



**Dr Anne Jensen  
Environmental Consultant**

ABN 34 930 978 273

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## **SUBMISSION FROM DR ANNE JENSEN TO THE PRODUCTIVITY COMMISSION IN RELATION TO THE MURRAY-DARLING BASIN PLAN: IMPLEMENTATION REVIEW 2023**

Thank you for the opportunity to provide input to the Murray-Darling Basin Plan: Implementation Review 2023.

### **Background to submission**

I have worked on sustainable management of natural resources in the Murray-Darling Basin throughout my career, which has covered water policy and governance in the SA environment agencies, practical wetland rehabilitation projects in a conservation NGO, academic research on environmental water needs for floodplain vegetation and wetlands, and environmental consulting on natural resources management and delivery of environmental water to Lower Murray wetlands. I am aware of the extended history of the development of the Basin Plan, and the extensive and complex process undertaken to this point in implementation of the Plan.

I want to see an effective Basin Plan with all its complementary elements delivered as intended, to provide a sound framework for water sharing and sustainable management of river ecosystems, so that all Basin communities can survive and thrive into the future. However, I am very concerned that the implementation of the Murray-Darling Basin Plan, along with its supporting elements, has not included sufficient support for Basin communities to transition to a future with reduced water availability. Key elements of the Plan have been undermined, compromised or delayed, so the intended benefits of the Plan are not being realised as quickly as intended.

### **Response to Question 1:**

#### **What issues are important to you in implementing the Basin Plan?**

The Basin Plan has failed to address effectively over-allocation of water, which was its primary goal. It has not achieved an ecologically sustainable level of take, as specifically required in the legislation. These were essential to the delivery of the intended outcomes from the Basin Plan. The repeated mantra of 'in full and on time' has already failed comprehensively on both counts, before the deadline of 2024.

The implementation process has not delivered sufficient water for recovery of river ecosystem health and, as a result, the ecological targets set in the Plan have not been met (Appendix 1). The interim targets to halt loss or degradation of key ecological parameters by 30 June 2019 were not met and the long term targets to improve condition in those same parameters since that date are not being

met. For example, waterbird populations continue to decline, in spite of small recovery phases during wetter conditions.

Insufficient secure water has been recovered to date to support long term ecosystem health. The original target of 3200 GL was already a compromise, significantly less than the minimum 4000 GL recommended by the best available science at the time, as required by the Plan. Since the Plan was signed in November 2012, this figure has been undermined and under-delivered through modifications and variations of definitions, obligations and deadlines by state governments, ending with a reduced target of 2075 GL instead of 2750 GL, and ongoing arguments by state governments that the 450 GL of 'up' water can't be delivered.

These failures to deliver have left the Commonwealth Environmental Water Holder with 2800 GL on paper but only 1987 GL as the long term average level of yield from licences of varying security. The actual amount delivered since 2012 has not exceeded 1700 GL in any single year, with an average of 1100 GL delivered over 2012-2019.

Several parties to the Basin Plan have failed to meet their agreed commitments and deadlines, in key cases by several years. There is an urgent need to strictly enforce deadlines and recovery targets, and to ensure effective penalties for failure to deliver on commitments. Most importantly, a clear path must be spelt out for alternative recovery of water where offset projects fail to deliver against the 605 GL and 70 GL credits by 2024.

The process to recover 450 GL should be fast-tracked as a first priority give the earliest benefits towards achieving Plan targets, while simultaneously taking action to accelerate delivery of constraints projects as fast as possible. These projects have taken much too long and still are predicted to take a further 5-10 years. They must be accelerated urgently, as they are preventing the effective delivery of environmental water to priority sites in dry times.

Recovered environmental water can be delivered, particularly in dry times, to provide relatively small amounts of water to sustain the benefit of recent floods. Delivery of environmental water will only result at most in relatively low flows and occasionally limited minor flooding over a temporary period. In many cases, water is delivered directly to wetlands without flooding other sites.

There has been major misinformation about potential damage from environmental flows and this needs to be strongly countered with correct information about the benefits of water for river health to all river communities. The counter-argument should not be accepted, that there is no point in recovering the 450 GL because it can't be delivered due to constraints.

