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The Royal Commissioner
Murray-Darling Basin Royal Commission
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To the Commissioner

Thank you for the opportunity for the Murray Darling Association to make submission to the South Australian Royal Commission of inquiry into the Murray-Darling Basin.

The Murray Darling Association is the peak body for local government in the Murray-Darling Basin, informing policy and contributing local knowledge and regional solutions since 1944. There are 167 councils that sit within the Basin and whose communities rely upon water from within the catchment. The management of water is a matter that is of significant interest to local government.

Key points

- One of the most significant and fundamental risks to the effective implementation of the Murray-Darling Basin Plan is the omission of local government from any formal role in the institutional and governance arrangements of the Murray-Darling Basin Plan.
- Interjurisdictional consistency on measuring, monitoring, reporting and language will greatly assist the full and timely implementation of the Murray-Darling Basin Plan.
- Legislated change to incorporate into the Act and the Basin Plan an agreed water recovery impacts assessment and response framework and methodology against which the social and economic impacts of the Plan can be measured and assessed, that equitably defines socio-economic neutrality, and that can be linked to a comparable environmental recovery assessment tool is an essential requirement without which there is likely to be no lasting agreement and effective collaboration between the states on the recovery of the 450GL.

These three key points apply consistently and may be considered a direct response to all terms of reference, in addition to the more detailed comments following.

- **On whether the Water Resource Plans defined by the Act and Basin Plan (which are to include the long-term average sustainable diversion limits for each Basin water resource) will be delivered in full and in a form compliant and consistent with the Basin Plan by 30 June 2019.**
- **On whether Water Resource Plans are unlikely to be delivered in full and in a form compliant and consistent with the Basin Plan, the reasons for this.**

Local government has no formal role in the institutional and governance arrangements, nor responsibility for the development or delivery of the Water Resource Plans.

Local government is the third tier of government in Australia and is the level of government most intimately connected with the local areas, ecosystems, topographies, communities, industries, and interests that make up Basin environment.

Local government is adroit and well equipped in balancing complex and often competing social, economic, and environmental needs within and across their municipalities. They do this within legislated standards of discipline and governance.

Local government has the skill and institutional capacity to inform policy development, has rich and established regional networks that offer an invaluable interface and an effective resource for state and federal policy makers.

Failure to include perspectives and knowledge uniquely understood by local government may place water resource plans at risk of not being consistent with the triple bottom line objectives of the Basin Plan.

For Water Resource Plans to be delivered in full and in a form compliant and consistent with the Basin Plan by 30 June 2019, state governments will need to collaborate, and commit to this responsibility.

- **On whether the Basin Plan in its current form, its implementation, and any proposed amendments to the Plan, are likely to achieve the objects and purposes of the Act and Plan as variously outlined in ss.3, 20, 23 and 28 of the Act, and the ‘enhanced environmental outcomes’ and additional 450 GL provided for in s. 86AA(2) and (3) of the Act, respectively.**
- **On whether the Basin Plan is unlikely to achieve any of the objects and purposes of the Act and Basin Plan and/or the ‘enhanced environmental outcomes’ and the additional 450 GL referred to above, what amendments should be made to the Basin Plan or Act to achieve those objects and purposes, the ‘enhanced environmental outcomes’ and the additional 450 GL?**
- **On any legislative or other impediments to achieving any of the objects and purposes of the Act and Basin Plan and/or the ‘enhanced environmental outcomes’ and additional 450 GL referred to above, and any recommendations for legislative or other change if needed.**

It is essential that proposed amendments to the Basin Plan (such as the Northern Basin Review and SDL adjustment) rely on evidence that such amendments won’t unduly jeopardize the achievement of these end-of-system environmental targets, objectives, and outcomes, nor be inconsistent with the requirement that recovery of the 450GL deliver neutral or beneficial social and economic impacts.

One of the most significant challenges to delivering the Murray-Darling Basin Plan on-time and in-full is the social and political conflict over the social and economic impact of water recovery, and the rate of environmental recovery.

For communities across the Murray Darling Basin to adapt effectively to changing water allocations, the impacts of those variations, including those occurring under the implementation of the Basin Plan must be properly understood.

Members and stakeholders alike have identified a need for a consistent, rigorous, and repeatable impacts evaluation framework with the tools to assist communities and governments to quantify and respond to the social and economic impacts of changing water allocations, and to identify a clear and consistent means of determining social and economic neutrality.

