



Wednesday 25 March 2020

Senate Select Committee on the Multi-Jurisdictional Management and Execution of the
Murray-Darling Basin Plan
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Submission

Senate Inquiry into the Multi-Jurisdictional Management and
Execution of the Murray-Darling Basin Plan

Introduction

Lifeblood Alliance consists of environmental, Indigenous and community groups committed to keeping the rivers, wetlands and aquifers of the Murray-Darling Basin healthy for the benefit of current and future generations.

Member groups and associated individuals of the Lifeblood Alliance span the breadth of the Basin and beyond and include landowners, farmers, irrigators, commercial and recreational fishers, nature tourists, Local Government representatives, Traditional Owners, ecologists, townspeople and conservationists.

Lifeblood Alliance has been closely following the initial development of the Basin Plan, its adoption and the processes of implementation.

We welcome the opportunity to provide information to this Senate Inquiry and comment on the Issues Paper.

This submission makes the following recommendations:

1. Review the science and ecological consequences of the SDLAM and Nth Basin Review.
2. Give high priority to removing constraints to delivery of environmental water.
3. Include loss of return flows to the environment in calculation of water recovery from efficiency measures.
4. Lift the 1500 GL cap on water buybacks.
5. Conduct a comprehensive and independent audit of water diversions.
6. Include floodplain harvesting under existing SDLs.
7. Improve the protection of first flush flows in the Nth Basin after prolonged drought

8. Re-establish the National Water Commission as the independent oversight body for national water reform.
9. Establish an independent Federal Basin Plan Regulator to deal with enforcement of water resource plans and all other compliance issues, to separate the roles of the MDBA.
10. Establishment a National Integrity Commission to investigate allegations of corruption.
11. Implement restrictions to water trading as required by the *Water Act 2007* Schedule 3.

Key failings of Basin Plan implementation

1. SDL adjustment mechanism (SDLAM)

The adjusted SDL, as adopted by Parliament in 2018, was not based on science. Submissions lodged with the MDBA in November 2017, in response to the proposed supply and constraint measure package, highlighted significant concerns with the entire SDLAM process. These included a number of issues raised in technical reports provided with MDBA's draft proposal itself.

The supply measures are required to deliver equivalent or better environmental outcomes compared to those achieved under current Basin Plan settings, using less water.¹

However, reports provided with the proposal demonstrated that *'there is considerable uncertainty in the representation of real changes in ecological condition when using the Ecological Elements method's scoring.'*² The methodology itself has been described by the Independent Review Panel as risky and operating in 'unchartered waters'.³

It was also noted that six locations across the Basin breach the limits of change as a result of the SLDAM. These include breaches of Specific Flow Indicators (SFI) for overbank flows in the Lower Darling and Barmah-Millewa Forest.

The failure to remain within the limits of change for six areas is an indication that the SDLAM will not provide equivalent or improved environmental outcomes compared with the adopted Basin Plan.

A review of all documentation supplied with the draft determination report has demonstrated that there will not be equivalent or better environmental outcomes if 605 GL is returned to extractive industries.

The draft determination report analyses the impacts of reduced environmental flow volumes on the eight Ramsar listed wetlands in the Southern Basin.

Modelling indicates there will be changes to the hydrological regime of these Ramsar sites as a result of operating the SDLAM. These include changes to the volume, timing, duration and frequency of surface water flows.⁴

The Wentworth Group of Concerned Scientists analysed the 37 proposed supply measures across 12 criteria required by the Basin Plan and associated MDBA documents.⁵ Only one proposed supply measure met all criteria.

¹ Murray-Darling Basin Plan s 7.03 and 7.09; MDBA (2 October 2017) SDLAM Draft Determination Report p 11

² Ibid

³ Independent Review Panel (2014) *SDL Adjustment Ecological Elements Method Development Report* p 7

⁴ MDBA (2017) op cit, Appendix B, p 45

⁵ Wentworth Group of Concerned Scientists (Nov 2017) *Submission to the MDBA SDLAM Draft Determination Report* p1

There is now considerable community concern about the impacts of a number of the supply measure proposals, particularly the Menindee Lakes project on the Darling River and the Yanco Creek project on the Murrumbidgee River. Works projects in Victoria lack local support and have not yet addressed Traditional Owner concerns. There is a strong indication that the implementation of supply projects will not meet Basin Plan deadlines.

