



Australian Government  
Productivity Commission

# Murray-Darling Basin Plan: Five-year assessment

Productivity Commission  
Issues Paper

March 2018

The Commission has released this issues paper to assist individuals and organisations to prepare submissions.

It contains and outlines:

- the scope of the inquiry
- the Commission's procedures
- matters about which the Commission is seeking comment and information
- how to make a submission.

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- the scope of the inquiry
- the Commission's procedures
- matters about which the Commission is seeking comment and information
- how to make a submission.

Participants should not feel that they are restricted to comment only on matters raised in the issues paper. The Commission wishes to receive information and comment on issues which participants consider relevant to the inquiry terms of reference.

### Key inquiry dates

Receipt of terms of reference	7 March 2018
Due date for submissions	19 April 2018
Release of draft report	August 2018
Draft report public hearings	September/October 2018
Final report to Government	31 December 2018

### Submissions can be lodged

Online:	<a href="http://www.pc.gov.au/inquiries/current/basin-plan">http://www.pc.gov.au/inquiries/current/basin-plan</a>
Or email:	Basin.plan@pc.gov.au

### Contacts

Administrative matters:	Tracey Horsfall	Ph: 02 6240 3261
Other matters:	Jessica Hartmann	Ph: 02 6240 3222
Freecall number for regional areas:	1800 020 083	
Website:	<a href="http://www.pc.gov.au">www.pc.gov.au</a>	

## The Productivity Commission

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

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

Further information on the Productivity Commission can be obtained from the Commission's website ([www.pc.gov.au](http://www.pc.gov.au)).

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# 1 What is this inquiry about?

Under the *Water Act 2007* (Cwlth), the Productivity Commission (the Commission) has responsibility for assessing the effectiveness of implementation of the Basin Plan — and associated water resource plans (WRPs) — every 5 years. This function was transferred to the Commission when the National Water Commission (NWC) was abolished in 2015. This assessment is the first to be undertaken by the Commission.

The Basin Plan represents a major step change in the management of the Murray-Darling Basin (the Basin). It is part of a comprehensive, large-scale Australian and Basin State<sup>1</sup> government reform initiative to reset the balance between environmental and consumptive use of water across the Basin and establish a long-term, sustainable water management system.

The move to a more sustainable balance required a series of substantial trade-off decisions — balancing the environmental benefits to the system overall against the socioeconomic impacts on industries and regional communities of a permanent reduction in water for irrigation. As such, the development of the Basin Plan by the Murray-Darling Basin Authority (MDBA) was a lengthy and an often-contested process, involving considerable negotiation and compromise before it was finalised and became law in November 2012.

Since then, all jurisdictions have been involved in the process of implementing the Basin Plan. By June 2019, governments are due to have largely established the arrangements for a new management regime under the Basin Plan, with full implementation by 2024.

Implementing the Basin Plan and associated reforms is a complex process. Basin States must develop new planning frameworks to manage water, implement significant water recovery and infrastructure projects and develop new approaches to managing water for the environment. It is also prone to controversy as governments work through review and adjustment provisions, and issues covered when formulating the Plan are reopened. This is made more difficult as the socioeconomic impacts of rebalancing to the new Sustainable Diversion Limit (SDL) become apparent and as some communities grapple with the realities of adjustment against a background of changing commodity prices and, in the southern Basin, water trade.

## What is the Commission required to do?

The terms of reference (attachment A) require the Commission to assess progress towards implementing actions required under the Basin Plan within legislated timeframes, including the:

- extent to which stated water recovery and other targets are on track to be delivered within statutory timeframes
- likelihood that activities and arrangements now in place will ensure that these targets and timeframes will be met.

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<sup>1</sup> The Basin States are the jurisdictions of New South Wales, Victoria, Queensland, South Australia and the Australian Capital Territory

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The Commission has also been asked to examine the extent to which current arrangements for implementing the Basin Plan — including for monitoring, compliance, reporting and evaluation — are likely to be sufficient to:

- support delivery of the objectives and outcomes of the Basin Plan and associated reforms (as listed in chapter 5 of the Plan)
- enable assessment of risks and risk mitigation requirements and provisions associated with Basin Plan implementation
- enable an assessment of progress in meeting the Plan’s objectives and outcomes when the MDBA reviews the Plan in 2026.

The Commission has been asked to make findings on progress towards implementing the actions required under the Basin Plan. In particular, the Commission is to make recommendations on any actions required by the Australian Government or Basin States to ensure timely implementation of the Basin Plan and the effective achievement of its intended outcomes. The scope of the inquiry does not extend to considering changes to the water recovery and other targets set by governments as part of the Basin Plan.

In undertaking the inquiry, the Commission will consider a number of other reviews and audits of the Basin Plan, including those in response to allegations of water theft in the Basin that have been completed or are ongoing. In accordance with the Water Act, the Commission will consult widely including with stakeholders with interests from agriculture, industry and the environment, and Indigenous groups through submissions and public hearings. The Commission will listen to different perspectives through visits to a number of regional communities in the Basin prior to publication of the draft report. Details of these regional visits can be found on the inquiry webpage.

In addition, a stakeholder working group will be established. The purpose of the working group is to provide a consultation forum to exchange information and views on issues relevant to the inquiry. Membership of the stakeholder working group can be found on the inquiry webpage.

The Commission encourages submissions on issues relevant to the inquiry’s terms of reference. As a guide to preparing submissions, this issues paper outlines what the Commission sees as the material and relevant issues; it also contains a number of questions. It is not a requirement that participants answer all the questions nor limit their submissions to the questions raised.

Initial submissions should be provided to the Commission by 19 April 2018. Attachment B provides further details on how to make a submission. There will be opportunities to make further submissions following the public release of the draft report in August 2018. Key dates for the inquiry are set out at the front of this issues paper.

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## 2 Resetting the balance in the Basin

The Basin includes significant areas of inland New South Wales, Victoria, and the ACT, and parts of Queensland and South Australia. In the past, it was managed under state legislation with issues of common concern addressed through a formalised agreement between these jurisdictions and the Australian Government – the Murray-Darling Basin Agreement (MDB Agreement). The MDB Agreement set out arrangements for water sharing between states, river operations and other matters of common interest. The Agreement was based on a consensus decision-making model and, over time, jurisdictions collectively made a number of significant reforms, including:

- managing salinity, with the first strategy agreed in 1985
- capping water extractions across the Basin in 1995
- improving environmental flows in the River Murray through The Living Murray program, which recovered 500 GL of water for the environment and built environmental works along the River Murray.

However, the consensus-based approach to managing the Basin was challenged in the later years of the Millennium Drought (1997 to 2009). In 2006, the lowest inflows to the River Murray system were recorded, causing significant risk to the drinking water supplies of towns and cities that relied on the river and imminent risk of widespread and irreversible acidification of the Lower Lakes at the end of the river system. This triggered the Australian Government to intervene in the management of the Basin with a comprehensive initiative to reset the balance between environmental and consumptive water use and to establish a long-term and sustainable water management system for the Basin overall.

The Australian Government's initiative included:

- Commonwealth legislation – the *Water Act 2007*
- a shift from the model of consensus decision-making to one where the Australian Government was responsible for determining a maximum level of extraction for consumptive use — the SDL — with which Basin States are required to comply
- developing the Basin Plan to set a new, lower, SDL, and the framework for the sustainable management of water resources across the Basin
- creating a new independent Australian Government agency (the MDBA) to develop and oversee the Basin Plan
- providing approximately \$13 billion to recover enough water from consumptive use to achieve the new SDL whilst minimising the socioeconomic impact on irrigators and communities, and to implement sustainable water management across the Basin
- creating a Commonwealth Environmental Water Holder (CEWH) to manage water recovered for the environment.

The new approach was ultimately agreed by all Basin States who passed legislation that referred some powers for water management functions, covered in the MDB Agreement, to

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the Commonwealth. In addition, the importance of the MDB Agreement was recognised and it was included in the Water Act. The Basin Plan became law in 2012.

## **The Basin Plan**

The Basin Plan provides the guidance and legal framework to reset the balance of water use in the Basin. It sets 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.

Successful implementation of the Basin Plan also depends on a range of inter-related elements to be delivered in conjunction with the Basin Plan, including:

- water recovery programs, where government is investing directly in water entitlements purchase or irrigation efficiencies to recover water entitlements for the environment and enable communities to transition to new extraction limits
- structural adjustment programs aimed at assisting affected communities to adjust to reduced water availability as a result of the Basin Plan
- environmental water management activities where environmental water holders work together to deploy environmental water and achieve the environmental objectives of the Plan
- jurisdictions embedding key parts of the Plan in their normal water planning and management processes through WRPs.

The key elements for establishing and implementing the Plan are described in figure 1.

Implementation of the Basin Plan is a long-term undertaking requiring communities and institutions to adapt to the new SDLs, build new infrastructure works, implement specific projects and develop new ways of working to manage environmental water.

