

Improving implementation of the Murray–Darling Basin Plan

Joint Basin government response to the
Productivity Commission inquiry
report: Murray–Darling Basin Plan:
Five-year assessment

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Foreword

The Murray–Darling Basin river system is one of Australia's great natural resources. The water that flows through the Basin, often travelling thousands of kilometres, sustains a wide range of economic, social, environmental and cultural assets that are of national and international significance.

Balancing use of water across the Basin in a fair and transparent way has been an ongoing challenge for Basin governments over the last 100 years. The drought and historic low inflows into Murray–Darling Basin waterways over the last two years has placed stress on the rivers and communities. In times of drought and limited water availability the task of balancing water use is harder, and all uses and users of water suffer. The Murray–Darling Basin Plan, agreed by Basin governments in 2012, was a landmark agreement that provided detailed requirements for sustainable water use.

The Basin Plan is built on previous efforts by Basin governments to reverse past over-allocation of water and to provide certainty for how water is used in the future. We are now seven years into the 12 years scheduled to implement this complex reform. Significant progress has been made, but there is work still to do to achieve a healthy Basin.

Basin governments and their institutions can always do better in how the Basin Plan is implemented. The Productivity Commission's first five-yearly assessment of the effectiveness of the Basin Plan offers an important evaluation of progress to date and where improvements are needed. Recent reports by the South Australian Royal Commission and scientific assessments into recent fish death events have also provided different perspectives and views on how implementation of the Basin Plan can be improved.

This is a joint response to the Productivity Commission's assessment that also addresses key themes raised by other reports. This response is from all six governments of the Basin and represents a commitment to continue the task of implementing the Basin Plan in full and without delay.



Hon. David Littleproud MP

Chair, Murray–Darling Basin Ministerial Council

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Glossary

Basin governments	Includes the Australian Government, and governments of New South Wales, Victoria, South Australia, Queensland and the Australian Capital Territory.
Constraints projects	<p>Projects that address anything that affects the delivery of environmental water. This can include physical aspects such as low lying bridges, or river channel capacity, but can also include operational aspects such as river rules or operating practices that impact on when and how much water can be delivered.</p> <p>The effectiveness of environmental water delivery and management can be improved by addressing some of these physical and operational constraints.</p>
Consumptive use	Use of water for irrigation, industry, urban, stock and domestic use, or for other private consumptive purpose.
Efficiency measures projects	Projects that change water use practices and recover more water for the environment with no adverse socio-economic impacts. This can include upgrading on-farm irrigation infrastructure, or lining channels to reduce water losses within an irrigation network.
Environmental flows	Any river flow pattern provided with the intention of maintaining or improving river health.
Held environmental water	Water that is available under a water access right, a water delivery right or an irrigation right for the purpose of achieving environmental outcomes.
Prerequisite policy measures	<p>A suite of legislative and operational rule changes that allow environmental return flows to be credited for downstream environmental use or allow held environmental water to be called from storage during un-regulated flow events.</p> <p>The Basin Plan outlines these measures and required them to be implemented by 1 July 2019.</p>
Sustainable Diversion Limit adjustment mechanism	Basin Plan provision that allows for adjustment of the Sustainable Diversion Limit under certain circumstances.
Supply projects	Projects that enable equivalent environmental outcomes to be achieved with less water. Examples include environmental works, such as building

	or improving river or water management structures, and changes to river operating rules.
Sustainable Diversion Limit	The maximum long-term annual average quantities of water that can be taken, on a sustainable basis, from the basin water resources as a whole, and the water resources, or particular parts of the water resources, of each water resource plan area.
Toolkit measures	As part of the Northern Basin Review, the Australian, New South Wales and Queensland governments made in-principle commitments to implement a number of projects that would enhance outcomes of water recovered for the environment. These measures include better protection of environmental flows, addressing constraints to environmental water delivery in the Gwydir wetlands, mitigating cold water pollution and constructing fishways.
Water for the environment	Water used to achieve environmental outcomes, including benefits to ecosystem functions, biodiversity, water quality and water resource health.
Water resource plans	Statutory management plans established by the <i>Water Act 2007</i> and developed for particular surface water and groundwater systems. States also have statutory management plans established under state legislation (e.g. 'water sharing plans' in New South Wales and 'water allocation plans' in South Australia).

1 Introduction

Australia's water reform efforts in the Murray–Darling Basin over the past two decades have transformed the management of water resources. The Basin Plan forms the cornerstone of this ambitious and far reaching reform to establish a sustainable base for water resource use. Australia's water reform efforts in the Murray–Darling Basin are recognised as world leading.

In early 2019, the Productivity Commission (the Commission) released its first five-yearly assessment of the effectiveness of the Basin Plan as required by the *Water Act 2007* (the Water Act). In undertaking its assessment, the Commission reviewed progress in implementing the Basin Plan and whether the current implementation framework is sufficient to achieve the Basin Plan's objectives and outcomes.

The Commission found that significant progress has been made in implementing the Basin Plan and that, on the whole, it is progressing well. The report noted achievements to date including that almost all of the water needed to sustain the Murray–Darling Basin's natural ecosystems has been recovered. The assessment found that this water, termed water for the environment, is being delivered to wetlands across the Basin and is achieving environmental outcomes.

The Commission recognised that it is too early to assess the effectiveness of some of the more recent improvements to ensure the effective, efficient and transparent compliance and enforcement with Basin Plan rules. These improvements include the Murray–Darling Basin Compliance Compact which was agreed to in 2018, and the establishment of the Office of Compliance in the Murray–Darling Basin Authority (MDBA). These initiatives will be assessed in the Commission's next five-yearly review of the Basin Plan in 2023.

The Commission recommended improvements to governance, planning and management of the Basin Plan to strengthen the foundations needed for it to succeed. In addition to the Commission's assessment, several other key reports have looked at the management of the Basin including water management, compliance and integrity of the water market.

The assessment by the Commission was preceded by a series of reports, including an independent investigation into NSW water management and compliance by Ken Matthews AO, a Basin wide review of compliance by the MDBA and an independent panel, and an Australian Senate inquiry into the water market. These reports led, in part, to the establishment of a Royal Commission by the South Australian Government. The Royal Commission released its report on the operation and effectiveness of the Murray–Darling Basin system in January 2019.

Following a series of fish death events in the lower Darling River in December 2018 and January 2019, Professor Rob Vertessy chaired an independent panel to investigate the likely causes and recommend ways to minimise the risk of more fish deaths in the future.

All of these reports recognised the importance of the Basin Plan and the need to continue the reform process. While this paper focusses on responding to the Productivity Commission's assessment, it also addresses key themes raised by other reports.

The reports over the past couple of years have highlighted that successful implementation of the Basin Plan will require increased attention in the following areas:

- responding to climate change
- engaging Aboriginal peoples for positive cultural outcomes

- building resilient communities and strengthening economic outcomes
- enhancing environmental outcomes
- restoring confidence in the Basin Plan.

Basin governments are addressing many of these issues but recognise that more needs to be done. At the heart of Basin governments' commitment to the Basin Plan is a shared belief that restoring the health of the rivers, lakes and wetlands of the Murray–Darling Basin is the best way to sustain a working river system and the social wellbeing of the Basin. It will take ongoing cooperation between the six governments to deliver this commitment in a way that balances environmental and community needs.

This document sets out actions the Basin governments are taking to achieve the goals being sought for each of the five themes and the specific responses to each of the Commission's recommendations.

Of the 38 recommendations made by the Commission, 23 are agreed and Basin governments will act to implement these as soon as practical and report to the Murray–Darling Basin Ministerial Council (Ministerial Council) on progress. Five recommendations are agreed in principle, where the intent of the recommendation is agreed but alternative approaches are being taken. Five recommendations are agreed in part, where some aspects of the recommendation are agreed but others are not. Basin governments do not agree with one recommendation. Basin governments need to further consider four recommendations before a decision can be made and will report to the Ministerial Council on progress resolving these issues.

2 Responding to climate change

Goal

Basin governments will implement a Basin Plan that helps build community and environmental resilience to a changing climate.

Key actions

Continue to implement the MDBA's climate change research program, as outlined in the publication, *Climate change and the Murray–Darling Basin Plan discussion paper*, released in early 2019.

Establish and implement a Basin-wide science platform.

The Australian Government will ask the Bureau of Meteorology to produce annual Murray–Darling Basin climate statements on the future impacts on water resource availability.

