

Murray-Darling Basin Plan: Five-year assessment

Productivity Commission
Draft Report
Overview & Recommendations

August 2018

This is a draft report prepared for further public consultation and input. The Commission will finalise its report after these processes have taken place.

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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).

Opportunity for further comment

We invite examination of this draft inquiry report and comment on it by **written submission** to the Productivity Commission, preferably in electronic format, by **10 October 2018** and/or by attending a public hearing. Further information on how to provide a submission is included on the inquiry website: http://www.pc.gov.au/inquiries/current/basin-plan/make-submission#lodge.

The final report will be prepared after further submissions have been received and public hearings have been held and will be forwarded to the Australian Government by the 31 December 2018.

Public hearing dates and venues

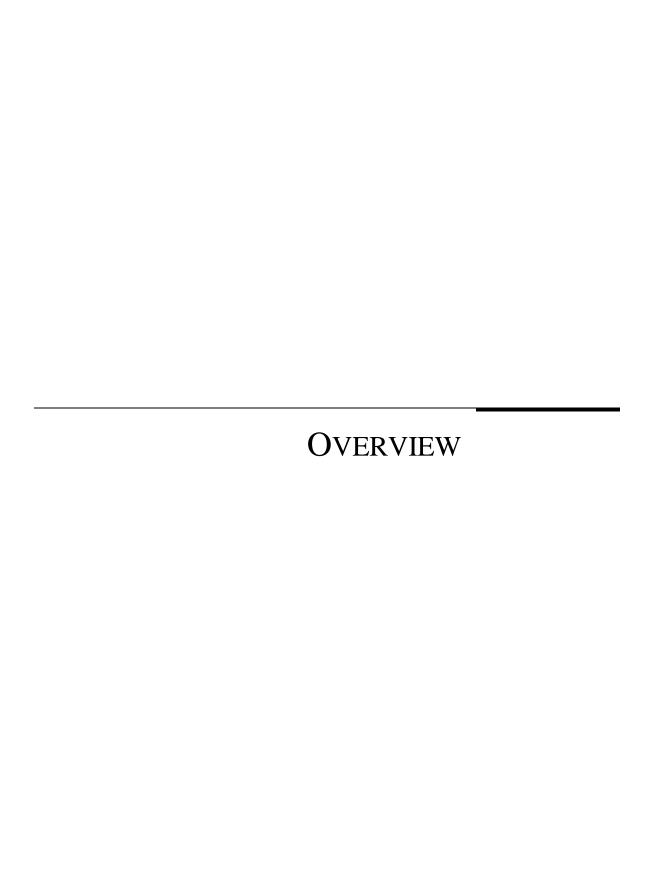
Location	Date	Venue	
Murray Bridge (SA) Monday 15 October 20			
Shepparton (Vic)	Wednesday 17 October 2018	All venues to be confirmed and they will appear on our website	
Goondiwindi (Qld)	Monday 22 October 2018		
Sydney (NSW)	Wednesday 24 October 2018		
Dubbo (NSW)	Thursday 25 October 2018		
Canberra (ACT)	Friday 26 October 2018		

If you wish to speak at a public hearing please register on the Inquiry's webpage at http://www.pc.gov.au/inquiries/current/basin-plan/public-hearings.

Closer to the time of the hearings, further details will be provided on the inquiry website.

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Key points

- The Basin Plan is a significant step change in resetting the balance between environmental and consumptive use of water and establishing a new sustainable water management system.
- The Plan is a major investment \$13 billion in total and \$4.9 billion is still to be spent by 2024.
- · Significant practical progress has been made.
 - Recovery of water entitlements to bridge the gap between poorly-managed historical use and the new Sustainable Diversion Limits is almost complete.
 - New management arrangements, including those for managing both environmental watering and water trading are in place and are working well.
- An immediate improvement is nevertheless required in two important elements of the Plan.
 - The development and accreditation of Water Resource Plans is behind schedule. Basin Governments should agree to extend the 2019 deadline where there is a material risk to the quality of plans.
 - Basin Governments should substantially revise the Basin Plan Evaluation Framework and develop a monitoring strategy. This will enable the impacts of the Plan to be evaluated and communicated effectively in 2020 and 2025, and the Plan to be reviewed in 2026.
- In the future, there will also be major challenges and risks to implementing the measures to adjust Sustainable Diversion Limits by 2024.
 - The agreed package of supply measures (including constraints easing projects) is ambitious. If key projects fail, environmental benefits will be delayed and the additional costs to tax-payers are potentially in the order of \$480 million. Basin Governments should establish sound governance and funding arrangements and develop an integrated plan to manage delivery of the projects. The current timeframe is unrealistic and should be extended.
 - Projects to ease or remove delivery constraints and achieve enhanced environmental outcomes are unlikely to be completed by 2024. The Australian Government consequently risks bringing forward significant expenditure for an asset that cannot be effectively used for many years. It should instead align additional water recovery with progress on easing constraints and include strategies to mitigate socioeconomic impacts.
- These complex challenges are made more difficult because of the way Basin Governments have developed and agreed to the projects. The process has lacked transparency and candour with stakeholders who are concerned about potential impacts.
- There are major shortcomings in the current institutional and governance arrangements and these pose a significant risk to successful implementation. Now is the time for Basin Governments to do some heavy lifting and provide strategic direction.
 - Basin Governments should take joint responsibility for leading implementation, not leave it to the Murray-Darling Basin Authority (MDBA).
 - The Basin Officials Committee should be assigned responsibility for managing the significant risks to successful implementation, including the integrated program of projects.
- The MDBA has two main roles: supporting Basin Governments to implement the Plan; and
 ensuring compliance with the Plan (in its role as regulator). These roles are conflicted and the
 conflicts will intensify in the next five years.
 - The MDBA should be separated into two institutions the Murray-Darling Basin Corporation and the Basin Plan Regulator.
- This is an opportunity to make important 'stitch in time' changes to ensure an effective Plan.
 Failure will be costly for the environment and tax-payers and undermine confidence that the significant investment in the Basin Plan has been worthwhile.

Overview

1 The Basin Plan and the Commission's approach to assessing implementation

The Basin Plan is a step change in the management of the Murray-Darling Basin (the Basin) (box 1). It is part of a comprehensive effort by the Australian and Basin State Governments ¹ to reset the balance between environmental and consumptive use of water across the Basin and establish a long-term, sustainable water management system.

The Plan sets environmental and other objectives for the Basin and establishes new, lower sustainable extraction limits to achieve them. It outlines key actions, decision-making processes and timeframes that Governments are to adopt to implement the Plan.

The development of the Basin Plan was a lengthy and an often-contested process, involving much negotiation and compromise before it was finalised and became law in November 2012. This involved a series of substantial trade-offs between balancing the environmental benefits across the Basin and the socioeconomic impacts on industries and regional communities of a permanent reduction in water available for irrigation.

Governments are to have largely established the new management arrangements embedded in the Plan by 30 June 2019. The activities to reset the balance between the environment and consumptive use are to be fully implemented by 30 June 2024.

The Productivity Commission has responsibility for assessing the effectiveness of implementation of the Basin Plan and associated Water Resource Plans (WRPs) every five years. This function was included in the *Water Act* 2007 (Cwlth) to ensure there was a regular independent review. This type of comprehensive review is critical to ensure public confidence in the implementation of the Basin Plan. For these reasons, this review is different to the typical Productivity Commission inquiry.

For this assessment, the Commission has looked at:

- how the actions of Governments to implement the Basin Plan are tracking against the set timeframes
- the extent to which management arrangements will deliver on the objectives of the Plan and enable its impacts and outcomes to be evaluated
- whether actions to implement the Plan have been effective and efficient.

¹ The Basin States are New South Wales, Victoria, Queensland, South Australia, and the Australian Capital Territory.

Box 1 The Murray-Darling Basin and the Basin Plan

The Murray-Darling Basin

The Basin covers over 1 million square kilometres, including significant areas of inland New South Wales, Victoria, and the ACT, and parts of Queensland and South Australia. The Basin and its water resources support:

- the cultural, social, environmental, spiritual and economic needs of more than 40 Indigenous Nations whose traditional lands fall within the Basin
- over 30 000 wetlands, 100 of which are recognised as nationally important due to environmental, heritage or cultural significance
- about 41 per cent of the total gross value of Australia's agricultural production, including 46 per cent (\$7 billion) of the gross value of national irrigated agriculture
- the supply of drinking water for approximately 2.1 million people that reside within it, as well as a further 1.3 million people outside of the Basin.

The Basin Plan

The 2012 Basin Plan is the legal framework to reset the balance of water use in the Basin. It sets environmental and other objectives for the Basin and establishes new, lower sustainable extraction limits to achieve them. It also outlines the key actions, processes and timeframes that Governments are to adopt to implement the Plan.

Responsibilities

The Basin Plan is an instrument of the Australian Parliament. Basin Governments comprising the Australian Government and the State Governments of New South Wales, Victoria, Queensland and South Australia and the Government of the Australian Capital Territory (known as the Basin States) have agreed to implement the Plan.

The Australian Government has responsibility for water recovery programs, and the management of this water (by the Commonwealth Environmental Water Holder) for environmental purposes.

As constitutional responsibility for water resource management ultimately resides with them, the Basin States have a key role to ensure that their own State-based arrangements reflect and are consistent with the Basin Plan.

Basin Governments agreed that the Murray-Darling Basin Authority (an independent Australian Government statutory authority) would be responsible for preparing, implementing, monitoring and enforcing the Basin Plan.

Funding

Successive Australian Governments have made substantial investments to implement the Plan. \$13 billion has been ear-marked for reform, including:

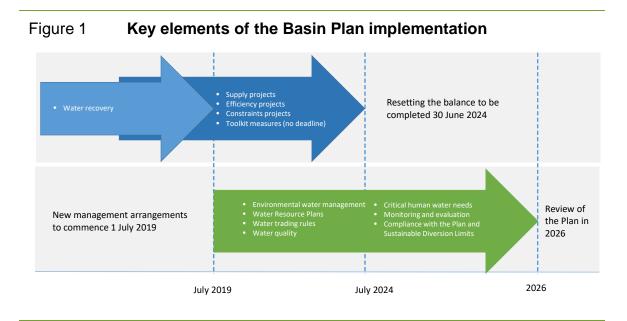
- \$3.1 billion to purchase water entitlements for the environment
- \$4.8 billion for investment in modernised irrigation infrastructure, with a share of water savings from most projects transferred to the environment
- \$1.0 billion for supply measures (box 2).