LBA is very concerned about the lack of transparency and rigour in the gateway process now established by the Department of Agriculture to progress the supply projects. We note that only one project to date has passed through the gateway. This is one of the very small projects, the Flows for the Future project in South Australia. This is the same project that met the Wentworth Group's criteria for SDLAM projects. More complex supply measures have to have all environmental approvals in place before getting through gateway.

The implementation of Pre-requisite Policy Measures (PPMs) is required by the Basin Plan⁶ and was factored in to the SLDAM process reconciliation. PPMs include the protection of return environmental flows and piggy-backing environmental flow releases on tributary inflows. There has been very slow progress in adopting and implementing these policies. The PPMs are included in rules in proposed Water Resource Plans (WRPs) that have not yet been accredited by the MDBA or in the case of NSW, not yet submitted for accreditation.

The PPMs are a critical part of the SDLAM process and must be rigorous in their adoption before supply measures can be accepted through the gateway process.

LBA considers that the SDLAM process will fail to meet the requirements of the Commonwealth *Water Act 2007* (Water Act). The equivalent of 3,200 GL will not be returned to the environment under the adopted SDLAM.

2. Supply measures and Constraints

The SDL adjustment for supply measures was calculated on the assumption that constraints measures are in place. These have not been implemented, and the Productivity Commission notes that they are highly unlikely to be completed by 2024.⁷ All jurisdictions are dragging their heels on constraints projects.

LBA considers the removal of constraints to the delivery of environmental water is critical to the successful achievement of the Basin Plan. The management of constraints needs to be given top priority with infrastructure investment and the acquisition of easements.

There needs to be a stronger focus on the public benefits of constraints management. Infrastructure projects such as lifting bridges and road crossings will benefit the community during times of natural flood. Likewise, the acquisition of flood easements will allow for ecologically important overbank flows that provide nutrient sources, recharge groundwater systems and deposit alluvial soils thus increasing productivity for environmental outcomes.

Acquisition of flood easements will have private and public benefits.

⁶ Basin Plan s

⁷ Productivity Commission (December 2018) *Five Year Assessment Murray-Darling Basin Plan*. Inquiry Report no 90

3. Efficiency measures

a) Bridging the gap

Efficiency measures undertaken by the Commonwealth government to 'bridge the gap' to the SDLs have not been cost effective and have not recovered sufficient volumes of water to meet the environmental objective of the Plan.

The loss of return flows to the environment (for example as groundwater recharge) has not been factored into the estimation of recovery volumes through investment in efficiency measures such as channel lining and piping. Estimates vary from 121 GL/year⁸ to 630 GL/year⁹. Whatever the actual figure it is a substantial amount, 10 % of estimated water savings as an absolute minimum, which has not been taken into account.

There is a likelihood of an increase in water take due to more storages in the landscape, funded as efficiency measures, especially on the lower floodplains eg Murrumbidgee. The investment in large turkey nest dams across the Basin, as efficiency measures, has not been audited in regard to increased extraction opportunities through unregulated floodplain harvesting.

b) Improved environmental outcomes in Schedule 5 of the Basin Plan

It is critical for the success of the Basin Plan that an additional 450 GL is returned to the environment to meet end of system targets, protect Ramsar wetlands, flush salinity and keep the Murray Mouth open.

To date only 1.3 GL has been recovered through efficiency measures funded through the Water for the Environment Special Account at an approximate cost of \$12 m/GL. There are inadequate funds in the account to acquire 450 GL through efficiency measures alone.

LBA recommends that the agreement to restrict the recovery of 450 GL to costly efficiency measure investment be reviewed. Investment in broader regional development and diversification programs would have a better outcome for impacted communities.

The 1500 GL cap on buying water should be removed. The 450 GL should be purchased from willing sellers through voluntary open tender process.