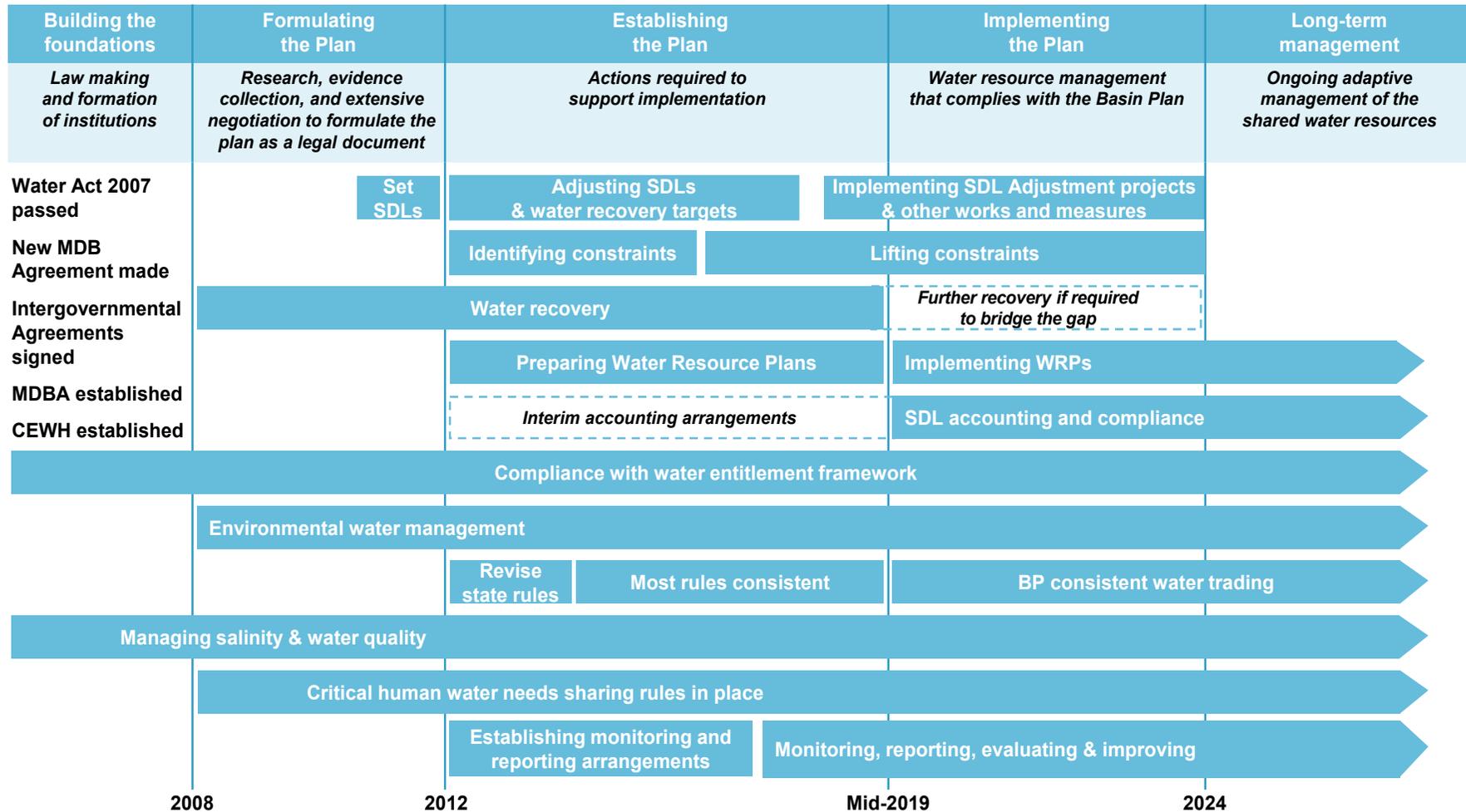
The timing for each of the major elements of the Plan is outlined in figure 2. Formulation of the Plan was completed in 2012. Governments are now working towards establishing the arrangements required to implement the Plan — this phase must be completed by 30 June 2019. This work includes establishing the final target for SDLs and developing WRPs which will give effect to the new SDLs, completing the majority of the water recovery.

Figure 1 **Basin Plan – key elements of establishment and implementation**



**CEWH:** Commonwealth Environmental Water Holder; **DAWR:** Department of Agriculture and Water Resources (Cwth); **DIRDC:** Department of Infrastructure, Regional Development and Cities (Cwth); **MDBA:** Murray-Darling Basin Authority

Figure 2 Phases of the Basin Plan

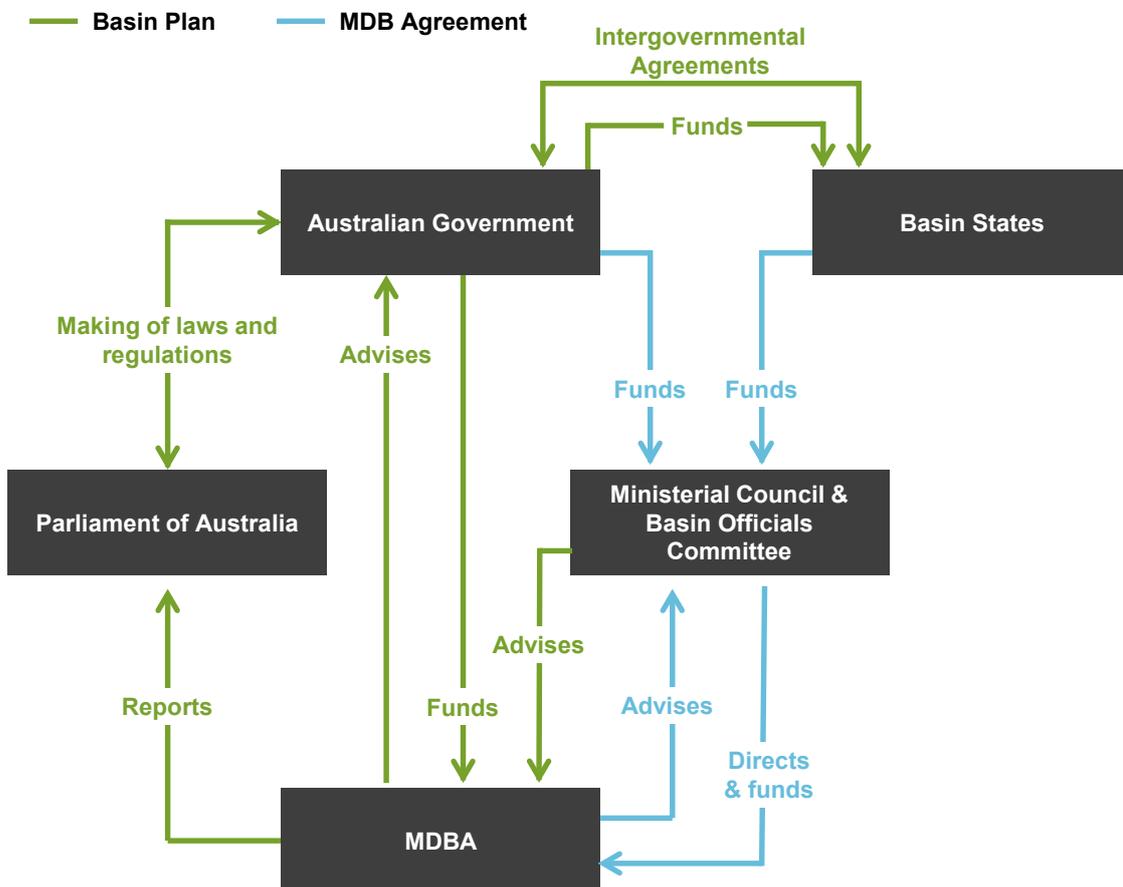


Data sources: Water Act 2007 (Cwlth); Basin Plan 2012 (Cwlth), COAG (2013).

## Roles and responsibilities

The Water Act and the Basin Plan are laws made by the Parliament of Australia. However, under the *Australian Constitution*, the management of water resources is vested in State and Territory Governments and, as such, each Basin State is responsible for water resource management within its jurisdiction. A number of the state responsibilities for water management, particularly in shared water resources, are managed cooperatively by Basin States and the Australian Government under the MDB Agreement. The relationships between key institutions is shown in figure 3.

Figure 3 Institutional relationships



Data source: Water Act 2007 (Cwlth); Basin Plan 2012 (Cwlth).

The Water Act, MDB Agreement and the Basin Plan result in a complex suite of governance and institutional arrangements for water management in the Basin. The complexity of the current governance arrangements is highlighted by:

- the multiple roles of the MDBA: it is an independent authority advising the Australian Government on formulation and establishment of the Basin Plan; it is a regulator that oversees, ensures compliance with and reports on the implementation of the Plan by

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Basin States; and under the MDB Agreement, it is funded by and delivers River Murray operations and joint programs on behalf of the MDB Ministerial Council.

- the dual roles of the Basin Officials Committee (BOC): it directs the MDBA on MDB Agreement functions and it requires the support of and is overseen by the MDBA in undertaking its Basin Plan responsibilities.

Ultimately, the Australian Government, the MDBA and the Basin States have to work together to effectively implement the Basin Plan. The institutional and governance arrangements for the Basin are explored further in section 5.

### **3 The Commission's assessment approach**

The Commission has been asked to assess the effectiveness of the implementation of the Basin Plan. Effectiveness is the extent to which a policy achieves its intended outcome. For the Basin Plan, the intended outcome is 'a healthy and working Basin' (Basin Plan, s. 5.02). The Plan outlines the objectives, environmental targets and the SDLs which would enable that outcome to be delivered in the longer term. In undertaking its assessment, the Commission will accept these as the starting point of the inquiry.

The Commission will assess the Basin Plan's effectiveness by gauging the extent to which the following are on track to be delivered within legislated timeframes:

- actions required to implement the various elements of the Basin Plan
- water recovery and other targets.

These will be used as proxies for the (difficult to measure) intended outcome of the Plan.

