

**Goulburn Murray Irrigation District (GMID)
Water Leadership**

**Submission
to
Productivity Commission
Murray-Darling Basin Plan: Five-year Assessment**

“An Inquiry into the effectiveness of the implementation
of the Basin Plan and water resource plans.”

23 April 2018

GMID Water Leadership

Community Economy Environment

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Goulburn Murray Irrigation District (GMID) Water Leadership

GMID Water Leadership was established in late 2015 to provide a strong voice on water security for the Goulburn Murray Irrigation District in northern Victoria. Its members include leaders in the dairy, horticulture and cropping industries; local government; food processors; natural resource managers; community and business groups.

It is co-chaired by Suzanna Sheed, independent member for Shepparton and David McKenzie, local agri-valuer and chair of the Goulburn Regional Partnership and the Regional Development Advisory Committee to the Victorian Government.

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Executive Summary

Poor implementation of the Murray-Darling Basin Plan has made the socio-economic adjustment challenge in the Goulburn Murray Irrigation District (GMID) in northern Victoria much more difficult than it needed to be, and deepened the hardship being experienced across this community.

The Productivity Commission's assessment should give equal consideration to all Basin Plan outcomes and objectives, that is, its social and economic objectives as well as environmental as set out in Clause 5.02 of the Plan.

The assessment should also focus on outcomes, not inputs (i.e. environmental outcomes, not fixed volumes of water recovery), and whether the Plan is being implemented as designed as an adaptive management plan.

Communities and agricultural producers in the GMID hold grave concerns that the Ernst & Young report released on 19 January 2018, 'Analysis of Efficiency Measures in the Murray-Darling Basin' will heavily inform the implementation strategy for the Basin Plan in future.

The report's content is so heavily qualified and deficient in evidence that it does not support the widely reported 'headline' conclusion that 450 GL in efficiency measures could be recovered within budget and with neutral or beneficial socio-economic impact.

The delivery of nominated supply measures under the Sustainable Diversion Limits Adjustment Mechanism is another significant implementation risk, particularly to community confidence and trust if the full 605 GL cannot be delivered and further water recovery from irrigator results.

The Basin Plan's implementation timelines are unrealistic. All Water Resource Plans should be complete for every valley by June 2019, yet barely any have been done. Rushing the process to meet the deadline greatly increases the risk of poorly informed documents and perverse outcomes.

The narrow socio-economic neutrality test in the Basin Plan ignores the broader regional socio-economic and water market risks of individual participation in projects. While it is generally accepted that on-farm efficiency programs are less socio-economically damaging than outright buybacks, this is not to say on-farm program effects are neutral or positive at any scale.

It is critical that any socio-economic analysis and neutrality test resonates with affected communities and sectors if they are to have trust and confidence in the Basin Plan's implementation.

If the Basin Plan's objective is improved environmental outcomes, then high-level decision makers in Canberra need to drop the fixation with recovering set volumes and take a more open-minded and innovative approach. Many options merit investigation, including carryover spills being accounted for as part of the environmental allocation.

The MDBA's benchmark model must be reviewed, reset and rerun. Irrigators in Victoria and New South Wales are using less water and relying more on carryover. The model should be rerun with actual climate conditions for the last 12 years, and the predicted model usage using model assumptions compared with what was *actually* used.

A series of reports in recent years have been undertaken by various groups, using different methodologies, but all pointing in the same direction: that the Basin Plan is having substantial negative socio-economic effects on some communities, the impacts are unevenly spread, and that further recovery from the irrigation pool will cause additional hardship

Yet while high-level decision-makers on Canberra acknowledge impacts, they downplay their significance. This reinforces the community distrust and lack of confidence in the authorities responsible for implementing the Plan. This is a major barrier to successful implementation.

The Senate disallowing the Basin Plan amendment to reduce the 2750 GL target by up to 605 GL in supply measures is the greatest risk to achieving water recovery targets by 1 July 2019. New South Wales and Victoria have made clear they will walk away from the Basin Plan if the offsets are disallowed, saying the Basin Plan will no longer be the adaptive management plan they signed up to.

The Plan would revert to its default 2750 GL target in entitlements, but with no clear plan as to how the remaining 650 GL gap could be closed in just a little over 12 months' time.

Six years into the Plan's implementation, it is clear that the institutional and governance arrangements for the Murray Darling Basin Authority (MDBA) and the Department of Agriculture and Water Resources (DAWR) in Canberra have been shown to fail.

The MDBA is regarded by the community as insufficiently independent. The MDBA's multiple responsibilities also leave the organisation hopelessly conflicted. The solution is greater clarity on what functions should be done by the MDBA (much reduced), the States and water supply entities.

But while the MDBA is responsible for implementing the Basin Plan, the Department is responsible for the design and delivery of water recovery programs. The lines of responsibility are confused in the public mind, leaving DAWR unaccountable for water recovery programs designed and delivered in ways that have made socio-economic impacts in the GMID much worse than they needed to be.

The MDBA's engagement record is also poor, due to the Authority's culture rather than any deficiency in the institutional and governance arrangements. Senior MDBA and Departmental executives are not regarded as independent or objective advisers to government, but enablers to deliver a political commitment from 2012 regardless of the actual provisions in the Basin Plan.

All external reviews, including the January Ernst & Young report, have identified a critical 'trust deficit' between the Canberra decision-makers (MDBA and DAWR) and Basin communities. Arguably, the MDBA and DAWR have already lost their social licence for reform in the GMID and southern NSW Riverina, creating a key risk for the Basin Plan's implementation.