This would be the most effective use of public funding with broader benefits to regional communities in the Basin in a drying climate.

4. Northern Basin Review

The review of the Northern Basin SDL of 390 GL was completed in 2017. The review report identified a number of scenarios from an increase in water recovery to 415 GL to a decrease to 320 GL.

The increased water recovery scenario of 415 GL would achieve more of the Basin Plan targets, particularly in the Barwon-Darling.

⁸ QJ Wang, G Walker and A Horne (2018) *Potential impacts of groundwater Sustainable Diversion Limits and irrigation efficiency projects on river flow volume under the Murray-Darling Basin Plan* An Independent review for MDBA

⁹ John Williams & R. Quentin Grafton (2019) *Missing in action: possible effects of water recovery on stream and river flows in the Murray–Darling Basin, Australia*, *Australasian Journal of Water Resources*, 23:2, 78-87,

The socio-economic study conducted for the Review failed to analyse the Darling townships downstream of Bourke, including Louth, Tilpa, Wilcannia, Menindee and Pooncarie. These townships have suffered considerably during the recent intensive drought which was extended because of upstream extractions.

The critical human needs of these communities could not be met. These issues were not considered in the Northern Basin review.

The massive fish kills in the Lower Darling in January 2019 and this season, including threatened species listed on the IUCN red list, were a result of over-extraction that intensified the impacts of the intensive drought.¹⁰

The final outcome of the Review, a reduction in water recovery by 70 GL, is a major failing of the Basin Plan implementation.

The management of water extraction in northern tributaries, including large volumes of unmeasured floodplain harvesting, is an ongoing problem that is not being adequately addressed through WRPs.

Connectivity with the Lower Darling and Lower Murray is a key issue that requires better management. This includes a higher level of water recovery from the Northern Basin.

The extraction of recent critical first flush flows in Queensland and NW NSW demonstrates a failure of the Basin Plan and its implementation to meet the objects of the Water Act.

5. NSW failure to deliver Water Resource Plans (WRPs)

NSW has failed to deliver WRPs for accreditation, as agreed by 31 December 2019 or to meet agreements on SDL management as of June 2019, as required in the Basin Plan.

The Bilateral Interagency Agreement entered into by MDBA and NSW Government had only been partially met in some agreed actions¹¹. This relates to NSW meeting the SDL requirements of the Basin Plan from July 2019. There appears to be no updated report available now that NSW failed to submit the WRPs by the December deadline.

The Basin Plan is under threat because of the inaction in developing the required water management rules that will deliver improved outcomes for environmental values and downstream communities.

NSW has not fully implemented the PPM's, has not protected environmental flows in the Northern Basin, has not implemented improved measurement of extraction and has allowed access to critical first flush flows through the Barwon-Darling tributaries.

LBA understands that the failure to submit WRPs for accreditation, as agreed, has caused Federal funding to be withheld. This is of particular concern in regard to the floodplain harvesting project that is still at the assessment and modelling stage.

Floodplain harvesting is free, unregulated and unmeasured access to water in the northern NSW tributaries that connect with the Barwon-Darling system. The intensive drought, exacerbated by

¹⁰ Fish kill reports

¹¹ MDBA (July 2019) MDBA/NSW Bilateral agreement implementation commitments. MDBA's assessment of progress.

upstream extraction, has caused an ecological catastrophe in this river system at the same time as the implementation of the Basin Plan.

LBA considers this to be a failure of both the MDBA and NSW Government that needs to be urgently addressed. Transparency around the implementation of the Basin Plan is failing.

The Water Act under s73 gives the Minister step-in power to take over the WRP development process. While this is a last resort power, NSW continues to threaten to pull out of the Plan. This is destabilising the Plan implementation and needs to be addressed with some urgency.

6. Complexity of Water Resource Plans

There is an overarching problem with Water Resource Plans (WRPs) because each jurisdiction is following its own methodology to formulate their plans and meet the requirements of their own water legislation. For example Victoria has used its existing instruments to meet WRP requirements, and their Plans are constructed in a radically different way from NSW plans. Victorian plans identify only small parcels of planned environmental water whereas this is a major component of NSW plans.