The Australian Government later committed a further \$1.775 billion over ten years to a program to pursue enhanced environmental outcomes, by recovering an additional 450 GL (box 2).

The Commission's task in this review does not extend to examining the processes for setting the sustainable balance and associated targets in the Plan or measuring the impacts and outcomes of the Plan. However, it does examine the preparedness of Basin Governments and their institutions to undertake these activities effectively in the future.

2 Key elements to implementing the Basin Plan

The Basin Plan sets out a number of key elements that are required for implementation. Other elements, while not specified in the Plan (such as water recovery programs) are also necessary for successful implementation. Key implementation elements of the Plan and their timing is outlined in figure 1.



Resetting the balance by 30 June 2019

Sustainable Diversion Limits (SDLs) define how much water consumptive users can take from rivers and groundwater (the remainder is dedicated to the environment). SDLs are the core element of the Plan.

The SDLs in the 2012 Basin Plan required recovery of 2750 GL from consumptive use by 30 June 2019. To achieve this, the Australian Government committed to purchasing water entitlements directly and to investing in irrigation infrastructure.²

² The Australian Government committed to *bridge the gap* between the Baseline Diversion Limits and the SDLs by recovering water in a way that ensured that water entitlements would not be eroded or compulsorily acquired.

The Plan allows for SDLs (and water recovery targets) to be adjusted under certain circumstances, prior to them taking effect on 1 July 2019. In the northern Basin, these adjustments are to account for new information. In the southern Basin, SDLs can be changed by projects to achieve environmental outcomes with less water (supply and constraints measures) or through projects which aim to achieve enhanced environmental outcomes through the recovery of additional water for the environment (efficiency and constraints measures) (box 2).

A package of supply measures (including measures to ease constraints) equivalent to 605 GL in water recovery has been approved and must be implemented by 30 June 2024. If this is not achieved, Governments may need to make up the shortfall with further water recovery. Basin Governments are required to notify the MDBA of the volume of water recovered through efficiency projects by the end of 2023. All recovered water is to be transferred to the Commonwealth Environmental Water Holder (CEWH) by 30 June 2024.

Basin Governments have also agreed to implement the 'Toolkit' measures recommended by the MDBA in the Northern Basin Review. These Toolkit measures aim to target water recovery, protect environmental flows, improve the coordination and delivery of environmental water, ease constraints to environmental water delivery in the Gwydir River and construct works to improve fish passage.

The Australian Government (with the agreement of the Australian Parliament) has recently made two amendments to the Basin Plan reflecting these adjustments to SDLs.

New management arrangements are to be in place by 1 July 2019

Implementing the Basin Plan also involves establishing a new and ongoing management framework, which includes the following.

- **Environmental water management** activities whereby environmental water holders work together to deploy water to achieve the environmental objectives.
- Basin States embedding key parts of the Plan in their normal water planning and management processes through **Water Resource Plans**, with specific provisions relating to **water quality** and **critical human water needs**.
- Measures to establish consistent Basin-wide water trading rules for the trading and transfer of surface water and groundwater access rights, irrigation rights and water delivery rights; as well as consideration of third-party impacts of trading and provision of information to improve the operation of the market.³
- A whole-of-Basin framework for **monitoring and evaluating** the impact and effectiveness of the Basin Plan, which includes public reporting requirements.
- A role for the MDBA to enforce **compliance** with the Basin Plan, noting that Basin States are to enforce compliance with their water take laws.

-

Most of the trading rules became effective in 2014 but Basin States have until July 2019 to ensure that their trade restrictions are consistent with the Plan.

Box 2 Adjustments to Sustainable Diversion Limits

SDL Adjustment Mechanism

In the southern Basin, the Plan allows for adjustments to surface water SDLs through:

- **Supply measures**, which allow for achievement of equivalent environmental outcomes with a lesser volume of water. Examples include using pumping stations, regulators and levees to deliver water to lakes and floodplains without creating overbank flooding.
- Constraints easing, to overcome some of the impediments to delivery of water down the system. They can include changes to physical features such as crossings and bridges, as well as negotiating easements where private land is flooded.
- Efficiency measures, to achieve enhanced environmental outcomes above those achievable with 2750 GL by recovering an additional 450 GL for the environment with neutral or improved socioeconomic outcomes. Examples of these projects include works to reduce on-farm water losses from irrigation, with a share of the water savings provided to the Australian Government as an entitlement. The enhanced environmental outcomes are in the southern Basin, and are achieved by watering larger areas of floodplains, higher stream flows, and meeting specific objectives for the Coorong, Lower Lakes and Murray Mouth in South Australia. Delivering these enhanced environmental outcomes is also dependent on easing water delivery constraints.

The aim of supply measures was to test whether environmental outcomes could be achieved with less water, thereby reducing the socioeconomic impacts on communities in the Basin. The inclusion of efficiency measures in the southern Basin reflects the opportunity to improve environmental outcomes (particularly in the Lower Murray) by recovering additional water for the environment.

Northern Basin Review

When the Plan was developed, the MDBA recognised that it required additional information to inform the setting of the SDLs in the northern Basin. As a result, Governments agreed that the MDBA would undertake a review into the northern Basin, which was completed by the MDBA in November 2016.

The key recommendation arising from this review was to reduce the water recovery target in the northern Basin from 390 GL to 320 GL on the provision that the Australian, Queensland and New South Wales Governments implement Toolkit measures to ensure effective management of environmental water in the north.

3 Significant progress has been made

Governments have made significant progress implementing elements of the plan, particularly in recovering water for the environment and establishing the planning and management arrangements to use this water.

Water recovery to bridge the gap is largely complete

The Australian Government committed to *bridge the gap* between historical levels of water use and the new SDLs of the Basin Plan. This is almost complete, with 1995.8 GL⁴ of the adjusted target of 2075 GL delivered to environmental water holders. The Australian Government recovered almost 60 per cent of this water purchasing from willing sellers. Most of the remainder was recovered through programs that modernise water infrastructure and return a share of water savings to the Australian Government.

The main outstanding issue for resetting the balance is ensuring that the approved package of supply projects to offset the overall water recovery target by 605 GL are fully operational by 1 July 2024. If this is not achieved the MDBA may re-estimate the size of the SDL adjustment. If revised downwards, Basin Governments may need to recover more water to meet the SDLs.

New management arrangements for many elements are in place

Basin Governments have put in place the key foundations of the Basin Plan's new management arrangements and a number of these are working well.

- The Basin Plan's Environmental Management Framework formally outlines processes
 to coordinate the planning, prioritisation and use of environmental water. Over 750
 environmental watering events have occurred over the past five years, targeted at specific
 environmental outcomes linked to the long-term objectives of the Plan. There is already
 some evidence of improved ecological outcomes at the local and system scale.
- New rules for providing critical human water needs in the River Murray are established, with stakeholders confident that these rules will ensure these needs can be met in extremely dry times.
- Basin Plan salinity targets are integrated into the Basin salinity management framework and have been consistently met for most areas.
- Basin States have improved their formal processes for engagement with Traditional Owners as part of WRP development, in particular they are taking a nation-by-nation approach to consultation.
- New requirements to improve water market information and market confidence (such as
 protocols to manage market sensitive information) are in place. The Basin Plan trading
 rules also include a mechanism to validate or remove restrictions on trade. Although this
 mechanism has not been applied extensively yet, it has the potential to improve the
 efficiency of water markets.

A further 121.7 GL is under contract to be delivered by 1 July 2019.

4 In other areas success is less certain

Some elements of the Basin Plan implementation have progressed more slowly than expected or have only just commenced.

Pre-requisite policy measures

The outcomes of the Basin Plan are based on an assumption that Basin States will implement pre-requisite policy measures (PPMs) to enable the efficient use of environmental water. PPMs provide the capacity to credit environmental return flows for downstream environmental use (rather than being used to meet the demands of other users) and allow the call of held environmental water from a specific storage to top up or 'piggy-back' on unregulated flow events. The PPMs were assumed in the original modelling used to set SDLs and were also incorporated in the environmental equivalence methodology that underpins supply measures and the associated adjustment to SDLs. Without PPMs, a water recovery target of more than 4000 GL would be required to achieve the outcomes of the Basin Plan. If Basin States do not implement PPMs by 1 July 2019, the MDBA may recalculate SDLs.

There is some risk that PPMs will not be implemented by 30 June 2019.

Water Resource Plans

The development and accreditation of WRPs is behind schedule with a number of key issues still to be finalised. Of the 33 WRPs that must undergo accreditation, 20 are in the early stages, 11 are in draft form, one is in the accreditation process and just one has been accredited.⁵

In some WRP areas, significant rules changes are needed to meet Basin Plan requirements and these changes could impact on the reliability and use of entitlements. In these areas, meaningful consultation is required to resolve these issues and there is a concern that not enough time is left to do this well. There is a risk that old rules will be rolled into the new arrangements, or new rules will be rushed and ill specified, resulting in WRPs being ineffective in addressing the issues. This risk is highest for New South Wales, given the number of outstanding WRPs and the magnitude of proposed rule changes in some plans.

Important technical work is still being undertaken by the Basin States and the MDBA to enable the SDLs to be fully operational by 1 July 2019. This includes work to enable SDLs to be accounted for, Basin States to report on the implementation of SDLs and the MDBA to assess compliance.

⁵ Based on the most recent quarterly report on progress, released in May 2018.

Supply measures

Basin States are required to implement supply measures in full by 2024. There were delays in the development of the package and this has compressed the timeframe for implementation. Significant challenges lie ahead.

- Basin Governments need to resolve governance, funding and managing risk before these projects can commence, straining the timeframe even further.
- The supply package relies heavily on six highly complex and interdependent projects that are still in the concept design stage of development (box 3). Past experience with similar projects shows that they require detailed consultation and take many years to plan and implement.
- There is a degree of dissatisfaction and mistrust in parts of the community, including Traditional Owners, arising from a lack of transparency and consultation.

The 2024 deadline for supply projects is highly ambitious, if not unrealistic.