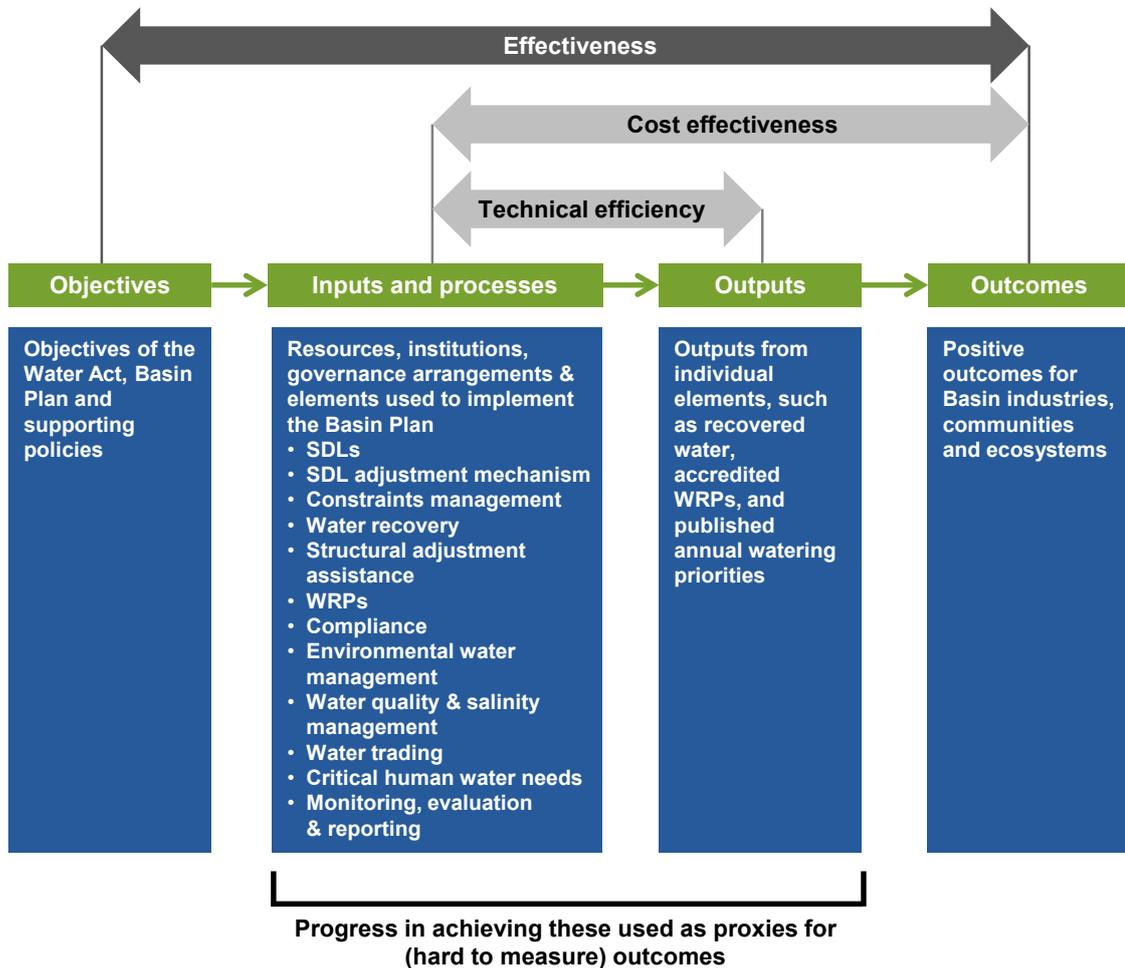
Effectiveness will be assessed in terms of the extent to which:

- current progress is on schedule for each element of the Basin Plan
- future progress is likely to meet legislated timeframes to fully implement the elements and achieve associated targets.

Where possible, and considered important, the Commission will also assess the Basin Plan's cost effectiveness (cost of achieving the intended outcome) and technical efficiency (quantity of inputs used to produce a given level of output, such as a particular volume of recovered water). The relationship between these concepts and effectiveness is outlined in figure 4.

The Commission will place greatest emphasis on assessing required actions and targets that inquiry participants and the Commission's own investigations indicate are most critical to achieving the Plan's intended outcomes. The Commission is therefore interested in early input on the actions and targets that inquiry participants consider to be most critical to achieving the Plan's intended outcomes.

Figure 4 The Commission's approach to assessing the Basin Plan



It will only be possible to quantify progress on required actions and targets for some elements, such as the number of WRPs accredited and volume of water recovered. The Commission will supplement this with a qualitative analysis of implementation of the Basin Plan, including the processes by which this is being achieved. The qualitative analysis will, among other things, examine:

- what policy instruments are being used, the extent to which they directly influence the targeted objective, and whether the objective conflicts with what is being sought and done elsewhere in the Basin Plan
- how clear are the steps to be taken, their timing, roles of different parties, and what the objective is
- risks to achieving the management objectives and outcomes, as well as any targets, set out in the Plan; uncertainty about impacts on communities, industries and the environment; and whether adaptive management is built in to policies, such as scope for timely and low-cost adjustment to policy settings in response to new information

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- institutional and governance arrangements, for both the individual elements of the Plan and the Plan as a whole, including whether there are clear lines of responsibility and accountability; assignment of functions to agencies best equipped to deliver them; credible monitoring, reporting and enforcement; and a separation of regulatory and policy-making functions
  - whether the steps actually taken have been consistent with stated policies and agreed methodologies; how trade-offs have been made between different water uses; whether there been any observed changes to local communities, industries and the environment; and what concerns, policy flaws or barriers have been exposed during implementation that need to be addressed to achieve the intended outcome of the Basin Plan in the long term.

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*INFORMATION REQUEST 1*

*The Commission welcomes feedback on its approach to assessing the Basin Plan.*

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## **4 The key elements required to implement the Plan**

The Commission's assessment will involve examining a range of inter-related factors that are broadly structured around:

- establishing the arrangements for implementing the Plan (SDLs and Adjustment; constraints management; water recovery; and structural adjustment)
- plan implementation and long-term management (WRPs; compliance; environmental water planning and management; water quality and salinity management; water trading rules; critical human water needs; and monitoring, evaluation and reporting) (figure 2).

### **Sustainable Diversion Limits and Adjustments**

SDLs are a core element of the Basin Plan. They represent the maximum long-term average-annual quantities of water that can be taken from the water resource areas of the Basin.

The Basin Plan sets an SDL for all surface water units at 10 873 GL per year which requires a water recovery target of 2750 GL (the water recovery target is the difference between the SDL and estimated diversions prior to the commencement of the Basin Plan — the baseline diversion limit, or BDL). The SDL for groundwater take in the Basin is 3334 GL per year.

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## Sustainable Diversion Limit Adjustment Mechanism

The Basin Plan provides an opportunity to adjust the proposed SDLs and consequential water recovery targets prior to SDLs commencing on 1 July 2019 under certain circumstances. Under the adjustment mechanism, the surface water SDL in the southern connected part of the Basin can be increased where works and measures can be shown to achieve equivalent environmental outcomes with a lower volume of environmental water. These are known as ‘supply measures’ and can include both physical environmental works as well as operation rule changes. The maximum increase in the SDL from supply measures anticipated under the Plan is a total of 650 GL per year.

The SDL can also be reduced to enable a suite of enhanced environmental outcomes. This can occur where additional volumes of water can be recovered for the environment while maintaining or improving social and economic outcomes. These are known as ‘efficiency measures’ and can include projects to improve the efficiency of on- and off-farm irrigation. The Plan identifies a target of acquiring an extra 450 GL of water through efficiency measures and reflects modelling which found that 3200 GL in water recovery and the removal of a range of capacity constraints (explained later) would deliver the enhanced environmental outcomes as set out in schedule 5 of the Plan.

The Basin Plan limits the net change to the SDL as a result of the adjustment mechanism to 5 per cent of the SDL (or 543 GL).

Basin States are responsible for identifying and developing the business cases for potential supply and efficiency measures. The BOC must then assess the notified measures and recommend a package of adjustment measures for consideration by the MDBA. The MDBA provides advice to the Minister on the package of adjustment measures and the impact on the SDLs, but (as recent events showed) it is a disallowable instrument. The Minister then tables an amendment to the Basin Plan reflecting the decisions on adjustment in the Parliament. If allowed by the Parliament, Basin States have until 2024 to implement approved SDL adjustment projects. The MDBA can reconcile SDL adjustments in 2024 to assess whether the ‘register of measures’ have achieved equivalent environmental outcomes and, if they have not, revise the SDL accordingly.

In June 2017, the BOC submitted a package of SDL adjustment measures (including 36 supply projects) to the MDBA for consideration.<sup>2</sup> The MDBA’s assessment was that, if successful, these supply projects would achieve the equivalent environmental outcomes with a resultant reduction in the water recovery target of 605 GL (MDBA 2017d).

The Plan was amended in January 2018 to provide for the approved package of SDL adjustment measures and put to Parliament. However, the amending instrument is currently subject to a disallowance motion in the Australian Parliament which expires in May 2018.

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<sup>2</sup> The list of approved SDL adjustment projects can be found on the MDBA’s website: <<https://www.mdba.gov.au/basin-plan-roll-out/sustainable-diversion-limits/sdl-adjustment-proposals-state-projects>>

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If the amendment holds, a minimum 62 GL of water will need to be recovered through efficiency measures by 30 June 2019 to stay within the 5 per cent limit of change.

Some stakeholders have previously expressed concern about whether efficiency measures to recover the extra 450 GL can be implemented in a way that meets the Basin Plan requirement for ‘neutral or improved socioeconomic outcomes’ (MDBA 2017c).

In January 2018, EY (2018) delivered a report to the MDB Ministerial Council that examined opportunities to recover 450 GL in additional environmental water through efficiency measures by 2024, with neutral or improved socioeconomic outcomes. Notably the report advised ‘on potential socioeconomic impacts arising from efficiency measures at a range of scales, including socioeconomic concerns that go beyond the specific legal requirements of the Basin Plan’ (the Basin Plan describes ‘neutral or improved socioeconomic outcomes’ as being evidenced by voluntary participation in projects to recover water through works to improve water use efficiency).

If the adjustment mechanism included in the Basin Plan does not operate, then Basin States must comply with the original SDLs outlined in the Plan. This implies a consequential water recovery target of 2750 GL by 2019.

