



INDEPENDENT ASSESSMENT OF SOCIAL
AND ECONOMIC CONDITIONS IN THE BASIN

Summary Report: Independent assessment of social and economic conditions in the Murray–Darling Basin

Summary Report prepared for The Hon. Keith Pitt MP, Minister for
Resources, Water and Northern Australia

April 2020



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Acknowledgement

We acknowledge that First Nations peoples are the traditional owners of the land and water, and pay respect to Elders past, present and future. We also recognise the unique, diverse and enduring Culture of First Nations peoples, and the wisdom that comes from such a long connection and respect for Country that can inform today's decisions.

The Independent Panel for the Assessment of Social and Economic Conditions in the Murray–Darling Basin (the Panel) recognises the pressures that many people in Basin rural and regional communities are under. We are in awe of their resilience and persistence under testing conditions, their willingness to innovate and adapt, and their desire to make a future in the Basin.

We are indebted to all the people, organisations and government agencies who participated in this Review, and appreciate their generous contributions of time, ideas and insights.



Caption: Telephone Bank Gayini Nimmie Cairra. Photo credit to Jamie Woods, Land Manager Gayini Nimmie Cairra for Eulimbah Gayini Nimmie Cairra

Foreword

As someone who grew up on an irrigation farm in southern New South Wales and now runs a dryland farm in northern New South Wales, I have always been proud to live and work in rural and regional Australia, and to call the Basin home.

It was an honour to be appointed Chair of the independent Panel assessing the social and economic impacts of water reform on Basin communities, joining six other respected individuals from across the Basin. As a Panel, we bring diverse skills and experience to the task, united in our commitment to understand the needs of people living and working in Basin communities.

There are more than two million Australians who live in the Murray–Darling Basin. Whole communities have been built on generations of hard work to create a prosperous and vibrant life, with a commitment to ensuring a sustainable environment.

Through the course of the review, we have seen communities experiencing challenges around water reform, as well as hardship from the drought and more recently the fires and spread of COVID-19. We also looked carefully at big long-run drivers of change, such as new technology, swings in commodity prices, and movements in the Australian dollar.

After visiting Basin communities and reviewing expert analysis, we found many communities struggling, including some in dire circumstances. We saw a complex array of factors are contributing to this distress. Seeking to blame circumstances on one factor or another is not going to solve things. Given the scale and depth of concern, we need to get the diagnoses and responses right—quickly—across all levels of government.

As a Panel, we were disheartened to see communities at a crossroads despite countless studies, reviews and inquiries. Visions and policies in our irrigated communities focusing on overall gains have not dealt fairly with those left behind, nor worked hard enough to be fully inclusive.

Our Basin communities are changing. The pace has been rapid and the impacts profound. The future is no longer secure or certain for some people and regions, despite their hard work. Morale has eroded, and a sense of hopelessness is spreading; in many cases, people no longer feel confident in their future. These impacts are not only being felt in the ‘back pocket’, but witnessed in the main streets of towns, and in the prospects for our next generation.

We heard from people caught in a one-way conversation—over-consulted and under-listened to. They were frustrated that decisions are being made ‘for’ them, often with short term objectives as the predominant driver. They want to be part of a conversation that sets a coherent vision and drives sound policy that deals them in again. First Nations communities have also expressed deficiencies in current and future water planning, management and access arrangements.

Despite this despair, we witnessed industries and businesses defying these outlooks. They are predominately in larger Basin communities with more diverse economies, in communities where irrigation has expanded, water has moved into districts following unbundling and water market reforms and where buoyant commodity prices have shored up confidence.

Above all, many Basin communities remain open to supporting Basin water reform. It was clear that people recognise the importance of enhanced environmental outcomes in maintaining healthy working rivers, supporting important ecosystems, and improving conditions for Basin communities. They need confidence that the Plan is fair and equitable for all and managed soundly. For this outcome to occur, all affected communities must be at the heart of decisions deciding their future.

Communities are calling for courageous leadership. They want greater involvement in decisions that impact them—not via ad-hoc town hall meetings—but by helping to shape a long term vision for rural and regional Australia and their Basin. This requires both governments and our community leaders moving forward together, rebuilding trust and goodwill.

The Panel hopes this report not only captures what communities have told us, but also highlights where critical information or data is missing. Sound judgements cannot be achieved when data is outdated, incomplete or inaccurate.

This report presents our key findings and recommendations. The Panel is grateful for the large number of considered and thoughtful submissions that have helped shape and sharpen them.

We see it as vital that governments adjust their approach and our communities engage positively as they do so. Our leaders need to give more attention to the uneven and indirect impact of their action or inaction, provide greater policy clarity and inclusiveness, and improve information for decision making. This requires genuine engagement and supporting communities as they determine their futures and work together to achieve a more prosperous and vibrant future for all.



Robbie Sefton

Chair, Independent Panel for the Assessment of Social and Economic Conditions in the Murray-Darling Basin





Throughout our consultations we heard that people in Basin communities want to be part of decisions that make their communities better places to live.

Section 1

About this Review

- 1.1 What the Panel was asked to do
- 1.2 Our approach to this Review
- 1.3 This summary report



1. About this Review

In June 2019, the Hon. David Littleproud MP, then Minister for Water Resources, Drought, Rural Finance, Natural Disaster and Emergency Management, appointed a seven-member [independent Panel](#) to investigate social and economic conditions affecting rural and regional communities across the Murray–Darling Basin (the Basin). He also asked the Panel to look at the impacts of water reform on those communities.