These differences make assessment difficult both for the MDBA and for the public to understand if WRPs are meeting Basin Plan requirements. Furthermore the big differences will make it difficult to measure compliance. This was always going to be a difficult area of Basin Plan implementation, where disparate legislation and planning frameworks have to be made to match a single template for which they were not designed, but the complexity, lack of transparency and outright delay tactics by the states have not made it easier.

The protection of first flush flows through the Northern Basin tributaries into the Barwon-Darling, Lower Darling and connecting to the Murray River after extreme drought conditions is an essential requirement for WRPs. This important aspect of connectivity throughout the Basin needs to be urgently addressed.

7. Measurement of water take across the Basin

It is of great concern that 26% of water take across the Basin is estimated, not measured¹².

The requirement to measure all forms of take should be a high priority of all jurisdictions managing the Basin water assets.

There is an urgent need for an independent audit of extraction including all forms of take.

Since the National Water Commission was abolished in 2014, its functions have been transferred to other agencies. Water accounting is carried out by the Bureau of Meteorology, the Murray-Darling Basin Authority and the states in the development of water accounts. However, none of these accounts are able to answer critical questions for Basin-wide system management – in particular, *How much water is used? Who is using it? Where is it used?*

These existing accounts are not independently audited and have many gaps in data collection and analysis.

¹² MDBA (21 November 2019) SDL Accounting update p6

A comprehensive and independent audit of water diversions would be a valuable tool to identify and inform policy solutions.

A broad audit of diversions would determine whether SDLs have been respected and provide confirmation that jurisdictions are complying with their responsibilities under the Water Act. It would help decision-makers identify potential problems with vulnerable streams before catastrophes such as fish kills occur. It would ensure that all entitlement holders, including the Commonwealth Environmental Water Holder, see fair and reliable allocations.

An independent Basin-wide audit with valley by valley accounting would provide a valuable report on progress in Basin Plan implementation, increase community trust and inform future planning assumptions.

This audit would highlight the need for improved measurement of all levels of take.

8. Management of Floodplain Harvesting in NSW WRPs

As stated above floodplain harvesting is free, unregulated and unmeasured access to water in the northern NSW tributaries that connect to the Barwon-Darling River.

Flood flows play a critical role in recharging groundwater sources, filling the soil moisture profile, nourishing floodplains and wetlands and providing flushes downstream, particularly after prolonged drought.

A policy to manage this unknown level of take has been in development since 2008 and still not fully implemented. The NSW WRPs will not have volumetric data for floodplain harvesting included until 2021.

LBA is greatly concerned that NSW and MDBA plan to increase the SDL in northern basin water sources to accommodate volumes of floodplain harvesting once assessed and licenced.

This take should be included in the existing SDL, as set by the Basin Plan. An increase in the SDL to accommodate past unregulated and unmeasured extraction will lock in the unfair sharing of important inflows to highly variable river systems.

This proposed increase in the NSW northern basin SDL is not acceptable and needs urgent attention. The ecological crisis in the Barwon-Darling has been exacerbated by over-extraction upstream.

Improved management of floodplain harvesting is an opportunity to address the problem and must occur under the existing SDLs as adopted in the Basin Plan.

First flush flows through the highly variable Darling catchment after prolonged drought provide critical ecological, social, cultural and economic values to downstream ecosystems and communities. The capture of these flows through unmanaged floodplain harvesting in upstream tributaries is robbing the river system and its dependent communities from the benefits of drought-breaking rainfall.

While the NSW Government attempted to restrict floodplain harvesting for the very first time in February 2020, the restriction was lifted, almost immediately due to political pressure from the upstream irrigation lobby.

It is imperative that WRPs have rules to protect first flush flows from extraction so that connectivity from the Northern Basin to the Lower Darling and Lower Murray is reinstated after prolonged drought.

9. Calculation of environmental water recovery

The calculation of environmental water recovery through an extremely complex and non-transparent modelling process is a threat to the success of the Basin Plan.

The models are based on a set of factors and assumptions developed at a state agency level that are not available for independent review.