Efficiency measures

Progress on implementing efficiency measures provides little confidence that the enhanced environmental outcomes of the Basin Plan will be achievable by 2024.

- Basin Governments have not yet agreed on a work plan for the efficiency measures to recover the additional 450 GL by 2024. The approach to meeting the Basin Plan's requirement for neutral or improved socioeconomic outcomes is still being contested and this is affecting program design and delaying progress.
- The proposed constraints projects are unlikely to be fully operational by 2024 and may not achieve the required flow rates at key sites to deliver the enhanced environmental outcomes.
- There has been no update to the modelling to estimate what environmental benefits can be realistically achieved, given proposed constraints easing projects are unlikely to achieve the anticipated flow rates at key sites or be fully operational by 2024.
- The current water recovery program is being rolled out Basin-wide, and risks recovering water in the northern Basin that is unlikely to be useful to achieving the enhanced environmental outcomes in the southern Basin.

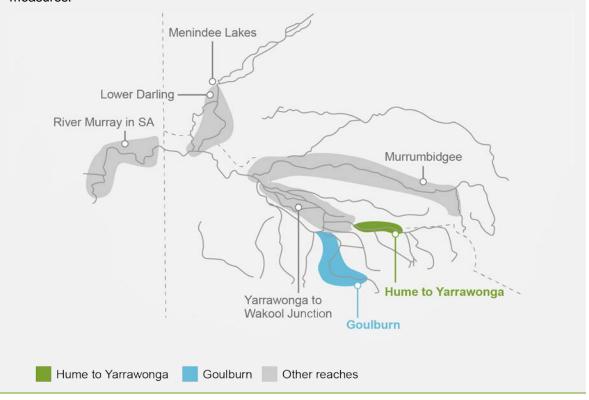
There is a material risk that recovering the additional 450 GL could be significantly more expensive than anticipated. The benefits and costs of the program as a whole have not been assessed, and there is no requirement to do so.

Box 3 Challenging components of the supply package

The supply package relies heavily on six highly complex and interdependent projects, which could account for between one-third and half of the 605 GL expected water recovery offset. These key projects are still in the concept design phase.

- Menindee Lakes a project that aims to improve the operation of the Lakes to reduce evaporative losses. It involves changes to infrastructure and operational arrangements and easing constraints in the Lower Darling.
- Constraints four projects that aim to increase the size of flows that can be delivered down the river system. This involves removing physical barriers (such as increasing the height of bridges), building levees to protect land from inundation and negotiating and signing agreements with landholders whose land is flooded by the higher flows.
- Hydro-cues a project that aims to increase the ability of environmental water holders to
 coordinate environmental water delivery with increases in natural flows. It involves operational
 rules changes and system enhancements to achieve in-channel, floodplain and wetland
 environmental outcomes. It is dependent on easing constraints.

Easing constraints in the supply package will involve negotiations with over 3000 landholders across five reaches (figure below). In the early 2000s, negotiations to secure easements for the right to release 25 000 ML/day from Hume Dam (green in map below) took almost eight years and involved negotiations with 103 landholders from Hume to Yarrawonga. Easing constraints in the Goulburn (blue in map below) is not required for supply measures, but is for efficiency measures.



Northern Basin Toolkit

The Northern Basin Toolkit was a key recommendation arising from the Northern Basin Review (box 2). Although recommended by the MDBA in 2016, the amendment to the Plan was not confirmed by the Australian Parliament until mid-2018. The details for implementing the Toolkit (including key milestones for implementation, funding arrangements and program governance) are still to be settled by Basin Governments.

Monitoring and evaluation

Evaluating the outcomes of the Basin Plan is the responsibility of the MDBA. The current Basin-wide evaluation framework is not comprehensive and there is no clear strategy to coordinate the collection of information needed to monitor the outcomes of the Plan.

As a result, actions taken to monitor outcomes in the Basin are fragmented and inadequately integrated, and risk information gaps that will limit future evaluations of the Plan. This will impede the ability of Basin Governments to clearly communicate the outcomes of the Plan.

Summary of progress

Table 1 summarises progress made on implementing the Basin Plan. After five years of implementation, significant progress has been made in a number of elements. However, progress has been much slower than expected in a number of key areas.

Table 1 Progress towards implementing Basin Plan elements					
Element	On schedule	Risk to meeting its objectives	Nature of risks		
Resetting the balance					
Water recovery	\checkmark	Low			
Supply measures	*	High	Compressed timelines for implementation, with a range of issues to resolve. 2024 deadline is highly ambitious, if not unrealistic. No process for assessing whether individual projects in the supply package provide value for money. Risk to budget is hundreds of millions of dollars.		
Efficiency measures	*	High	The design of the efficiency measures program is contested. Enhanced environmental outcomes from additional water recovery require easing constraints, which is unlikely to meet timelines. Material risk that costs are significantly larger than anticipated.		
Northern Basin Toolkit	n/a	Medium	No firm deadlines for implementation. Not subject to same checks and balances as supply measures (such as oversight by the MDBA).		
New management arrangements					
Water Resource Plans (WRPs)	×	Medium	Behind schedule. Complex issues in some WRPs yet to be resolved.		
Critical human water needs	*	Low	River Murray arrangements robust. WRP provisions for other areas behind schedule.		
Water quality	×	Low	Salinity targets largely being met. WRP provisions behind schedule.		
Water trading rules	\checkmark	Low			
Environmental water planning and management (including pre-requisite policy measures)	✓	Medium	Failure to implement pre-requisite policy measures is a low likelihood, but high consequence risk. Other risks associated with environmental water planning and management are low.		
Reporting, monitoring, evaluation	*	Medium	Monitoring to inform evaluation has been fragmented and poorly coordinated. Limited evidence of effective forward planning.		
Compliance	ongoing	Low			

Note: A tick for on schedule means the element is progressing in line with agreed timelines. The level of risk assigned reflects the risk to achieving the objectives of the element, after taking into account actions to manage the risk. For example, while water take compliance is fundamental to achieving the outcomes of the Plan, Basin Governments have agreed on substantial changes that, when implemented, will provide greater confidence and assurance of compliance with water take rules.

5 Where does this leave us?

The next five years will be challenging

Over the next five years, the focus will shift from negotiating key details to implementation. The task ahead includes:

- implementing the supply and efficiency measures. This is particularly complex, and adequate time will be needed to plan, consult and obtain the necessary approvals
- embedding Basin Plan arrangements and ensuring compliance with them
- enhancing environmental watering efforts
- putting in place monitoring and evaluation arrangements to learn, adapt and review the outcomes of the Plan.

There is \$4.9 billion remaining and it is critical it is spent effectively.

The task ahead is challenging in its own right. However, it is made more difficult by the context in which Basin Governments will commence the next phase of implementation.

The implementation of supply measures is facing growing opposition in some of the affected communities. Some stakeholders are concerned that, if done poorly, implementation will impinge on their land or water property rights. Others are concerned that the equivalent environmental outcomes envisaged from these projects cannot be achieved, or that their local environmental values will be compromised to achieve broader Basin Plan objectives.

Some communities are increasingly sensitive to the socioeconomic impacts of the Plan. They are concerned about the potential impacts of further water recovery, including the additional 450 GL through efficiency measures.

For both supply and efficiency measures there is a lack of decisive direction-setting leadership and clarity about responsibility for what increasingly will be polarising activities in some communities.

An overwhelming number of participants to the inquiry indicated that stakeholder confidence has been rocked by concerns that some Basin States have been lax in ensuring compliance with water take rules. An unwillingness to demonstrate that water acquired for the environment can be protected from extraction further downstream, and allegations of fraud in water recovery programs have compounded these concerns and left stakeholders sceptical of the motivations of Basin Governments.

Much of the community unease is driven by the way Basin Governments have sought to negotiate and navigate their way through issues. Their approach has lacked transparency and candour. Examples of this include the absence of detailed information on the business cases that describe the SDL adjustment measures, and the absence of strategies to deal with relatively minor issues such as potential over-recovery.

More than most other policy issues, the management of the Basin is prone to poor credibility created by decades of States promoting their own interests in negotiations and a recent history of over-promise in commitments on the Plan.

A stitch in time to rebuild confidence

The passing of amendments to the Plan (accepting the package of supply measures and the Northern Basin Review) and an agreement by Basin Governments to address compliance concerns provide a more credible platform for change. Basin Governments now have an opportunity to demonstrate their commitment to jointly implement the Plan and work together to re-build public confidence.

Basin Governments should openly acknowledge the issues for the next phase of implementation and transparently deal with them. Denial or blame-shifting will compromise the quality of outcomes, lead to poor investment decisions and further erode community confidence.

The Commission, in crafting its draft recommendations, has taken the view that the best way to restore community confidence in water management in the Basin is to go back to the basics of good management. This means:

- there is clarity about roles and responsibilities, where responsibility is given to institutions who can best achieve the outcome in the long term
- there are effective processes for collaboration for implementation with all parties having a genuine commitment to shared goals and co-operative working arrangements
- there is transparency and clear accountability for decisions and actions, and the costs and benefits of decisions are clearly articulated
- there is meaningful community engagement, with stakeholders informing the design of the processes used by Governments to engage with them to enable their issues and concerns to be understood and properly considered by decision makers.
- there are adequate reporting, monitoring, evaluation and review processes in place, providing the information and opportunity to review decisions in the light of experience.

These are the principles the Commission has used when making draft recommendations. Our draft recommendations are forward-looking and are aimed at improving current arrangements to ensure that the Basin Plan is implemented effectively, that reforms are long-lasting, and that they have the confidence of the community.

There are three broad areas where the implementation of the Basin Plan needs to be improved.

Governance and leadership

Governance and leadership are important across all elements of Basin Plan implementation. The Plan is a joint responsibility of Basin Governments and they need to work together to implement it. A fundamental foundation of collaboration is a real commitment by the parties to the Plan and accepting accountability for implementing it. Co-operative working arrangements need to be reformed so that collaborative efforts are coordinated and effective.

Program design and delivery

Collaboration is a key issue for delivery of the supply measures, efficiency measures and the Toolkit measures. An immediate focus on design of these programs should be to establish clear roles and responsibilities and ensure that there is accountability for decision making. Transparency is required for confidence in the projects, and to allow for meaningful engagement with key stakeholders so that their issues and concerns can be taken into account.