The Panel members are Robbie Sefton (Chairperson), Andrew Kassebaum, David McKenzie, Dr Deborah Peterson, Michelle Ramsay, Bruce Simpson and Rene Woods. This report provides our final findings and recommendations to stimulate, support and promote healthy and sustainable rural and regional communities in the Basin in the longer term.

1.1 What the Panel was asked to do

We developed our Terms of Reference (Box 1) following broad public consultation and engagement with people in Basin communities and other stakeholders.

Box 1: Terms of Reference

- A. The Panel will provide an independent assessment of social and economic conditions in rural and regional communities across the Murray–Darling Basin.
- B. The Review will assess impacts (positive and negative) of water reforms including the Basin Plan on the vulnerability, resilience and adaptive capacity of Murray–Darling Basin communities and their development potential. This will include consideration of social and economic impacts of the environmental effects of water reforms.
- C. The Review will consider ongoing structural changes influencing different communities in the Murray–Darling Basin, and seek to separate the effects of these trends, and events such as drought, from the effects of water reform, including the Basin Plan.
- D. The Review will support longer term efforts to monitor and understand social and economic conditions in the Basin, and the impact (positive and negative) of water reform on different communities in the Murray–Darling Basin. This will be used by governments and leaders to help understand the outcomes of water reform, including the Basin Plan. However, this is not a review of the Basin Plan.
- E. The work of the Panel will explore a range of options that stimulate, support and promote healthy and sustainable rural and regional communities in the Basin.

Following our Terms of Reference, we focused on effects of water reforms on people living in rural and regional Basin communities. We define Basin communities broadly, but we are particularly concerned with the people whose lives, livelihoods and future are most connected to and impacted by water and by Basin water reform (Box 2).

Box 2: Basin rural and regional communities in focus



- Communities heavily dependent on irrigation and irrigators
- First Nations groups and communities
- Businesses operating in local economies that are deeply connected to the rivers
- Recreational and commercial users of rivers and riverine environments
- Other groups who have clear local, cultural and other connections to the Basin's rivers and water management

At the same time as this Review, many other reviews and inquiries were also underway. The Panel has deliberately not focused on the issues that these reviews and inquiries are looking at. We list these reviews and inquiries in Appendix A of our final report. In particular, this Review does not address in substantial detail:

- how lower in-flows may have impacted on state shares under the Murray–Darling Basin Agreement. This was the focus of the review by the [Interim Inspector General](#). This report was provided to the Minister for Resources, Water and Northern Australia, the Hon. Keith Pitt MP, on 30 March 2020
- how carryover and other changes to water use and management have impacted on water allocations to different water securities in the southern Basin. This is included in the Australian Competition and Consumer Commission (ACCC) water market inquiry terms of reference. The ACCC interim report is due to the Treasurer, the Hon. Josh Frydenberg MP, by 31 May 2020.

The Panel also recognises many reports and inquiries in recent years have looked at water policy in the Murray–Darling Basin. They include the Productivity Commission's [Five-year assessment of Basin Plan implementation](#) (2018) and the [National Water Reform Inquiry](#) (2017), the [Northern Basin Review](#) (2016) and many more. There has also been a lot of work on profiling social and economic conditions in [southern](#) and [northern](#) Basin communities. The Panel considered these reports, government responses, and other supporting work.

1.2 Our approach to this Review

To inform our findings and recommendations, we engaged with stakeholders across the Basin in late 2019 and again in March–April 2020. In late 2019 we met face to face with more than 750 people across Queensland, NSW, Victoria and South Australia. We received over 100 [written submissions](#) that contributed to shaping the Terms of Reference and 600 survey responses between July and November 2019. Plus, we received over 70 [submissions in response to our draft report](#) released in March 2020. Our engagement coincided with a time of severe drought, bushfires and flooding in many parts of the Basin, and the emergence of COVID-19.

Alongside our consultation, we [commissioned new research](#) looking at:

- a summary of the existing literature and knowledge on the [impacts of reforms](#), [government spending in the Basin](#), [existing data and knowledge of social and economic conditions in the Basin](#), and [strategies for building community resilience, adaptability and wellbeing](#)
- [social and economic metrics](#), to help understand conditions in different Basin communities, based on six recognised dimensions of a thriving community
- [what might happen](#) when 497 GL of future water recovery occurs, especially given the likelihood of more frequent droughts and a drying climate
- case studies on [recreational fishing](#); [recreational boating](#); the [rice industry](#); [cotton industry](#); [dairy industry](#); and [horticulture below the Barmah Choke](#).

We also drew on the latest available research and information, such as analysis of [trends and drivers](#) shaping water markets, water availability and agricultural production in the northern and southern Basins.

Valuable community input



750+

people at face to face meetings across **QLD, NSW, VIC and SA**



100+

written submissions that contributed to shaping the Terms of Reference



600

survey responses



70+

submissions in response to our draft report



Our engagement coincided with a time of severe drought, bushfires and flooding in many parts of the Basin, and the emergence of COVID-19.

1.3 This summary report

This report summarises the Panel's key recommendations and findings from its [final report](#).