Introduction

Goulburn Murray Irrigation District (GMID) Water Leadership welcomes the Productivity Commission's inquiry into the effectiveness of the implementation of the Murray-Darling Basin Plan.

GMID Water Leadership supports the Basin Plan in rebalancing water resources between the environment and consumptive users including irrigators, but it is deeply concerned about how the Plan has been, and continues to be, implemented.

Poor implementation has made the socio-economic adjustment challenge in the GMID much more difficult than it needed to be, and deepened the hardship being experienced across this community. The GMID is at a tipping point if more water is recovered from irrigators across the southern Basin.

Other concerns include the socio-economic neutrality test in the Basin Plan and the bureaucratic and political focus on set volumes of water recovery rather than the flexibility built into the Basin Plan through the SDL Adjustment Mechanism.

GMID Water Leadership in this submission will focus on addressing requests for information 1, 2, 5 and 14.

Background

The Goulburn Murray Irrigation District (GMID) spans 27,000 square kilometres in northern Victoria, stretching from Cobram in the east to Cohuna in the west. It covers five local government areas: Moira, Greater Shepparton, Loddon, Campaspe, Gannawarra and Swan Hill.

It is Victoria's foodbowl, generating \$5.9 billion worth of production a year¹. Regional employment remains heavily reliant on agriculture, with around one in three jobs being on farms, in farm services or agricultural manufacturing. Even Shepparton, a diverse major regional centre, has a strong reliance on agriculture with one in five jobs in the city and surrounding area being on farms, in farm services or agricultural manufacturing².

Dairy is the major industry, with 1200 dairy farms producing about 2 billion litres of milk a year worth \$850 million at the farmgate – a third of the total milk produced in Victoria and more than 20% of Australia's milk. More than 6600 local people are employed on dairy farms and in processing, with eight major factories producing cheese and milk powders.

Horticulture is another major industry, worth \$702 million a year. The GMID produces half Australia's stonefruit (peaches, nectarines, apricots), and three-quarters of Australia's pears.

The Commission's assessment should give equal consideration to all Basin Plan outcomes and objectives, that is, its socio-economic objectives as well as environmental.

¹ GMW at a glance. https://www.g-mwater.com.au/downloads/gmw/aboutUs/GMW_at_a_glance_Web.pdf Accessed 10 April 2018.

² MDBA southern Basin community profiles. <https://www.mdba.gov.au/publications/mdba-reports/southern-basin-community-profiles>. Accessed 10 April 2018.



Figure 1. Map of GMW area, including GMID.

Information Request 1: Feedback on the approach to assessing the Basin Plan

The assessment should also focus on outcomes, not inputs (i.e. environmental outcomes, not fixed volumes of water recovery), and whether the Plan is being implemented as designed as an adaptive management plan. As such, the SDL Adjustment Mechanism (SDLAM) allows for a range of water recovery volumes within the $\pm 5\%$ limits of change. This flexibility enables new knowledge on socio-economic impact and environmental management gained since the Plan was signed in 2012, to be incorporated into the Plan's implementation.

The limits of change ostensibly ensure that the Plan's environmental indicators will be achieved, at least according to the Murray-Darling Basin Authority's benchmark model. This means anything between 2206 GL to 3294 GL can be recovered in entitlements from irrigators and through off-farm and urban savings, and the Basin Plan is legally delivered 'in full'.

Claims that South Australia was guaranteed an additional 450 GL may be true in terms of the political deal in the last weeks leading up to the Basin Plan's approval in November 2012, but they are not supported by the actual legislative instrument itself.

Adjusting the 2750 GL recovery target up or down is conditional on maintaining environmental outcomes and no additional adverse socio-economic impacts. The limits of change ostensibly protect the environment's interests in this equation.

However, further areas for the Commission's close examination include why supply measures, or 'offsets' are limited to 650 GL. Limiting supply adjustments to 650 GL is a political construct.

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Economic efficiency would require that the size of the ‘offsets’ only be limited at the point where they are less cost-effective than other water recovery mechanisms.

Similarly, the rule that limits ‘offsets’ to $\pm 5\%$ of the SDL is a construct embedded in the Murray Darling Basin Authority’s benchmark model. An independent expert panel appointed by the Victorian and NSW Governments found this ‘limits of change’ approach led to a binary trigger that had little relationship to actual ecological responses.³

The Independent Panel also found the Murray Darling Basin Authority and other decision-makers were too focused on the detail of the SDL adjustment mechanism assessment method (including the associated benchmark model), rather than the broader objectives and outcomes sought by the Plan.

It warned against treating recovery volumes as absolutes, the ‘just add water’ approach:

Over time, the SDL adjustment mechanism assessment method has become overly deterministic. In effect, the process has become reliant on the method’s ability to provide ‘the answer’. Instead, the outputs from this method should be seen as a reasonable, approximate representation of a complex system.

While the method can establish the upper and lower limit estimates of an optimised system, the method itself is not capable of delivering defined environmental outcomes. Instead, optimised environmental outcomes will be achieved as high-level decision makers interface intelligently with the assessment method and associated results.

In short, the Panel found that while the Basin Plan seeks to establish an adaptive management framework to optimise Basin water resources, current arrangements do not reflect that objective. This is a serious impediment to effective implementation of the Basin Plan that some political and bureaucratic decision-makers appear unwilling to address.

Information Request 2:

a) Risks that may prevent Basin States from successfully implementing SDL adjustment projects.