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*INFORMATION REQUEST 2*

*The Commission is seeking information on:*

- a. risks that may prevent Basin States from successfully implementing SDL adjustment projects*
  - b. the extent to which adopting a different definition of ‘neutral or improved socioeconomic outcomes’ for efficiency measures to what is in the Basin Plan would affect the likelihood of projects being delivered on time and on budget*
  - c. whether there are other novel approaches to recovering water for the environment, such as purchase of entitlement options, that may contribute to Basin Plan outcomes while achieving neutral socioeconomic outcomes.*
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## Northern Basin Review

The Basin Plan also included provisions to review the surface water SDLs in the Northern Basin, recognising that information about water sources in this area was limited and that new information could justify changing the original SDLs.

After a three-year review process looking at new information on both environmental outcomes and socioeconomic impacts, the MDBA proposed to reduce the overall surface water recovery target in the Northern Basin from 390 GL to 320 GL provided that the Australian, New South Wales and Queensland Governments implement a number of ‘toolkit measures’ to improve the management of environmental water. Modelling that informed the Northern Basin Review (NBR) showed that the toolkit measures would produce similar

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environmental outcomes with less water recovery, reducing the socioeconomic impact of water recovery on northern basin communities. The MDB Ministerial Council subsequently agreed in-principle to couple the reduced water recovery target with the toolkit measures (MDB Ministerial Council 2017a).

The Basin Plan was amended on 14 November 2017 to reflect changes from the NBR. However, these amendments were disallowed following a vote in the Australian Parliament on 14 February 2018. This means that, at present, the original water recovery target of 390 GL for the Northern Basin still stands.

### Groundwater reviews

When the Basin Plan came into effect in 2012, there was recognition that information about some groundwater areas could be improved. Governments therefore committed to undertake reviews of SDLs for three groundwater areas to determine if the original SDLs set in the Plan should be changed to reflect new information. The planned groundwater reviews were completed in 2014. The MDBA subsequently proposed increases in SDLs in these areas, reflecting new knowledge. The Minister accepted these changes and the SDLs for groundwater sources were proposed to increase from 3334 GL per year to 3494 GL (the groundwater resources covered by the review do not have water recovery targets because levels of extraction are below the SDLs). The November 2017 Basin Plan amendments also included the outcomes of these reviews and, at this stage, they have also been disallowed.

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#### *INFORMATION REQUEST 3*

*The Commission is seeking information on actions governments should now take to achieve SDLs in the Northern Basin.*

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### Constraints management

Physical, operational and management constraints in river systems can limit the size of flows that can be delivered for environmental purposes, and therefore limit the effective suite of environmental outcomes that can be achieved with improved flows. For example, constraints prevent higher flows that might flood private land or affect public infrastructure such as low bridges, limiting the extent of floodplain watering.

In the context of the Basin Plan, constraints management is a key issue for ensuring the effective delivery of environmental water. In particular, the analysis that underpinned delivering the ‘enhanced environmental outcomes’ (outlined in schedule 5 of the Basin Plan) from providing an additional 450 GL to the environment (above the 2750 GL water recovery benchmark) was premised on a number of existing constraints being lifted. The corollary is that if these constraints are not lifted, the additional water from the water efficiency measures outlined above will be less likely to achieve enhanced environmental outcomes.

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Under the Basin Plan, the MDBA was required to prepare a constraints management strategy that identifies and describes key constraints affecting the delivery of environmental water. The MDBA (2013) published its Constraints Management Strategy in 2013 which outlined priority actions for the seven key focus areas:

- Hume to Yarrawonga (Upper Murray)
- Below Yarrawonga to Wakool Junction (Mid-Murray)
- Goulburn
- Murrumbidgee
- Lower Darling
- Gwydir (Northern Basin)
- South Australia (Lower Murray)

The strategy outlined a staged approach for the development of measures to address constraints by 2024.

Basin States are responsible for making decisions to remove constraints, developing specific constraints measures and being involved in the consideration of measures proposed by other jurisdictions. A number of constraints measures have been included in the package of supply measures mentioned above. In addition, a package of constraints measures will be considered by the MDB Ministerial Council, advised by BOC, with the final investment decision made by the Australian Government.

The Australian Government has allocated \$200 million to relax or remove priority constraints in the context of the SDL adjustment mechanism (discussed above). Once measures are approved, Basin States will be responsible for implementing measures within their respective jurisdictions, including consultation and engagement. The MDBA must report annually to the MDB Ministerial Council on progress on the matters covered by the Constraints Management Strategy.

Progress with constraints measures is at present behind the timelines set out in the Constraints Management Strategy. The MDBA undertook the prefeasibility phase of the Constraints Management Strategy during 2014. However, measures have not yet progressed past the next phase (feasibility), which was due to be completed in 2016.

Current action to lift constraints include further ‘investigation of opportunities’ to allow higher flow rates as part of measures in the SDL adjustment package<sup>3</sup> for constraints in the Southern Basin. It was also proposed that toolkit measures (as part of the NBR) be used to

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<sup>3</sup> These measures have been assessed as constraints-as-supply measures, meaning they contribute to the supply measures assessment. The proposals to investigate constraints in the SDL adjustments package represents a change in responsibilities to the 2013 Basin Plan Implementation Agreement where the MDBA was responsible for developing and evaluating options to lift constraints.

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lift the Gwydir constraint. The pathway for lifting the Gwydir constraint is no longer clear after the Parliament rejected the NBR amendments in February 2018.

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*INFORMATION REQUEST 4*

*The Commission is seeking information on:*

- a. why progress to remove constraints has been slower than expected*
  - b. the implications of this slow progress*
  - c. what can be done to ensure that constraints are removed in a more timely manner while managing impacts on third parties*
  - d. strategies that are, or could be, put in place to increase the extent to which Basin Plan objectives are met when constraints cannot be removed.*
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## **Recovery of water for the environment**

Water recovery has to be completed as part of the establishment phase of the Basin Plan to give effect to the SDLs, provide water to protect the water-dependent ecosystems of the Basin, and support achievement of the environmental outcomes of the Plan.

The Australian Government (through the Department of Agriculture and Water Resources, or DAWR) has committed to ‘bridging the gap’ to meet the SDLs by 1 July 2019. The water it recovers is generally managed by the CEWH to support environmental outcomes.

Data published by the Australian Government indicates that, by the end of December 2017, 2106.4 GL of surface water entitlements (77 per cent of the current 2750 GL surface water target) and 2.7 GL of groundwater entitlements (7 per cent of the 40.4 GL groundwater target) had been recovered from consumptive use (DAWR 2018) (table 1).<sup>4</sup> This includes 161.9 GL of surface water previously recovered by Basin States and now managed by state-based environmental water managers.

The gap to be bridged by 1 July 2019 could change if amendments to the Basin Plan to implement the SDL adjustment mechanism and NBR (discussed above) are allowed. As mentioned, the latter of these amendments was recently disallowed in the Australian Parliament, and the former is subject to a disallowance motion which expires in May 2018. Each of these amendments would reduce the surface water recovery target. The final recovery task will also depend on some planning assumptions underpinning state water resource plans.

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<sup>4</sup> Recovered water holdings are reported as long-term average annual yields (LTAAYs), which represent the average quantity of water allocated to a water entitlement each year.

**Table 1 Progress towards recovering water for the environment**  
As of 31 December 2017

	<i>Surface water</i>		<i>Groundwater</i>	
	<i>Volume of water<sup>a</sup></i>	<i>Proportion of target</i>	<i>Volume of water<sup>a</sup></i>	<i>Proportion of target</i>
	GL	%	GL	%
Water purchase	1 224	45	2.7	7
Infrastructure projects	703	26	nil	0
State and other recoveries	180	7	nil	0
<b>Water recovered by 31 Dec 2017</b>	<b>2 106</b>	<b>77</b>	<b>2.7</b>	<b>7</b>
Water recovery remaining	644	23	37.7	93
<b>Water recovery target</b>	<b>2 750</b>	<b>100</b>	<b>40.4</b>	<b>100</b>

<sup>a</sup> Long-term average annual yield (LTAAAY).

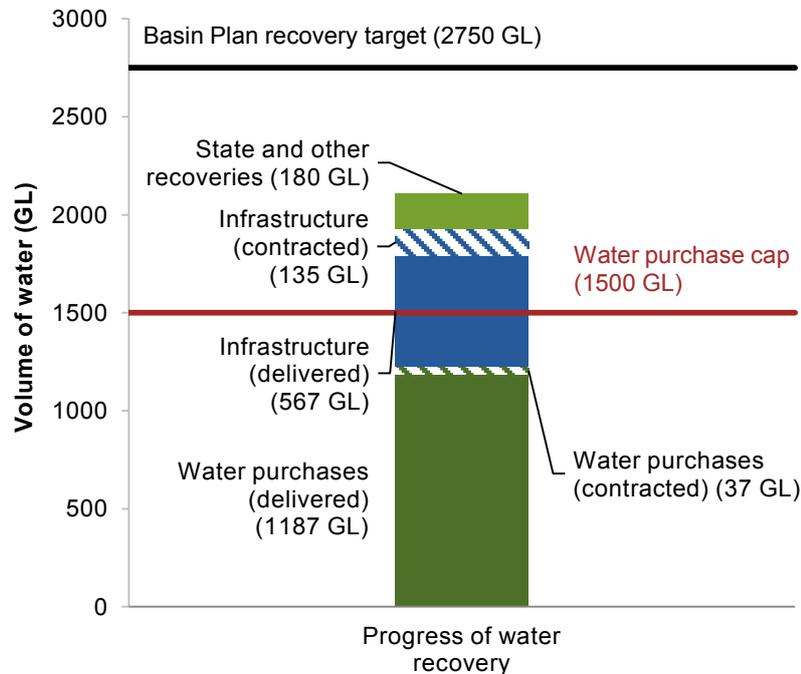
*Data source:* DAWR (2018).