Ensuring quality and the durability of outcomes is more important than timelines, providing there is clear commitment to ultimate delivery.

Continuous improvement

The emphasis of the past five years was on establishing the Plan. Going forward, it is important that the adaptive management ethos in the Plan is translated into a genuine focus on continuous improvement across all elements. Effective arrangements for reporting, monitoring and evaluation are required to underpin this focus, and to provide the information and lessons learned so that scheduled reviews of elements and the Plan as a whole can be informed by new information and by experience.

6 The way forward

While significant progress has been made for many elements of the Plan, when considered as a whole, ensuring the success of the Plan in a way that maximises the benefits to the Australian community is still at risk.

Supply measures require integrated management

These highly complex, interlinked notional projects are potentially more cost effective than recovering 605 GL of water entitlements to achieve the environmental outcomes. Giving them every opportunity to succeed could save the Basin Governments in the order of hundreds of millions of dollars and significantly reduce community angst. They could also provide additional benefits to improve the long-term health of the Basin, such as the ability

to provide additional delivery capacity, greater flexibility for river operations and capacity to water new areas of the floodplain.

Having decided to progress with a package of supply projects, Governments must now commit to delivering them lest persistent delay, deferral of community agreement and subsequent potential for abandonment undermine the credibility of the Plan itself.

Interdependencies are a risk

Stakeholders are fully aware of the magnitude of issues to be resolved to implement supply measures and are concerned about likely impacts on cultural assets, the reliability of water entitlements, and impacts on land use. The apparent reluctance of Basin Governments to recognise the reality of these issues and to plan to undertake the projects with full consultation and appropriate issue resolution is further eroding community confidence.

Successful implementation of the supply measures package will require:

- recognition that the supply projects are an integrated package of projects with clear interdependencies between some projects in the planning, building and operation stages and which will ultimately need to be integrated into the operation of the River Murray and shared resources
- clear roles and accountabilities for project implementation and oversight
- realistic timeframes which enable consultation, approvals processes, planning and implementation to be undertaken properly
- meaningful engagement with communities, with fewer platitudes and greater incorporation of local knowledge. Stakeholders should be provided with information to understand the possible impacts on them and how these will be mitigated
- commitment to engagement with Traditional Owners not only at the local scale (as required by current legislation) but also at the program scale on the design, sequencing and operation of the package.

To address these issues, Basin Governments should develop an integrated plan for delivering supply projects to enable:

- management of interdependencies within the portfolio of supply projects
- the development of common policy principles and consistent approaches where required
- logical sequencing of projects
- coordinated community and stakeholder engagement including with Traditional Owners
- integration into ongoing river operations and management.

There is an important role for the MDBA (as the agent of Governments) to assist in the development and implementation of this integrated plan.

The Australian Government should establish a process to ensure individual supply measures offer value for money. Funding agreements for supply measures should be robust enough to hold Governments to account for their performance. This should include an independent and publicly available assessment of progress.

The 2024 deadline for supply projects is looking unrealistic

Due to delays in the development and approval of the package of supply measures, Basin States now face compressed timelines to implement these projects — with a range of significant policy issues still to be resolved before they can commence. Governments urgently need to agree on governance and funding arrangements and then establish the approach to implementing supply measures.

Failure to successfully implement these projects by 2024 would mean that either Basin States or the Australian Government may need to make good any shortfall in the offset, which could include further water recovery. However, the 2024 deadline for a number of these projects (particularly the constraints projects) is looking to be highly ambitious, if not unrealistic.

Governments should establish a process to extend the 30 June 2024 deadline for supply measures to be operational where an extension would allow retention of those projects where there is a high degree of confidence that they are likely to be effective.

Extending timeframes could be interpreted as a lack of commitment to the Basin Plan, thereby reducing public trust and confidence. But a greater threat to credibility is for Governments to persist while appearing ignorant of the risks that local communities see as obvious. An unwillingness to confront these risks head-on will feed the view of communities that Governments are incapable of implementing the plan, further increasing discontent across the Basin.

Governments should address these concerns on a case-by-case basis. For example, Basin Governments could agree to only allow extensions where independent assurance shows that an extension would facilitate desired benefits, there is a clear pathway for successful delivery and the proposed new timeline is credible. Governments should still be subject to make good if projects fail to meet revised deadlines.

The cost of poor implementation of supply projects is considerable

The changes proposed by the Commission would maximise the likelihood of supply measures succeeding in meeting their objectives and could potentially reduce the cost to taxpayers of meeting SDLs by hundreds of millions of dollars. For example, failure to implement the Menindee Lakes, constraints and hydro-cues projects (box 3), which together are estimated to account for between one-third and half of the total 605 GL offset, could

increase costs by the order of \$480 million, if the Government needs to make good on any shortfall by recovering water through purchases or infrastructure works.⁶

Prudent design of the efficiency measures program is needed

There are currently significant risks to achieving the enhanced environmental outcomes being pursued through additional efficiency measures.

- These additional outcomes are dependent on progress in easing or removing constraints. However, these projects are unlikely to be fully operational by 2024 and may not deliver the full range of flow rates required to deliver the additional outcomes. If constraints are not eased, rushing to recover the full 450 GL by 2024 would risk the Australian Government bringing forward significant expenditure for an asset that cannot be effectively utilised for many years, at a cost of up to \$184 million in present value terms.⁷
- There is at present no coherent water recovery strategy that aligns water recovery with progress on easing constraints, ensures that recovered water will contribute to achieving the enhanced environmental outcomes in the southern Basin, and demonstrates how socioeconomic impacts will be mitigated.

With almost \$1.8 billion available in the Water for the Environment Special Account, there is a critical need to rethink the implementation of the efficiency measures program before the Australian Government spends large sums of money. The Australian Government (in agreement with Basin States) should:

- undertake further modelling to establish the benefits of additional water recovery with the current suite of constraints proposals
- develop a strategy for the recovery of the additional 450 GL to ensure water recovery is effective, efficient and genuinely 'no-regrets'
 - this should include sequencing additional water recovery with progress in easing constraints (so that environmental water can be delivered at the flow rates required to achieve the enhanced environmental outcomes) and designing the program to identify and minimise socioeconomic impacts
- assess the benefits and costs as a whole through the independent statutory review of the
 Water for the Environment Special Account in 2021, which should examine: the updated
 modelling results; the progress and realistic timelines for easing constraints; and the
 likely costs of water recovery.

This estimate compares the average cost of implementing the key projects (based on their business cases) and the potential cost of recovering 250 GL through infrastructure works (the middle estimate of their water offset). Details of this estimate are in Appendix B.2 of the main report.

The estimate compares the net present value of the cost of recovering water through efficiency measures by 2024 and increasing the time over which water is recovered to 2030 (Appendix B.4).

Ensuring accountability for the Northern Basin Toolkit

A lack of firm deadlines and checks and balances for implementing the Northern Basin Toolkit means accountability for outcomes is limited. Basin Governments should ensure that the arrangements to implement the Toolkit measures are transparent, enable progress to be tracked and ultimately lead to understanding the effectiveness of the measures.

In the absence of such arrangements, there is a risk that the timeframes for implementing the Toolkit will blow out, or that some may never be put in place to the degree originally intended.

Significant issues in Water Resource Plans should not be rushed

Given the remaining workload, there is a significant risk that some WRPs will either not be accredited by 30 June 2019 (leaving SDLs on uncertain ground) or rushed through without appropriate consultation having been undertaken.

Issues such as defining permitted water take or changes to water management rules to protect environmental flows, could impact the property rights of entitlement holders. Other issues, such as ensuring critical human water needs can be met in extreme events and the identification of Indigenous values and uses, are important to achieving the outcomes of the Basin Plan. Where WRPs are dealing with significant issues such as these, it is critical that Basin Governments provide adequate time for consultation to ensure that stakeholders can understand the issues and have some input into solutions.

The MDBA and Basin States should immediately negotiate a pathway for granting extensions to the 30 June 2019 deadline for accrediting WRPs where there are outstanding issues with material impacts. Extensions should only be allowed in limited circumstances, in particular to enable adequate community engagement and negotiation of substantive changes to water management rules.

In the longer term, there is a need to clarify the purpose and effective format of WRPs and associated compliance processes.

The arrangements for evaluation are inadequate — and critical

Effective arrangements for monitoring and evaluation are critical to the successful implementation of the Basin Plan. Improvements are required to enable informed judgements about the extent to which the Plan is meeting its objectives to be made and to provide the information base for the review of the Plan in 2026.

The MDBA (as Basin Plan Regulator) should urgently publish a revised Basin Plan evaluation framework. Basin Governments should develop and publish a monitoring and evaluation strategy to meet its requirements.

The Basin Plan evaluation framework should define the specific questions that will be used to comprehensively evaluate the effectiveness of the Plan in achieving environmental, socioeconomic and cultural outcomes at both a region and Basin scale. This will enable Basin Governments to communicate the outcomes of the Plan in a clear, cogent and consistent manner.

The Basin Plan monitoring and evaluation strategy should describe the process by which the information needed to answer these evaluation questions will be obtained. This includes what information will be collected and by whom; the process to address information gaps; and the arrangements for sharing the costs of monitoring and evaluating the Plan between Basin Governments.

Institutional and governance arrangements need reform

Basin Governments should set firm direction for this phase of the Plan

It is unclear who is responsible for leading the implementation of the Basin Plan — the MDBA or Basin Governments. The MDBA has played the central role in developing the Plan and recommending key amendments. However, since the Plan was agreed in 2012, there has been a shift and Basin Governments have taken a more central role in deciding how it would be implemented as the responsibility for the management of water resources ultimately resides with them.

This shift has occurred implicitly. The MDBA has positioned itself as leading the implementation, and stakeholders most often perceive them to be an Authority that is in charge (although of what is unclear). Basin Governments have not sought to challenge this position, or explicitly claim this role. There is consequently uncertainty about who should respond to issues as they arise and an exposure to a lack of accountability. As a result, key risks to successful implementation have not been strategically managed with default to last minute negotiations as a crisis looms.

For the outcomes of the Basin Plan to be achieved and sustained, the Plan must be integrated into State water resource management frameworks and in joint arrangements for shared water resources.