The South Australian Government will establish adaptation pathways to maintain the ecological values of the Coorong under a changing climate through South Australia's '*Healthy Coorong, Healthy Basin Action Plan*'.

The Victorian Government will implement a pilot 'Water Sector Climate Change Adaptation Action Plan' in Victoria.

The Queensland Government will produce five yearly reports that include an assessment of climate change risks to water management.

The New South Wales Government will implement 12 regional water strategies underpinned by a better understanding of climate risks and extreme events probabilities to determine the best long-term water security solutions for regional communities.

Climate change is impacting the water resources of the Basin. It is getting warmer and drier in the south. Seasonal rainfall patterns are becoming more variable in the north—with longer dry periods, less frequent but more intense rainfall events and increased evaporation. The low flows and extreme temperatures that contributed to the summer 2018–2019 fish deaths in the lower Darling River are consistent with these changing climatic conditions.

One of the central objectives of the Basin Plan is to enable the management of water resources to better adapt to changing climatic and economic conditions in the Basin. By setting sustainable limits, the Basin Plan provides greater security for all water users, including the environment, and will help ensure the whole system is resilient in times of low rainfall.

Basin governments are preparing for and managing the water related impacts of climate change through their water resource management frameworks, which incorporate the requirements set out in the Basin Plan. This includes the preparation of water resource plans, building infrastructure to allow wetlands to be watered even in dry periods and modernising water delivery systems to use water more efficiently.

Projections about the impacts of future climatic conditions are critical for water resource planning and decision-making. The 'Annual climate statement 2018' produced by the Bureau of Meteorology (BOM) provides valuable information about the current national and global climatic conditions. The BOM will be asked to consult with Basin state governments on providing an annual Basin focussed climate statement from 2020 that will include projections of water resource availability into the future.

Since 2012, Basin governments have continued to build on their knowledge of the Basin, including the impacts of climate change, through robust, collaborative, and relevant science. This new knowledge is used to inform decision-making and the ongoing implementation of the Basin Plan. A Basin-wide science platform is currently being

developed by Basin governments to support the ongoing identification of priority policy issues and knowledge gaps, along with the science needed to address them. The South Australian Royal Commission and Vertessy reports highlighted the need for more research and improved modelling of the impacts of climate change and climate variability to inform future adjustments to the Basin Plan. Governments also need to develop a better understanding of how climate change and climate variability will impact ecosystems and communities to help build the resilience needed to meet these challenges.

Regular reviews of key aspects of the Basin Plan by the MDBA, as set out in the Water Act, provide opportunities to consider updated science and assessments of climate change risks.

3 Engaging Aboriginal peoples for positive cultural outcomes

Goal

Aboriginal peoples of the Basin will be included and their voices heard in decision-making on Basin water resources and they will have access to water for cultural and economic purposes.

Key actions

Appoint an Aboriginal member to the MDBA board to ensure Aboriginal interests are represented in water management decisions.

The Victorian Government has appointed an Aboriginal Water Commissioner to the Victorian Environmental Water Holder.

Implement the Australian Government's \$40 million initiative to invest in water for cultural and economic purposes to benefit Aboriginal communities of the Murray–Darling Basin.

Continued action by all Basin governments to promote Aboriginal values and objectives and ensure Aboriginal views continue to be included in planning and reviews.

Basin governments recognise the role of Aboriginal peoples as the traditional custodians of the Murray–Darling Basin and are working to improve the inclusion of Aboriginal communities in all aspects of water management.

While Basin governments are getting better at engaging with the Aboriginal peoples of the Basin, recent reviews have identified that more engagement is still needed. This includes genuine and meaningful involvement in decision-making and the delivery of tangible cultural and community outcomes.

Basin governments have developed ongoing partnerships with Aboriginal peoples as they work together to identify the Aboriginal values and uses of water resources in the Basin.

Through the development of water resource plans Basin governments have gained closer ties and a deeper understanding of the needs and aspirations of Aboriginal peoples. This is an important foundation for ongoing Basin Plan implementation.

Aboriginal knowledge of the landscape and the cultural importance of water is valuable when planning for environmental watering. The

MDBA will publish annual reports on how environmental water holders have involved Aboriginal peoples and considered Aboriginal values and uses. The first report will be provided by the end of 2019.

A range of initiatives have been implemented through these partnerships. The Victorian Aboriginal Waterway Program is funding projects to better include Aboriginal people in Victorian water management.

The New South Wales Government undertook nation-by-nation consultation with 29 Aboriginal nations—covering the entire New South Wales area of the Murray–Darling Basin—to incorporate specific Nation's values and objectives for water in water resource plans.

The South Australian Government consulted with the five Aboriginal nations whose lands and waters cover the South Australian Murray–Darling Basin to review and amend water allocation plans that form a key component of South Australia's water resource plans. Each nation was engaged according to their individual needs and interests.

The Queensland Government consulted with 13 First Nations to ensure Aboriginal views were included in the development of water resource plans. Aboriginal peoples will continue to be consulted by the Queensland Government on reviews of Long-term Environmental Watering Plans using the water resource plan consultation model.

The Barkandji people hold native title rights and interests in water in far western NSW and sections of the Darling River. This allows the Barkandji people the right to use water and speak for the cultural significance of the water.

The NSW Government is negotiating an Indigenous Land Use Agreement with the Barkandji people that will cover how native title rights and interests coexist with the rights and interests of other people. It is anticipated that once negotiated this agreement will be valuable for facilitating consultation between the state and the Barkandji people.

The Commonwealth Environmental Water Office works with Aboriginal people across the Murray-Darling Basin to deliver water for the environment for environmental and cultural outcomes. This includes working with the MDBA, the Murray-Lower Darling Rivers Indigenous Nations and Northern Basin Aboriginal Nations to incorporate Aboriginal environmental watering objectives into planning and delivery of environmental flows.

The Commonwealth Environment Water Office is developing a 'First Nations Engagement Strategy' to improve Aboriginal participation in the planning, delivery and monitoring of water for the environment.

4 Building resilient communities and strengthening economic outcomes

Goal

Basin governments will engage with communities to implement the Basin Plan and help build resilience, such as in times of low water availability.

Key actions

Establish the Australian Government's independent panel to assess Murray–Darling Basin community socio-economic health.

The New South Wales Government will implement their Safe and Secure Water Program to supply safe, secure and sustainable water and wastewater services to regional towns.

Apply new criteria to efficiency measures projects to ensure their outcomes are socio-economically neutral or positive.

Implement the Australian Government's Murray-Darling Basin Economic Development Program, which will provide \$25 million to strengthen the economic and social resilience of 15 Basin communities most impacted by water recovery, including Aboriginal communities.

Improve MDBA engagement through the continued regional engagement officer program, and relocating one third of MDBA positions to regional offices across the Basin.

Research shows that the implementation of the Basin Plan has had adverse impacts on some communities, and that water recovery efforts have affected some communities more than others.

This is on top of a broad range of other short term factors, such as increasingly dry conditions across the Basin, and longer term trends of rural population decline, employment changes, and changing on-farm technology.

Basin governments recognise that the Basin Plan and other factors have impacted Basin communities, and are committed to improving the resilience of these communities to changing conditions across the Basin. To this end, Basin governments need to better understand how water reform and other drivers of change are affecting Basin communities.

The Australian Government has commissioned an independent panel to undertake an assessment of social and economic conditions in irrigated communities across the Basin. This assessment is to be completed by the end of April 2020 and will be used to inform future work and decisions for Basin Plan implementation.

The Productivity Commission's report highlights the need for Basin governments to better engage with local communities and incorporate local knowledge into implementation of the Basin Plan. Basin governments are committed to genuine and effective engagement with local communities.

5 Enhancing environmental outcomes

Goal

Basin governments will implement the Basin Plan to provide a robust environmental watering regime to support ecosystems and improve resilience to changing climatic conditions.

Key actions

Enforce new rules to allow held environmental water to remain in-stream for environmental purposes in the Barwon-Darling, Lower Macquarie and Lower Gwydir unregulated rivers to improve flow-based environmental outcomes in New South Wales.

The Victorian Government will continue to implement its \$222 million program to support healthy and resilient fish populations and improve ecosystem health.

The Australian Government will implement its \$88 million initiatives to improve the health of the Darling River and prevent further mass fish deaths, including improved monitoring, research and restocking.