We anticipate some people will be dissatisfied with some areas of the final report and the Panel's final recommendations. Given the diversity and strength of views across Basin regions and peoples, this is unavoidable. Some submissions, for example, called for changes to the Basin Plan that were outside the scope of our Review—this is not a review of the Basin Plan nor a referendum on water reform. The Panel acknowledges the overall gains Basin Plan reforms have brought our nation. We are not about turning back the clock.

The Panel re-emphasises that its final report and its recommendations are not a review of the Basin Plan, nor a referendum on water reform. The final report is, however, a call to address what the Panel sees as significant socioeconomic challenges for rural and regional Basin communities, and aims to refocus government effort in ways that restore trust and build prosperous, healthy and sustainable rural and regional Basin communities.

2. Panel recommendations

Improve the way we work together

Governments and Basin communities need to work together to rebuild trust, and communities need to be put at the centre of conversations about their future. Being clearer about decision making expectations and the allocation of responsibilities and building our capacity to work together are steps towards this.

All Basin governments and relevant authorities need to work together cooperatively, to deliver the Basin Plan in the nation's interests. This may require adapting to changing circumstances and new information. The Murray-Darling Basin Ministerial Council should demonstrate a shared vision and clear objectives, showing it can articulate what it sees as common goals with clear roles, accountabilities and actions, that provide long term policy certainty.

Recommendation 1

Basin governments and communities must find better ways to engage about Basin and broader reforms and strengthen leadership capacity of regional communities and government agencies. Specific actions to improve the way we work together may include:

- building local leadership capacity to work with governments to design policies and programs that are tailored to community needs. Programs such as the Basin Communities Leadership Program could be scaled up and/or the Murray-Darling Basin Leadership Program reinstated to support local capacity development
- building community and catchment involvement by engaging with local communities, landholders and Catchment Management Authorities to support coordination of environmental watering and investments in complementary measures
- strengthening community consultation approaches so that consultation on issues with potentially material social, economic and/or environmental implications are not rushed or superficial. This applies to initiatives including, but not limited to, Sustainable Diversion Limit Adjustment Mechanism (SDLAM) projects, the remaining Water Resource Plans, and river operation decisions
- further strengthening the capacity and capability of the Australian Government Department of Agriculture, Water and the Environment, the Murray-Darling Basin Authority (MDBA) and Basin states to engage regionally and implement the Panel's recommendations.

Recommendation 2

All parties involved in designing, developing, implementing, monitoring and evaluating water policy and reform must recognise the importance of transparency and accountability in providing certainty and confidence to communities. Actions to achieve this include:

- investing in an easily accessible, Basin-wide water resource information platform. The platform should provide timely information and simple description and definitions of water terms, policies, operational settings, rules and their implementation, and changes (or those proposed) to them. It could also provide easily understandable indicators of water supply and demand and enable rapid understanding of the composition of, and changes in, river flows and storages, both temporally and spatially, as well as access and release triggers. It should also track how governments have assessed, consolidated and implemented recommendations from reviews on issues relating to the Basin
- having the [Basin Officials Committee](#) publicly report advice provided to the Ministerial Council and advice provided for implementing policy and decisions of the Council on matters such as state water shares and the funding and delivery of natural resource management programs
- investing in water literacy in communities, media organisations and local government to support informed dialogue and rebuild trust
- improving data and information about social and economic conditions in rural and regional Basin communities, the drivers, and dynamics of change.

Appendix B.1 of the final report has specific areas where Panel inquiries indicate information and data need to be improved.



Pace further planned water recovery to capacity to adjust

The Panel's commissioned work (final report section 4.2) clearly shows that recovering more consumptive irrigation water will have significant negative impacts for some regional Basin communities, including NSW Murray and northern Victoria. It may also have significant negative impacts in the northern Basin communities where water recovery is likely to be targeted. These impacts will be additional to those that these communities have already incurred.

While we acknowledge benefits from past recovery (final report sections 3.2.2 and 3.4), the Panel has significant concerns about the depth and distribution of past impacts in rural and regional Basin communities and considers that the pace of water reform needs to be changed. Further planned water recovery at the current pace raises a red flag given:

- the current low levels of resilience and capacity to adapt within smaller irrigated agriculture communities and other vulnerable communities (final report section 2.2)
- evidence that there is no longer low hanging fruit in terms of programs for recovering water from the consumptive pool (final report section 3.2.2)
- growing recognition that, under current policy settings, the overall target for water recovery of 2,750 GL per year plus 450 GL per year of efficiency measures cannot be achieved by 2024, and also cannot be achieved within the funds available through the [Water for Environment Special Account](#)
- the lack of clarity around what the enhanced environmental, working river and social wellbeing outcomes of additional water recovery will be (final report section 3.4). The evidence of heightened costs of recovery mean it is incumbent on governments to address the uncertainties and gaps in knowledge about the incremental environmental benefits of additional water recovery.

If a decision is made to slow the pace of planned further water recovery to beyond 2024, all Basin governments must recommit to the shared vision of achieving recovery targets over the longer term and put in place achievable milestones and trigger points for action. Care must be taken with messaging so as not to undermine community confidence and support for the Basin Plan.

Recommendation 3

From this point on, the Australian Government should time planned further water recovery in the northern and southern Basins to match the capacity of systems to deliver water to where it is needed, to achieve enhanced environmental, social and working river outcomes without detrimental uncompensated third party impacts.