### **Response to Question 2:**

#### **What lessons should be learned from programs aimed at helping communities adjust to the Plan?**

Priority needs to be given to the need for social support for communities to adjust to changes resulting from the Plan. During the implementation of the Basin Plan, little or no attention was paid to giving this support. It is essential that just as much funding is invested in facilitating change as in returning water. Research by Prof Sarah Wheeler has demonstrated that a 50:50 split of funding between buybacks and social support would give much more effective results in terms of real return of water than spending all of the funds on engineering solutions. Background reports to the Sefton socio-economic report refuted claims of social and economic damage as a result of the Basin Plan, and detailed other drivers affecting regional economies and communities (see background report by Wittwer).

It is strongly recommended that environmental water be described as ‘water for river health’ to emphasise the value to all river communities as it flows through the river valleys to the river mouth. It is of value to everyone and is not competing against producers. The term ‘environmental water’ has been given a bad image through persistent misinformation that it is ‘wasted’ or ‘competing’.

There has been consistent misinformation undermining implementation of the Plan, especially water recovery and removal of constraints. Going forward, there is a need to invest in selling the value of completing constraints projects better, provide support to landholders and regional department officers, and to counter misinformation equating environmental flows with the devastating impacts of the 2022 floods. The focus should be on getting flows of up to 50,000 ML/d through the mid-Murray region, 1 year in 3, in spring (compared to the current operating restrictions limiting flows to under 15,000 ML/d).

There is an urgent need to challenge for the legal right to flood floodplains to recover ecosystem health, emphasising that there would be minimal damage, possibly only inconvenience if access is lost, but also emphasising that there is funding available to provide higher level access via constraints projects. This situation of not flooding floodplains is currently being accepted by the Authority as a constraint, without challenge, that they cannot deliberately release water for environmental flows if it floods onto floodplains. A case should be made that landholders on floodplains have received long term benefits from reduced flood frequencies, and minor flooding for river health benefits should be accepted as part of the overall Plan and delivery of recovered water.

### **Response to Question 3:**

#### **How well is the Plan addressing the interests of the Aboriginal people?**

The delivery of water for use by traditional owners has been delayed far too long. It is urgent that the promised \$40 million be delivered as soon as possible for effective water allocation to traditional owners. There should be an additional amount granted to make up for the reduced volume of water which can be purchased now due to significantly higher prices for water.

There should be more partnership programs involving Aboriginal water managers and rangers, such as the Nimmie-Caira joint project on the Lowbidgee at Balranald, which is training traditional owners in management of watered sites.

### **Response to Question 4:**

#### **How could a Basin Plan water recovery be done better?**

The Productivity Commission already identified in 2018 the steps necessary to get the Basin Plan back on track and warned of the economic consequences if action was not taken. The joint governments response was published in 2019, and progress in implementing the promised actions should be re-visited in the current review.

Continue to recover real environmental water and the 450 GL of ‘up’ water, it can be used now! Environmental water is critical to help river ecosystems survive through dry periods and to maximise the benefits of recent floods with follow-up waterings. Promote strongly the message that the 450 GL of ‘up’ water benefits all river valleys in the Southern Basin, as it is re-used multiple times along its journey to the sea.

It is urgent to remove the 1500 GL cap on buy-backs, to boost the balance of high security licences in recovered water held by CEWO, and to make sure the long term average annual yield (LTAAY) is really 2100 GL or matches the final agreed volume after SDLAM adjustments (in 2020 it was only 1987 GL).

Prioritise actions to recover real water, with buy-backs from willing sellers preferred. Change the narrative by promoting the story that sellers tend to retain some of their allocation and remain in their district, spending the funds received locally.

Identify and address the most critical/priority constraints projects which are preventing effective delivery of environmental water. A priority is the mid-Murray reach, where flows are currently limited to less than 15,000 ML/d, but need to reach up to 50,000 ML/d for greatest environmental benefits from application of environmental flows.

More rigid accounting is needed of water recovery and return flows delivered from efficiency projects, especially off-sets for 605 GL and 70 GL credits, and early identification of shortfalls in promised recovery, so that alternative sources of water can be found.