Implement projects to adjust the Sustainable Diversion Limits to achieve Basin Plan environmental outcomes with less water.

Implement toolkit measures in the northern Basin to improve outcomes of environmental watering and help reduce social and economic impacts of water recovery.

Improve coordination, connectivity and management of water across the NSW and Queensland border

Build on successful flow events to coordinate environmental water delivery to improve the health of rivers and wetlands and benefit towns in the northern Basin.

The Basin Plan is designed to provide a healthy working Murray–Darling Basin that includes healthy and resilient ecosystems with rivers and creeks regularly connected to their floodplains and, ultimately, the ocean.

The Productivity Commission recognised that, to the extent the Basin Plan has been implemented, good progress has been made towards these outcomes.

Water recovery is close to completion—95 per cent of the July 2019 target has been recovered, although some targeted local recovery still needs to be completed. The Basin Plan provides for a further 450 gigalitres of water that is required to be recovered by 2024 with neutral or positive socio-economic impacts. Efforts to provide water for the environment are already delivering local improved ecological outcomes. State water resource plans are expected to be submitted to the MDBA by the end of 2019.

The Commission highlighted the positive environmental outcomes achieved by the use of water for the environment by the Commonwealth Environmental Water Holder. This includes promotion of waterbird breeding events across five wetlands in the Murrumbidgee and improved growth and establishment of native wetland plant species.

The reviews also acknowledged that the remaining elements of the Basin Plan present challenges, but are vital to achieving a healthy, working Basin. Crucial elements of the Basin Plan include projects to adjust the Sustainable Diversion Limits, northern Basin toolkit measures and actions outlined in the Compliance Compact.

Protecting water for the environment

The positive outcomes of delivering over 8,000 gigalitres of water for the environment over the past decade are clear. There is evidence of measurable improvements to the health of the vegetation, fish and waterbirds for the many water-dependent ecosystems that have received

water for the environment. For example, as a result of providing water for the environment in the Goulburn River, golden perch populations have increased by 300 per cent over the past five years and silver perch were recorded in the river for the first time in ten years.

While the benefits of providing water for the environment are evident, improvements to the rules are needed to maximise the resulting environmental outcomes. Basin governments have implemented state specific policy measures to protect environmental flows and improve the coordination and delivery of water for the environment. In some places, these add to existing protective policies, such as those put in place in Victoria in 2009 and the *River Murray Act 2003* in South Australia.

In the southern Basin, measures to enhance and protect environmental flows (called 'prerequisite policy measures') were completed by Basin governments in June 2019. These measures include allowing water for the environment to 'piggy-back' on natural flow events and for water delivered to a wetland to be re-used when it re-enters the river for downstream environmental purposes.

In the northern Basin, the Australian Government has committed funding to implement a range of initiatives, termed 'toolkit' measures, to better protect water for the environment, improve compliance and monitoring with water laws, improve river management across the northern Basin and create opportunities for local communities, including Aboriginal peoples. These measures include improving the management and delivery of water for the environment and works that will benefit fish passage and improve fish outcomes.

The NSW and Queensland governments have agreed to establish a stronger governance and coordination framework to improve the coordination, connectivity and management of water in the northern Basin.

Improved cooperation between Basin governments in the delivery of water for the environment was demonstrated in mid-2018 when 32 gigalitres of water was delivered an unprecedented distance flowing over 2,000 km from the northern tributaries of the Barwon-Darling River to the Menindee Lakes. As it flowed from storages in the north through Bourke and Wilcannia, this water refreshed waterholes and provided connectivity for native fish. The NSW Government applied temporary water restrictions to protect the water from being pumped as it flowed down the rivers. This event was so successful that the second event of this kind, called the Northern Fish Flow Event, ran from April to June 2019 to support the health of the Dumaresq, Macintyre, Mehi and Barwon river systems.

Basin governments are also addressing river system constraints such as crossings and bridges that currently limit the delivery of the large volumes of water needed for delivery of water for the environment. Basin governments are working to address concerns about the transparency and ability of governments to deliver projects that remove constraints. This includes commitments to improve engagement with Basin communities and involve them in the design and implementation of the projects.

Delivering supply, constraints and efficiency projects

Basin governments agreed to 36 projects nominated by the states. These projects aim to improve the way environmental water is delivered and reduce the amount of water needed to achieve the same environmental outcomes.

Basin governments assessed the feasibility of each project through an agreed assessment process. The status of each project varies. Some are fully operational while others are in the early stages of design and community consultation.

Supply projects must be operating by mid-2024 if the Sustainable Diversion Limits adjustment is to be retained. The Productivity Commission and the South Australian Royal Commission highlighted the difficulty of delivering such complex projects within this timeframe.

Basin governments recognise that the progress of supply, constraints and efficiency projects must be carefully monitored in the lead up to the 2024 deadline. The more complex and challenging projects will be reviewed annually and their progress on delivery within the 2024 timeframe given careful consideration. Annual progress reports on these projects will be published by the MDBA.

In June 2018, Basin Ministers agreed to progress the recovery of 450 gigalitres of water through efficiency projects that are provided for under the Basin Plan by 2024. This includes implementing a Basin-wide program to seek more efficient water use through urban, industrial, off-farm, on-farm and metering projects. In addition, Basin governments are developing state-led projects for consideration for funding by the Australian Government. In December 2018, Basin Ministers agreed to criteria that would help to ensure that these projects do not have adverse socio-economic impacts on communities.

6 Restoring confidence in the Basin Plan

Goal

Well informed Basin communities that are engaged in implementing the Basin Plan for the benefit of all.

Key actions

Implement the Murray–Darling Basin Compliance Compact to strengthen compliance in water resource management.

The Queensland Government will implement new provisions for measuring the take of overland flows to improve compliance and management of water.

The Australian Government will establish a statutory position of Inspector-General of Murray–Darling Basin Water Resources to provide independent assurance on Basin Plan implementation.

The Australian Government will invest \$35 million in the 'Northern Basin satellite and remote river sensor program' to improve the measurement of inflows, river height, river response and provide real time information to the public.

Implement collaboration protocols developed by the MDBA and Basin governments for information sharing and joint enforcement of water compliance in the Basin Plan.

Conduct an Australian Competition and Consumer Commission review of the Basin water market and its operation.

The New South Wales Government will implement:

- the 'Water Reform Action Plan' and establish the Natural Resources Access Regulator
- new metering rules to ensure the vast majority of licensed water take is metered and that meters are accurate, auditable and tamper-proof.

Basin governments have heard the communities' concerns about the implementation of the Basin Plan and can see that confidence has been eroded. It is clear that work is needed to improve transparency and provide assurance that the Basin Plan is being implemented in the best way possible.

To promote best practice and address concerns about the transparency of decision making, Basin governments are improving the way decisions on water management are made.

Basin governments are considering the recommendations from a recent review of the Murray–Darling Basin joint governance arrangements. These recommendations included ways to streamline processes to support the delivery of water management and reforms.

Since the release of the Commission's report, the Australian Government has become aware of concerns about the effective operation and integrity of the water market, especially in the southern Basin. To investigate these concerns, the Australian Competition and Consumer Commission will undertake a review of the southern Basin water market and its operation.

The current public scrutiny of the Basin Plan comes at a critical point in its implementation. The main focus over the past seven years has been on establishing the Basin Plan, including recovering water for the environment, establishing environmental watering regimes and preparing water resource plans. In the next phase, implementation will be the focus.

Basin governments recognise that a strong compliance regime is essential to maintain confidence in the integrity of water resource planning in the Basin. In December 2017 in response to various reviews into compliance and enforcement in the Murray–Darling Basin, NSW released a 'Water Reform Action Plan'. Since committing to the Basin Plan, 35 out of the 40 actions designed to establish strong water

regulation and transparent water sharing have been delivered. The remaining actions are due to be completed this year.

In 2018 Basin governments jointly agreed to the Murray–Darling Basin Compliance Compact that included a series of commitments to strengthen compliance and restore public confidence in water resource management. These commitments will improve transparency and accountability of surface and groundwater management, reporting and regulation and provide a consistent approach to compliance and enforcement practices by governments across the Basin. For example, the Compliance Compact requires that all new non-urban water metering must meet the relevant Australian Standard (AS4747) by 2025. NSW has established regulations to roll out their new metering framework in a staged 5-year rollout. Basin governments and the MDBA are being annually reviewed on their progress towards meeting their commitments under the Compliance Compact and this information is publicly available on the MDBA website.