The factors used to calculate water recovery in NSW and Victoria were recently updated with no transparency in the modelling process.¹³ The new model outcomes conveniently increased the modelled level of water recovery in some water sources. This is particularly evident in the Macquarie River system in NSW where total water recovery increased from 75.4 GL to 95.8 GL through changes to the model factors.

LBA is aware that the irrigation lobby group, Macquarie Food and Fibre, has been lobbying the MDBA and NSW Government to adjust the factors. This information was obtained through an FOI.

The Macquarie River system supports the Ramsar listed Macquarie Marshes. This significant wetland system is continuing to deteriorate in extent and health and is not demonstrating any sign of having adequate access to water for environmental purposes.

The truth of the on ground condition of the Marshes should be the key factor in considering environmental water recovery, not the adjustment of factors in an artificial model. This issue is similar for the Ramsar listed Gwydir Wetlands.

Unknown information about the updated factors includes: what are the new assumptions? What are the different factors used? What is the purpose of each type of factor? And many more detailed issues including the difference between Long-Term Diversion Limit Equivalence and Long-Term Average Available Yield factors.

Other concerns in regard to the calculation of environmental water recovery is the variety of different types of licences purchased by the Commonwealth for this purpose.

Some of the Northern Basin licences purchased privately, not through an open tender system, will only provide environmental flows in very high flood occurrences. This is not when the water is needed most. More clarity about the difference between paper water on licences and availability of real water flowing to the environment is an important aspect of calculating water recovery.

The protection of held environmental water through the PPMs and Northern Basin rules in WRPs and the removal of constraints to the delivery of environmental water are significant issues that are yet to be addressed and implemented through the Basin Plan.

¹³ <https://www.agriculture.gov.au/water/mdb/progress-recovery/progress-of-water-recovery>

Related Matters

1. Governance

Sound governance is essential to the success of the Basin Plan. The many inquiries into the Basin Plan including the South Australian Royal Commission have revealed multiple failings, with the SA Commissioner particularly concerned about lack of disclosure and the role of science, inadequate Aboriginal engagement and the lack of oversight of MDBA's work. The Productivity Commission in its Five year assessment also made repeated reference to failure of governance and recommended splitting the functions of the MDBA into an implementer and a regulator¹⁴, a proposal which has met with a muted response from COAG.¹⁵

LBA believes the proposed reforms need to go further to ensure independence and transparency. The National Water Commission (NWC), which existed from 2004 to 2014, was set up as an independent body with relevant expertise to oversee national water reform, as set out in the National Water Initiative (NWI). It reported regularly on progress in NWI implementation and was given the same role in reporting on Basin Plan implementation through the Water Act 2007. The NWC received support from all sectors as an independent umpire, and its work was respected and acknowledged in the many submissions received when the Abbott government proposed to abolish it as a cost cutting measure.¹⁶ Unfortunately the advice was not heeded, the NWC was abolished in 2014 and its responsibilities for the Basin Plan split between the Productivity Commission and other agencies such as Bureau of Meteorology.

We recommend the re-establishment of the National Water Commission as the independent oversight body for national water reform. It should be backed by an independent Federal Basin Plan Regulator to deal with enforcement of water resource plans and all other compliance issues, separate from the MDBA. The appointment of the interim Inspector-General is a step in the right direction in terms of independent oversight, but he lacks legislated powers and the position at present is advisory only.

We also strongly support the establishment of a National Integrity Commission. Since the airing of the ABC 4 Corners program 'Pumped' in 2017, there have been many, varied and repeated allegations in the media and elsewhere of undue influence by vested interests, rorts, special deals for mates etc etc¹⁷, resulting in calls from all directions for a federal Royal Commission into Basin Plan implementation. A National Integrity Commission with powers to compel witnesses would be the appropriate body to investigate the allegations and hold government, political parties and vested interests to account.