From this point on, the Australian Government should also match the pace of all planned further water recovery to the capacity of communities to absorb and adjust to change, based on community scale social and economic assessment of anticipated impacts and engagement with affected communities.

Consider recovery that reduces the impact on the consumptive pool

Recognising the types and levels of water recovery that have occurred to date, the Panel acknowledges the water available for consumptive use in the southern and northern Basins is highly valuable. With future climate change, this water will be even more valuable.

The Panel recognises that many strongly support off-farm recovery measures because they do not directly reduce consumptive water (final report section 3.2.2). As discussed above, our commissioned work (final report section 4.2) demonstrates that recovering more consumptive water for irrigation will have significant negative impacts for some regional Basin communities, including NSW Murray and northern Victoria. It may also have significant negative impacts in the northern Basin communities where water recovery is likely to be targeted. We believe that planned future water recovery should avoid reducing consumptive water wherever possible.

Recommendation 4

Where possible, off-farm recovery should be a preferred approach for recovering water when it reduces the impact on the consumptive pool. Where off-farm recovery occurs, it should be cost-effective and underpinned by appropriate and transparent infrastructure pricing and service provision frameworks that align the long term needs of users and their capacity to maintain the off-farm infrastructure.



Allow more time and flexibility to progress the SDLAM

The [SDLAM](#) is a key adaptive mechanism for reducing the amount of water needed for the environment, while also improving environmental outcomes in the Basin (final report section 3.2.3).

The Panel supports SDLAM. Delivering SDLAM measures with equivalent value of 605 GL is critical. Basin communities cannot afford additional water recovery from the consumptive pool if the SDLAM projects are not delivered.

The Panel is concerned that SDLAM will not be achieved by the 2024 legislative deadline given the current lack of progress and COVID-19 causing delays to consultation around SDLAM projects (final report section 3.2.3). We are also concerned that the [SDLAM projects](#) may not recover the full 605 GL.

Recommendation 5

If the existing SDLAM projects do not deliver the anticipated 605 GL, there should be flexibility to allow new or other existing projects to close the SDLAM gap. The 605 GL must be achieved through SDLAM.

Given COVID-19, the progress status of key SDLAM projects, and the need for community consultation to not be rushed or superficial, timeframes for SDLAM measures should be extended to deliver an equivalent value of 605 GL.



Progress complementary measures

Complementary measures are widely supported on a 'more than water' approach to environmental management (final report section 3.2.3), reflecting that more than just environmental watering is needed to deliver environmental outcomes. The Panel notes complementary measures can include non-flow and flow-based measures (final report section 3.2.3).

Complementary measures need to progress from concept stage to practical plans for implementation and measurement as a priority. This work is currently progressing too slowly (final report section 3.2.3).

The Panel considers the MDBA, working with Australian and state governments and Basin communities, should develop an agreed method to determine the impact of local complementary measures on supporting or making progress towards Basin Plan objectives.

The Panel considers complementary measures should count towards Basin outcomes and reduce water recovery targets where the complementary measure delivers equivalent or better target environmental outcomes than water recovery.

The method should be appropriate to the northern and southern Basins, and:

- consider the potential for local complementary measures to offset further water recovery (extended complementary measures)
- map out the implementation pathway for complementary actions for the future. It may identify low regret measures, and complementary measures that should be delivered now and in the next two years. It may build on the preliminary list of complementary measures proposed by jurisdictions in the [CSIRO complementary measures](#) report
- account for impacts that may result from future regional climate changes
- include non-flow and flow measures
- explore using flexible market-based mechanisms for environmental watering (e-water leasing/options).

Recommendation 6

The MDBA, working with Australian and state governments and Basin communities, should develop an agreed method to determine the impact of local complementary measures on supporting or making progress towards Basin Plan objectives. The method should be appropriate to the northern and southern Basins.

The draft method should be developed for consultation by October 2020.

Recommendation 7

Commonwealth and Basin state governments should invest in complementary measures across the northern and southern Basins to contribute to the outcomes in recommendation 6.

Accelerate preparation for the Basin Plan review

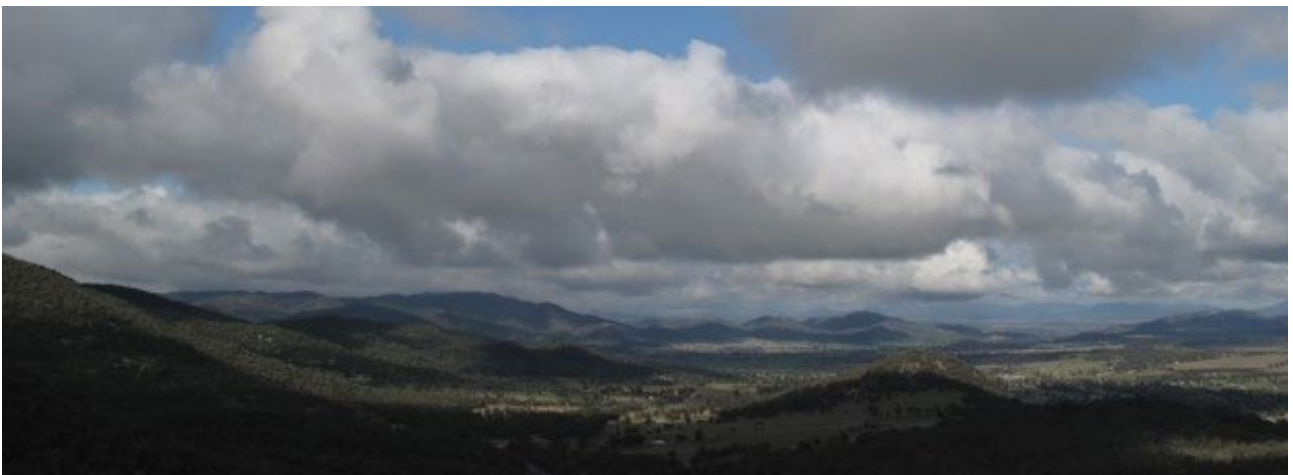
The Basin Plan will be reviewed in [2026](#). The [Productivity Commission](#) recommended early preparations for this review. The Panel supports this recommendation and believes there are important opportunities to bring forward aspects of the planned review to align with adaptive management objectives, and to improve the timeliness and robustness of data for the review proper. There are opportunities to progress the [framework for evaluating Basin reforms](#) and move to a rolling reporting against some of the matters for evaluation and reporting in 2026 set out in [Schedule 12](#) of the Basin Plan, including:

- progressing the framework and bringing forward reporting on Schedule 12 item (3)—the extent to which the Basin Plan has affected social, economic and environmental outcomes in the Murray–Darling Basin
- establishing a framework and bringing forward reporting on Schedule 12 item (6)—the extent to which local knowledge and solutions inform the implementation of the Basin Plan
- finalising the framework and bringing forward reporting on Schedule 12 item (16)—implementation of water trading rules
- enhancing small area socioeconomic time series and Panel data that can be used to build a body of evidence of socioeconomic conditions and impacts over time.

Recommendation 8

To support adaptive management and better prepare for scheduled formal reviews, the MDBA should bring forward a program of continuous evaluation, including the development of timely and relevant social and economic indicators (Schedule 12, item 3).

This program should build on the MDBA's 2020 evaluation of the effectiveness of the Basin Plan. It should establish a clear framework and approach for information sourcing so that social and economic condition and change information is directly comparable, and reports at the appropriate spatial scale. Information should be sourced and reported as it becomes available.



Support community led transitions

Our investigations have found that the suite of Basin water reforms is delivering uneven outcomes across the Basin, with some communities doing well and others faring very badly. Research we commissioned shows (final report section 3.2.2):

- Farms, farming regions and towns that have more water recovered through on-farm irrigation infrastructure upgrades have gained a competitive advantage compared with farms, farming regions and towns that have sold more of their water to the Australian Government through open tender buybacks.
- Dairy, rice and annual cropping regions and regional communities that heavily rely on these industries have benefited less from past water reforms and, based on current settings, will also benefit less in the future.
- Reforms have disrupted smaller, outer regional and remote communities that heavily rely on irrigated agriculture and irrigated agricultural value chains, particularly when water recovery reforms have been fast.

Our view is that current funding falls well short of being enough to address the significant community impacts of Basin water reform or to drive effective economic development and community transitions. More funding is warranted. But we are concerned that much of the past funding to support Basin regions and towns impacted by Basin water reforms has not been effective or well targeted (final report section 3.5). That said, current funding through the Murray–Darling Basin Economic Development Program is better targeted and may be more effective at supporting transitioning regions and communities.

Funding to support Basin regions and towns impacted by Basin water reforms must be used to build industries that provide long term jobs and income for communities. Regional development or adjustment programs must be community driven, long term and consistently supported over several terms of governments. The Panel also recognises that the economic development programs may have limited scope, especially in small towns. Some towns exist almost solely for irrigation and lack other competitive advantages to make them attractive.

Recommendation 9

To empower communities to make longer term investments in their future, the Australian Government should increase the scale of the Murray–Darling Basin Economic Development Program and extend it to 2030. It should also prioritise the program towards more vulnerable and disadvantaged communities most negatively impacted by Basin water reforms. Funding programs must be community driven and focused on reforms and investments that build industries that provide long term jobs and income for communities.

Recommendation 10

The Australian Government should increase the Murray–Darling Basin Economic Development Program Round 2 budget.

Further empower communities in decisions about their future

The Panel recognises that the recently agreed socioeconomic [neutrality criteria](#) provide important protections for irrigators and others. The criteria say programs or projects cannot have negative third party impacts on the irrigation system, water market or regional communities or jobs. They also say programs or projects in an irrigation district cannot reduce the overall productive capacity of the relevant region.

But the Panel finds the criteria may also limit the ability of a local community to transition effectively to a less water dependant future, where they want to do this. We consider that the criteria should be less prescriptive, and more outcomes focused. Communities, regions and irrigation infrastructure operators (IIOs) should be empowered to engage with government where they wish to transition effectively to a less water dependant future.

The Panel considers proposals that fail to meet the established neutrality criteria should trigger a formal conversation around whether and how third party impacts could be offset in a way that is acceptable to those negatively affected by the change. The community must lead these proposals and discussions. This process would likely stimulate a more diverse range of community led recovery proposals, which may alleviate an otherwise protracted and even more painful and unmanaged transition for regions.

Recommendation 11

Where an upwater recovery proposal fails to meet established neutrality criteria, this should trigger an option by the local communities to have a formal process to consider and agree on whether and how third party impacts could be offset in a way that is acceptable to those negatively affected by the change. These processes must be community led.