The Basin Plan does not prescribe how water is to be recovered. Water can be recovered through water entitlement purchases, and Commonwealth funded on- and off-farm infrastructure programs (programs that seek to improve the efficiency of water use, with some or all of the water savings returned to the Australian Government). To date, most of the water recovered by the Australian Government has been through water purchases (figure 5). However, the Australian Government’s current water recovery strategy now explicitly prioritises recovering remaining water through infrastructure projects. Legislation passed by the Australian Parliament in 2015 placed a 1500 GL limit on surface water purchases. In December 2017, the unused portion of this limit (after taking account of past purchases) was 276 GL.

Water purchase programs and some infrastructure projects have been examined by various reviews, audits and studies, which have highlighted a number of risks and shortcomings (for example, ANAO (2011) and GHD (2015)). In the case of infrastructure projects, some studies have found that they have been less cost-effective at recovering water than water purchases (RMCG 2016), and have become more expensive over time (Loch et al. 2014). Moreover, there is a risk that infrastructure projects do not recover the expected volume of water because, in some projects, water savings are not transferred to the Australian Government upfront.

Figure 5 **Surface water recovery progress<sup>a</sup>**

As of 31 December 2017



<sup>a</sup> Volume of water in long-term average annual yield (LTAAY) terms.

Data source: DAWR (2018).

The environmental objectives of the Basin Plan are premised on water recovery being undertaken in the right place and with the right mix of entitlement types. It is also premised on targets being met within legislated timeframes. Ongoing delays, or the absence of a credible pathway, would create uncertainty for Basin industries and communities, and pose risks to finalising water recovery within budget.

#### INFORMATION REQUEST 5

The Commission is seeking information on:

- the extent to which the Australian Government's strategy to recover water in areas where gaps remain will be cost effective, align with the Basin Plan's environmental objectives, and be transparent
- risks to achieving water recovery targets by 1 July 2019 and, where not already addressed under current arrangements, how any shortfalls may be resolved
- examples of water recovery (both infrastructure projects and purchases) that have been either well implemented or had major deficiencies, including risks to securing contracted but not yet delivered water from water-saving infrastructure projects.

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## Structural adjustment assistance

The intended outcome of the Basin Plan as a whole includes ‘productive and resilient water-dependent industries, and communities with confidence in their long-term future’. Given the impacts that the Basin Plan is expected to have on some Basin communities, the Australian Government has provided funding to assist those communities to adjust their local economies to a more water-constrained environment (in addition to investment through water recovery). Unlike on- and off- farm infrastructure programs (that seek to improve efficiency in water use), structural adjustment funding is largely premised on diversifying the economic base of affected communities.

The Australian Government is assisting Basin communities to adapt through the *Murray-Darling Basin Regional Economic Diversification Program*. This program has committed \$73 million to assist Basin communities with structural adjustment, with specific projects selected by Basin States, in consultation with the Australian Government Minister for Regional Development.<sup>5</sup> In Queensland, funding to date has, among other things, been used to develop the horticulture industry (Queensland Government 2017). In New South Wales, funded projects have supported a diverse range of industries, including manufacturing, cheese making, aquaculture and grain processing (New South Wales Government nd).

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### INFORMATION REQUEST 6

*The Commission is seeking information on:*

- a. what specific assistance has been provided to help communities adjust to the Basin Plan*
  - b. the extent to which this assistance has supported particular industries or regions*
  - c. evidence that this assistance has facilitated adjustment that would not have otherwise occurred and has contributed to meeting the intended outcome of the Basin Plan, including more resilient industries and communities with confidence in their long-term future*
  - d. whether future structural adjustment assistance is warranted, and if so, what lessons can be learnt from past programs.*
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## Water resource plans

WRPs are the key element through which Basin States will implement the Basin Plan. Prior to the Basin Plan taking effect in 2012, Basin States managed water resources in the Basin through catchment-based and/or system-based water planning arrangements to achieve state water resources management objectives and those of the MDB Agreement. WRPs are designed to ‘bring together existing state rules and instruments, along with other

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<sup>5</sup> Approximately \$15m of this funding was allocated to Queensland, \$33m to New South Wales and \$25m to Victoria. No funding has been committed to South Australia or the ACT (DIRDC 2017).

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supplementary material, to provide a plan for managing water resources in a way that is consistent with the Basin Plan’ (MDBA 2017a, p. 2). Once accredited, WRPs will set out how water is to be managed in each WRP area in the Basin, in particular specifying how water will be shared and managed to achieve the SDLs (MDBA 2017g).

There are 36 WRP areas across the Basin (five in Victoria, 22 in New South Wales, four in Queensland, three in South Australia and two in the ACT).<sup>6</sup>

### Accreditation of plans

Basin States are responsible for developing WRPs consistent with Basin Plan requirements. The MDBA is responsible for assessing whether WRPs meet the requirements of the Basin Plan and making recommendations to the Australian Government Minister for Agriculture and Water Resources on whether WRPs should be accredited. The MDBA is also required to assist Basin States in developing WRPs and has been providing states with a range of guidance material. It is also responsible for ensuring compliance with WRPs (discussed below under compliance). Accredited plans must be in place by 30 June 2019.

The Basin Plan sets out 54 requirements that WRPs must address to be accredited. Some of these requirements are about process — such as consultation with stakeholders and providing information — others relate to the inclusion of specific content — such as complying with SDLs and planning for environmental watering.

According to the MDBA (2017c) many of the requirements can be easily met by existing state arrangements. However, there are some new requirements, such as the water accounting and compliance framework, where this may not be the case (discussed below). In the MDBA’s (2017c) Basin Plan Evaluation, implementation of WRPs within required timeframes was found to be at risk. The MDBA noted that the development and accreditation of WRPs was progressing slower than initially envisioned with only one plan, in the Warrego-Paroo-Nebine, finalised and accredited by December 2017 and 31 still in preliminary stage of development (in 2014 it was projected 14 WRPs would be accredited by 2017 (MDBA 2017c, p. 45)). The MDBA attributed slow progress to:

- the need for the MDBA to provide guidance on addressing requirements
- the need to ensure plans submitted to the MDBA are supported by sufficient evidence that demonstrates they comply with all the requirements
- potentially too few resources allocated to this task (MDBA 2017c, p. 46).

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<sup>6</sup> The Basin Plan Amendment Instrument 2017 changed the number of WRP areas from 36 to 33 by merging Eastern Porous Rock with Western Porous Rock to form NSW Murray Darling Basin Porous Rock ground water WRP area, Lachlan and South Western Fractured Rock with New England Fractured Rock and Northern Basalts to form NSW Murray-Darling Basin Fractured Rock groundwater WRP area and merging the surface and groundwater WRP areas of Moonie and Queensland Border Rivers. This amendment was disallowed by Parliament on 14 February 2018.

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An update on the progress of the WRP development to accreditation process issued in January 2018 (MDBA 2018b) showed that two WRPs are in the assessment phase (Wimmera-Mallee surface and groundwater) and one WRP is in the accreditation phase (SA Murray Region). The rest of the WRPs, yet to be accredited, are still in the development phase.

If Basin States are at risk of not having their WRPs accredited in the statutory timelines (by 30 June 2019), the MDBA has two options (MDBA 2017e):

1. take compliance action where there are inconsistencies between Australian Government and state laws, or
2. use the step-in provisions of the Water Act to develop its own enforceable plan.

#### *Transitioning to SDL accounting and compliance*

WRPs must include methods for demonstrating how compliance with SDLs will be achieved under different climate scenarios. In particular, WRPs must include methods for calculating permitted annual take as well as methods for monitoring and reporting actual take.

The MDBA maintains an annual register of diversions based on data and estimates provided by Basin States. From 1 July 2019, the register will widen in scope to require data or estimates for all types of surface water and groundwater-takes rather than only certain types of surface water diversions. In preparation for the new accounting system, the Basin States have submitted a set of trial accounts for 2012–16 in the required format (MDBA 2017f).

The MDBA's (2017c) Basin Plan Evaluation found that the MDBA and Basin States must complete a large body of work to develop a robust basis for measuring water take and transparent reporting on SDL compliance, and assessed the transition to SDL accounting and compliance as at risk.

The MDBA suggested key areas of focus to improve the standard of SDL accounting should include: reviewing hydrological models to account for water take; improving methods for estimating forms of non-metered take (particularly floodplain harvesting in New South Wales and Queensland); improving the accuracy and reliability of metering; and reviewing network gauging stations.

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#### INFORMATION REQUEST 7

*The Commission is seeking information on:*

- a. the main risks to remaining WRPs being finalised and accredited by mid-2019*
  - b. how, and to what extent, recent measures to make the WRP accreditation process more efficient and streamlined have sped up the preparation of WRPs and whether there are opportunities to further streamline the accreditation process for WRPs*
  - c. other ways WRPs or associated planning processes (e.g. consultation, modelling inputs) could be changed to better meet the objectives of the Basin Plan*
  - d. how effective Basin States have been in consulting with all relevant stakeholders*
  - e. the main risks to planning assumption work being finalised on time.*
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### **Environmental water planning and management**

The Basin Plan outlines a range of environmental objectives designed to protect and restore the health and resilience of Basin ecosystems. The use of environmental water (planned<sup>7</sup> and held<sup>8</sup> water) will be vital to achieving these objectives. Specific actions in the Basin Plan for use of environmental water are:

- planning for use of environmental water
- coordination of environmental water delivery
- prerequisite policy measures (PPMs)
- complementary works
- monitoring and evaluation of environmental outcomes.

The first four of these are explored below. Issues relating to the monitoring and evaluation of environmental outcomes are explored later in this paper.

#### **Environmental water planning**

Processes to coordinate planning, prioritisation and use of environmental water are outlined in an Environmental Management Framework contained in chapter 8 of the Basin Plan. The framework obliges the MDBA to:

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<sup>7</sup> Planned environmental water is that which is used to achieve positive environmental outcomes through rules on consumptive water users or river operators that constrain the volume and timing of extractions or require releases from storages under certain conditions.

<sup>8</sup> Held environmental water is that which governments possess and use specifically to achieve positive environmental outcomes. Held water is managed by environmental water holders established by governments, with the majority held by the CEWH.