MDBA Board

There has been a failure to meet governance requirements of the MDBA Board, as set out in the Water Act 2007.¹⁸ The requirement for expertise in fresh water ecology has not been met for several periods of the Board's existence. There has been a long period of time with an Acting Chair and less

¹⁴ Productivity Commission *Five year assessment* op cit

¹⁵ COAG response to Productivity Commission assessment

¹⁶ See for example <https://www.wsaa.asn.au/media/call-key-functions-remain-national-water-commission-abolished>

¹⁷ See for example The Australia Institute (2018) *the Basin Files*

¹⁸ Water Act 2007 s178

than four other members besides the Chief Executive and the Chair. Vacancies advertised in October 2019 are yet to be filled.

LBA is concerned that numerous important decisions have been made by the MDBA Board without the relevant expertise or membership required.

This situation has the potential for a bias in decision-making and management by this important governance body.

There has been particular concern expressed in the community about the appointment of a number of Board members with direct connections to the irrigation industry. This is perceived as a conflict of interest and a cause of bias in decision-making by the MDBA Board.

The numerous issues outlined in this submission are a clear indication of a bias towards the irrigation industry in a process established to return over-allocated water to the environment.

2. Water management in different jurisdictions

Water sharing between the states is governed by the Murray-Darling Basin Agreement which is a Schedule of the Commonwealth Water Act 2007. This complex agreement sets up and describes the functions of the Ministerial Council and the Basin Officials Committee, and determines how water storage infrastructure is operated and who pays. It also includes the Basin Salinity Management Strategy and provisions for supplying critical human water needs (CHWN).

In essence the Agreement mandates that all inflows into the Murray upstream of Hume Dam are shared equally between Victoria and NSW, along with water stored in Menindee Lakes above a certain threshold. The two states are jointly responsible for supplying South Australia's entitlement, which is set out month by month in the Agreement, along with loss and dilution flows. All three states are entitled to store water in Dartmouth and Hume dams, Menindee Lakes and Lake Victoria.

MDBA is responsible for monitoring and reporting on the volumes held by each state in the Murray storages. In February 2020 NSW held 1100 GL, Victoria 1200 GL and South Australia 350 GL¹⁹ spread across the various storages.

Given the fact that inflows are shared equally between Victoria and NSW, it might be expected that the water situation might be similar on both sides of the Murray. However the allocation policies of the three states have resulted in very different situations for entitlement holders on the Murray. The NSW government has given a 97% allocation to a small pool (approx. 190GL) of High Security entitlement holders. The Victorian government has allocated 48% to a much larger pool (1244 GL) of High Reliability water shareholders, while the SA government has allocated 100% to class 3 and 8 entitlement holders in a consumptive pool of 693 GL. In the period 1/6-31/10/19 NSW delivered 119 GL to its entitlement holders while Victoria delivered 245 GL.²⁰ General Security allocations in NSW are zero, as are low reliability allocations in Victoria.

It is no wonder that such disparate allocation policies can be a source of angst and frustration for irrigators in the different jurisdictions. NSW HS water has the advantage of being allocated in almost entirety at the start of every season but the pool is small. Victorian HR holders can be sure of at least some allocation every year, while SA enjoys the benefit of higher allocations against a smaller pool.

¹⁹ https://www.mdba.gov.au/sites/default/files/state_shares/State-Shares-at-end-of-January-2020.pdf

²⁰ MDBA (December 2019) River Murray System Annual Operating Outlook 2019-20 Update

These SA allocations are possible even when the full volume of SA's share under the Agreement is not delivered. For example in 2019/20, SA will receive 1154 GL out of its 1850GL entitlement but is still able to make a 100% allocation.²¹ The situation is further complicated by interstate trade of entitlements and allocations.

The Inspector General is currently examining water sharing arrangements between the states, but without the collaboration of SA or Victoria, who are both strongly opposed to any legislative change. Allocation policy is a matter for the states and there are historic and hydrological reasons behind each states' approach. However the impacts of their different approaches are far reaching, albeit little understood, and a potential barrier to equitable Basin Plan implementation.

3. State parochialism

Disputes between the states over water sharing in the Murray pre-date federalism. The first River Murray Agreement between Victoria, NSW and SA was signed in 1915 but the jurisdictions have continued to follow their own agendas and put their own interests first.