Ernst & Young Report

Communities and agricultural producers in the GMID hold grave concerns that the Ernst & Young report released on 19 January 2018, ‘Analysis of Efficiency Measures in the Murray-Darling Basin’ will heavily inform the implementation strategy for the Basin Plan in future.

The report was released promoting a ‘headline’ conclusion that the 450 GL could be recovered within budget and with neutral or beneficial socio-economic impact. The report itself, however, is so heavily qualified and deficient in evidence that it does not support this widely reported conclusion.

³ ‘Murray Darling Basin SDL Adjustment Mechanism’. Report by the Victorian and NSW Ministers’ independent expert panel. Confidential report prepared for the Victorian and NSW Governments, 27 April 2017.

Using this report to justify recovering some or all of the 450 GL from irrigators is probably the single biggest risk to the successful implementation of the SDLAM.

In particular, in claiming the 450 GL can be recovered within the \$1.575 billion budget, Ernst & Young (EY) assumes a high reliability water share (HRWS) entitlement market value of \$1880/ML. But the report also acknowledges this is unlikely: ***'Given current water prices and the increase in the price of water over time ... there is a significant risk in achieving the recovery of the 450 GL within the statutory budget.'*** (p33).

HRWS in Goulburn was selling on the water market around \$2800-\$2900/ML at the time the EY report was released, and \$3000-\$3300 /ML elsewhere in the southern Basin. Water from on-farm efficiency projects is even more expensive, with EY noting average costs of past programs were more than \$4500/ML. EY observes future off-farm savings in the NSW Murray Irrigation Area would cost at least \$8000/ML.

Similarly, EY's conclusion that on-farm projects deliver a net benefit to participating farmers is based on a conceptual framework, because they did not have the data to undertake a robust evaluation based on evidence. In the framework, the claimed net benefit assumes an average 16% productivity gain to deliver a positive net benefit, but the feasibility of this assumption is not tested.

The EY report warns irrigated industries will suffer a net \$330 million loss if the assumed 16% productivity gain is not realised, or irrigators are unable to retain their water savings (pp100-102). The benefit/cost analysis is also based on fixed 2014-15 values, so there is a high risk the numbers may be subject to significant volatility given changes in water prices, commodity prices, and capital works costs, and so forth.

EY acknowledges that on-farm upgrades programs tend to lead to farmers using more water, not less, and this has the potential to drive up temporary water prices. So like the buybacks and on-farm recovery to date, further investment in on-farm projects to recover the 450 GL would amount to continuing deliberate government market interventions affecting supply, demand and price.

The EY report is transparent about its shortcomings, at least. It says limited data collection for on-farm projects hampered its evaluation, and this information is needed to better understand the socio-economic effects, the economics of participation, value for money, and budgetary risks.

Community confidence and trust in the Basin Plan's implementation will be further eroded if decision-makers use the EY report to justify recovering some or all of the 450 GL from irrigators, when the States have urban and off-farm options.

Supply measures

The delivery of nominated supply measures under the SDLAM is another significant implementation risk, particularly to community confidence and trust if the full 605 GL cannot be delivered and further water recovery from irrigator results.

For example, the supply projects package includes relaxing constraints in several river reaches to supplement naturally occurring high flow events to make the most of their environmental benefits.

However, this assumes that the rights to flood private land will be established through voluntary agreements and easements. Given the vehement opposition in some communities to such projects, it is unlikely that they will be delivered without compulsorily acquiring easements. This is against Victorian State government policy

Timelines

The Basin Plan's implementation timelines are unrealistic. All Water Resource Plans should be complete for every valley by June 2019, yet barely any have been done. Rushing the process to meet the deadline greatly increases the risk of poorly informed documents that could deliver perverse outcomes for communities, industry and the environment. This would further erode public confidence and trust in the Basin Plan's implementation.

Information Request 2:

b) The extent to which adopting a different definition of 'neutral or improved socio-economic outcomes' for efficiency measures to what is in the Basin Plan would affect the likelihood of projects being delivered on time and on budget.

The narrow socio-economic neutrality test in the Basin Plan ignores the broader regional socio-economic and water market risks of individual participation in projects that involve further entitlement transfers to the environment.

Adopting a different definition of 'neutral or improved socio-economic outcomes' would affect the likelihood of projects being delivered on time and on budget, and the volume recovered, but it is critical that any socio-economic analysis resonates with affected communities and sectors if they are to have trust and confidence in the Basin Plan's implementation.

Specifically, the Basin Plan provisions do not account for:

1. impacts on people who are not directly participating in the program
2. impacts that are a result of the cumulative or aggregate implementation of entire programs
3. the distribution of impacts across stakeholders.

The current provision in the Basin Plan, that voluntary individual participation equals neutrality, does not meet the overarching intent of the Basin Plan to consider the socio-economic impacts of 'upwater' programs.

Source: Aither 2017. "A review of socio-economic neutrality in the context of Murray-Darling Basin Plan implementation". A Final Report prepared for the New South Wales Department of Primary Industries – Water March 2017

The Basin Plan's socio-economic neutrality test is not consistent with the Federal Government's Regulatory Impact Statement guidelines, including:

- The RIS should discuss which groups will bear the consequences if an adverse event occurs (that is, the parties affected). The distribution of the risk may have important consequences

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for efficiency (some parties may be able to bear the risk at lower cost than other parties) and equity (it may be more socially acceptable for some parties to bear risk than others).

- encourages decision makers to take account of all the positive and negative effects of the proposed regulation, and discourages them from making decisions based only on the impacts on a single group within the community.

In short, the current test is deeply flawed, and continues to drive distrust and evaporating social licence for the MDBA.