Change river operating rules for a better balance with river health needs, especially ensuring water for river health in wet times, to build resilience for dry times. For example, set a target to deliver overbank flows to the Lower Murray valley, starting with 60,00 ML/d at the SA border for 4-6 weeks in October-November once every three years, and 80,000 ML/d at the SA border for 6-8 weeks in October-November once every five years. This scenario should include the appropriate flows from Menindee Lakes which are sufficient to provide overbank flows to the Lower Darling valley.

Do not allow carp and toolkit measures to be used as pseudo water recovery projects, these are complementary measures which should be happening alongside the Basin Plan, funded by state governments, not substituting for real water recovery.

#### **Response to Question 5:**

##### **What needs to change to deliver infrastructure and efficiency projects under the Plan**

Establish a system to link project delivery deadlines to tranche payments<sup>1</sup> again, as was done in the early stages of the National Water Initiative. This incentive assisted rapid development of water markets and trading, and separation of land and water entitlements, but was removed before over-allocation of Basin water was addressed. Significant incentives/penalties are needed to get faster action on delivering key projects on time and in full, to meet Basin Plan targets. The threat of withholding tranche payments to state governments was very effective in the past in ensuring deadlines were met and should be applied again.

It is also critical to ensure true independence of the Inspector-General's office and support his ability to prosecute offenders in relation to water theft and other actions undermining the security of the Basin Plan. Ensure meaningful penalties for failure to deliver projects on time and for failures to comply with licensing conditions. Give that office the role of preparing progress reports/dashboard reporting on Plan progress, instead of the MDBA.

Declare the failed SDLAM projects as soon as possible (as outlined in Andrew McConnell's speech to the National Press Club) and identify what volume of the 605 GL offset will need another form of offset or buyback. It is known that 104 GL offset from Menindee Lakes is not going to be delivered, but the proposed 30 GL from the Better Baarka project is not a substitute; those projects are toolkits, and are not delivering environmental equivalence for less water. Strict standards and deadlines should be applied, to ensure that effective alternatives will deliver real, measurable environmental benefits.

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<sup>1</sup> Commonwealth payments made to state governments, including GST payments

## **Response to Question 6:**

### **How is environmental water improving the health of the Basin?**

Environmental water has already supported floodplain ecosystems through dry periods in recent years and reinforced continued recovery from the Millennium Drought. Deliveries of environmental water have sustained mass black box germination in the Lower Murray valley following the 2010-12 floods, during the following dry years 2013-2016. After the 2016 short flood, there were a further five years dry before the 2022 floods, requiring watering to sustain the growing saplings. Watered saplings were two to three times taller than non-watered saplings in the same location, and so responded with rapid further growth during the 2022-23 floods.

Environmental watering sustained mature trees, provided refuges for aquatic plants and animals and maintained soil moisture at watered sites. It has fulfilled its primary role of sustaining key sites during dry times but volumes are not sufficient to create the overbank flows which are critical for the health of Lower Murray floodplains.

In the Lower Murray valley, watered wetland sites have produced very large numbers of threatened Southern Bell frog tadpoles, as well as all of the more common regional frog species. At one saline site, hundreds of thousands of threatened Murray Hardyhead fish thrived in response to freshening by environmental watering, enabling translocation of seed populations to upstream sites near Mildura. Near Milang, migratory shorebirds including threatened Latham's snipe were able to feed in suitable wetland habitat created by environmental watering. Management of environmental flows at the barrages led to breeding of black bream, and lamprey have been detected migrating upstream as far as Renmark. All watered wetlands showed substantial positive responses in growth of floodplain and aquatic plants, and breeding events in fish, turtles and waterbirds.

The 2022 floods have saved the floodplain environments of the Lower Murray and Lower Darling, which were deprived of overbank flows during the high flows of 2021-22 until upstream storages could not retain any more water. It is critical that operating rules be amended to provide overbank flows in small to medium floods in order to sustain floodplain ecosystems, as well as creating airspace in upstream storages to prevent uncontrolled releases which are likely to cause damage to communities immediately downstream of the dams.