There have been many attempts at a more co-operative approach with some very significant achievements, including the imposition of the Cap, the National Water Initiative and the Basin Plan itself. But in all cases implementation has been fraught and the Productivity Commission in its Five Year Assessment of the Basin Plan makes many allusions to this disunity, stating for example 'Much of the community concern is driven by the way Basin Governments have sought to negotiate and navigate their way through issues', 'Governments' approach has regularly lacked transparency and candour' and 'The MDB Ministerial Council must set a much clearer tone of firm commitment to the Basin itself, with unmistakable collective direction for delivering on that commitment'.²²

These concerns have been reinforced by the Interim Inspector General:

"I've never seen a group so divided," he said of the water ministers.

"It does not augur well for the cooperation and commitment to what is a national asset and what is the food bowl of Australia," Mr Keelty said.

"The sooner we understand this is a national asset, and what you do in one part of the basin directly impacts another, and what nature does in one part of the basin, directly impacts another ... Government can't control nature, but it can control the policy response."²³

For the Basin Plan to be a success, all jurisdictions must see it for what it is, a national plan to address a national problem of over-allocation and resulting environmental degradation.

4. Impact of Inter-Valley Transfers

The loss of inflows to the Murray from the Darling and Murrumbidgee Rivers has put increased pressure on the Goulburn River to provide inter-valley transfers causing environmental degradation.

²¹ ibid

²² Productivity Commission *Five year assessment* op cit

²³ <https://www.abc.net.au/news/2020-01-25/mick-keelty-on-the-water-beat-murray-darling-basin/11897876>

Victorian tributaries have been less impacted by the recent drought than NSW, so inflows have been higher. This means that more water has been allocated on the Goulburn than on the Murrumbidgee and that the Goulburn has to supply a greater proportion of downstream needs.

The Goulburn has been forced to carry higher summer flows than normal, causing ecological damage and cancelling out some of the benefits of environmental watering over winter. The Goulburn has a self-sustaining population of Murray cod but recent monitoring shows that recruitment has dropped by 30% due to the high summer flows.²⁴ These high flows also impact on recreational use of the river over summer, with sandbars submerged and swimming and boating more dangerous than usual.

The Victorian government is aware of these problems and seeking solutions. It has requested that the MDBA limit IVT out of the Goulburn to 50GL/month over the 2019/20 summer, but the MDBA has indicated that this may be hard to achieve.²⁵ The government is currently writing a discussion paper on potential solutions that will be released for public consultation shortly.

A full solution will require co-operation from the other states to seek alternative ways of meeting downstream demand.

5. Increased downstream demand

Recent years have seen a dramatic increase in horticulture plantations, particularly almonds, in NSW, Victoria and South Australia. Thousands of hectares have been planted, many of which are yet to reach maturity, and have required the acquisition of water entitlements and allocations from upstream users. The trees are relatively high water users, requiring 12-15 ML/ha every year.²⁶ The increase in demand is so acute that the Victorian government analysis shows that in very dry years all the water allocated in the southern connected basin may be required to service the plantations.²⁷

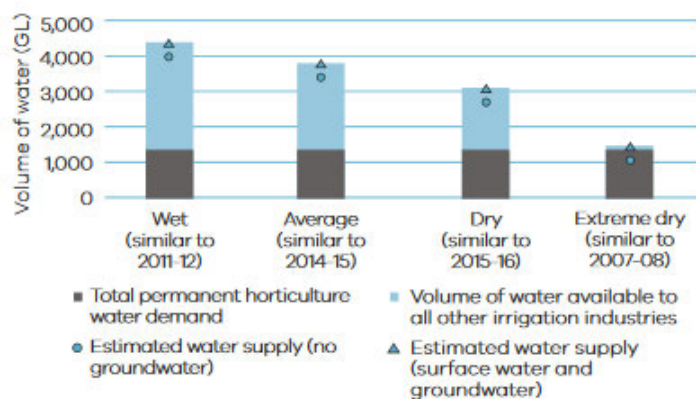


Figure 2: Water availability scenarios and baseline permanent horticulture water demand (at full maturity) - connected Murray region