To improve confidence in Basin Plan implementation in the northern Basin, the Australian Government appointed Mr Mick Keelty AO as Northern Basin Commissioner, to report to Ministers on a range of implementation issues. In addition, the Australian Government has committed \$26 million for northern Basin satellite and remote river sensors. This will improve the measurement of inflows, river height and river response and provide real time information to the public. Building on this role, the Australian Government will establish a new Inspector-General of Murray–Darling Basin Water Resources to provide independent assurance on Basin Plan implementation.

The inquiries into fish death events call for greater investment in research and modelling to better understand the environmental, social and economic needs of Basin communities, within a changing climate. This information is important to underpin the decision-making required in the next phase of Basin Plan implementation.

The management of water resources in the Basin has a long history of science and collaborative research. Basin governments will continue building this knowledge base to provide confidence that decisions are made with the best and most up-to-date information available.

Appendix A: Responses to Productivity Commission recommendations

The Basin governments have agreed on the following language for responding to the Productivity Commission's recommendations:

Response	Definition
Agree	All elements of the recommendation are supported by Basin governments.
Agree in principle	Basin governments generally support the intent or merit of the recommendation, but do not support the proposed approach for achieving the intended outcome.
Agree in part	Basin governments agree with one or elements of the recommendation, but other elements either need further analysis or are not agreed.
For further consideration	Further analysis is required before Basin governments can make a decision on the recommendation.
Disagree	The recommendation is not supported by Basin governments.

Recovering water for the environment

RECOMMENDATION 3.1

Once water resource plans are accredited, the Murray–Darling Basin Authority (as Basin Plan Regulator) should assess which (if any) resource units are over-recovered against the Sustainable Diversion Limit.

As soon as practicable, the Commonwealth Environmental Water Holder, in co-operation with Basin governments, should develop a process and an appropriate timeframe to return any identified over-recovery to consumptive uses in accordance with Sustainable Diversion Limits.

Agree in part

The Australian Government has commenced work on policy arrangements and timeframes to address any over-recovery. It is the intention that consultation will be undertaken with communities and stakeholders on the approach, management and handling of any over-recoveries to achieve a balanced outcome.

The handling of any over-recoveries will be subject to the finalisation of remaining gap-bridging water requirements and water resource plans. The final amount of any over-recoveries will not be known until all currently contracted water recovery is delivered and final long-term diversion limit equivalence factors take effect through accreditation of water resource plans. The

accreditation of all water resource plans is now expected to occur in the first half of 2020. Australian Government agencies will work to develop and outline a timeline and process for the management of over-recovery that reflects the completion of these key components of Basin Plan implementation.

The handling of any over-recovery volumes would need to comply with legislative requirements, including the requirements for Commonwealth environmental water holdings.

RECOMMENDATION 3.2

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

To support accountability, it should commit to publishing all advice provided by the Commonwealth Environmental Water Holder and the Murray–Darling Basin Authority (including advice on strategic purchases) once transactions are complete in a Sustainable Diversion Limit resource unit.

Agree in principle

Basin governments agree that water recovery should be consistent with the environmental requirements specified in the Basin Plan. However, whilst water recovery should be guided by environmental outcomes, governments are committed to a balanced approach whereby community needs are genuinely considered.

When recovering water, the Australian Government takes into account advice from a variety of sources with different levels of sensitivity. This includes advice from the Commonwealth Environmental Water Holder (CEWH) on the environmental value of water acquisitions, and the Murray–Darling Basin Authority (MDBA) on river operation matters and requirements of the Plan, as well as the relevant state government and independent consults.

To increase transparency, the Australian Government will publish additional information on the Department of Agriculture's (the department) website about water purchasing. This information will include a summary of the water purchasing process that identifies the government's key steps when purchasing water.

On the completion of future water purchase tenders, the department will also publish advice received and a summary of the tender outcome. Advice will be released on a case-by-case basis having regard to statutory obligations (such as privacy provisions) and taking care to avoid compromising future water recovery.

Environmental water is used by the CEWH to meet statutory requirements as defined in the *Water Act 2007* (the Water Act). The CEWH routinely publishes information on the outcomes it has achieved through environmental watering. It also publishes plans for future environmental water use.

RECOMMENDATION 3.3

If provided, the Australian Government should target any further assistance to communities where substantial adverse impacts arising from water recovery to date or any future recovery program 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*.

Agree

Basin governments recognise that past programs for the initial 'Bridging the Gap' water recovery had adverse impacts on some communities. Future programs will not have the same socio-economic impact due to their different program design.

The Australian Government is funding communities affected by water recovery under the Basin Plan. For example, \$25 million is being provided through the Murray–Darling Basin Economic Development Program over 4 years for 42 projects that support the 15 communities assessed as being affected the most. A list of projects approved by the Australian Government minister responsible for water under this program can be found at agriculture.gov.au/water/mdb/programs/basin-wide/edpgrants.

The Murray–Darling Basin Economic Development Program includes guidelines with clear objectives and selection criteria and a monitoring and evaluation strategy to measure effectiveness. The guidelines can be found at communitygrants.gov.au. The regional development support provided by this program aligns with the Productivity Commission's strategies for transition and development.

The Australian Government has also recently announced a Basin-wide study by an independent panel to assess the social and economic conditions of irrigated communities across the Basin. The research will inform the MDBA's 2020 evaluation of Basin Plan implementation.

Supply measures and Toolkit

RECOMMENDATION 4.1

Basin governments should, as soon as practicable:

- resolve governance and funding issues for supply measures, including risk sharing arrangements
- develop an integrated plan for delivering supply measures to improve understanding and management of interdependencies within the package of supply measures
- develop clear mechanisms for consultation on the package and individual projects with Traditional Owners and local communities.

Agree

Governance and funding arrangements for implementation of preconstruction (Stage 1) supply and constraints measures have been established with each state. A National Partnership Agreement (NPA) is being negotiated for the full implementation (Stage 2) of supply and constraints measures, including risk sharing arrangements. There will be a 'gateway' assessment undertaken by the department in consultation with Basin state governments for each project between Stage 1 and Stage 2 to determine whether a project will be eligible to be considered for implementation funding (Stage 2) under the proposed NPA.

Basin governments have established an inter-jurisdictional committee to provide strategic direction and support the delivery of the package of supply and constraints measure projects. Basin state governments are also establishing governance arrangements for their individual supply and constraints measure projects.

Basin state governments, as project proponents, will consult with communities, including Aboriginal people, on their supply and constraints measure projects.

The MDBA will hold annual technical workshops on the roll-out of Sustainable Diversion Limit (SDL) adjustment measures. These workshops will encourage collaboration between Basin governments and relevant experts on the implementation of SDL adjustment projects.

RECOMMENDATION 4.2

Basin governments should be open to the possibility of extending the 30 June 2024 deadline for specific supply measures to be operational where an extension would be necessary to allow worthwhile projects to be retained.

Basin governments should make this position clear to project proponents early enough to inform the finalisation of detailed business cases for supply measures. It should be clear that extensions would need to be well founded, only apply in limited circumstances, and not alter the requirement to make good if a project ultimately fails.

Further consideration needed

Basin governments are committed to delivering the Basin Plan in full. While every attempt will be made to deliver the program on time, governments acknowledge that there could be practical

issues with aspects of implementation. Should these issues arise, it is possible that deadlines for those specific initiatives may need to be revisited on a case-by-case basis.

Basin governments are working together to deliver the package of supply measures projects and recognise that delivery of some of these projects by 2024 will be challenging. As a number of supply projects are in the planning phase, it is premature to consider extensions for individual projects until after the gateway assessment is completed. The assessment will determine if projects should move from the initial stage to the implementation stage.

Basin governments recognise that the progress of these projects must be carefully monitored in the lead up to the 2024 deadline, especially for the more complex and challenging projects. Strong governance and project management arrangements will be put in place by each of the States to enable progress review and early identification of risks to project delivery.

Additional oversight and monitoring will be provided by Basin committees. The MDBA's annual progress reports will also provide a review of projects and identify risks associated with delivering project outcomes within the required timeframe. The MDBA's report will be published on their website and be considered by Basin governments.