Information Request 2:

c) Novel approaches to recovering water for the environment, while achieving neutral outcomes.

If the Basin Plan's objective is improved environmental outcomes, then high-level decision makers need to drop the fixation with recovering set volumes and take a more open-minded and innovative approach. Many options merit investigation, including carryover spills being accounted for as part of the environmental allocation.

Carryover is a highly valued business risk management tool for irrigated industries. Large volumes are now carried over each year and this has increased spills from the storages, giving the environment an unrecognised advantage.

The benefit already delivered as a result of Victoria introducing generous carryover provisions during the Millennium Drought, is estimated at 200 – 300 GL a year. Some simple work would enable that number to be verified, and to evaluate the capacity to manage carryover and spills as they are only advantageous if supporting spring/autumn environmental flows or out-of-bank events. It is potentially negative if added to existing summer/early autumn (inter-valley transfer) flows 'within banks' as was experienced in the Goulburn River system in the 2017/18 season.

Within the parameters above, recognising the environmental advantage from increased spills means that the outcomes required from the 450GL may be already well underway, but not accounted for. It could firstly make up any shortfall to achieving the 2750 GL target and then contribute to the 450 GL

Spills have increased from additional carryover for several reasons:

- a) More water being held in private carryover accounts. In 2016/17, for example, there was 2,000GL of private carryover. In the early years of Victoria's carryover policy, the estimated spill by 2014/15 was around 300 GL/year on average in the Goulburn system alone⁴.
- b) Currently the spills go either to the environment or in some cases in the Murray system they end up in NSW's allocation. These spills often increase the size of the flood and actually provide ecological benefits that controlled releases would not be able to achieve.

⁴ RMCG 2014. "Change in Carryover Rules". Discussion Paper for Dairy Australia. RMCG 24 March 2014

c) This logic applies equally to the NSW Murray system.

The MDBA's benchmark model

The benchmark model must be reviewed, reset and rerun. As it stands, it assumes a certain amount of water use by irrigators under different climate conditions over the last 120 years, with Cap conditions applied. It then works out the environmental benefits of reducing this amount by a number.

However, things have changed. Irrigators in Victoria and New South Wales are using less water and relying more on carryover in an attempt to increase their security of supply from one season to another. The recently released Cap figures demonstrate this, but the Cap comparison did not compare apples with apples, with the result it overestimated the irrigators' under-usage.

It is important to investigate the effect of carryover is having on spills and how well this is being modelled. The Cap models are being run with the last 12 years of data. Similarly, the benchmark Basin Plan model should be rerun with actual climate conditions for the last 12 years, and the predicted model usage using model assumptions compared with what was *actually* used. This would reflect the changed behaviour and reveal, for example, whether the extra spills effectively mean that the 450 GL has already been achieved.

If this was done it would be easy to see what the environment has actually received. It would also show that South Australia has not reduced its water use. If the modelling was broken into GMID and Sunraysia, and NSW was broken into Murrumbidgee and Murray, it would show where the impact had occurred. This data would also be available from the Cap models – it's just that no one is looking at it.

Information Request 5:

- a) the extent to which the Australian Government's strategy to recover water in areas where gaps remain will be cost-effective, align with the Basin Plan's environmental objectives, and be transparent.**

Firstly, the Commission should be evaluating the water recovery strategy against all the Basin Plan's objectives and outcomes, not just its environmental objectives.

Assessing the water recovery strategy requires an understanding of the relative value of different types of water entitlements, and how they have shaped the development of irrigation districts and their commodity mix. This in turn affects the degree of socio-economic impact when entitlements are recovered in different irrigation regions across the Basin.

Production in the GMID has been underpinned by its High Reliability Water Shares (HRWS) delivering on average 97% of the entitlement volume each year. This compares with General Security in the NSW Murray at 81% and General Security in the Murrumbidgee valley at 64%.

Victoria's HRWS and NSW Murray General Security entitlements were consequently targeted for buybacks because of their more reliable allocations and better connectivity to deliver environmental flows to South Australia down the Murray, compared with the Murrumbidgee valley hydrology.