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- prepare a Basin-wide environmental watering strategy that further articulates the environmental outcomes of the Basin Plan and how these can be achieved. A strategy was first published in 2014 and must be reviewed every five years (MDBA 2014a)
  - identify Basin annual environmental watering priorities (MDBA 2017b). These must be published before the commencement of the water accounting period each year.

The framework also obliges Basin States to:

- prepare long-term watering plans, which set long-term objectives for the use of environmental water in individual WRP areas — these must be reviewed and updated at least every five years
- identify annual environmental watering priorities in each WRP area — these must be provided to the MDBA by 31 May each year unless otherwise agreed.

Long-term watering plans and annual watering priorities must be consistent with the Basin-wide environmental watering strategy. Basin States have to submit long-term watering plans and WRPs to the MDBA. The MDBA is responsible for reviewing and accrediting WRPs.

The Basin-wide environmental watering strategy, long-term watering plans, and annual Basin-wide and state watering priorities have all been published within legislated or agreed timeframes thus far (MDBA 2017c).

### Coordination of environmental water delivery

The effective delivery of environmental water is a responsibility shared between the MDBA, CEWH, Australian Government, and Basin States, as well as other holders of held environmental water and managers of planned environmental water.

The CEWH manages the largest portfolio of held environmental water in the Basin. Some Basin States also hold water entitlements for environmental use, and/or manage Australian Government holdings. The MDBA manages some held environmental water through The Living Murray program.

The Water Act requires the CEWH to manage its environmental water holdings in accordance with the Basin-wide environmental watering strategy, while the Basin Plan requires all environmental water holders to operate in accordance with the Basin annual environmental watering priorities. If environmental watering is undertaken other than in accordance with the Basin annual environmental watering priorities, a statement must be provided to the MDBA outlining the reasons why, within four months of the end of that water accounting period.

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State environmental water holders and the CEWH coordinate decisions regarding the use of planned and held environmental water, guided by the key planning documents outlined above. Water is delivered in collaboration with river operators, waterway managers, non-government organisations and communities.

### Prerequisite Policy Measures

Achievement of the Basin Plan's environmental objectives through the use of held and planned water is dependent on Basin States implementing the Prerequisite Policy Measures (PPMs) outlined in the Basin Plan by 30 June 2019. PPMs promote efficient use of environmental water by:

- ensuring it is protected in-stream ('shepherding')
- allowing environmental water users to be credited for return environmental flows
- allowing environmental water users to release held environmental water from dams to complement natural flow events ('piggy-backing').

The hydrological modelling underpinning the Basin Plan assumes that PPMs are all fully implemented. PPMs are therefore critical to achieving the environmental outcomes specified by the Plan. If they are not implemented, the ability to achieve the environmental objectives of the Basin Plan may be compromised.

Basin States have submitted their plans for implementing PPMs and these have all been approved by the MDBA. In its 2017 Basin Plan Evaluation report, the MDBA (2017c) emphasised the importance of implementing PPMs within the legislated timeframe. It is unclear whether Basin States are on track to meet this deadline.

### Complementary works

Achievement of the Basin Plan's environmental objectives depends not only on the use of held and planned water but also on the environmental management regimes for the rivers and wetlands of the Basin. These include the undertaking of complementary works, including habitat restoration, the management of pest species, water quality improvement and land and catchment management. These actions sit outside the Basin Plan and are undertaken within natural resource management programs. The integration of environmental watering and these programs is critical to the achievement of environmental outcomes.

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#### INFORMATION REQUEST 8

*The Commission is seeking information on:*

- a. how environmental water planning under the Environmental Management Framework is, or is not, facilitating achievement of the Basin Plan's environmental objectives within legislated timeframes, and what improvements should be made.*
  - b. how effective and efficient the delivery of environmental water is — including through coordination among owners of held environmental water, managers of planned environmental water and other stakeholders — and how any barriers could be reduced*
  - c. whether Australian and State Government objectives for the delivery of environmental water align, any examples of where this has not been the case, and how differences are resolved through the Environmental Management Framework*
  - d. the extent to which the Prerequisite Policy Measures (PPMs) assumed to exist under the Basin Plan will be in place by the target date of 30 June 2019, so that the Plan's environmental objectives can be achieved under the SDLs agreed by governments, and how any identified concerns should be addressed*
  - e. any opportunities to better integrate environmental water planning and management with natural resource management programs and complementary works to facilitate achievement of the Basin Plan's environmental objectives.*
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## **Water quality and salinity management**

Maintaining the quality of Basin water is crucial for a healthy environment, farming, industries, human consumption, recreation and cultural needs. Threats to water quality include high salinity, blue-green algae blooms, low dissolved oxygen (including blackwater), suspended matter, nutrient deposits and toxicants.

The Basin Plan builds on decades of collaborative work by Basin States to manage water quality, particularly salinity. It contains specific objectives so that Basin water quality is fit for purpose for all uses including the environment, human consumption, recreational users and for irrigation. It also includes a salt export objective for the River Murray system.

The Basin Plan sets out a range of water quality targets<sup>9</sup> for each water resource area for freshwater ecosystems, irrigation water and recreational use and reflects the end of valley salinity targets agreed by jurisdictions in the MDB Agreement. Collectively, these targets inform the development of Water Quality Management Plans, a requirement of Water Resource Plans. The Basin Plan puts obligations on Basin States, river operators, environmental water holders and the managers of planned environmental water to have regard to targets when making flow decisions.

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<sup>9</sup> These targets are based on national water quality guidelines including those for drinking water, recreational water, and fresh and marine water.

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The MDBA is required to report annually on its assessment of the salt export objective and salinity targets for flow management. A key recommendation of the MDBA's (2017c) Basin Plan Evaluation was that the appropriateness of the water quality and salinity targets and the salt export objective be considered when they are scheduled for review in 2020.

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*INFORMATION REQUEST 9*

*The Commission is seeking information on:*

- a. any inconsistencies between the various national water quality guidelines and the water quality management plan requirements in WRPs and whether these inconsistencies are being resolved and managed*
  - b. the adequacy of the actions of water managers to achieve the water quality objectives of the Basin Plan.*
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## **Water trading rules**

Water trading provides benefits to the community by allowing water to move to higher value uses. Trade has given irrigators greater flexibility to respond to changes in water availability and adapt their businesses, and has encouraged more efficient water use.

The Basin Plan water trading rules aim to facilitate opportunities for trade while protecting the interests of third parties and the needs of the environment. They provide a common framework for the trading of water rights in the Basin<sup>10</sup>, and include rules and reporting requirements for Basin States and irrigation infrastructure operators. The Basin Plan also seeks to enable the appropriate mix of tradeable water products, such as lease arrangements, to develop and evolve over time.

The rules build on a range of incremental reforms which have enabled water trade to expand significantly since the 1980s, both within Basin States and between them under the MDB Agreement (NWC 2011). Between 2007-08 and 2015-16, the volume of entitlement trade in the Basin increased by 71 per cent and surface water allocation trade increased by 266 per cent (ABARES 2017).

The Basin Plan water trading rules also contain requirements relating to market information and those that aim to support confidence in the market. Water announcements including those regarding seasonal allocations or carryover arrangements must be made generally available. In addition, persons aware of a market announcement must not enter into trades informed by that information until the information is generally available.

The trading rules came into effect in July 2014, although Basin States have until their transitional or interim water resource plans expire (July 2019) to ensure that their water

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<sup>10</sup> Water rights include water access entitlements, water allocations, water irrigation rights and water delivery rights.

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trading rules are consistent with the Basin Plan trading rules (MDBA, CEWH & Basin State Governments 2013).

The MDBA is taking a risk-based approach to assessing whether Basin States' existing trading rules are consistent with the Basin Plan (MDBA 2017c). Its highest priorities are trade restrictions, and the disclosure and management of water announcements (MDBA 2016c).

To support the implementation of the Basin Plan, a water trade working group has been established to provide advice to the Basin Plan Implementation Committee (discussed in section 5) on issues related to the water trading rules and guidelines, and the operation of the water market (MDBA, CEWH & Basin State Governments 2013). The MDBA consults with the Basin States through this working group as part of its examination of the consistency of Basin States' trading rules with the Basin Plan.

Under the Basin Plan, the MDBA may request advice from the ACCC if it is required to prepare a declaration on the consistency of a Basin State's trade restriction. The ACCC also has a role under the Water Act to provide advice to the MDBA on the Basin Plan trading rules, both in their development and if they are amended.

Basin States will need to address inconsistent trade restrictions by 2019 in conjunction with the development of WRPs. Failure to do so may hinder incremental improvements to the effectiveness and efficiency of the water market.

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*INFORMATION REQUEST 10*

*The Commission is seeking information on:*

- a. whether the Basin Plan trading rules advance the water trading objectives and outcomes stated in chapter 5 of the Plan*
  - b. whether changes to state trading rules made to date as part of implementation of the Basin Plan adequately recognise and protect the environment and third party interests*
  - c. whether implementation of the Basin Plan has improved access to market information and what further actions Basin States, irrigation infrastructure operators or the MDBA might need to take*
  - d. whether processes for reviewing Basin State trading rules — including the roles of the MDBA and the water trade working group — are sufficiently transparent, evidence-based and consultative.*
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## **Critical human water needs**

During the Millennium Drought, when inflows were at a record low, Basin States faced the prospect of being unable to meet water for critical human needs in the River Murray. In

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response, jurisdictions agreed that in the River Murray system, critical human water needs (CHWN) should be prioritised above all and developed specific water sharing rules for periods of water scarcity. These were then included in the MDB Agreement and the Water Act, and are reflected in the Basin Plan.

CHWN are the minimum amount of water that can reasonably be provided from Basin resources to meet:

- core human consumption requirements in urban and rural areas that are dependent on Basin water resources
- non-human consumption requirements that, if not met, would cause prohibitively high social, economic or national security costs (Water Act s. 86A(2)).