If accepted, the Panel's additional process should also be applied to any further northern Basin future water recovery.



Give greater transparency around river operations

The [December 2019 Commonwealth and state water ministers meeting in Brisbane](#) agreed there are real delivery risks in the southern Basin. The recent Keelty report highlighted the need for [improved transparency on river operations and established governance arrangements across the Basin](#). We consider there remains an urgent requirement to not worsen binding river constraints that impact upstream and downstream irrigators, the environment and third parties (final report section 3.2.1) and to improve transparency around river operations.

Recommendation 12

Reflecting community concerns, all Basin governments should continue addressing consumptive and environmental water river operation issues. This work includes, but is not limited to:

- Commonwealth and state water ministers developing an aligned multi-state approach to development below the Barmah Choke
- developing efficient and effective longer term responses to deliverability issues that impact on consumptive and environmental water and third parties. This work may involve exploring new water market products such as capacity shares to help manage consumptive and environmental water delivery issues
- better incorporating local and regional information and decision making into water recovery and river operations planning
- improving the transparency of river operations and governance arrangements.



Caption: © Murray Irrigation

Improve urban water security

Town water security is the fundamental building block of socioeconomic outcomes in the Basin. More needs to be done to ensure adequate security is in place.

The prolonged and deep drought has left urban water supply for many town communities under threat of critical failures (final report section 2.3). If the future sees a warmer, drier climate, regional Basin communities will have less water flowing into their dams. They will potentially need more water for essential use and to keep cities and towns sustainable. Extreme weather events and a greater risk of fire in water supply catchments will increase risks to conventional supply reliability. As a result, the costs of servicing towns and other water users, while maintaining service standards, may increase.

The Panel notes Infrastructure Australia's February 2020 [infrastructure priority list](#) has specifically identified town and city water security as a new High Priority Initiative. The Panel also recognises the [National Water Grid Authority](#) (NWGA) and the [National Water Infrastructure Development Fund](#) could be instrumental in securing town and regional centre water supply in the future, if their remit is explicitly extended.

Consistent with the [Productivity Commission findings](#), the Panel believes we need to be clearer about critical human water needs in Water Resource Plans during extreme events, and how the MDBA will assess the adequacy of critical human water needs during extreme events.

Recommendation 13

The Australian, state and local governments should improve the water security of Basin towns and cities (including First Nations communities) by focusing on better supply and demand forecasting and planning; non-rainfall based supply options; a full assessment of costs, benefits, risks and uncertainties; and adequate provision of required water supply.

As part of this effort, the Australian, state and local governments should work with town water suppliers to develop regional pilot programs for alternative urban supply sources, including indirect potable reuse.

Recommendation 14

Consideration should be given to extending the National Water Grid Authority's remit to include securing town and regional centre water supply. This is consistent with National Water Grid Authority objectives of planning the next generation of water infrastructure to support thriving regions by growing our agricultural sector, increasing water security, and building resilience to a changing climate.

Improve First Nations' outcomes

Some water reforms and government decisions have improved First Nations' participation in water planning and access to water, in principle. In practice, improved outcomes for First Nations peoples are yet to materialise, and some jurisdictions have made more progress than others (final report section 3.2.1). More needs to be done to ensure social and economic outcomes for and by First Nations communities in the Basin improve. There are significant opportunities for substantive improvements.

First Nations groups that we consulted emphasised the need for efforts to build knowledge and improve understanding, and for First Nations peoples to lead those efforts with appropriate support. These First Nations groups also called for review of the condition of water licences allocated for First Nations Cultural purposes. Currently, water on these licences is [limited to its Cultural purpose](#) and cannot be traded or used to make money (final report section 2.2).

Recommendation 15

As a priority, governments should increase First Nations peoples' access to water for economic and social purposes by:

- working with First Nations groups to define levels of access required to support improved outcomes for First Nations peoples across the Basin
- recognising the relationship between, and benefits from, First Nations' increasing access to water and land, and working on approaches that provide for both
- purchasing water entitlements for First Nations' needs, as described in the [Echuca Declaration](#)
- reviewing the condition of water licences allocated for First Nations Cultural purposes. Currently, water on these licences is limited to its Cultural purpose and cannot be traded or used for economic activities and outcomes.