A total of 36 supply and constraints measure projects have been proposed under the Sustainable Diversion Limit Adjustment Mechanism. These are at varying stages of implementation. Fifteen of these are currently in operation, undertaking operational trials, in the drafting or construction phase. This includes projects such as the Nimmie Caira Infrastructure Modification Proposal The Living Murray environmental works, several operational rules projects and several South Australian floodplain projects. The suite of nine Victorian Murray Floodplain Restoration Projects have established funding agreements to commence detailed design and approvals.

The constraints measure projects are progressing under a coordinating work plan with progress monitored by the Murray–Darling Basin Ministerial Council. Phase 1 funding agreements enabling design and initial stakeholder engagement are now in place for the Yarrawonga to Wakool, Murrumbidgee, Lower Darling and the South Australian Lower Murray projects. Progress is being made on Stage 1 funding proposals for the remaining constraints measure projects.

Stakeholder engagement for the Menindee Lakes Water Saving Project has recommenced and a forward work program has been developed.

RECOMMENDATION 4.3

The Murray–Darling Basin Authority (as Basin Plan Regulator) should, as soon as practicable, devise a strategy for undertaking the reconciliation of supply measures that accommodates projects to be delivered in realistic timeframes.

Agree

The MDBA is working with Basin governments to develop its approach to reconciliation and annual reporting and how this will recognise any necessary project changes and track progress leading up to 2024. A key focus of the MDBA will be on transparency to provide a level of confidence for Basin governments, stakeholders and the community.

Each year in the lead up to 2024, the MDBA will review state progress across each of the supply, constraints and efficiency measure programs. The first of these reviews was conducted in 2018

and an annual progress report is available on the MDBA website at mdba.gov.au/publications/mdba-reports/adjusting-sustainable-diversion-limits-annual-progress-report.

RECOMMENDATION 4.4

The Department of Agriculture and Water Resources should, as soon as practicable, establish a clear gateway process that determines whether proposed supply measures proceed to implementation.

The department should appoint an independent panel to provide advice throughout the gateway review. The panel should consider:

- any material decrease in the anticipated net benefits of projects since their initial business case (to ensure projects represent a prudent and effective use of public money)
- Whether project timeframes and milestones are credible.

Based on the above assessment, the panel would make a recommendation on whether projects should proceed to implementation. The department should publicly respond to the advice of the independent panel, including justifying instances where it elects to not accept that advice.

Throughout implementation, the independent panel should also advise on whether projects are meeting their milestones, and projects that fail to make reasonable projects should be removed.

Agree in part

The department is establishing a gateway process to determine if supply and constraints measures should receive further Commonwealth funding to proceed to implementation (Stage 2). Prudent and effective use of public money and credibility of project timeframes and milestones will be at the core of the decisions. In making a determination about whether individual projects will be eligible to be considered for implementation funding (Stage 2), the department may seek independent assessment advice and will take into account any advice provided by Basin state governments. It is noted that Basin state governments may have to go through their own gateway review processes to ensure that projects are being effectively developed and delivered on time, on budget and in line with their government's objectives.

As implementation progresses the Basin Officials Committee will be responsible for determining any amendments to the scope of notified projects. Basin governments will also consider the implications of any such amendments to the overall package.

It is noted that, through the reconciliation process, the MDBA is responsible for determining the extent to which supply measures achieve their SDL offset and the extent of any shortfall. The Australian Government will consider the merits of an independent panel on a case-by-case basis, for example, where the department does not have the expertise to provide advice in its own right.

RECOMMENDATION 4.5

Northern Basin governments should, as soon as practicable, 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.

Agree

Northern Basin governments are working together to finalise a schedule to the Intergovernmental Agreement on Implementing Water Reform in the Murray–Darling Basin that will establish roles and responsibilities and governance arrangements for the prioritisation and implementation of toolkit measures in the northern Basin. A Northern Basin Project Group representing northern Basin state governments, the department, the MDBA and the CEWH has been established. The group is responsible for monitoring progress in the implementation of toolkit measures and reporting progress to the Basin Officials Committee and Ministerial Council.

The Australian Government will provide funding to implement toolkit measures under an NPA, with clear milestones to keep project implementation within reasonable timeframes.

The MDBA will assess progress with implementation of the Northern Basin Toolkit as part of its annual reporting on Basin Plan implementation.

The Australian Government established the Northern Basin Commissioner to oversee progress and effectiveness of the Northern Basin Toolkit. At the Ministerial Council meeting on 4 August 2019, Basin governments agreed to the establishment of an Inspector-General of Murray–Darling Basin Water Resources to oversee the implementation of the Basin Plan. This role replaces the Northern Basin Commissioner, with oversight of both Northern and Southern Basins. The Inspector-General will report to the Australian Government minister responsible for water and update Ministerial Council on progress when they meet. Annual progress reports from the Inspector-General will be tabled in the Australian Parliament.

Efficiency measures

RECOMMENDATION 5.1

As soon as practicable, the Murray–Darling Basin Authority (as the agent of governments) should comprehensively update and publish modelling to confirm the enhanced environmental outcomes that can be achieved with additional water recovery. This modelling should use up-to-date information on the constraints proposals, the effects of supply measures, and the volume of held environmental water.

The Murray–Darling Basin Authority should also model the benefits of additional environmental water within existing delivery constraints, and use this information to establish which Sustainable Diversion Limit resource units should be the priority for additional environmental water recovery.

Agree

Basin governments are working together to achieve the environmental outcomes set out in Schedule 5 of the Basin Plan. The benefits of the additional 450 gigalitres (GL) of environmental water and the relaxation of constraints on delivery were modelled in the preparation of the Basin Plan in 2012. This modelling has been published.

Many of the more complex supply measure projects are in the early stages of consultation and refinement. Given this, new modelling will be done once these projects are settled and have progressed to implementation. This new modelling will be published.

RECOMMENDATION 5.2

By early 2019, the Department of Agriculture and Water Resources should release a strategy for the efficiency measures program to achieve the Schedule 5 environmental outcomes while minimising adverse socioeconomic impacts. To ensure that the recovery of the 450 GL is effective and efficient, this strategy should:

- prioritise recovering water that can usefully contribute towards achieving Schedule 5 outcomes
- plan for a range of scenarios for constraint easing
- phase water recovery to ensure that, as new information becomes available, it aligns with both revised constraint proposals and progress in easing constraints, and contributes towards specific Schedule 5 outcomes
- consider all available options for recovering water in the development and assessment of projects, including community-designed initiatives
- clearly outline how it will address adverse socioeconomic impacts through the design of its program (recommendation 5.3)
- be transparent, and regularly publish information on successful projects, prices paid and overall progress against program objectives
- outline clear processes to ensure ongoing engagement with local communities and industries.

Agree in part

An Efficiency Measures Work Plan was agreed by the Ministerial Council on 14 December 2018 as the strategy for achieving the 450 GL of efficiency measures by 2024.

Basin ministers also agreed to a Constraints Measures Coordinating Work Plan at the Ministerial Council meeting in December 2018. Together, these plans provide a means to achieve the objectives of the Water for the Environment Special Account to enhance the environmental outcomes by easing or removing constraints on the capacity to deliver environmental water and increase the volume of environmental water by 450 GL. The outcomes are Basin-wide and include but are not limited to those set out in Schedule 5 of the Basin Plan.

Following agreement at the December 2018 Ministerial Council meeting, efficiency measure projects must now pass tighter tests of how they will affect Basin communities. The Australian Government has incorporated additional socio-economic criteria in the assessment of all efficiency measure projects. Applying these criteria will help to assure communities that the delivery of efficiency measures will have either neutral or improved socio-economic outcomes.

The Australian Government is in the initial stages of recovering environmental water to achieve the 450 GL efficiency measures target. Prioritisation of water recovery will become more important as recovery approaches the 450 GL target.

The easing of constraints is integral to the successful implementation of the adjustment mechanism. Along with the enhanced environmental outcomes, some of the proposed supply measure projects are also dependent on the easing of constraints. Basin governments are committed to implementing the full SDL adjustment by delivering supply and efficiency projects in conjunction with the constraints measures.

Basin governments are progressing projects to remove constraints to water flows in the southern Basin that will facilitate Schedule 5 outcomes. At this point in time, it is premature to plan for alternative constraints scenarios as recommended by the Commission. The Australian Government will regularly review the Murray–Darling Basin efficiency measures program and assess the implications of any changes to the constraint proposals or progress in easing constraints may have on Schedule 5 outcomes.