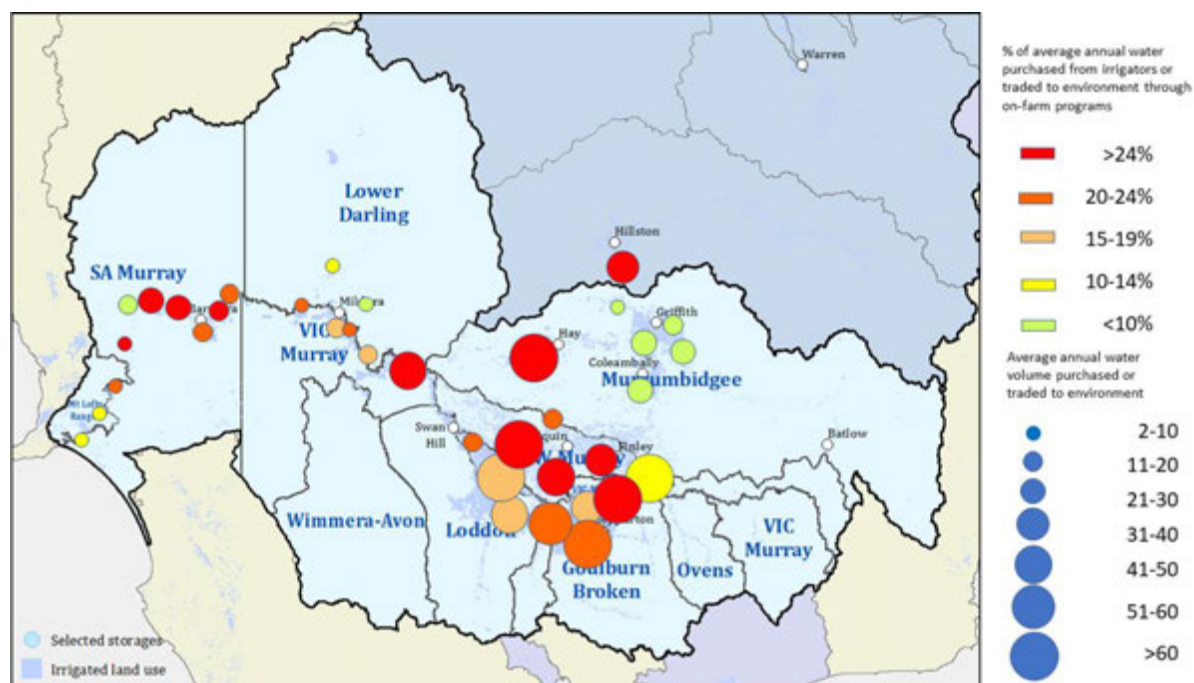


Figure 2. Volume and percentage of irrigation water sold or transferred to the environment under the Basin Plan. Volume is annual average water available from irrigation entitlements. Source: MDBA community profiles
Graphic: Claire Miller Consulting

Further, while the GMID was targeted for water buybacks, it has attracted comparatively little Commonwealth investment in water-saving on-farm projects. The program criteria varied across States and regions, but generally involved irrigators transferring a volume of their entitlements in return for government funding for more water-efficient irrigation infrastructure and other works on their properties.

Government funding for on-farm works still has significant water market and production impacts by reducing the total water available for irrigation in the southern Basin, but it is generally accepted as less socio-economically damaging compared with outright water buybacks.

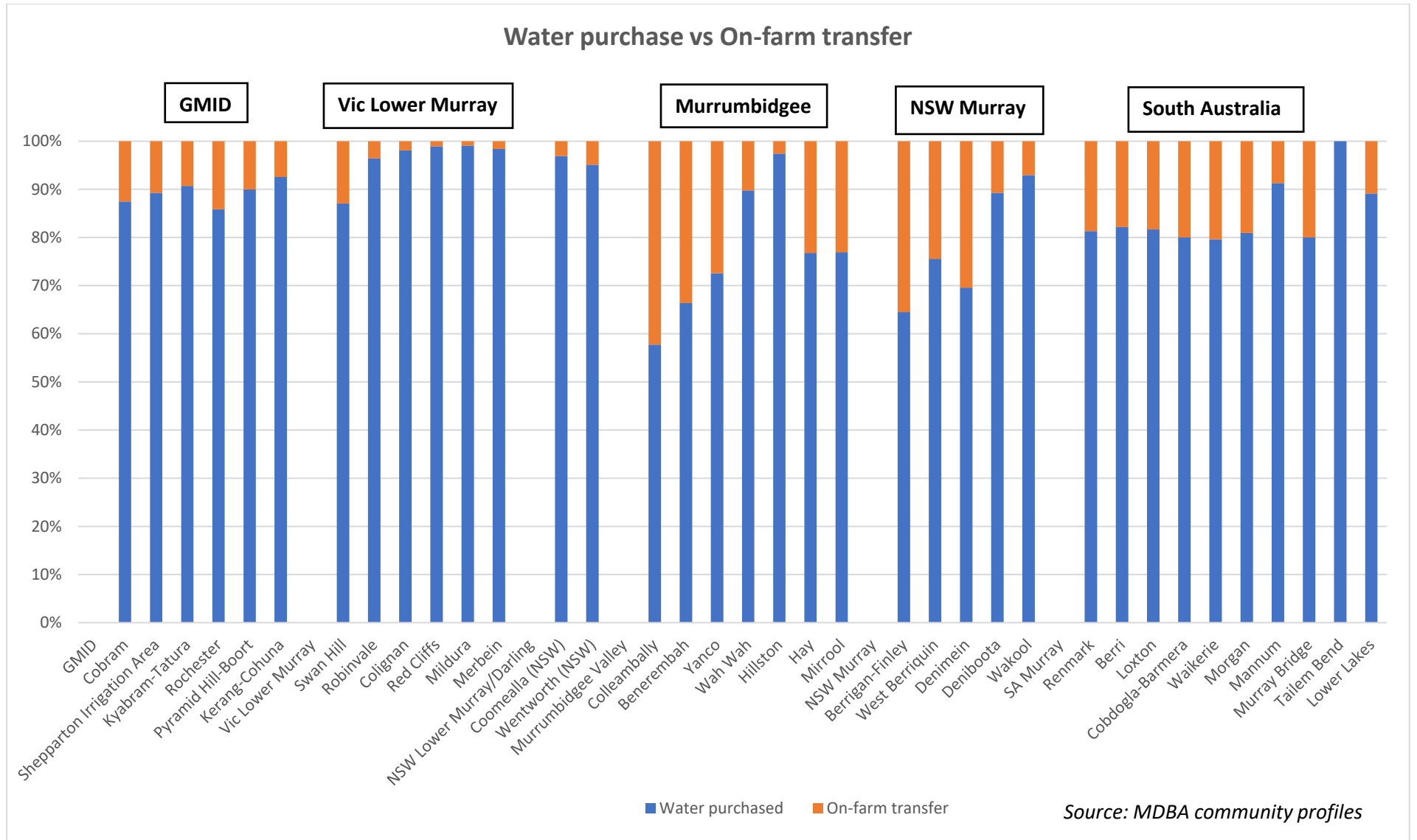
The GMID stands out for getting the worst of both options: a disproportionately large volume and percentage of total water available for irrigation being purchased for the environment, and comparatively little investment in on-farm works to improve water efficiency.