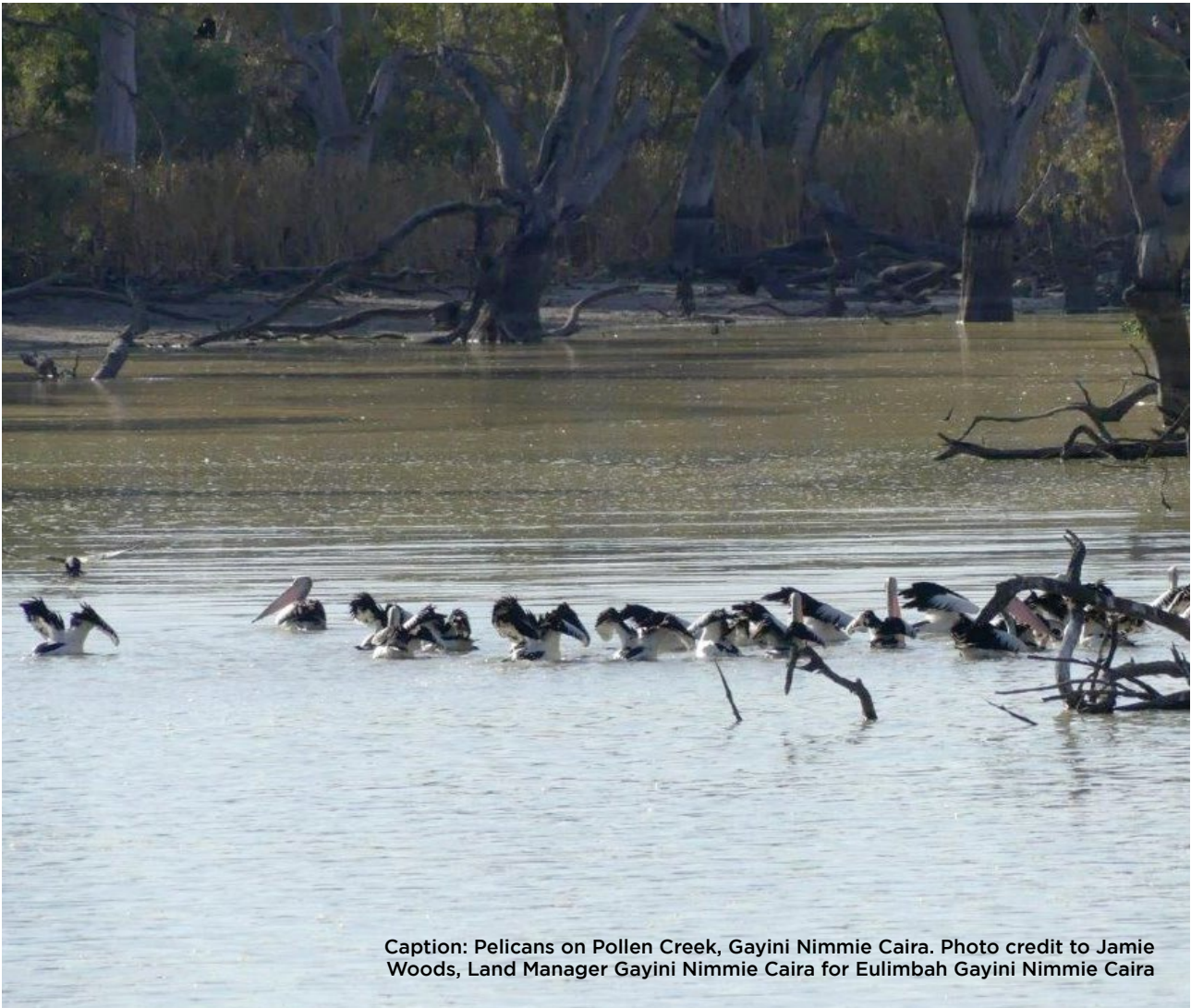
Recommendation 16

The Australian and Basin state governments should fund First Nations groups to work with experts in valuing ecosystem services provided by, and the benefits arising from, Culturally significant sites (including, but not limited to, the 16 Ramsar sites in the Basin). The goal should be to better understand the Cultural and economic benefits of improving First Nations groups' access to water, and environmental outcomes.

Funding should also be provided to support Aboriginal enterprise development in associated First Nations communities that use (or could use) ecosystem services.

Recommendation 17

First Nations' participation should be embedded in water policy and strategy development at all levels of government. Basin-wide processes have provided for greater First Nations involvement, but involvement in state and local decision making and planning varies and should be increased.



Caption: Pelicans on Pollen Creek, Gayini Nimmie Caira. Photo credit to Jamie Woods, Land Manager Gayini Nimmie Caira for Eulimbah Gayini Nimmie Caira

Pursue more flexible farm systems through research and innovation

Australia's Rural Research and Development Corporations (RDCs) have been investing in agriculture in the Basin for more than 30 years. RDCs are accountable to industry and government, and they fill a key gap in research and innovation (R&I) and practice change that enables farm system diversification to address emerging risks and opportunities. Public expenditure on this R&I will be essential to prevent the well-recognised problem in agriculture of under investment in private R&I.

Current R&I efforts are often focused at an industry scale, so farm businesses have limited information on how to transition to more flexible farming systems that are not industry focused. We observed gaps in help for farmers to translate R&I knowledge into on-ground application through training. Therefore, there may be opportunities to provide resources that enable this translation.

Recommendation 18

In response to the emerging climate and other risks in the Basin, Commonwealth and Basin state governments should increase the focus of, and funding for, research and innovation in these key areas:

- enabling the diversification of farm systems across industries, and adaptation to climate change, natural hazards and other risks
- translating research and innovation knowledge into on-ground application, particularly through greater in-region capacity to demonstrate the practical value of adopting research and innovation.



Caption: Dairy Australia

Improve measurement and evaluation of social and economic impacts of environmental outcomes

The [Intergovernmental Agreement on Basin water reform](#) committed governments to, among other things, the goal of improving river and wetland health. The Panel wholeheartedly supports this objective. We believe that healthy, resilient rivers, wetlands and floodplains can deliver significant benefits to Basin regions and communities, and to people living outside the Basin, over time.