The Australian Government will publish updated guidelines and information on the efficiency measures program. This will include information on successful projects, agreed funding, water savings and prices. The Australian Government will also publish yearly reports on progress against program objectives and monitoring and evaluation of program and socio-economic outcomes.

The Efficiency Measures Stakeholder Engagement Strategy, agreed by the Ministerial Council in December 2018, is the basis for ongoing engagement with local communities, industries and other stakeholders across the Basin. This strategy includes the funding of community facilitators to raise awareness of the program and to develop proposals in consultation with the community.

RECOMMENDATION 5.3

The Department of Agriculture and Water Resources' water recovery strategy should explicitly outline how it will seek to address adverse socioeconomic impacts through program design. The department should require project proponents to provide information on:

- the likely benefits to, and adverse impacts on, the local district and any potential flow-on impacts
- the degree of engagement with community and/or industry
- alignment with irrigation network plans, including any planned rationalisation.

The purpose of collecting this information would be to identify possible cumulative socioeconomic impacts across different combinations of projects under consideration, as part of a broader decision about which projects to fund. This information should not be used as pass or fail criteria for individual projects.

The department should also implement a regional-level monitoring and evaluation program to identify (over time) which regions are subject to substantial socioeconomic impacts from additional water recovery.

Agree

Additional socio-economic criteria have been added to the efficiency measures program to provide greater assurance to Basin communities that efficiency measure projects will deliver neutral or improved socio-economic outcomes.

These new socio-economic criteria, agreed to at the Ministerial Council meeting in December 2018, will, among other things:

- require proponents to describe the expected socio-economic impacts and benefits of their proposed project on the local community, region or state
- place an obligation on the proponent to consult with industry bodies, irrigation infrastructure operators, local governments or regional development organisations in developing project proposals
- require proponents to consider how the project would contribute to the current and future viability of the relevant irrigation district or region, including identification of potential irrigation network improvements and rationalisation.

The Australian Government will also undertake ongoing monitoring and evaluation of projects and the efficiency measures program. This includes evaluation of socio-economic outcomes through the Monitoring, Evaluation, Reporting and Improvement Framework. This framework, developed with Basin governments, includes methods for assessing aggregate or cumulative socio-economic impacts of approved projects to identify regions that are most impacted by the efficiency measures program.

RECOMMENDATION 5.4

The Australian Minister for Water should specify that the 2021 review of the Water for the Environment Special Account review the benefits, costs and impacts of pursuing the enhanced environmental outcomes in Schedule 5 on the basis of new and updated information. This should include:

- identifying which, if not all, of the Schedule 5 outcomes can be achieved, given progress in easing or removing constraints, and how much environmental water would be required to do so
- assessing the benefits and costs (and feasibility) of other approaches to achieving those environmental outcomes.

This review should be supported by modelling provided by the Murray–Darling Basin Authority (as the agent of governments) and any additional information from Basin states.

The Australian Government should use the outcome of this review to determine whether there is a need to amend the Schedule 5 outcomes, or adjust the water recovery strategy to pursue those outcomes efficiently and effectively.

Disagree

As set out in the Water Act, the Australian Government will review the Water for the Environment Special Account (WESA) in 2021. The primary focus of the WESA review is to determine the potential to recover 450 GL environmental water based on the available WESA funds, the design of efficiency measures projects and progress to date on the efficiency and constraints measures.

It is not appropriate to expand the scope of the WESA review to include consideration of the environmental outcomes that can be achieved. Achieving the Schedule 5 outcomes will be informed by the review of the effectiveness of the Basin Plan in 2020 and 2025 and modelling undertaken as part of the Monitoring, Evaluation, Reporting and Improvement Framework. Achievement of the Schedule 5 outcomes will be considered as part of the broader review of the Water Act in 2024.

Water resource planning

RECOMMENDATION 6.1

The Australian Minister for Water and Basin States should as soon as practicable negotiate extensions to the timelines for accrediting water resource plans in areas where there is clearly insufficient time for adequate community engagement before 1 July 2019 (particularly in areas of New South Wales).

Extensions should only be given in limited circumstances, particularly where substantive changes to state-based water management rules are proposed that may have material impacts on entitlement holders and/or the environment.

Agree

The Australian Government, through a regulation under the Water Act, provided for Basin state governments to have more time to prepare water resource plans if requested. Basin state governments remain committed to delivering obligations under the Basin Plan and to ensuring that stakeholders have time to provide feedback on how changes will impact them. Updates on the progress of water resource plan accreditation are published on the MDBA website at mdba.gov.au/basin-plan-roll-out/water-resource-plans.

Through bilateral agreements with the Commonwealth, Basin state and territory governments made sure Sustainable Diversion Limits were in place from 1 July 2019 where water resource plans were yet to be accredited.

RECOMMENDATION 6.2

Before 1 July 2019, 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 (WRP) obligations
- articulate the compliance assessment regime relevant to WRP obligations
- consult with Basin states in developing guidance on how it proposes to assess future amendments to WRPs.

RECOMMENDATION 6.3

The Murray–Darling Basin Authority (as Basin Plan Regulator) in consultation with Basin governments should finalise and publish 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.

Agree

The MDBA is developing a water resource plan compliance framework which will include details of the annual self-reporting process as well as guidance on the rolling annual audit program and the MDBA's approach to spot audits for water resource plan compliance.

In addition to this, the MDBA is developing a new framework to guide the evaluation of water resource plans in 2020. Basin state governments will be involved in the development of the framework, noting that the evaluation is intended to be based on existing processes developed for the five-yearly review required under the Basin Plan.

Water resource plans can be amended once in place using the process set out under Section 65 of the Water Act.

Water quality

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 there are any additional environmental benefits associated with achieving the salt export objective that are not covered by achieving the environmental outcomes of the Basin Plan
- whether the objective should be respecified or abolished

Agree in principle

The 2020 review of water quality and salinity targets is a specific component of the ongoing monitoring and evaluation program for the Basin Plan (section 22 of the Water Act). The outcomes of this work will be used to inform the next scheduled review of the Basin Plan in 2026, which includes review of the salt export objective.

Critical human water needs

RECOMMENDATION 9.1

The New South Wales Murray and Lower Darling water resource plan (WRP) should recognise the direct link between the management of Menindee Lakes, flows to the Lower Darling and the risks to the provision of water for critical human water needs.

The WRP should set out how key operational plans (including the Murray–Darling Basin Authority's River Murray System Annual Operating Plan and the WaterNSW Lower Darling Operations Plan) interact with each other to provide for critical human water needs.

Agree

Under the Basin Plan, water resource plans are required to identify and manage risks to water resources. They must cover all water uses in a catchment, including critical human water needs in times of severe drought. The NSW Government will ensure that provision of water to meet critical human water needs is addressed in the Murray and Lower Darling water resource plan.

The management of the Menindee Lakes system alternates between the NSW Government and the MDBA depending on the water levels in the Menindee Lakes. Risks to the local community's critical human water needs are considered in any decision to release water.

The NSW Government has released an extreme events policy which sets out a framework to manage extreme events and secure critical human water needs in a structured and proactive way.

The NSW Government will prioritise the development of the Western Regional Water Strategy that will include modelling of low flows and consider options to more effectively actively manage the system.

Water trading rules

RECOMMENDATION 10.1

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

- finalise 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 about whether the 11 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

Agree

The MDBA has commenced work on developing an assessment framework for evaluating the consistency of state trade restrictions against the Basin Plan, which will be published. The framework will provide information on how the MDBA will consider costs and benefits of trade restrictions. Basin state governments will be involved in the development of the framework.

The MDBA has also published a compliance and enforcement policy. This policy includes information about how the MDBA will work with Basin state governments, including the MDBA's approach for compliance with the Basin Plan's water trading rules.

Publishing the overarching reasons that Basin state governments provide for surface water trade restrictions is supported by all Basin governments.

The MDBA intends to publish its findings, after assessing Basin state trade restrictions under the assessment framework.

RECOMMENDATION 10.2

Basin governments should set and publish a work plan within the next 12 months that describes how delivery capacity issues and third party effects 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 the agent of governments) responsibility for identifying and managing risks related to changes in water use and trade in shared resources and connected systems.