A complex task lies immediately ahead for Basin Governments. The MDB Ministerial Council must set a much clearer tone of firm commitment to the Basin itself, not just to their own patch, with unmistakable collective direction for delivering on commitment. The Basin Officials Committee should put substance into this Basin-wide direction-setting at the detailed implementation level.

Structural reform of the MDBA is also required to manage its conflicting roles

The MDBA will continue to be critical in driving collaboration between and providing technical support to Basin Governments on key issues, particularly the implementation of supply, constraints and efficiency measures.

However, the MDBA is also the regulator of the Basin Plan. It is required to make final judgments on the success or otherwise of its own coordinated activity via supply projects and to manage breach or non-compliance of all aspects of the Plan. At times it may have to call out States when they are non-compliant.

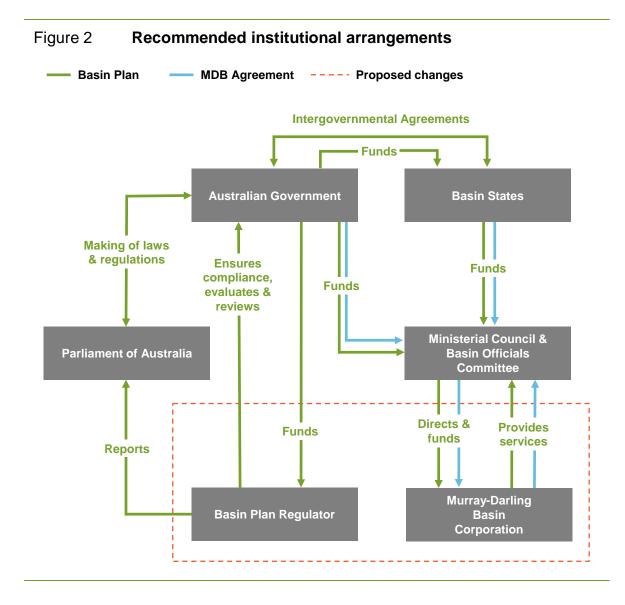
Being an agent of those same Governments (a role that involves providing collaborative leadership, advice and technical capability to the Basin States) compromises the MDBA's ability to be an impartial regulator. This latter role is critical to restoring public confidence in the Plan. Conversely, having to regulate and stand in judgment of the States undermines the MDBA's ability to work closely and openly with them as a trusted adviser.

The MDBA has recognised and sought to manage these conflicts through their internal structure and processes. In the early phase of Basin Plan implementation, this was a pragmatic solution. However, the MDBA is an inherently conflicted entity and is perceived as such by stakeholders.

The conflict in the MDBA's roles will be exacerbated over the next five years. Its agent of Government role will grow, as Basin Governments draw on its technical capability and river operations skills to implement supply projects. Its role as regulator of the Basin Plan comes into full effect when WRPs are accredited. This conflict cannot be successfully managed through internal controls. In its current form, the MDBA cannot be a trusted adviser to Basin Governments and be a credible regulator.

Structural reform is required to assign the MDBA's two key roles to separate institutions (figure 2). Failure to do so will compromise the credibility of the MDBA and Basin Governments; the effective implementation of the Plan and community confidence that the significant investment made in the Basin Plan has led to meaningful change in the way water resources in the Basin are managed.

The agent of Governments roles of the MDBA should be assigned to a new Murray-Darling Basin Corporation (the Corporation). The Corporation would be governed, directed and funded by Basin Governments. It would provide them with the support, capability and services they require to implement the Plan and to manage joint water resources.



The compliance, evaluation and review functions of the MDBA should be assigned to a new independent Commonwealth statutory entity, the Basin Plan Regulator (the Regulator). The Regulator should be governed by a board comprising of members with skills that are aligned to its compliance and evaluation role.

As an interim measure, the MDBA should ensure its internal structure fully aligns with this separation of functions.

7 The potential costs of inaction are massive

Much is riding on how Governments implement the Basin Plan from this point forward. There is still about \$4.9 billion in Australian Government funding left for implementing the Plan. Most of this is allocated to 'resetting the balance' through supply and efficiency projects. If major shortcomings in current arrangements are not addressed, projects are likely to fail or be implemented poorly. Failure will mean:

- the future costs of resetting the balance could be in excess of \$480 million higher (the
 cost of having to make good by acquiring water entitlements plus any cost of wasted
 expenditure on failed projects)
- poor environmental outcomes as the anticipated benefits of projects are either delayed or do not eventuate
- community trust and confidence in the Plan and Basin Governments will be reduced further, particularly if there is a perception that money is being wasted as Governments are unaware of issues, or unwilling to confront them
- there will be shortcomings in key arrangements that will have potentially significant implications for how water is managed for the environment and to meet users' needs.

The Commission has made 35 draft recommendations that would significantly improve the arrangements for implementing the Plan, if accepted. The recommendations are organised by timeline and responsible institution in boxes 4 and 5.

Most of our recommendations are essential but incremental improvements to the current arrangements.

By their less dramatic nature, there will be a strong temptation to ignore many. How often is planning or compliance or governance really treated seriously, when there is the capacity to focus on drought or environmental disaster?

But absent such changes, delivery of the Plan is at risk. It has been a real achievement to get this far, and the objectives remain vital to an iconic region of Australia.

Box 4 Short-term priorities (within 12 months)

Basin Governments

- Take joint responsibility for implementing the Basin Plan (14.1)
- Review the capability and resourcing required to jointly implement the Plan (14.3)
- Develop an integrated plan for delivering the package of supply measures (4.1)
- Extend the deadline for delivery of supply measures to enable projects that offer value for money to be delivered in credible timeframes (4.2)
- Develop a Basin Plan monitoring and evaluation strategy (13.3)
- Put in place transparent and accountable governance arrangements for implementing the Northern Basin Toolkit (4.5)
- Agree on a policy and timeframe for addressing over-recovery (3.1)
- Negotiate a pathway for granting extensions to the timelines for WRP accreditation where there are outstanding issues to give sufficient time for adequate community engagement. (6.1)
- Publish a work plan that describes how delivery capacity and constraint issues associated with changes in water use and trade will be investigated and managed (10.2)
- Formalise arrangements to coordinate connected environmental watering activities (11.4)
- Consider the costs and benefits of metering policies, including the role of metering standards (12.2).

The Australian Government

- The Australian Government to ensure there are specific milestones and clear responsibilities in any future intergovernmental agreements and there is a process of independent assessment of progress against these (13.1)
- The Department of Agriculture and Water Resources (DAWR) to establish a review process to determine if supply projects offer value for money prior to funding (4.4)
- DAWR to publish the advice it has received on environmental priorities for water recovery once transactions are complete (3.2)
- DAWR to update its water recovery strategy to include the no regrets principles (5.2)
- CEWH to ensure processes are in place for coordinating event-based watering decisions (11.5).

Murray-Darling Basin Authority

- Change its internal structure to create the Office of the Basin Plan Regulator to house all compliance and evaluation functions (14.4, 12.1)
- Revise its compliance policy to convey its role in system-wide Basin Plan compliance and that water take enforcement is a Basin State responsibility (12.3)
- Develop a revised Basin Plan evaluation framework (13.2)
- Devise a strategy for undertaking SDL reconciliation to enable adaptive management and to assess reasonable progress (4.3)
- Update its modelling to establish the environmental benefits of additional water recovery (5.1)
- Determine the extent of any over-recovery (3.1)
- Clarify the annual reporting obligations of Basin States to enable them to demonstrate compliance with WRPs and the process for amending WRPs (6.2)
- Develop a detailed terms of reference for the 5-yearly evaluation of the effectiveness and efficiency of WRPs in consultation with Basin Governments (6.3)
- Include in the 2019 Basin-wide environmental watering strategy clearer guidance on the relative priority of assets and types of watering activities (11.1)
- Develop an assessment framework for evaluating trade restrictions (10.1).

Box 5 **Medium-term priorities (2-5 years)**

Basin Governments

- Agree and embark on the institutional reform to establish the Murray-Darling Basin Corporation
 — an agent of Basin Governments, and the Basin Plan Regulator an independent
 Commonwealth statutory authority (14.2)
- Target any further assistance to communities where substantial adverse impacts from water recovery have been identified (3.3)
- Direct the 2021 review of the Water for the Environment Special Account to review the benefits and costs of pursuing the enhanced environmental outcomes, to inform how the Australian Government should proceed with water recovery (5.3)
- Amend the Basin Plan to remove the requirement for Basin Annual Environmental Watering Priorities (11.3)
- Review the skills mix of the statutory appointments in establishing the Basin Plan Regulator (14.5).

Basin States

- Ensure processes are in place for identifying social and cultural outcomes that could be achieved from environmental watering (11.6)
- Manage the risks to achieving environmental outcomes by delivering complementary management activities (11.7).

Murray-Darling Basin Authority

- Review the salt export objective (8.1)
- Provide material to Basin States to guide the first revision of long-term watering plans (11.2).

Findings and recommendations

Chapter 3 — Recovering water for the environment

The Australian Government (through the Australian Department of Agriculture and Water Resources) is required to recover 2075 GL of surface water and 40.4 GL of groundwater by 1 July 2019. The surface water target was revised down from 2750 GL, after adjustments to the Sustainable Diversion Limits (SDLs) were made in 2018. The water recovered contributes to a held water portfolio that is managed to achieve the environmental objectives of the Basin Plan. The Australian Government has spent \$6.4 billion on bridging the gap, which includes purchasing water and investing in water-saving infrastructure. In addition, \$189 million has been provided through structural adjustment programs to support communities adjust to reduced water availability.

DRAFT FINDING 3.1

A total of 1995.8 GL of the 2075 GL needed to meet the adjusted Sustainable Diversion Limits has been delivered.

Finalising water recovery by 1 July 2019 is contingent on:

- recovering a further 29.1 GL from the northern Basin, 37.7 GL from two Queensland groundwater resources and 0.4 GL in one surface water resource in Victoria
- the delivery of 121.7 GL that is contracted, but has not yet been delivered
- recovering 62 GL through efficiency measures
- any changes to planning assumptions that affect the contribution of those water entitlements already recovered towards water recovery targets.

Although a small gap remains, the risk of not meeting the water recovery target is low.

DRAFT RECOMMENDATION 3.1

Once Water Resource Plans are finalised in July 2019, the Murray-Darling Basin Authority should assess and determine the extent of over-recovery.

