans should be developed by First Nations people through genuine, resourced partnerships with the Murray–Darling Basin Authority (for the Basin-Wide Environmental Watering Strategy) and Basin state governments (for long-term watering plans), consistent with commitments made by all governments under the National Agreement on Closing the Gap.

Chapter 4. Water resource plans



Interim finding 4.1
Without water resource plans, the Murray–Darling Basin Plan cannot be fully implemented

Most New South Wales water resource plans remain outstanding more than 10 years after the Basin Plan was put in place and almost four years after an already extended deadline. Without all water resource plans in place across the Basin, the Murray–Darling Basin Plan cannot be fully implemented or properly enforced. With 13 outstanding plans, there is a greater risk of over extraction in New South Wales.

**Interim finding 4.2****Preparing and assessing water resource plans is unnecessarily difficult**

The process of preparing and assessing water resource plans is onerous and time-consuming. This is in part because the requirements in the Basin Plan are unnecessarily complex and prescriptive.

**Interim recommendation 4.1****Simplify requirements for water resource plans**

In its 2026 Basin Plan Review, the Murray–Darling Basin Authority should consider how the requirements for water resource plans could be simplified and whether some requirements should be removed or made less prescriptive and more focused on outcomes. The principle of subsidiarity should be a guiding consideration in this review, given many of the arrangements included in the plans should remain largely the responsibility of state governments, with the implementation of sustainable diversion limits being a core purpose of water resource plans.

**Interim recommendation 4.2****A risk-based approach to amending water resource plans**

The *Water Act 2007* (Cth) should be amended to allow the accreditation of amendments to water resource plans to be fast-tracked, where those amendments are low-risk and clearly comply with the Basin Plan.

**Information request 4.1****Reporting on compliance and other arrangements**

The Commission invites comments on whether Basin state governments should continue to be required to report on compliance with their water resource plans (Murray–Darling Basin Plan, Schedule 12, Matter 19), and on any other ways the reporting arrangements for water resource plans should be improved.

Chapter 5. The values of First Nations people



Interim recommendation 5.1

Strengthen the roles of Aboriginal and Torres Strait Islander people in the Basin Plan

In line with the priority reforms committed to under the National Agreement on Closing the Gap, Basin state and territory governments should:

- publish the input and advice received from Aboriginal and Torres Strait Islander people and organisations on draft water resource plans
- publicly report on how the advice is considered, actioned and reflected in finalised water resource plans.

In addition, the Murray–Darling Basin Authority should:

- in partnership with Aboriginal and Torres Strait Islander people, develop a framework for monitoring and reporting on how Basin governments engage with Aboriginal and Torres Strait Islander people on Basin Plan matters. This should be in place before the 2025 evaluation of the Basin Plan
- annually report on Aboriginal and Torres Strait Islander engagement activities undertaken by Basin governments that relate to water management in the Murray–Darling Basin
- consider – in partnership with Aboriginal and Torres Strait Islander people – the merits of establishing a new Basin-wide body to represent Aboriginal and Torres Strait Islander people’s water interests in Basin Plan decision-making.

All Basin governments should:

- actively pursue opportunities to work in formal partnership with Aboriginal and Torres Strait Islander people on the implementation of, and shared decision-making about, the Basin Plan and provide funding and capacity strengthening support to these partnerships
- work in partnership to develop, then make public, their Aboriginal and Torres Strait Islander engagement intentions early, including for the upcoming 2025 Basin Plan Evaluation and 2026 Basin Plan Review.



Interim finding 5.1

Limited progress made on the Aboriginal Water Entitlements Program

The Australian Government has made little progress on the Aboriginal Water Entitlements Program since the program was announced in 2018. Given the increase in water entitlement prices over that period, the \$40 million program budget will buy less water today than it would have in 2018.

An implementation timeline published by the Australian Government Department of Climate Change, Energy, the Environment and Water would provide participants with greater certainty about when and how the program will be implemented across the Basin.

Chapter 6. Bringing new knowledge into the Basin Plan framework



Information request 6.1

Embedding climate change science into the Basin Plan framework

The Commission is considering whether the *Water Act 2007* (Cth) places sufficient emphasis on the application of climate change science to the development and implementation of the Basin Plan. For example, should section 21 of the *Water Act*, which is about the general basis on which the Plan is made and updated, be amended to make clear and explicit that the best available science about the impact of climate change on water availability, including climate projections, is part of the scientific knowledge on which the Plan should be based?