²⁴ Arthur Rylah Institute research

²⁵ MDBA Annual Operating Plan update

²⁶ Agriculture Victoria *Managing almond trees with less water*

²⁷ https://waterregister.vic.gov.au/images/documents/Water-Supply-and-Demand-Fact-Sheet_southern-Murray-Darling-Basin.pdf

This increased downstream demand is putting pressure on delivery capacity at the Barmah Choke, a natural narrowing of the Murray which feeds water into the Ramsar listed Barmah-Millewa forest. The forest owes its existence to the constriction of the Choke, but it requires flooding in winter, not summer, to maintain its ecological character. It is a key site for the delivery of environmental water under the Basin Plan.

In-channel capacity at the Choke is limited to 8,500 ML/day. There are trade restrictions in place at the Choke but these have not been adequate to prevent unseasonal flooding of the forest and environmental damage. The situation was particularly acute in the 2018/19 season when significant areas of the forest were flooded and large losses occurred.²⁸ The situation is self-reinforcing – the greater the volume of water that is driven through the Choke, the shallower it becomes and its capacity to deliver water declines.

Almond growers themselves are concerned about the ability to deliver water they have legally purchased and are calling for a moratorium on future developments. Governments and the MDBA can see the problem but are scratching their heads for a solution. The reality is that the unfettered workings of the water market have created the situation and the ability to deliver water and consequent environmental damage has been treated as an externality, in contravention of the Commonwealth Water Act.

The increase in horticulture plantations is part of a shift in Basin economics towards more profitable crops, cotton being the other crop to experience a major increase. This shift towards a ‘two crop basin’ is having a major impact on other irrigators who are now unable to compete in the water market. It is also shifting water use upstream in the case of the Darling and its tributaries, and downstream in the case of the Murray and Murrumbidgee, which is having major impacts on the entire river ecosystem.

This issue needs thorough investigation and consideration and changes to the way the water market operates to protect the river environment. There is also a big question about what the shift means for food security and for the 2 million plus inhabitants of the basin who are not cotton or almond growers and the billions dollars’ worth of dryland farming, flood plain grazing, tourism and other economic value they produce.

6. The water market

The water trading market, with an emphasis on highest value use, has caused water delivery constraints and environmental damage. The consideration of environmental harm through water trading has not occurred, although there is a legal requirement to avoid third party impacts in the Basin Plan.

Environmental impacts from the water trading market include:

1. Environmental damage to the Goulburn River through erosion, threats to riparian revegetation projects and loss of benefits from environmental watering
2. Unseasonal flooding of the Barmah-Millewa Ramsar wetlands in the 2017-18 water year due to overbank flows from water order deliveries

²⁸ MDBA (2019) *Losses in the River Murray 2018-19*

3. Loss of natural flows from the Murrumbidgee River

Lifeblood Alliance is concerned that environmental, physical and cultural impacts from water trade have not been adequately considered, as required under the Commonwealth Water Act 2007.

Under the Commonwealth Water Act 2007 Schedule 3 restrictions to water trading are required when:

- avoiding environmental impacts
- protecting water quality
- facing delivery constraints
- geographical features are being impacted
- major indigenous, cultural heritage or spiritual significance would be impacted.

Conclusion

Lifeblood Alliance requests that the Committee support the following recommendations:

1. Review the science and ecological consequences of the SDLAM and Nth Basin Review.
2. Give high priority to removing constraints to delivery of environmental water.
3. Include loss of return flows to the environment in calculation of water recovery from efficiency measures.
4. Lift the 1500 GL cap on water buybacks.
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For more information on this submission please contact me on

Yours sincerely

Juliet Lefeuve

On behalf of the Lifeblood Alliance:

Australian Conservation Foundation, NSW Nature Conservation Council, Conservation Council of South Australia, Environment Victoria, Queensland Conservation Council, Murray Lower Darling Rivers Indigenous Nations, Northern Basin Aboriginal Nations, River Lakes and Coorong Action Group, Environmental Farmers Network, Inland Rivers Network, National Parks Association of NSW, Goulburn Valley Environment Group, Healthy Rivers Dubbo and Central West Environment Council.