Basin Governments should then agree to a policy and timeframe to address any over-recovery where it has occurred.

DRAFT FINDING 3.2

The Department of Agriculture and Water Resources does not have a systematic and transparent process to demonstrate that water recovered has environmental value.

DRAFT RECOMMENDATION 3.2

The Department of Agriculture and Water Resources should ensure that water recovery aligns with environmental requirements and its processes for doing this are transparent.

To ensure accountability, it should publish all advice provided by the Commonwealth Environmental Water Holder (including advice on strategic purchases) once transactions are complete.

DRAFT FINDING 3.3

The Department of Agriculture and Water Resources has accounted for the impacts of improving irrigation efficiency on return flows in some major water recovery projects, but has not systematically accounted for these impacts in all water recovery programs.

The overall impact of improved irrigation efficiency on water resources is not precisely known. The Murray-Darling Basin Authority (as Basin Plan Regulator) is responsible for determining this risk to Sustainable Diversion Limits.

DRAFT FINDING 3.4

The size and speed of water purchases has had negative impacts on some regional communities.

Recovering water through infrastructure modernisation has partially offset pressure for structural adjustment in some communities, but at a significant cost to taxpayers.

However, higher water prices, water trade, and other ongoing pressures for change in the agriculture sector mean that some structural change is inevitable.

DRAFT FINDING 3.5

The Department of Agriculture and Water Resources has not always demonstrated that water recovery has been cost-effective in meeting its goal of mitigating adjustment pressures while sourcing water entitlements. It has:

- not systematically released information for strategic water purchases acquired by direct negotiation
- paid a substantial premium above market prices to recover water through infrastructure modernisation
- not undertaken a comprehensive assessment of benefits and costs of these approaches.

DRAFT FINDING 3.6

Grants-based structural adjustment programs are unlikely to have been effective at supporting communities.

- Assistance was not provided to those areas considered most vulnerable prior to the Basin Plan.
- Some projects considered to provide community assistance have not done so.

DRAFT RECOMMENDATION 3.3

If provided, the Australian Government should target any further assistance to communities where substantial adverse impacts from water recovery have been identified. This should:

- have clear objectives and selection criteria
- be subject to monitoring and evaluation.

Any support for regional development should align with the Productivity Commission's strategies for transition and development, set out in its report on *Transitioning Regional Economies*.

Chapter 4 — Supply measures and Toolkit

In the southern Basin, a package of 36 supply projects was agreed in May 2018, with funding of up to \$1 billion. These projects provide equivalent environmental outcomes, enabling the water recovery target to be offset by 605 GL and are required to be fully operational by 2024. Some of these projects are at the scoping or concept design stages of development. The Murray-Darling Basin Authority may undertake a reconciliation of the actual equivalent environmental outcomes of projects compared with their predicted outcomes in 2024. Failure to deliver projects by the deadline may require Governments to make good the shortfall through further water recovery. Similar projects are proposed for the northern Basin (referred to as Toolkit measures), although there are no formal consequences if these projects fail.

DRAFT FINDINGS AND RECOMMENDATIONS

⁸ Constraints projects included in the supply package will also be able to seek up to \$200 million in funding from the Water for the Environment Special Account.

DRAFT FINDING 4.1

It is likely that some key projects in the approved supply package will not be fully operational in 2024.

- They are behind schedule and the timeframe for implementation has been compressed due to delays in developing the projects.
- They are still in an early stage of development.
- History has shown that these types of projects are complex, interdependent and require extensive consultation to implement.
- A range of issues still need to be resolved between Governments before these projects can proceed. These include project risk sharing, monitoring, governance and funding.

DRAFT RECOMMENDATION 4.1

Basin Governments must resolve governance and funding issues for supply measures. They should develop an integrated plan for delivering supply projects to improve understanding and management of interdependencies within the package of supply projects within 12 months.

DRAFT RECOMMENDATION 4.2

Basin Governments should extend the 30 June 2024 deadline for supply measures to be operational where it would allow projects that offer value for money to be retained and their full benefits to be delivered within credible timeframes.

DRAFT RECOMMENDATION 4.3

The Murray-Darling Basin Authority (as Basin Plan Regulator) must devise a strategy for undertaking the reconciliation of supply measures against environmental equivalence. This strategy should include an adaptive management approach to assessing reasonable progress to enable projects to be delivered in realistic timeframes.

DRAFT RECOMMENDATION 4.4

The Department of Agriculture and Water Resources should establish a review process to determine if projects offer value for money and to determine credible timelines before final funding is approved.

DRAFT RECOMMENDATION 4.5

Northern Basin Governments should put in place transparent and accountable governance arrangements for implementing the Northern Basin Toolkit. These arrangements should include:

- a mechanism to establish clear milestones to ensure the Toolkit measures are implemented within reasonable timeframes
- an independent assessment by the Murray-Darling Basin Authority, as Basin Plan Regulator, of progress and effectiveness in implementing the measures.

Chapter 5 — Efficiency measures

The Basin Plan allows for the recovery of an extra 450 GL of water to pursue environmental outcomes additional to those that can be achieved by recovering the equivalent of 2750 GL (outlined in Schedule 5 of the Plan). These enhanced environmental outcomes are also dependent on easing or removing constraints (for example, flooding on private land). This extra water is to be recovered through efficiency measures — infrastructure investments to reduce water loss. Efficiency measures must meet the Basin Plan requirement for neutral or improved socioeconomic outcomes. \$1.575 billion is set aside in a special account for water recovery through efficiency measures.

DRAFT FINDING 5.1

The current test of neutral or improved socioeconomic outcomes (based on voluntary participation in infrastructure projects) does not fully address stakeholder concerns about impacts of additional water recovery on regional communities.

However, addressing these concerns by requiring efficiency projects to have no adverse impacts is impractical, and risks ruling out projects that achieve the outcomes at least cost.

Potential adverse impacts of further water recovery would be better addressed through program design, including close consultation with water users and irrigation infrastructure operators.

DRAFT FINDING 5.2

Current progress in implementing efficiency measures provides little confidence that the enhanced environmental outcomes of the Basin Plan will be achieved by 2024 or on budget.

- There has been no update to the modelling to estimate what environmental benefits can be realistically achieved, given proposed projects to ease or remove constraints are unlikely to achieve the anticipated flow rates at key sites or be fully operational by 2024.
- Basin Governments have not yet agreed on an efficiency measures work plan to recover 450 GL by 2024, including how major socioeconomic impacts will be addressed.
- Despite this, the Australian Government is rolling out a water recovery program Basin-wide, which risks recovering water in the northern Basin that may not be useful to achieving the enhanced environmental outcomes in the southern Basin.
- There is a material risk that recovering 450 GL could be significantly more expensive than anticipated. The benefits and costs of the program as a whole have not been assessed (and there is no requirement to do so).

DRAFT RECOMMENDATION 5.1

The Murray-Darling Basin Authority should immediately update and publish its modelling to establish the environmental benefits of additional water recovery with the current proposals for easing or removing constraints.

DRAFT RECOMMENDATION 5.2

The Department of Agriculture and Water Resources should release a new strategy for recovering the additional 450 GL in a no regrets fashion in early 2019. No regrets water recovery requires that:

- the strategy should plan for a range of scenarios for constraint easing or removing and costs, and evolve as new information becomes available
- water recovery should align with progress in easing or removing constraints
- the volume, type and location of water recovered should clearly contribute to achieving the enhanced environmental outcomes in Schedule 5 of the Basin Plan
- alternative water products (such as leases and options) should be considered where capable of meeting enhanced environmental outcomes at a lower cost than the permanent recovery of entitlements
- program design and implementation should explicitly consider potential socioeconomic impacts and include mitigation strategies. This should include close engagement with affected communities and industries
- prices paid for water (per ML and total expenditure) should be within predetermined benchmarks. Where they exceed this benchmark, projects should be subject to independent scrutiny and the reasons made publicly available.

DRAFT RECOMMENDATION 5.3

The Water Minister should direct the independent review of the Water for the Environment Special Account scheduled for 2021 to review the benefits and costs of pursuing the enhanced environmental outcomes in Schedule 5. This should include:

- identifying what enhanced environmental outcomes can be achieved, given progress in easing or removing constraints, and how much environmental water would be required to do so
- the benefits and costs of other approaches to achieving those environmental outcomes.

The Australian Government should use this information to determine how to proceed with water recovery in a way that maximises net benefits to the community, or whether to pursue the enhanced environmental outcomes through other means.

Chapter 6 — Water resource planning

Water Resource Plans (WRPs) ensure that the Basin Plan (particularly the SDLs) is reflected in state-based water management arrangements. The MDBA's accreditation of WRPs is due to be finalised by 30 June 2019, at which time its role in ensuring compliance with the Plan takes full effect.

DRAFT FINDING 6.1

The development and accreditation of Water Resource Plans is well behind schedule and there are key issues still to be finalised in some Water Resource Plan Areas.

There is a risk that attempting to accredit all Water Resource Plans by the 30 June 2019 deadline will:

- compromise the quality of some plans
- not allow sufficient time to consider and consult on key issues with affected stakeholders
- inadvertently impact the entitlements of water users or the environment
- reduce the effectiveness of Water Resource Plans in implementing key elements of the Plan including Sustainable Diversion Limits, the protection of environmental water and providing water for critical human needs.

This risk is highest for New South Wales, given the number of outstanding plans and the magnitude of proposed rule changes in some Water Resource Plan Areas. There is currently limited public information on how the Murray-Darling Basin Authority will address the risk of some plans not having accreditation by 30 June 2019.

DRAFT RECOMMENDATION 6.1

Basin Governments should immediately negotiate a pathway for granting extensions to the timelines for accrediting Water Resource Plans where there are outstanding issues to give sufficient time for adequate community engagement.

Extensions should only be given in limited circumstances, particularly where there are material impacts that require negotiation of substantive changes to state-based water management rules.

DRAFT FINDING 6.2

There are concerns that the process of developing Water Resource Plans has been onerous and unnecessarily costly because of inadequate guidance on the requirements of plans and little clarity of the Murray-Darling Basin Authority's expectations for accreditation.