Interim recommendation 6.1

Specific measures or targets for evaluating climate change resilience

The Murray–Darling Basin Authority should set out how it evaluates whether water-dependent ecosystems are resilient to climate change, including by specifying which targets are relevant to climate change resilience and how progress against these targets is monitored. When reviewing the Basin Plan in 2026, the Murray–Darling Basin Authority should also consider whether some of this information should be integrated into the Basin Plan.



Interim recommendation 6.2

Publishing material used for decisions

Government agencies should publish in regular scheduled reports the data, modelling outputs and government-commissioned research that informs their decisions about water management in the Basin. This should include any decisions related to resetting sustainable diversion limits.



Interim recommendation 6.3

Strategic coordination of knowledge generation and sharing activities

The Australian Government should establish a role for overseeing and coordinating knowledge generation and knowledge sharing across the Basin.

Chapter 7. Water quality and critical human water needs



Information request 7.1

Options to improve water quality and availability in the northern Basin

The Productivity Commission invites participants to comment on whether the Murray–Darling Basin Plan should do more to improve water quality and ensure critical human water needs are met in the northern Basin. What options should be considered by the Murray–Darling Basin Authority in the 2026 Basin Plan Review?

Chapter 8. Water trading rules



Interim recommendation 8.1

A comprehensive review of trading rules in the Basin Plan

The Murray–Darling Basin Authority (MDBA) should ask the Australian Competition and Consumer Commission (ACCC) to conduct a comprehensive review of the Basin Plan trading rules. The review should consider, among other things, how unnecessary trade restrictions should be identified and removed.

The *Water Act 2007* (Cth) should be amended to enable the ACCC to provide advice to the MDBA about the trading rules on its own initiative. The ACCC should notify the MDBA before preparing any such advice.

Chapter 9. Governance and engagement



Interim recommendation 9.1

Extending oversight of intergovernmental funding agreements relevant to Basin Plan implementation

The Australian Minister for Water should prescribe by regulation the additional intergovernmental funding agreements that the Inspector-General of Water Compliance should oversee.

The Australian Government Department of Climate Change, Energy, the Environment and Water should consult with Basin state governments, the Inspector-General of Water Compliance and other interested parties to determine which new and existing agreements should be prescribed and make public the rationale for including or excluding each agreement in the Inspector-General of Water Compliance's remit.

**Interim finding 9.1****Information about Basin Plan funding, processes and outcomes can be difficult to access**

Information about Murray–Darling Basin water management is fragmented and difficult to navigate. This can cause confusion about which agency to go to for information. It can also mean that information reported sometimes differs across agencies. This makes it difficult for communities to understand and engage with water policy and practice. Inconsistencies in information can undermine public confidence and trust in Basin institutions and instruments.

**Interim recommendation 9.2****Improving the transparency of Basin Officials Committee**

The Basin Officials Committee (BOC) should be more transparent. The BOC should publish:

- meeting agendas, communiqués and information on meeting outcomes
- BOC decisions and the reasons for those decisions
- formal directions to BOC from the Ministerial Council
- information on BOC’s strategic priorities, governance practices and sub-committees.

The *Water Act 2007* (Cth) should be amended to enable the appointment of an independent Chair to the BOC.

**Interim finding 9.2****Engagement by government agencies on Basin Plan matters is not well coordinated**

There are many Australian Government and Basin state agencies that engage with the community on matters related to the Murray–Darling Basin Plan. These engagement processes are generally not well coordinated, which can frustrate participants. More joined-up engagement efforts could reduce costs for participants and governments and allow for a more holistic consideration of issues.

**Interim finding 9.3****Well defined local outreach can be an effective engagement approach**

Local, place-based engagement mechanisms can be an effective way of ensuring community views are sought, responded to, and considered by decision-makers. A permanent local presence in communities can help foster community understanding of water policy processes and build relationships and trust. The Commonwealth Environmental Water Holder Local Engagement Officer model provides a good template for effective local engagement.



Interim recommendation 9.3

Strengthening the community voice in Basin decision-making

The Basin Community Committee should have a standing agenda item at Basin Officials Committee meetings to provide input and advice on matters from a community perspective. The Basin Officials Committee should publicly report on how this input and advice has been considered and has influenced decision-making.