The minimum volume of water required to enable the delivery of CHWN (conveyance water) has highest priority, after which water is then allocated to meet CHWN.

Water sharing is based on a three tiered approach whereby tier one represents normal water availability, tier two is very low water availability and tier three is extremely low water availability. The Basin Plan defines triggers for moving between the water sharing tiers.

Since the Basin Plan came into effect, the MDBA has not declared either tier two or tier three water sharing arrangements. In 2015-16 the MDBA conducted a drought preparedness project (including a review of the Millennium Drought conditions) to consider how these actions would fit under new governance arrangements (MDBA 2016a).

The Basin Plan also requires all WRPs to include provisions for responses to extreme events, including severe droughts and water quality events that risk the supply of critical human needs.

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*INFORMATION REQUEST 11*

*The Commission is seeking information on:*

- a. risks to meeting critical human water needs (CHWN) under the Basin Plan, how the Plan addresses these risks, and what, if any, further measures are required*
  - b. any concerns about provisions in WRPs relating to CHWN under extreme conditions.*
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## **Compliance**

Compliance is a key element of the Basin Plan implementation. There are various compliance activities and responsibilities across different aspects of the Plan. The MDBA is responsible for taking actions to enforce compliance with the Basin Plan and WRPs (including SDL compliance). The Basin States are responsible for ensuring compliance with their own water laws, such as rules governing water take.

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Compliance regimes need to be effective, both keeping cost to a reasonable level, but also ensuring community confidence.

## MDBA compliance and enforcement

The Water Act and the Basin Plan introduced a new regulatory and compliance role for the MDBA (MDBA 2014b). One of the MDBA's key roles is to ensure compliance with SDLs. This role includes assessing whether Basin States have arrangements in place to measure and maintain SDL compliance (as part of the WRP accreditation process discussed above) and, from 1 July 2019, maintaining and publishing a register of take for each SDL resource unit (MDBA 2017e). The MDBA's other Basin Plan compliance and regulatory activities include handling of allegations of non-compliance (with the Basin Plan or WRPs) against individuals, publishing annual statements of assurance on Plan implementation, overseeing implementation of the Basin Plan water trading rules and education and awareness (MDBA 2017e). Tools available to the MDBA to enforce compliance include injunctions, declarations, enforcement notices and civil penalties.

A recent compliance review by the MDBA and an Independent Panel found that the MDBA must be more assertive in performing its compliance and enforcement role across the Basin (MDBA 2017e). It proposed that the MDBA's compliance powers be available consistently across the Basin, which will require a regulatory amendment to ensure this is the case in the lead up to the accreditation of state water resource plans by 30 June 2019.

In response to the review, the MDBA committed to revise its compliance and enforcement strategy, adopt a clear escalation pathway for handling allegations of non-compliance, make its expectations for compliance clear, commence an auditing program across the Basin, and report publicly on handling and progress of compliance matters.

The MDBA has established an Office of Compliance, an Independent Assurance Committee and an online register to report on the handling and progress of compliance matters reported to the MDBA.

## State compliance and enforcement

Although Basin States must bring their water planning laws into alignment with the Basin Plan, they retain responsibility for their own water management arrangements. For example, Basin States are responsible for enforcing their own water laws to prevent illegal water take and ensuring individual entitlement holders fulfil their licence obligations (MDBA 2017a).

A Four Corners investigative report into water management in the Basin broadcast on 24 July 2017 raised major concerns about compliance with and enforcement of water laws in the Basin. This resulted in a number of investigations into compliance at both the Basin and state level, some of which are still ongoing (Matthews 2017; MDBA 2017e). A review undertaken by the MDBA and an Independent Panel found 'compliance systems and activities in some

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jurisdictions are more effective than in others’ and ‘all Basin State regulators need [to] be more active, consistent and transparent in enforcing compliance’(MDBA 2018a). The South Australian Government has launched a state royal commission to investigate the operations and effectiveness of the Murray-Darling Basin system (Murray-Darling Basin Royal Commission 2018).

Some state government agencies have already committed to changes in compliance arrangements in response to recent reviews. For example, the NSW Government has announced a ‘Water Reform Package’ and established the new Natural Resources Regulator (Niall Blair 2017).

At its 19 December 2017 meeting, the MDB Ministerial Council (2017b) tasked Basin officials to develop a draft Basin Compliance Compact that will detail a compliance implementation framework in response to the issues identified in recent reviews. The framework is to include specific plans for improving compliance and enforcement activities for each Basin State and for the MDBA, and for transparent reporting and accountability arrangements on progress. The Council is scheduled to consider the framework at its first meeting in 2018, prior to consideration by COAG. As agreed at this meeting, an independent person has been appointed to assess and review all the investigations currently being undertaken about the Basin on compliance and provide advice on implementation.

The Commission will consider how governments are responding to recommendations of recent compliance reviews as they relate to implementation of the Basin Plan.

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#### *INFORMATION REQUEST 12*

*The Commission is seeking information on:*

- a. risks to the MDBA’s ability to monitor and enforce compliance with the Basin Plan and WRPs from July 2019, and what, if any changes should be made to address these risks*
  - b. the extent to which non-compliance with the Basin Plan will be addressed by recent changes to compliance and enforcement announced by governments*
  - c. any further changes that should be introduced to increase water take compliance across the Basin.*
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## **Monitoring, evaluation and reporting**

Monitoring, evaluation and reporting is required to determine whether the objectives of the Basin Plan are being met. It is also necessary to discern what approaches and actions are working, and to contribute to adaptive management of the Basin.

To be effective, and to support adaptive management, monitoring, evaluation and reporting on the Plan should be entrenched in the Plan’s processes and timetables. It should also be

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published in a timely manner and focus on measuring outcomes (as opposed to inputs or efforts).

Chapter 13 of the Basin Plan outlines the program for monitoring and evaluating the Basin Plan. Schedule 12 of the Plan provides a breakdown of the matters to be evaluated and reported on (including the extent to which the Plan has affected social, economic and environmental outcomes in the Basin), the party responsible for this, and the frequency with which reporting is to occur.

Monitoring, evaluating and reporting on the Basin Plan is a responsibility shared by the MDBA, the Australian Government, Basin States and environmental water holders. Broadly speaking, the MDBA is responsible for monitoring and evaluation of the Plan as a whole — looking at outcomes on a Basin-wide scale — while Basin States are responsible for monitoring and evaluating their own state-level actions and outcomes. Depending on the impacts or outcomes being examined, monitoring, evaluation and reporting may be done with participation from relevant experts (such as scientists) or local groups.

The outputs of monitoring, evaluation and reporting will not only track progress, but feed into reviews of the Plan (including the 10 yearly review scheduled in 2026), and contribute to improving the operation of the key elements (both in the short and long term) through adaptive management. Monitoring, evaluating and reporting on the Basin Plan is informed by the Framework for Evaluating Progress published by the MDBA (2014c), which broadly outlines the methods and data sources to be used to evaluate how the Plan is being implemented and whether its intended outcome is being achieved.

Key monitoring, evaluation and reporting publications to date include the NBR (MDBA 2016b), Basin Plan annual reports produced by the MDBA (MDBA nd), the MDBA's work on socioeconomic impacts (of which more is expected to be released in April 2018), and most significantly, the 2017 Basin Plan Evaluation. The latter found that there is scope to improve monitoring and reporting requirements, and that there should be a focus on shifting to more evaluative reporting (MDBA 2017c).

The evaluation also found that there are early signs of positive responses from native fish, waterbirds and vegetation as a result of the provision of environmental water (MDBA 2017c). That said, the Productivity Commission's draft inquiry report on National Water Reform warned that efforts to monitor environmental outcomes within the Basin appear fragmented and that a strategy that coordinates the monitoring and evaluation of the outcomes from environmental water in the Basin — both planned and held — should be developed (PC 2017).

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INFORMATION REQUEST 13

The Commission is seeking information on:

- a. *how well current arrangements for monitoring, evaluation and reporting support the delivery of the objectives of the Basin Plan; and how they could be improved to increase the likelihood of the objectives being met*
  - b. *whether there is a clear delineation of responsibilities for monitoring, evaluating and reporting on the Basin Plan, and, if not, how it could be improved*
  - c. *the usefulness of the MDBA's Framework for Evaluating Progress and its recent application in evaluating the Basin Plan*
  - d. *how data and information obtained through monitoring, evaluation and reporting could be made more useful for decision making and evaluation of the Basin Plan (including how to make this data and information more outcomes-focused)*
  - e. *the general information required to provide confidence to communities and others that the Plan is being implemented well and is achieving its objectives*
  - f. *whether processes are in place to monitor key risks to the continued availability of Basin water resources.*
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## **5 Basin institutional and governance arrangements**

The establishment and implementation of the Basin Plan is a shared responsibility of the Australian Government and the Basin States. In addition, the MDBA and the Basin States have shared responsibility for managing the Basin's water resources as established by the MDB Agreement.

Successful implementation of the Basin Plan requires:

- institutional arrangements with clear lines of responsibility and accountability that promote co-operation and are broadly understood by stakeholders
- processes that are comprehensive and enable governments to coordinate, make joint decisions, manage risks and resolve differences
- assignment of functions to agencies best equipped to deliver them and to ensure separation of regulatory and policy-making functions
- institutions that are open and transparent, focused on continuous improvement, and suitably equipped to perform their roles.

If institutional arrangements and processes for co-operation are not working well, or an organisation is performing poorly, the likelihood of effective implementation is diminished.

As outlined in section 2, the institutional and governance arrangements for water management in the Basin are complex. These roles and responsibilities are outlined in table 2.