Close to 80 GL has been recovered from on-farm efficiency measures in Victoria from Victorian and Commonwealth programs before and after the Basin Plan. Post the Millennium drought our irrigators use water efficiently, so only small volumes of water can be recovered from true efficiency measures on farm. It is people who participate in the Commonwealth on-farm projects go back into the market to recover the water they transferred to the Commonwealth in return for the funding.

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So the answer at this late stage of the Basin Plan's implementation is not to 'even' it up by recovering even more water from the GMID towards the 450 GL through on-farm works. Encouraging more entitlements to be transferred out of the GMID to the environment will just put further upward price pressure on the temporary market. It will also further reduce water deliveries in the GMID, with flow-on effects on revenue to maintain the network. And that inevitably that means putting up water charges collected from a dwindling customer base.

This would compound the legacy from the missed opportunity to integrate Commonwealth water buybacks in 2008-2012 with the Victorian Government's plans to modernise, reconfigure and rationalise the delivery infrastructure in the GMID (known initially as the Northern Victorian Irrigation Renewal Project (NVIRP), and later as Connections).

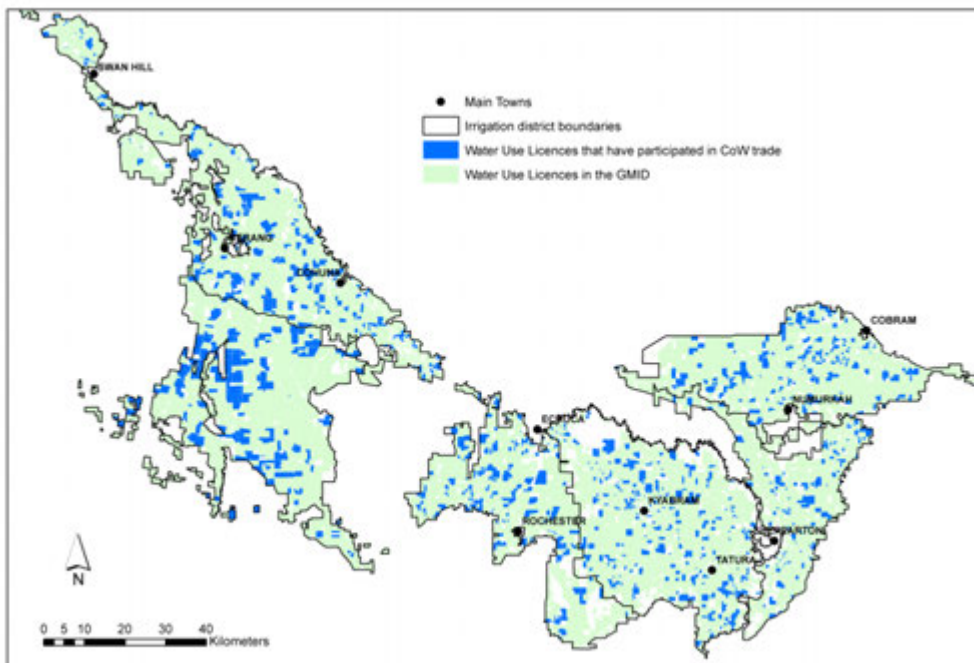


Figure 4. Location of water buybacks in the GMID by the Commonwealth 2008 – 2012

Targeted water buybacks would have helped to boost the off-farm water savings from infrastructure rationalisation. Reducing the infrastructure footprint as originally envisioned would have reduced maintenance and replacement costs in future. The Victorian Government sought Commonwealth cooperation, but was refused on the grounds the buybacks tenders should be open to all, and not targeted.

The result is fewer irrigators in the GMID using less water but dotted all over the GMID and legally entitled to get water delivered. Water bills are under upward pressure to maintain a infrastructure footprint that is now too large for the number of remaining commercial irrigators. This has compounded the Basin Plan's substantial and negative socio-economic effects in the GMID.

GMID Socio-Economic Impact Assessment

*RMCG socio-economic impact assessment*⁵

Concerned about the emerging signs of socio-economic stress, GMID Water Leadership commissioned RMCG to prepare a socio-economic analysis of the Basin Plan's impact so far. It was the first evaluation of the GMID's situation, and was a peer-reviewed analysis.

The analysis stripped out externalities to expose only the Basin Plan impact on water availability and use for agricultural production. It projected what a 2750 GL Plan and a 3200 GL plan would mean for dairy, horticulture and cropping/mixed farming production under different climatic scenarios.

The RMCG report found that the Basin Plan's reduction in water availability increased the future vulnerability of the dairy industry in the GMID, as the volume available in a future drought is only 26% of the volume available in an average year. In the Millennium Drought, the sector suffered when it had access to 50% of the average volume available.

Basin Plan water recovery and horticultural expansion downstream in Sunraysia and the South Australian Riverland mean the next drought's impact will be twice as severe, with horticulture needing 75% of the available water compared with the 40% in the Millennium Drought.



Figure 5: Impact of Basin Plan water recovery so far on the GMID. RMCG final report.