Agree in part

The MDBA works with Basin governments to manage risks and find solutions for River Murray System capacity issues. Basin governments are currently considering an MDBA report on capacity issues and a workplan is being developed. Basin state governments support the development and implementation of decision support tools.

The role of the MDBA, as an agent of the governments, is defined by the Murray–Darling Basin Agreement. Given Basin state governments have primary responsibility for day-to-day management of water resources, it is not appropriate or practical for the MDBA to have sole responsibility for managing these risks.

At the Ministerial Council meeting in December 2018 Ministers noted the work already agreed by Basin officials and the MDBA to minimise water delivery shortfall risks. They committed to cooperating fully in exploring the full range of options available to manage water delivery shortfall risks for all water users. Options to be considered include changes to the river operations rules and trade rules, addressing constraints and infrastructure projects.

Environmental water planning and management

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, where environmental outcomes are not compromised, environmental watering should seek to contribute to social or cultural outcomes
- 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
- providing clear guidance on potentially harmful flow regimes, to support river operators and resource managers to act in a way that is consistent with the Basin Plan.

Agree

The Australian Government maximises environmental outcomes in keeping with the Water Act and the Basin Plan. The CEWH is achieving these outcomes through effective and efficient use of their environmental water holdings.

The MDBA will consider the Commission's recommendations in reviews of the Basin-wide Environmental Watering Strategy (BWEWS). This recommendation will also be considered as part of the MDBA's 2020 review of the Environmental Watering Plan of which the BWEWS is a key component.

The MDBA and the CEWH collaborate with the Murray Lower Darling Rivers Indigenous Nations and the Northern Basin Aboriginal Nations to incorporate cultural environmental values and outcomes in environmental water planning and delivery. The Basin Plan requires the MDBA to have regard to Aboriginal values and uses and optimising social and economic outcomes when developing the BWEWS.

The MDBA's annual environmental watering priorities provide clear guidance on the relative priority of key Basin environmental assets under all water availability scenarios for achieving the environmental objectives of the Basin Plan. The 2019 BWEWS and the 2020 Environmental Management Framework review will consider the need for including additional guidance in the BWEWS on the relative priority of key Basin environmental assets. The MDBA collaborates closely with Basin state governments to maximise environmental outcomes.

RECOMMENDATION 11. 2

Following the publication of the 2019 Basin-wide environmental watering strategy (BWEWS), the Murray–Darling Basin Authority (as Basin Plan Regulator) should provide clear guidance material to Basin states on the expected content of long-term watering plans (LTWPs) when they are reviewed or 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 the operational constraints at that time
- 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
- risks to the achievement of the long-term watering objectives, including the risk of undesirable outcomes arising from environmental watering or potentially harmful flow regimes as a result of river operations.

To improve the accessibility of information, the Murray–Darling Basin Authority 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.

Agree in principle

The Basin Plan sets out what is to be included in long-term watering plans (LTWPs). The MDBA works closely with Basin state governments and environmental water holders during the development of LTWPs and provides guidance on environmental watering in a particular year.

The content of LTWPs will be considered as part of the 2020 review of the Environmental Watering Plan.

Basin governments are improving the accessibility of information about environmental water planning, including through a register of long-term watering plans on the MDBA and Basin state government websites.

RECOMMENDATION 11. 3

As part of the 2020 review of the Environmental Watering Plan, the Murray–Darling Basin Authority (as Basin Plan Regulator) should consider the usefulness of Basin annual environmental watering priorities and whether the Basin Plan requirements for these annual priorities should be amended or removed.

Agree

The 2020 review of the Environmental Watering Plan is a specific component of the ongoing monitoring and evaluation program for the Basin Plan (section 22 of the Water Act).

The approach to setting Basin annual watering priorities was revised in 2018 to better cover all resource availability scenarios. This includes new rolling multiyear priorities that are responsive to opportunities arising under different water availability scenarios. These provide flexibility for the management of environmental water portfolios.

The effectiveness of this new approach to priority setting will also be assessed as part of the 2020 review, along with other elements, including the effectiveness and sequencing of state and MDBA annual environmental watering priorities.

RECOMMENDATION 11.4

By 2020, Basin governments should:

- 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.
- increase the transparency of the Southern Connected Basin Environmental Watering Committee and its role by making governance arrangements including terms of reference, membership and reporting responsibilities publicly available.

Agree in principle

The New South Wales, Queensland and Australian Governments recognise the need to work jointly to meet the challenges in managing environmental water in the northern Basin. These governments are establishing a stronger governance and coordination framework to improve the coordination, connectivity and management of water in the northern Basin.

The MDBA publishes information on the Southern Connected Basin Environmental Water Committee, including its annual report, on the MDBA's website. The report includes information on who the committee is, their role, environmental watering priorities, community engagement, and watering highlights for the year.

RECOMMENDATION 11.5

Where not yet in place, Basin state governments should establish processes for consultation and coordination between key stakeholders to enable event-based watering decisions – including water managers, asset managers and entitlement holders (including the Commonwealth Environmental Water Holder) – as soon as practicable.

These processes should be documented and publicly available.

Once in place, these arrangements should be reflected in the Commonwealth Environmental Water Holder's annual portfolio management plans.

Agree

The Australian Government, Basin state governments and environmental water holders undertake regular consultation with key stakeholders during the planning and management of event-based watering decisions. This includes engagement with a wide range of environmental water advisory groups and other similar forums, and directly with water delivery partners and industry in the annual environmental water planning process. The outcomes of these consultations are reflected in annual portfolio planning documents published on the websites of environmental water holders.

All governments will work to continue to improve consultation and coordination arrangements and transparency in the management of environmental water.

This recommendation applies to event-based decisions on the use of held environmental water. Circumstances are different for planned environmental water for which decisions are made at the time of setting the plan rules.

RECOMMENDATION 11.6

While achieving environmental outcomes is the primary focus of environmental water holders under their respective legislation, opportunities to contribute to social or cultural outcomes (without compromising environmental outcomes) should be actively pursued. 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.

Agree

The primary focus of environmental water holders should remain on achieving environmental outcomes. However opportunities for multiple benefits should be pursued where they do not compromise environmental outcomes. The Basin Plan requires Basin state governments to prepare long-term watering plans in consultation with local communities, including bodies established by Basin state governments that express community views in relation to environmental watering, and persons materially affected by the management of environmental watering.

Work in this area is progressing and there are engagement mechanisms in place at a Basin level, such as the Environmental Water Advisory Groups, run by the Basin state governments, that facilitate local community and Aboriginal peoples' involvement.

Under the *Water (Indigenous values and uses) Direction 2018* made by the Australian Government minister responsible for water, the MDBA will publish a report for each water accounting period demonstrating how, when planning for environmental watering in the Murray–Darling Basin, holders of held environmental water (a) considered Indigenous values and Indigenous uses and (b) involved Aboriginal people.

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).

Agree

The Australian Government and Basin state governments recognise that providing water is in itself not necessarily enough to secure environmental outcomes. Basin state legislation anticipates that water planning should have regard to other natural resource management planning and vice versa. Basin state governments continue to adapt their programs and resources to enhance this intent.

Risks to the Basin Plan's ecological outcomes can be mitigated by increasing the volume of environmental water. However, effective mitigation of ecological risk also requires non-flow measures such as control of pest plants and animals in rivers and wetlands (e.g. carp, weeds, foxes) and river and wetland restoration projects.

Considerable work is planned or underway on a range of complementary environmental projects as part of the Basin Plan's processes, such as environmental works and measures in the northern Basin, environmental works and measures through the SDL adjustment mechanism and state priority projects.

Compliance

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.

Agree

The MDBA Office of Compliance was established as a separate division within the MDBA in November 2017. The functions of the Office of Compliance include to coordinate and undertake the MDBA's compliance activities, including overseeing compliance with respect to the SDLs and water resource plans.

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.

Before new Basin state metering regulation and implementation plans are put in place they should be subject to scrutiny through publicly available business cases.

Agree

Basin state governments have agreed to a number of measures to improve metering as part of the Murray–Darling Basin Compliance Compact (the Compliance Compact). These include ensuring that all new non-urban water metering meets the relevant Australian Standard (AS4747) by 2025. The MDBA is monitoring progress of Basin governments against all of the Compact commitments.