Key details for the implementation of Water Resource Plans have not yet been agreed including the:

- requirements for annual compliance reporting, risking unnecessary compliance costs
- process for updating plans, risking an amendment process that inhibits adaptive management.

DRAFT RECOMMENDATION 6.2

In the next 12 months, the Murray-Darling Basin Authority (as Basin Plan Regulator) should:

- clarify what Basin States are required to self-report annually to show compliance with Water Resource Plan obligations
- articulate the compliance assessment regime relevant to Water Resource Plan obligations
- develop guidance and consult on how it proposes to assess future amendments to Water Resource Plans by Basin States.

DRAFT RECOMMENDATION 6.3

The Murray-Darling Basin Authority (as Basin Plan Regulator) in consultation with Basin Governments should develop a detailed terms of reference to assess the effectiveness and efficiency of Water Resource Plans in preparation for the five-yearly evaluation in 2020.

This evaluation should enable an assessment of the utility of Water Resource Plans for delivering on the objectives and outcomes of the Basin Plan.

Chapter 7 — Indigenous values and uses

The Basin Plan specifies how Indigenous values and uses are to be considered by Basin States in the preparation of Water Resource Plans and provides for Traditional Owners to be involved in the development of environmental watering priorities. Two organisations — the Murray Lower Darling Rivers Indigenous Nations (MLDRIN) and the Northern Basin Aboriginal Nations (NBAN) — represent Traditional Owners and work in partnership with the Murray-Darling Basin Authority to provide culturally authoritative advice.

DRAFT FINDING 7.1

Basin States have improved their formal processes for engaging Traditional Owners as part of Water Resource Plan (WRP) development.

Given that so few WRPs have been submitted for accreditation to date, there is a risk that Basin States have left too little time before July 2019:

- to complete effective engagement with Traditional Owners
- to have regard to the views of Traditional Owners in preparing their WRPs
- for MLDRIN and NBAN to develop their advice about whether the WRP requirements for Indigenous values and uses have been met.

This concern is greatest for New South Wales.

DRAFT FINDING 7.2

In addition to the development of Water Resource Plans, Basin Governments have developed a range of tools and processes to support the recognition of cultural values and uses in state water planning and environmental management and planning.

The Australian Government has committed \$40 million to administer a program to support Indigenous investment in cultural and economic water entitlements in the Basin. The objectives and principles guiding the implementation of this program have not yet been articulated. It is unclear why this funding is limited to Indigenous communities in the Basin, rather than being available to all Indigenous communities in Australia.

Chapter 8 — Water quality

The Basin Plan sets out specific objectives and targets for water quality that aim to ensure that water is suitable for a range of purposes. These include: an objective for salt export of two million tonnes per year from the Basin into the Southern Ocean, site-specific salinity targets for flow management in the River Murray and the Lower Darling, and end-of-valley salinity targets. The main Basin Plan mechanism by which water quality is to be managed is through Water Quality Management Plans which form part of Water Resource Plans.

DRAFT FINDING 8.1

Salinity targets for flow management have been met at four of the five reporting sites.

The salt export objective has not been met. In periods of low flows, there can be an inherent conflict between meeting site-specific salinity targets and meeting the salt export objective.

DRAFT RECOMMENDATION 8.1

The Murray-Darling Basin Authority should review the Basin Plan salt export objective in its 2020 review of salinity and water quality targets. This review should consider:

- the relationship between the salt export objective and site-specific salinity targets that require a higher prioritisation to meet water quality objectives
- whether the objective should be respecified or abolished.

DRAFT FINDING 8.2

In the Lower Darling, the management of water quality during periods of low flow is of concern. The development of the Water Quality Management Plan for the New South Wales Murray and Lower Darling Water Resource Plan is the process to resolve this concern.

Chapter 9 — Critical human water needs

The Basin Plan sets specific water volumes required to meet critical human water needs in communities that are dependent on the River Murray for water. For communities that rely on water from sources other than the River Murray, the Basin Plan requires that Water Resource Plans describe how critical water needs will be met during extreme events such as drought and water quality events.

DRAFT FINDING 9.1

The Basin Plan provisions for supplying critical human water needs in the River Murray system in periods of low water availability are robust and no changes to the provisions are warranted.

DRAFT FINDING 9.2

The management of critical human water needs during periods of low flow in the Lower Darling is of concern. The development of the extreme event provisions in the New South Wales Murray and Lower Darling Water Resource Plan is the process to resolve this concern.

Chapter 10 - Water trading rules

The Basin Plan water trading rules aim to contribute to more efficient water markets by introducing new requirements to improve market information and promote confidence in the market, and defining the types of trade restrictions that are permissible in the Basin.

DRAFT FINDING 10.1

Some trade restrictions that were inconsistent with the Basin Plan trading rules have been removed.

The Murray-Darling Basin Authority (MDBA) has raised 16 instances of potential non-compliance with the trading rules with Basin States. Ten of these matters remain unresolved and the MDBA has not been clear with Basin States about the steps to resolve these in a timely way.

DRAFT RECOMMENDATION 10.1

The Murray-Darling Basin Authority (as Basin Plan Regulator) should:

- develop and publish an assessment framework for evaluating the consistency of trade restrictions against the Basin Plan trading rules, which gives guidance about how to estimate the costs and benefits of removing trade restrictions
- specify the timeframes that it will endeavour to meet in resolving trading rule compliance matters
- notify Basin States whether the ten unresolved matters raised with them amount to non-compliance and what action is required by Basin States to resolve them
- publish the reasons given by Basin States for restrictions on surface water trade
- publish its compliance determinations and the assessments that support each determination.

DRAFT FINDING 10.2

New information and reporting requirements specified under the Basin Plan trading rules are largely in place.

DRAFT FINDING 10.3

Growth of trade has increased demands on delivery capacity and put pressure on delivery constraints in some parts of the Basin. A range of community members are concerned about the effects on third parties and the environment.

Basin States and the Murray-Darling Basin Authority are aware of this strategic policy issue, but the process to resolve it is unclear.

DRAFT RECOMMENDATION 10.2

Basin Governments should set and publish a work plan within the next 12 months that describes how delivery capacity and constraint issues associated with changes in water use and trade will be investigated and managed. The work plan should specify responsibilities, timeframes and how this information will be communicated to the water market.

Basin Governments should assign the Murray-Darling Basin Authority (as an agent of governments) responsibility for identifying and managing risks related to changes in water use and trade in connected systems.

Chapter 11 — Environmental water planning and management

The outcomes of the Basin Plan are based on an assumption that Basin States would implement pre-requisite policy measures (PPMs) to enable the efficient use of environmental water. PPMs provide the capacity to credit environmental return flows for downstream environmental use and allow the call of held environmental water from storage to piggy-back on unregulated flows. The PPMs were assumed in the original modelling to determine the Sustainable Diversion Limits (SDLs) and have been incorporated in the environmental equivalence methodology that underpins supply measures and the associated adjustment to SDLs. By assuming PPMs would be implemented, a higher SDL could be determined. If PPMs are not implemented, SDLs may be recalculated.

The Basin Plan establishes an environmental management framework that outlines the principles and processes to coordinate the planning, prioritisation and use of environmental water. It includes a Basin-wide environmental watering strategy and catchment scale long-term environmental watering plans.

DRAFT FINDING 11.1

Although the Murray-Darling Basin Authority has approved the Pre-requisite Policy Measure (PPM) Implementation Plans for all relevant Basin States, there is some risk that PPMs will not be implemented by 30 June 2019.

DRAFT FINDING 11.2

The 2014 Basin-wide environmental watering strategy (BWEWS) has provided a strategic foundation for the environmental water planning of significant environmental water holders and has been used to inform their portfolio planning and watering decisions.

The 2014 BWEWS does not provide clear guidance on how to prioritise those assets or types of watering events that are most important for achieving the Basin Plan objectives and expected outcomes.

DRAFT FINDING 11.3

Only seven out of 20 long-term watering plans (LTWPs) have been developed and published, with the remaining 13 due to be published by the ACT, New South Wales and Queensland Governments by 30 June 2019 or earlier.

LTWPs are likely to be an important component of the Environmental Management Framework as they are:

- undertaken at the catchment scale and facilitate top-down and bottom-up input
- a mechanism to facilitate local input into environmental water planning activities and the prioritisation of assets within a catchment.

Basin States have adopted different approaches to specifying priorities, objectives and targets in LTWPs.

DRAFT RECOMMENDATION 11.1

The Murray-Darling Basin Authority, when developing the next five-year Basin-wide environmental watering strategy in 2019, should strengthen its value as the key strategic plan governing environmental watering across the Basin by:

- including a clear objective to 'maximise environmental outcomes through effective and efficient environmental water management'
- including a secondary objective that environmental watering should seek to achieve social or cultural outcomes, to the extent that environmental outcomes are not compromised
- providing clear guidance, under all water availability scenarios, on the relative priority
 of key Basin environmental assets (including instream assets) to achieving the
 overall environmental objectives of the Basin Plan and the expected outcomes set
 out in the strategy
- providing clear guidance, under all water availability scenarios, on the priority for achieving flow connectivity at the system scale relative to watering within an individual Water Resource Plan Area.

DRAFT RECOMMENDATION 11.2

Following the publication of the 2019 Basin-wide environmental watering strategy (BWEWS), the Murray-Darling Basin Authority (MDBA) should provide clear guidance material to Basin States on the expected content of long-term watering plans (LTWPs) when they are revised. This guidance material should include the need for LTWPs to articulate:

- realistic long-term objectives to be achieved from the available environmental water portfolio through watering activities within current operational constraints
- environmental watering requirements in the catchment including the required magnitude, timing and frequency of watering for priority assets, ecosystem functions and system connectivity
- the relative priority of assets within the catchment for achieving the objectives of the Basin Plan and the expected outcomes of the BWEWS
- the risks to the achievement of the long-term watering objectives.

The MDBA should seek the strategic input of asset managers and environmental water holders and managers when preparing this guidance material to ensure that the utility of LTWPs for environmental water decision making can be improved over time.

To improve the accessibility of information, the MDBA should maintain a register of LTWPs on its website, including relevant deadlines, progress towards completion, final documents when they are completed, and the status of each plan as they are reviewed and adapted over time.

DRAFT FINDING 11.4

The Basin annual environmental watering priorities:

- do not add value to the decision making of environmental water managers as they are released too late for consideration in their planning processes
- are becoming increasingly redundant as significant environmental water holders are moving to rolling multi-year plans.