**Table 2 Basin Plan and resource management responsibilities**

	<i>Australian Government</i>	<i>MDBA</i>	<i>Basin States</i>	<i>Productivity Commission</i>
SDLs and adjustments		▲	▲	
Constraints management		▲	▲	
Water recovery	▲		▲	
Structural adjustment	▲			
Water Resource Plans	▲	▲	▲	
Compliance with SDLs & Plan		▲		
Environmental water management	▲	▲ ■	▲	
Water trading	▲	▲ ■	▲ ■	
Critical human water needs		▲ ■		■
Water quality and salinity		▲ ■	▲ ■	
Monitoring, evaluation and reporting		▲	▲	▲
River management, asset management and operation		■ River Murray	■	
Water entitlements, individual compliance			■	

▲ Basin Plan ■ MDB Agreement

Data Sources: *Water Act 2007* (Cwlth), *Basin Plan 2012* (Cwlth).

The Basin Plan is underpinned by multilateral and bilateral intergovernmental agreements. These agreements commit parties to implementing the Basin Plan, and provide the basis for funding to support implementation. Key intergovernmental agreements include:

- Intergovernmental Agreement for Implementing Water Reform in the Murray Darling Basin (COAG 2013)
- National Partnership Agreement on Implementing Water Reform in the Murray Darling Basin (COAG 2014)
- Bilateral partnership agreements for the delivery of specific projects or activities to contribute to the implementation of the Basin Plan.

A recent limited assurance review, by the Australian National Audit Office (ANAO), on the National Partnership Agreement on Implementing Water Reform in the Murray-Darling Basin found that the lack of specific, measurable deliverables and outcome measures in the milestones and criteria for assessing the performance against this agreement, was a significant weakness (ANAO 2017).

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In addition to intergovernmental agreements, an inter-agency agreement — the Basin Plan Implementation Agreement — was struck between the MDBA, Basin States and the CEWH (MDBA, CEWH & Basin State Governments 2013). This agreement establishes the Basin Plan Implementation Committee (BPIC) to monitor, review and make decisions relevant to implementing the Plan and the MDBA’s Annual Plan Implementation Work Program. BPIC is supported by working groups of officials. The MDBA (2017c) reported that the terms of reference of these working groups has been reviewed annually. In addition to BPIC, the SDL Adjustment Assessment Committee (SDLAAC) was established to advise BOC on the notification of SDL Adjustment projects (COAG 2013).

The MDBA’s (2017c) Basin Plan Evaluation noted evidence of a lack of community confidence and support for implementation, which was compounded by confusion about roles and responsibilities in water management and reform. It reported that there had been no detailed analysis of the effectiveness of the different cooperative arrangements that guide implementation of the Basin Plan. The MDBA recommended a review of governance to streamline arrangements, identify gaps, ensure that arrangements remain effective and to improve transparency, accountability and timeliness of implementation.

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*INFORMATION REQUEST 14*

*The Commission is seeking information on:*

- a. whether current institutional and governance arrangements provide for sufficient oversight of the plan and support engagement with the community*
  - b. whether there are risks to the achievement of the objectives of the Plan that arise from the current institutional and governance arrangements*
  - c. what improvements can be made to ensure that institutional and governance arrangements are fit for the next phase of implementing the Plan.*
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# Attachment A

## Terms of reference

*Productivity Commission Act 1998*

### Murray-Darling Basin Plan: Five-year assessment

I, Scott Morrison, Treasurer, pursuant to Parts 2 and 3 of the *Productivity Commission Act 1998*, hereby request that the Productivity Commission (the Commission) undertake an Inquiry into the effectiveness of the implementation of the Basin Plan and water resource plans.

### Background

The Basin Plan provides for the integrated management of water resources of the Murray-Darling Basin in ways that promote the objects of the *Water Act 2007 (Cth)* (Water Act), including the objective of optimising social, economic and environmental outcomes.

Under section 87 of the Water Act the Commission is required to undertake five-yearly assessments of the effectiveness of the implementation of the Basin Plan and water resource plans. This inquiry is the first such assessment.

### Scope of the inquiry

In accordance with the provisions of Part 3 of the Water Act, the Commission is to report on the matter of the effectiveness of the implementation of the Basin Plan and the water resource plans for the five year period ending 31 December 2018.

In undertaking the Inquiry, the Commission should assess:

- progress towards implementing the actions required under the Plan within legislated timeframes, including:
  - the extent to which stated water recovery and other targets are on track to be delivered within statutory timeframes; and
  - the likelihood that activities and arrangements now in place will ensure that these targets and timeframes will be met.
- the extent to which the current framework for implementing the Basin Plan, including the framework for monitoring, compliance, reporting and evaluation, is likely to be sufficient:

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- to support delivery of the objectives and outcomes identified in Chapter 5 of the Basin Plan, acknowledging that the Basin Plan is not yet fully implemented and that many of the outcomes will only be observable over a longer timeframe;
  - to enable assessment of risks and risk mitigation requirements and provisions associated with Basin Plan implementation; and
  - to enable an assessment of progress in meeting the Plan's objectives and outcomes under the next scheduled review of the Basin Plan in 2026.

In assessing progress towards Basin Plan implementation, the Commission should report on progress towards milestones agreed in the Murray-Darling Basin Ministerial Council's report to the Council of Australian Governments, *Implementing the Basin Plan*. Specifically, the Commission should focus on progress towards a pathway for three key priorities including:

- supply measures to offset the Basin Plan water recovery target of 2,750 GL by 2019, using the Sustainable Diversion Limit (SDL) adjustment mechanism;
- constraints measures to address impediments to delivering environmental water; and
- efficiency measures to recover an additional 450 GL by 2024, consistent with the Basin Plan legal requirement to achieve neutral or improved socio-economic outcomes.

In undertaking this assessment, the Commission should have regard to the *Intergovernmental Agreement on Implementing Water Reform in the Murray Darling Basin (2013)*, and the *Basin Plan Implementation Agreement* between the Murray-Darling Basin Authority (MDBA), Basin states and the Commonwealth Environmental Water Holder (CEWH).

In undertaking this assessment, the Commission should also have regard to reviews and audits that have recently been completed or are ongoing, including those relating to compliance and Basin Plan implementation.

The Commission should also have regard to the differing responsibilities of the Basin states and the Australian Capital Territory, the Department of Agriculture and Water Resources (DAWR), the CEWH and the MDBA.

The Commission should assess progress towards full implementation in the context of the differing timeframes applicable to each key component of the Basin Plan. This includes an assessment of the extent to which Commonwealth and state-led water recovery efforts and state water resource plans are on track for when SDLs take effect from 1 July 2019.

The Commission should make findings on progress to date and recommendations on any actions required by the Commonwealth or Basin state or territory to ensure the timely implementation of Basin Plan requirements and the effective achievement of Basin Plan outcomes.

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## **Process**

In undertaking the inquiry, the Commission should consult widely including establishing a stakeholder working group in accordance with section 89 of the Water Act, inviting public submissions, holding public hearings, and releasing a draft report to the public. The Commission should consult with relevant Australian Government, Basin state and territory government agencies, key interest groups and affected parties. These consultations should include, but not be limited to, parties with interests in agriculture, industry and the environment, and Aboriginal groups. The Government has asked Basin jurisdictions to co-operate with this Inquiry, including by providing the Commission with the information it considers necessary in undertaking its Inquiry.

The final report is to be provided to the Government by 31 December 2018.

Scott Morrison  
Treasurer

[Received 7 March 2018]

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## Attachment B

### How to prepare a submission

Submissions may range from a short letter outlining your views on a particular topic to a much more substantial document covering a range of issues. Where possible, you should provide evidence, such as relevant data and documentation, to support your views.

#### Generally

- Each submission, except for any attachment supplied in confidence, will be published on the Commission's website shortly after receipt, and will remain there indefinitely as a public document.
- The Commission reserves the right to not publish material on its website that is offensive, potentially defamatory, or clearly out of scope for the inquiry or study in question.

#### Copyright

- Copyright in submissions sent to the Commission resides with the author(s), not with the Commission.
- Do not send us material for which you are not the copyright owner — such as newspaper articles — you should just reference or link to this material in your submission.

#### In confidence material

- This is a public review and all submissions should be provided as public documents that can be placed on the Commission's website for others to read and comment on. However, information which is of a confidential nature or which is submitted in confidence can be treated as such by the Commission, provided the cause for such treatment is shown.
- The Commission may also request a non-confidential summary of the confidential material it is given, or the reasons why a summary cannot be provided.
- Material supplied in confidence should be clearly marked 'IN CONFIDENCE' and be in a separate attachment to non-confidential material.
- You are encouraged to contact the Commission for further information and advice before submitting such material.

#### Privacy

- For privacy reasons, all **personal** details (for example, home and email address, signatures, phone, mobile and fax numbers) will be removed before they are published on the website. Please do not provide these details unless necessary.

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- You may wish to remain anonymous or use a pseudonym. Please note that, if you choose to remain anonymous or use a pseudonym, the Commission may place less weight on your submission.

### Technical tips

- The Commission prefers to receive submissions as a Microsoft Word (.docx) files. PDF files are acceptable if produced from a Word document or similar text based software. You may wish to research the Internet on how to make your documents more accessible or for the more technical, follow advice from Web Content Accessibility Guidelines (WCAG) 2.0 <<http://www.w3.org/TR/WCAG20/>>.
- Do not send password protected files.
- Track changes, editing marks, hidden text and internal links should be removed from submissions.
- To minimise linking problems, type the full web address (for example, <http://www.referred-website.com/folder/file-name.html>).

### How to lodge a submission

Submissions should be lodged using the online form on the Commission's website. Submissions lodged by post should be accompanied by a submission cover sheet.

Online\*      [www.pc.gov.au/inquiries/current/basin-plan](http://www.pc.gov.au/inquiries/current/basin-plan)

Email\*      [basin.plan@pc.gov.au](mailto:basin.plan@pc.gov.au)

\* If you do not receive notification of receipt of your submission to the Commission, please contact the Administrative Officer.

### Due date for submissions

Please send submissions to the Commission by **19 April 2018**