As part of the Compliance Compact, Basin governments undertook a review of the appropriateness of the Australian Standard for non-urban water metering (AS4747). The review found the Australian Standard was reasonable, but the Metrological Assurance Framework, which is part of the National Framework for Non-urban Water Metering, could be adjusted to improve metering compliance and renewal. Basin governments are undertaking further technical investigations.

RECOMMENDATION 12.3

The Murray–Darling Basin Authority (MDBA), as the regulator responsible for overseeing compliance at a Basin-wide level, should publicly report instances where Basin states are not effectively enforcing their water take laws.

The MDBA's 2026 Basin Plan review should reconsider the risk to meeting the objectives of the Basin Plan from non-compliance of water take, including the case for reducing Sustainable Diversion Limits if there is evidence of persistent illegal water take.

Agree

The MDBA and Basin state governments have agreed to better define, and coordinate compliance and enforcement activities through the Compliance Compact. Progress with implementing the Compliance Compact is being reported annually.

The MDBA has put in place an arrangement for handling allegations it receives of possible non-compliance in Basin states, and has commenced an annual assurance program to examine the effectiveness of selected state compliance arrangements.

The 2026 review of the Basin Plan will include consideration of the effectiveness of compliance across the Basin.

Reporting, monitoring and evaluation

RECOMMENDATION 13.1

Reflecting lessons learned from deficiencies in past agreements, for any future funding 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) is used to inform assessments of progress is published in full.

Agree

Basin governments are committed to the continuous improvement of governance in the way the water resources of the Murray–Darling Basin are managed. This includes improving how future intergovernmental agreements are drafted.

As an example, the Australian Government has commenced a review of the National Partnership Agreement on Implementing Water Reform in the Murray–Darling Basin. This review is being undertaken in consultation with Basin state governments and will be completed by September 2019. The review is assessing the effectiveness, efficiency and appropriateness of the NPA in achieving its objectives, outcomes and outputs.

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 Basin Plan, and the scales and times at which these questions will be answered.

The process through which the framework will be developed should be made public as soon as possible.

The evaluation framework should be finalised by the end of 2019, and be made publicly available.

Agree

In 2017, the MDBA evaluated progress towards the outcomes of the Basin Plan. In response to this review, the MDBA revised its evaluation framework to ensure specific questions on the outcomes and effectiveness of the Basin Plan are defined and published in the planning stage leading up to an evaluation. The next evaluation is due by the end of 2020. The revised evaluation framework is available on the MDBA website at mdba.gov.au.

The MDBA is also working with all Basin governments to prepare a broader monitoring, evaluation, reporting and improvement framework. This framework will outline how outcomes will be evaluated at the asset and Basin scales, and the timing of these evaluations

RECOMMENDATION 13.3

Basin governments should develop a monitoring strategy to give effect to the evaluation framework for the Basin Plan. 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 Basin Plan between Basin governments.

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

The monitoring strategy should be finalised by the end of 2019, and be made publicly available.

Agree

The Australian Government and Basin state governments support a range of monitoring activities across the Basin and are working together on a Basin Science Platform.

The MDBA is working with all Basin governments to develop a monitoring strategy to guide the 2020 and 2025 evaluations of the Basin Plan. This strategy will be published by the end of 2019.

RECOMMENDATION 13.4

After the completion of the 2020 evaluation of the effectiveness of the Basin Plan, the Murray–Darling Basin Authority (as Basin Plan Regulator) should publicly outline the approach it will take for the 2026 review of the Basin Plan. This should include establishing:

- the broad objectives and scope of the review
- how the process as set out in the Water Act will be undertaken, including establishing the timing of the review's discussion paper
- a clear process for identifying and addressing knowledge gaps that may hinder the review how the review will be resourced.

Agree

The findings of the interim 2017, 2020, 2025 evaluations and annual progress reporting will be used to inform planning for the 2026 Basin Plan review.

The MDBA will also consult and collaborate with Basin state governments and independent advisory groups including those representing Aboriginal interests in the Basin to address key evaluation questions.

The MDBA has committed to the development of a knowledge acquisition strategy that will identify knowledge and capability needs to inform future evaluations and reviews.

The approach taken for the 2026 review will be made publicly available and will include the broad objectives, scope, process and timing.

Institutions and governance

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 Basin Plan, and be ultimately accountable for implementation.

In 2019, the MDB Ministerial Council should commence reforms to 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's agent of government role will continue to be key to driving collaboration between and providing technical support to Basin governments as they implement the Basin Plan
- ensuring that Basin governments are individually and collectively resourced to perform their roles to implement the Basin Plan.

Agree in principle

Basin governments agree that the implementation of the Basin Plan requires a Basin-wide, strategic approach with transparent and accountable governance arrangements to ensure Basin Plan outcomes and the expectations of the community are met.

In response to the interim findings in the Commission's draft report released in August 2018, the Ministerial Council commissioned an independent review of the governance arrangements for implementing the Basin Plan. This review, by Mr Greg Claydon, included recommendations on effective and streamlined processes to support the delivery of water reforms and improved institutional and governance arrangements for implementing the Basin Plan. Mr Claydon's review drew on the findings and recommendations of the Commission. Basin governments are considering Mr Claydon's recommendations.

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 Agency—as the agent of Basin governments
- Basin Plan Regulator—an independent Commonwealth Statutory Authority.

These institutional reforms should be in place by 2021.

RECOMMENDATION 14.3

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, evaluation and Basin Plan review functions.

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.

When there is a need for additional technical skills not available within the Regulator's staff, the Regulator should organise formal, transparent arrangements for the supply of these capabilities from the Murray–Darling Basin Agency, Basin governments, or other providers.

Further consideration needed

Basin governments acknowledge the concerns raised by the Commission and the importance of a clear and robust approach to compliance in the Basin.

In response to the concerns raised by the Commission on the governance arrangements for implementing the Basin Plan, the Australian Government, in consultation with the Basin states, will legislate to establish an Inspector-General of Murray–Darling Basin Water Resources to provide confidence in Basin Plan implementation by:

- provide assurance that MDBA are fulfilling their compliance responsibilities under the *Water Act 2007*, the Basin Plan and Water Resource Plans
- providing independent assurance over progress and compliance with Water Resource Plans and progress of water recovery, supply and constraint projects investigating reports of non-compliance with the requirements of the *Water Act 2007*, the Basin Plan and Water Resource Plans
- undertaking community engagement on Basin Plan implementation and compliance matters.

Basin governments have already implemented actions as agreed to in the Compliance Compact which represents a significant milestone in securing a consistent and transparent approach to ensuring compliance with all Commonwealth and state laws applicable to water use in the Basin. These changes include implementing measures agreed in the Compliance Compact and the establishment of the Office of Compliance in the MDBA.

In considering any further changes, Basin governments will assess the effectiveness of these recent improvements to the regulatory arrangements in the Basin. Basin governments will also take care to avoid any undue disruption to the MBDA's ability to implement the Basin Plan. The Ministerial Council will further consider these recommendations, including separating the MDBA's service delivery and regulatory functions, in 12 months time and ask the Inspector-General for advice to support their further decision making.

RECOMMENDATION 14.4

By 2020, to enable it to carry out its enhanced role (recommendation 14.1) the Basin Officials Committee should:

- have an independent Chair, appointed by the Australian Minister for Water in consultation with the Murray–Darling Basin Ministerial Council
- 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 Agency to support them to implement the Basin Plan and for shared water resource management
- establish new arrangements and processes to support ongoing intergovernmental collaboration.

Agree in part

The Basin governments regularly review the capability and resources needed to implement the Basin Plan, including the role of the Basin Officials Committee in supporting Basin ministers. This also includes reviewing the functions fulfilled by the MDBA and the resourcing needed to support the implementation of the Basin Plan and deliver programs under the Murray–Darling Basin Agreement.

Basin governments do not agree with the recommendation to have an independent Chair of the Basin Officials Committee at this point in time. A representative of the Department of Agriculture currently chairs the Basin Officials Committee. These arrangements appropriately reflect the role of the Commonwealth in facilitating water reform efforts in the Basin.

Basin governments are committed to continuously improving the way they work together and how decisions are made. This includes always looking for ways to improve the effectiveness and streamlining processes and improving the institutional and governance arrangements to support the delivery of water reforms and implementing the Basin Plan. The Ministerial Council commissioned an independent review of the governance arrangements for implementing the Basin Plan by a Mr Greg Claydon. The Ministerial Council is currently considering the recommendation from this review.