The Basin Plan also led to an increase in the price of water in the temporary market. That is an impost on the regional economy, as the GMID is a net importer of water, and leads to greater risk for the dairy sector in drought years as most farmers now rely on the market to access their needs.

⁵ 'Basin Plan – GMID socio-economic impact assessment' Final Report for GMID Water Leadership. RMCG October 2016.

Report by Frontier Economics and Tim Cummins & Associates⁶

This report was commissioned by the Victorian Government, and took a view across all northern Victoria including the Sunraysia region. It reached similar conclusions for the GMID as the RMCG report and reached new conclusions for Victorian horticulture.

Scenario	Potential impact on Victorian horticultural investment
2100 GL recovery scenario	<p>At current levels of water recovery, in a repeat of 2008-09 allocation levels there would be 16 GL more water available than it takes to meet the full irrigation requirements for horticulture. When the existing plantings mature however, there would be a shortfall (-110 GL).</p> <p>Without water recovery, there would still have been a small shortfall as existing planting mature of 8 GL of High Reliability Water Shares. Developers need to be aware of this risk, but based on the historical record they may judge that the risk is worth taking.</p> <p>At 12ML/ha the additional shortfall of 103GL could have developed another 8550ha. At \$19,000/ha this is \$162 million of total investment that has hypothetically already been forgone.</p> <p>An alternative way of considering is that, when the existing plantings mature, the additional shortfall of -103GL puts 8850 ha of existing horticultural development at risk, which represents \$162 million of existing investment.</p>
2750 GL recovery scenario	<p>Under medium future water recovery, there would be an additional shortfall of -193GL in a repeat of 2008-09 allocation levels. This puts 16000ha of existing plantings at risk, which represents \$306 million of existing investment.</p>
3200 GL recovery scenario	<p>Under high future water recovery, there would be an additional shortfall of -241GL. This puts 20000ha of existing plantings, at risk, which represents \$381 million of existing investment.</p>

These are only two in a series of reports in recent years undertaken by various groups, using different methodologies, but all pointing in the same direction: that the Basin Plan is having substantial negative socio-economic effects on some communities, the impacts are unevenly spread, and that further recovery from the irrigation pool will cause additional hardship⁷.

Yet while high-level decision-makers on Canberra acknowledge impacts, they are downplay the significance of those impacts. “The Basin Plan is having an impact, but it is only one of many factors affecting these communities in the context of larger long-term jobs and demographic trends that started before the Basin Plan” is the standard Canberra narrative.

⁶ ‘Social and Economic Impacts of the Basin Plan in Victoria’. TC&A and Frontier Economics, February 2017.

⁷ For example:

Aither 2016. ‘Water market drivers in the southern MDB: Implications for the dairy industry’. *Report for Dairy Australia 29 July 2016*.

Dairy Australia 2017. ‘Land Use Mapping in the GMID – dairy evaluation’, April 2017.

Project partners: GBCMA, DELWP, DEDJTR, Dairy Australia, Murray Dairy, GMW, GMW Connections, NCCMA
MDBA 2017. ‘MDBA Basin Plan Evaluation’, December 2017.

MDBA 2018. ‘Community profiles in the southern Basin’. February 2018.

The standard political narrative is “All communities are feeling the pain”, as if the impacts are evenly spread. They are not, and the fact they are not is largely due to Basin Plan implementation and water recovery policies.

It is not clear why the decision-makers think either narrative justifies attempting to recover more water from the irrigation pool towards the 450 GL efficiency measures, if doing so will make a bad situation worse in communities such as the GMID. It also reinforces the community distrust and lack of confidence in the authorities responsible for implementing the Plan. This is a major barrier to successful implementation.

Information Request 5:

b) risks to achieving water recovery targets by 1 July 2019 and, where not already addressed under current arrangements, how any shortfalls may be resolved.

Disallowing the 605 GL in supply measures is the greatest risk to achieving water recovery targets by 1 July 2019. New South Wales and Victoria have made clear they will walk away from the Basin Plan if the offsets are disallowed, saying the Basin Plan will no longer be the adaptive management plan they signed up to.

The Plan would revert to its default 2750 GL target in entitlements, but with no clear plan as to how the existing 650 GL gap could be closed in just a little over 12 months’ time. While there is still 276 GL potentially available under the buybacks 1500 GL cap, and a tender could be rolled out relatively quickly, such a response must be weighed against community opposition on socio-economic and water market impact grounds. It would be contrary to the objectives and outcomes set out in the Basin Plan Clause 5.02, to optimise social, economic and environmental outcomes, and to improve water security for all users of Basin water resources. Another Commonwealth intervention in the water market will exacerbate the insecurity of supply for all irrigators, particularly in dry years.

Information Request 5:

c) examples of water recovery (both infrastructure projects and purchases) that have been either well implemented or had major deficiencies, including risks to securing contracted but not yet delivered water from water-saving infrastructure projects.

See the above description of the missed integration opportunity in the GMID.

On-farm efficiency programs

While it is generally accepted that on-farm efficiency programs to recover water from irrigators are less socio-economically damaging than outright buybacks and at least support structural adjustment, this is not to say on-farm program effects are neutral or positive, individually, at regional or at water market scale.

The EY report’s cost-benefit analysis revealed how sensitive the benefits and costs are to assumptions on productivity and the sustainability of the assumed water efficiency gains. It is a serious deficiency that the value of these programs have not been assessed based on the evidence,

rather than assumptions – particularly when the Department of Agriculture and Water Resources in Canberra is promoting such programs to recover the 450 GL.