DRAFT RECOMMENDATION 11.3

The Basin Plan should be amended to remove the requirement for the Murray-Darling Basin Authority to produce Basin annual environmental watering priorities.

DRAFT RECOMMENDATION 11.4

By 2020, Basin Governments should:

- agree to formalise the role of the Southern Connected Basin Environmental Watering Committee as the mechanism for intergovernmental coordination for environmental watering. Governance arrangements including terms of reference, membership and reporting responsibilities should be established
- establish a Northern Connected Basin Environmental Watering Committee as a mechanism for intergovernmental coordination for planning and coordinating connected environmental watering events in the northern Basin.

DRAFT RECOMMENDATION 11.5

Where not yet in place, the Commonwealth Environmental Water Holder (CEWH) should set out the processes it will use to consult and coordinate with key stakeholders to make event-based watering decisions — including water managers, asset managers and other environmental water holders.

These processes should be in place and documented in the CEWH's 2019-20 annual portfolio management plans.

DRAFT RECOMMENDATION 11.6

Before the first revision of long-term watering plans, Basin States and environmental asset managers should have processes to engage with local communities and Traditional Owners. These activities should identify opportunities to achieve social or cultural outcomes with environmental water, while ensuring environmental outcomes are not compromised.

DRAFT RECOMMENDATION 11.7

Basin States should manage the risks to achieving the environmental watering objectives set out in long-term watering plans by delivering complementary waterway and natural resource management measures (such as habitat restoration or weed and pest control).

Chapter 12 — Compliance

The Murray-Darling Basin Authority is responsible for ensuring compliance with the Basin Plan. This role comes into full effect once Water Resource Plans are accredited by 1 July 2019. Basin States are responsible for ensuring compliance with their own water laws to prevent illegal water take and ensure entitlement holders fulfil their licence obligations. Basin Governments have instigated a number of reforms in response to recent reviews, including developing a Compliance Compact which outlines their commitments to reform. This Compact is still to be endorsed by COAG.

DRAFT FINDING 12.1

The Murray-Darling Basin Authority's reforms of its regulatory approach (including the establishment of an Office of Compliance) are a step forward in establishing its capability, but it is too early to gauge the likely effectiveness of the new arrangements. The Productivity Commission will examine these in its 2023 review of Basin Plan implementation.

DRAFT RECOMMENDATION 12.1

As a transitional measure, the Murray-Darling Basin Authority should house its Sustainable Diversion Limit and Water Resource Plan compliance functions within the Office of Compliance, before its compliance role comes into full effect in July 2019.

DRAFT FINDING 12.2

Compliance reforms by Basin State Governments are a step forward in improving water take compliance regimes. Their efficiency and effectiveness will be reviewed in 2023 by the Productivity Commission.

DRAFT RECOMMENDATION 12.2

Basin States should consider the role, costs and benefits of consistent metering policies including the role of metering standards.

Basin Governments should work with Standards Australia to formally revise standards to ensure quality and cost effectiveness in water measurement.

The new metering implementation plans being developed by Basin States should be supported by publicly available business cases.

DRAFT RECOMMENDATION 12.3

Enforcement of illegal water take is the responsibility of Basin States.

The Murray-Darling Basin Authority (MDBA) should publicly report instances where Basin States are not effectively responding to concerns of illegal water take.

In instances where public reporting is ineffective, the MDBA should use system-wide enforcement levers such as Sustainable Diversion Limit accounting compliance mechanisms to enforce limits on water take.

Chapter 13 — Reporting, monitoring and evaluation

The Basin Plan specifies annual and five-yearly reporting requirements that Basin Governments must meet. Reporting arrangements are also set out in the intergovernmental agreements that underpin the implementation of the Plan. The Plan sets out a program for evaluating its effectiveness. Completing these evaluations is the responsibility of the Murray-Darling Basin Authority, but the information required to conduct the evaluations comes from many different parties.

DRAFT FINDING 13.1

There are weaknesses with the National Partnership Agreement on Implementing Water Reform in the Murray-Darling Basin that reduce its usefulness as a means to hold Basin Governments to account for meeting their commitments in implementing the Plan.

These deficiencies include that:

- milestones are inadequately defined and have been assessed as met when there is evidence to the contrary
- key information that informs assessments of progress against National Partnership Agreement milestones is not publicly released
- there have been delays in the release of assessments of progress against National Partnership Agreement milestones in some years.

DRAFT RECOMMENDATION 13.1

Given deficiencies in past agreements, for any future intergovernmental agreements relating to the implementation of the Basin Plan, the Australian Government should ensure:

- the roles of the Australian Government and Basin States are clearly identified
- specific performance milestones are identified, and that clear responsibility is assigned for the delivery of each milestone
- where milestones are linked to payments, that these payments are disaggregated with a payment per milestone to provide a genuine incentive for implementation
- reporting on the progress of Basin Governments in meeting milestones is timely
- independent assessment of the progress of Basin Governments is undertaken
- advice provided by relevant agencies, such as the Murray-Darling Basin Authority or the Commonwealth Environmental Water Holder, that is used to inform assessments of progress is published in full.

DRAFT FINDING 13.2

The current Basin-wide evaluation framework is unclear and there is a lack of a clear strategy to coordinate the collection of the information needed to monitor the outcomes of the Plan. This means that:

- actions taken to monitor outcomes in the Basin are fragmented and inadequately integrated
- there is the potential for information gaps that may result in future evaluations being unable to accurately and comprehensively assess the impacts and outcomes of the Plan
- there is a risk of monitoring activity being duplicated
- the ability of Basin Governments to clearly communicate the outcomes of the Plan is impeded.

DRAFT RECOMMENDATION 13.2

The Murray-Darling Basin Authority (as Basin Plan Regulator) should develop a revised Basin Plan evaluation framework. This framework should define the specific questions that are to be used to evaluate the outcomes and effectiveness of the Plan, and the scales and times at which these questions will be answered. The framework should be made publicly available, and be published no later than 2019.

DRAFT RECOMMENDATION 13.3

Basin Governments should develop a Basin Plan monitoring and evaluation strategy to implement the evaluation framework. This should describe the process by which the information needed to answer the evaluation questions set out in the framework will be collected. This includes:

- outlining what information will be collected and by whom
- identifying any information gaps, who will be responsible for addressing them and the process by which they will be addressed
- establishing the arrangements for sharing the costs of monitoring and evaluating the Plan between Basin Governments.

This implementation strategy should be developed by Basin Governments, supported by the Murray--Darling Basin Authority (as the agent of governments).

The strategy should be made publicly available and be published no later than 2019.

Chapter 14 — Institutions and governance

The *Water Act 2007* (Cwlth), Murray-Darling Basin Agreement and the Basin Plan have resulted in a complex suite of institutional and governance arrangements for water management in the Basin. Responsibilities are shared by Basin Governments and key agencies (such as the Murray-Darling Basin Authority (MDBA)) have been assigned multiple roles. There has been an implicit shift in responsibility for leading implementation from the MDBA to Basin Governments.

DRAFT FINDING 14.1

There are major shortcomings in the current institutional and governance arrangements and these pose a significant risk to the next phase of implementation of the Basin Plan.

- Responsibility for leading the implementation of the Basin Plan is not clear and there
 has been a lack of strategic leadership. There is uncertainty about who should
 respond to issues as they arise.
- The Murray-Darling Basin Authority has conflicting roles. Its ability to effectively perform its collaborative service delivery functions (as an agent of governments) and be an independent and credible regulator that ensures compliance with the Plan has been compromised by these conflicts.

These key deficiencies in institutional and governance arrangements have led to:

- a lack of transparency and accountability
- ineffective processes for intergovernmental collaboration
- stakeholders who are confused and frustrated by the efforts made to engage them due to a perceived lack of responsiveness
- key risks not being strategically managed and timelines slipping
- implementation being managed through last minute negotiations as a crisis emerges or a deadline looms.

DRAFT RECOMMENDATION 14.1

Basin Governments should demonstrate strategic leadership, take joint responsibility and direct the implementation of the Basin Plan.

The Murray-Darling Basin (MDB) Ministerial Council should collaborate to provide the strategic leadership and policy direction required to implement the Plan, and be ultimately accountable for implementation.

The MDB Ministerial Council should reform the institutional and governance arrangements for implementing the Basin Plan by:

- enhancing the role of and delegating accountability for implementation to the Basin Officials Committee (BOC). BOC should be responsible for managing the significant risks to successful implementation and ensuring effective intergovernmental collaboration
- ensuring that formal directions to BOC regarding implementation are publicly available
- ensuring that arrangements to assess progress, evaluate outcomes, and ensure compliance with the Plan are fully independent
- recognising that the Murray-Darling Basin Authority will continue to be key to driving collaboration between and providing technical support to Basin Governments as they implement the Plan
- ensuring that Basin Governments are individually and collectively resourced to perform their roles to implement the Plan.

DRAFT RECOMMENDATION 14.2

Basin Governments should agree to the restructure of the Murray-Darling Basin Authority to separate its service delivery and regulatory functions into two institutions.

The Australian Government should then embark on the necessary institutional reforms to establish the:

- Murray-Darling Basin Corporation as the agent of Basin Governments
- Basin Plan Regulator an independent Commonwealth Statutory Authority.

These institutional reforms should be in place by 2021.

DRAFT RECOMMENDATION 14.3

To enable it to carry out its enhanced role, by 2020 the Basin Officials Committee should:

- comprehensively review the capability and the resourcing it requires to jointly implement the Plan
- agree on the capability and services Basin Governments require of the Murray-Darling Basin Corporation to support them to implement the Plan and for shared water resource management
- establish new arrangements and processes to support ongoing intergovernmental collaboration.

DRAFT RECOMMENDATION 14.4

As a transitional measure, and before the Murray-Darling Basin Authority's compliance role comes into full effect in July 2019, the Office of Compliance should be broadened to be the Office of the Basin Plan Regulator, and include compliance and evaluation functions.

DRAFT RECOMMENDATION 14.5

In establishing the Basin Plan Regulator by 2021, the Australian Government should ensure that it will be effective, including by reviewing the skills mix of the statutory appointments and establishing a statement of expectations.