Environmental benefits of Basin water reforms are becoming evident, and there is some evidence that these enhanced environmental outcomes may contribute to better liveability, human health and wellbeing, and cultural values in the Basin (final report section 3.4). Evidencing environmental benefits will take time, and drought has slowed benefit realisation.

The Panel considers there is an urgent need to better establish links between water recovery, flow regimes, enhanced environmental and working river outcomes, and benefits for rural and regional communities (final report section 3.4). Stronger evidence will help improve confidence that the costs of environmental water recovery to communities are worthwhile.

Improvements in monitoring and evaluation measures should include, but not be limited to, demonstrating how enhanced environmental outcomes of water reform affect tourism, recreation, liveability, human health and wellbeing, and cultural values. This tracking is a critical need, and communities should have the opportunity to be more involved in designing this program compared with previous efforts.

Recommendation 19

To improve decision making and enable well focused and timely responses to wellbeing concerns, governments should agree on a framework that creates a solid baseline and tracks environmental outcomes from water reform, and how these impact Basin communities' social and economic wellbeing. Improvements in monitoring and evaluation measures should include, but not be limited to, demonstrating how enhanced environmental outcomes of water reform affect tourism, recreation, liveability, human health and wellbeing, and cultural values.

Governments should ensure there is adequate resourcing of agencies and organisations involved in monitoring, evaluating and reporting all baseline environmental, social and economic conditions that Basin reforms are being evaluated against.



Move towards more sustainable irrigation infrastructure

After receiving submissions in response to our draft report, we remain concerned that off-farm irrigation infrastructure investment and higher running and renewal costs may be creating a medium to long term financial challenge for some Basin IIOs (final report section 3.2.2). The financial challenges could have significant pricing implications for irrigators supplied by some IIOs, which will have flow-on impacts in regions and towns.

Further water recovery through off-farm infrastructure should clarify future service requirements and how costs are shared. A legislated Community Service Obligation (CSO) mechanism could help in some circumstances. This mechanism could set out the Australian Government's longer term expectations for service provision.

Recommendation 20

IIOs should not accept infrastructure for water recovery without involving their customers in the process, and without customers having a clear understanding of the potential pricing implications of new infrastructure. As part of their investment business cases IIOs should demonstrate that customers have willingly accepted the pricing implications of taking on new infrastructure.

IIOs should provide irrigators with more information about the potential medium (five or more years) to long term (10 or more years) pricing implications of IIO capital investments.



Invest in regional connectivity

Our commissioned work shows many rural and regional communities in the Basin, including most of the 600,000 people (approximately 28% of the Basin population) living in outer regional and remote Basin regions and towns, say they have poorer access to essential services and infrastructure than the rest of regional Australia. Basin communities with poor access to infrastructure and essential services are at a competitive disadvantage. Not addressing these disadvantages will lock in the decline underway in many of the outer regional and remote Basin regions and towns, and limit future development.

Our commissioned research shows people across the Basin communities say they have less access to high speed reliable internet and mobile phone reception, relative to communities outside the Basin (final report section 2.2). The Panel notes economic modelling from the [Accelerating Precision Agriculture to Decision Agriculture](#) project indicates digital agriculture could increase the gross value of Australian agricultural production by \$20.3 billion (a 25% increase on 2014-15 levels). Regional tourism in the Basin would also benefit from greater connectivity.

We acknowledge the Australian Government's \$220 million Stronger Regional Digital Connectivity Package (SRDCP) (announced in [the government's response to the 2018 Regional Telecommunications Review](#)) aims to improve connectivity across the Basin. We also acknowledge the Australian Government has released [draft grant opportunity guidelines for public consultation](#) for the SRDCP.

Recommendation 21

Commonwealth and Basin state governments should invest to improve essential infrastructure in Basin communities that are at a relative disadvantage and consider developing a Basin-specific infrastructure fund focusing on digital connectivity.



Give immediate support to Basin regions and towns facing acute social and economic issues

We identified Basin regions with acute social issues, including poor mental health, household distress and financial hardship (final report section 2.2).

The Basin is home to regions and towns with higher community vulnerability and lower adaptive capacity. Many of the 600,000 people (approximately 28% of the Basin population) in outer regional and remote Basin regions and towns live in higher vulnerability areas. We found these communities (final report section 2.2), compared with similar areas outside the Basin, score relatively worse in terms of:

- their overall community wellbeing
- the pace at which populations are falling and ageing, and their health outcomes
- their economic performance and standards of living
- their access to essential services and infrastructure.

Recommendation 22

Basin governments and public and private agencies should:

- work with communities in the Basin with acute social and economic issues to develop action and outcome plans that will address these issues over the next three years
- direct resources to attract and retain frontline service providers that specialise in addressing household distress, mental health issues, and financial hardship, in Basin locations experiencing acute social or economic issues.

In addition:

- To ensure early progress in meeting the unmet need for mental health support, Basin governments should support organisations with existing and proven delivery capability to deliver online and telephone support services. These programs should be targeted to those most in need: Basin communities in greatest need, young people, and priority populations, particularly Aboriginal and Torres Strait Islander communities.
- To plan for the medium and longer term, the Australian Government, in collaboration with Primary Health Networks, leading mental health organisations, and state and territory governments should develop a mental health plan for the Murray-Darling Basin. This plan may include identifying the level of need in the Basin, establishing an action plan and resourcing to better meet the need, and prioritising support for those most in need.



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