## **Response to Question 7:**

### **What more could be done to support a healthy working Basin?**

Challenge the current MDBA operating priorities of:

- 1) capture all possible water in storages
- 2) create airspace (= spill) only if more inflows are coming, and
- 3) avoid flooding floodplains.

There needs to be a review of when storages can be allowed to spill to provide small floods onto floodplains downstream and when to release coordinated flows to create minor controlled overbank flows in the Lower Murray and Lower Darling, with benefits through reducing the risk of catastrophic flooding below dams.

Develop a policy to deliver water for environmental health to lower valley floodplains during high flows (>40,000 ML/d), to ensure the environment receives water in wet times in order to increase its resilience through dry times.

Investigate whether high flows management for environmental benefit could be used as credits towards water recovery, possibly as an offset for failed deliveries against the 605 GL and 70 GL credits (see suggested regime in Q4).

Address existing over-allocation of water before incorporating measures to address future reduced water availability due to climate change. Basin water resources are not a magic pudding, and all consumers will have to manage with significantly reduced volumes in the future while still allowing water to be allocated for river health.

Acknowledge the need for water for river health to support all river communities and nature-based tourism, currently worth \$11 billion annually across the Basin. Invest significantly in social support programs to help communities adjust to current conditions and future drier conditions. This should include repeated rhetoric about the benefits to all river communities of achieving a sustainable level of take, now and in the future.

Ensure any new permanent plantings have secured sufficient permanent water allocations for future needs as the crop matures, and are not relying on annual purchase of temporary water.

Require all water resource plans for Basin sub-catchments to include a minimum end-of-system flow to continue to downstream communities.

Develop effective engagement with Traditional Owners to facilitate early delivery of the promised \$40 million for cultural flows.

Promote the story that the Basin Plan benefits everyone, and it is an essential tool to manage a fair system of sharing declining water availability as climate change effects become evident. The Basin Plan has already provided significant benefits in creating systems for water allocations and trading, as well as recovering water, but it needs to be maintained and strengthened to continue to operate effectively into the future.

Thank you for the opportunity to present my concerns and suggested actions. If further information is required, please contact me

Yours sincerely

**Dr Anne E Jensen**  
**Environmental Consultant**  
**Healthy Rivers Ambassador for MDB**  
**Honorary Research Associate, Nature Foundation**

ABN 34 930 978 273

**Targets to measure progress towards the overall environmental objectives for water-dependent ecosystems**

*Intermediate targets up to 30 June 2019*

- (1) There is no loss of, or degradation in, the following:
- (a) flow regimes which include relevant flow components set out in paragraph 8.51(1)(b);
  - (b) hydrologic connectivity between the river and floodplain and between hydrologically connected valleys;
  - (c) river, floodplain and wetland types including the condition of priority environmental assets and priority ecosystem functions;  
 Note: See section 1.07 for the meaning of the terms *priority environmental asset* and *priority ecosystem function*.
  - (d) condition of the Coorong and Lower Lakes ecosystems and Murray Mouth opening regime;
  - (e) condition, diversity, extent and contiguousness of native water-dependent vegetation;
  - (f) recruitment and populations of native, water-dependent species including vegetation, birds, fish and macroinvertebrates.

*Longer term targets from 1 July 2019*

- (2) There are improvements in the following:
- (a) flow regimes which include relevant flow components set out in paragraph 8.51(1)(b);  
 Note: The improvements in flow regimes will be measured by progress towards natural flow regimes, having regard to the Basin-wide environmental watering strategy.
  - (b) hydrologic connectivity between the river and floodplain and between hydrologically connected valleys;
  - (c) river, floodplain and wetland types including the condition of priority environmental assets and priority ecosystem functions;
  - (d) condition of the Coorong and Lower Lakes ecosystems and Murray Mouth opening regime;
  - (e) condition, diversity, extent and contiguousness of native water-dependent vegetation;
  - (f) recruitment and populations of native water-dependent species, including vegetation, birds, fish and macroinvertebrates;
  - (g) the community structure of water-dependent ecosystems.