There is emerging evidence that the on-farm efficiency programs have unintended consequences. Any farmer in (practically all) the southern connected Basin who trades water for on-farm efficiency funding is likely to:

- End up using more water.
- Secure their enterprise by buying permanent or temporary water from the Victorian Murray and Goulburn systems.
- Thus compounding the socio-economic impact on GMID communities – no-one is trying to detect or measure this REAL impact.

Downstream irrigators who use Victorian Murray and Goulburn water will be at a further advantage because they:

- Do not hold delivery share, the distribution mechanism that covers the GMID network costs.
- Compress and elevate system running costs in the GMID for remaining irrigators.
- Do not contribute to the local economy.
- Put upward pressure on water prices.
- Cause our rivers to be ‘run as channels’ to deliver water downstream with attendant damage to riparian and in-stream ecological conditions.

Assessment by decision-makers also relies on averages, which means nothing in volatile ‘feast and famine’ river systems like the Murray-Darling Basin with highly variable annual river flows. The range of possibilities must be considered to understand potential social and economic, as well as environmental, vulnerability. For example:

- Look at the likely worst case – what does that show?
- The likely impact has been disguised by multiple good years of allocations since the buybacks ended and the Millennium Drought broke.
- Assessment can’t be limited to the GMID issue. It is a southern Basin issue, as all commodities and regions have their climatic and economic cycles.

On-farm programs have assisted with participating farmers’ structural adjustment, but the GMID is at a tipping point where more water leaving the irrigation pool will have exponential socio-economic and water markets impacts that overwhelm these programs’ limited value. Structural adjustment is still required but should no longer involve reducing the irrigation pool in exchange.

Information Request 14:

a) Whether current institutional and governance arrangements provide for sufficient oversight of the plan & support engagement within the community.

Six years into the Plan’s implementation, it is clear that the institutional and governance arrangements for the Murray Darling Basin Authority (MDBA) and the Department of Agriculture and Water Resources (DAWR) in Canberra have been shown to fail. The Four Corners report and subsequent inquiries and media coverage of theft allegations and questionable water purchases has

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exposed these institutions' failure to undertake properly their compliance and due diligence responsibilities; the issues goes beyond only the NSW and Queensland compliance regimes.

The MDBA's multiple roles are cause for concern and create conflict. It is not only the regulator to ensure compliance but also reports on the effectiveness of its implementation of the plan without independent external review or oversight. The MDBA is regarded by the community as insufficiently independent. The MDBA's multiple responsibilities also leave the organisation hopelessly conflicted. The solution is greater clarity on what functions should be done by the MDBA (much reduced), the States and water supply entities.

But while the MDBA is responsible for implementing the Basin Plan, the Department is responsible for the design and delivery of the water recovery programs. The lines of responsibility are confused in the public mind, with the MDBA commonly blamed for socio-economic outcomes from water recovery programs it has no control over. DAWR does not value community, industry or State input, it does not visit the regions, and its programs have been designed and delivered in ways that have made the socio-economic impacts much worse than they needed to be, as described earlier. It seems to enjoy the luxury of being unaccountable, while the MDBA takes the heat.

The MDBA's engagement record is also extremely poor, due to the Authority's culture rather than any deficiency in the institutional and governance arrangements. The consistent impression is that decisions are made in distant Canberra, and senior executives then come out to tell the community what has already been decided. Departmental executives making decisions about water programs and design are nowhere to be seen at all, despite the substantial impact their programs have.

Senior MDBA and Departmental executives also consistently present the Basin Plan as requiring set volumes, particularly the 450 GL in its entirety and from irrigators. They do not accurately present the Plan for what it meant to be: an adaptive management plan with a mechanism to adjust the volumes recovered depending on meeting socio-economic and environmental conditions.

These high-level decision-makers consequently are not regarded in the community as independent or objective advisers to government, but as enablers to deliver a political commitment from 2012 regardless of the actual provisions in the Basin Plan. Little the community says has been or is taken into account, and it is not surprising that after a decade of this experience, community distrust and lack of confidence in the Plan's implementation is so high.

Information Request 14:

b) Whether there are risks to the achievement of the objectives of the Plan that arise from the current institutional & governance arrangements.

As described above, the multiple roles of the MDBA are cause for concern and create conflict. It is not only the regulator to ensure compliance but also reports on the effectiveness of its own implementation of the Plan.

All external reviews, including the January Ernst & Young report, have identified a critical ‘trust deficit’ between the Canberra decision-makers (MDBA and DAWR) and Basin communities. Arguably, the MDBA and DAWR have already lost their social licence for reform in the GMID and southern NSW Riverina, creating a key risk for the Basin Plan’s implementation.

Information Request 14:

c) What improvements can be made to ensure that institutional and governance arrangements are fit for the next phase of implementing the Plan

The Government should consider separating functions into different organisations, with new arrangements between the States and the MDBA. The current arrangements, including the unaccountability of DAWR for its water recovery program delivery, allow for unhealthy politicisation among high-level decision-makers and nurture conflict between the States and between the States and the Commonwealth. There is a desperate need to structurally separate service delivery, policy and regulatory functions so that the social licence for the Basin Plan can start to be rebuilt.

Conclusion

The Murray-Darling Basin Plan is a world-leading reform. Rebalancing water resources to give the environment a greater share is an ambitious, and contentious, goal. Achieving this goal has been severely compromised by poor implementation inconsistent with the Basin Plan’s stated objectives and outcomes as an adaptive management plan. These problems must be addressed to regain public confidence and trust, and to achieve the triple bottom objectives spelt out in Clause 5.02 of the Basin Plan.