For proposed amendments to the Plan to achieve the objects and purposes of the Act and Plan, the MDA recommends

- a) that a project be considered aimed at replicating the model and successes of the [SARMS National Partnership Agreement](#) – RED/3IP at a Basin scale, utilizing the experience and learnings of the SA Govt and the networks and the knowledge of local government and communities to achieve Basin scale outcomes, and
- b) that all governments collaborate to support the development of a rigorous and repeatable water recovery impacts assessment and response framework and methodology against which the social and economic impacts of the Plan can be measured and assessed, and that can be linked to a comparable environmental recovery assessment tool.

There currently exists a significant lack of detail supporting the “supply measure” projects underpinning the 605GL of downwater. We support the Commission in identifying these projects as an area of focus requiring further scrutiny and recommend that a rigorous process be adopted in the development and accountability of the business cases and the environmental impacts analyses underpinning the projects.

Legislated change to incorporate into the Act and the Basin Plan an agreed water recovery impacts assessment and response framework and methodology against which the social and economic impacts of the Plan can be measured and assessed, that equitably defines socio-economic neutrality, and that can be linked to a comparable environmental recovery assessment tool is an essential requirement without which there is likely to be no lasting agreement and effective collaboration between the states on the recovery of the 450GL.

- **On whether the underlying assumptions in the original modelling used to develop the objects and purposes of the Act and the Basin Plan have been sufficiently adjusted for the impact of improved technologies.**

The underlying assumptions in the original modelling used to develop the objects and purposes of the Act and the Basin Plan were then and remain the subject of significant debate. The Murray Darling Basin Plan came into effect in 2012, with a planned staged implementation of major reforms over a 12-year period.

The allocation of water resources and the changes in availability continues to impact communities, and ecosystems requiring adaptive strategies and planning foresight if communities are to capture the benefits of the implementation process and pursue long term environmental and economic opportunity. There is little evidence that any of the modelling has been sufficiently adjusted for the impact of improved technologies.

- **On the likely impact of alleged illegal take or other forms of non-compliance on achieving any of the objects and purposes of the Act and Basin Plan, and the ‘enhanced environmental outcomes’ and the additional 450 GL, referred to above.**
- **In relation to any found instances of illegal take or work, on whether appropriate enforcement proceedings have been taken in respect of such matters**
- **On whether, in any event, the enforcement and compliance powers under the Act are adequate to prevent and address non-compliance with the Act and the Basin Plan, and any recommendations for legislative or other change if needed.**
- **On whether monitoring, metering and access to relevant information (such as usage data) is adequate to achieve the objects and purposes of the Act and Basin Plan and the ‘enhanced environmental outcomes’ and additional 450 GL referred to above.**

The allegations of non-compliance in NSW as aired on Four Corners, and further revelations are of serious concern to communities and governments across the Basin. Proper compliance with water rules, and consistent, fair, and equitable water rules, is crucial for ensuring community confidence in Basin Plan outcomes along the entire length of and breadth of the system.

In times of severe drought, communities at the end of the system need confidence that upstream States and water users are doing the right thing and that Basin Plan environmental watering will operate as expected. Similarly, compliant water users need confidence that unethical competitors will not gain an unfair advantage. And more broadly, our communities must have confidence in the rigors of the measuring, monitoring and compliance regimes that are essential to a fair and balanced, effective implementation process.

Two measurement issues of concern are

- a) the effective accounting of irrigation efficiency projects on return flows in determining how much water has been recovered for the environment, and
- b) the way that evaporation losses are accounted for across the Basin.

A question for the Commission is how the system should be consistently metered across all jurisdictions to ensure that all diversions and associated evaporative losses are properly and equitably accounted for. For example: how are evaporative losses from delivery channels being accounted for and who is paying for these losses?

There must be effective regulation of the Barwon-Darling River System, with a clear focus on a standardised state-wide solution. The Water Sharing Plan areas may need to be redefined to better meet the objectives required under the Water Resource Plans and the long-term environmental watering plans.

The MDA agrees with the currently agreed mix of environmental outcomes and adds that more outcomes should be defined, including:

- ❖ Integrated management of environmental water and accountability around flows.
- ❖ Integration with defined social and economic impact targets.
- ❖ Enhancement of multiple uses of environmental flows.
- ❖ Greater reliance on local knowledge and cultural knowledge.
- ❖ Greater synergies between environmental benefits and cultural flows.

- ❖ Mitigation of adverse impacts by pulsing flows and finding a solution to bank degradation caused by these pulses.
- ❖ Mitigation of cold water pollution.

The MDA supports the following additional measures

- ❖ Review of flow classes to better align with state and interstate standards.
- ❖ Review of changes to licence pumping heights and pump sizes.
- ❖ Adequate restrictions in periods of low flow.
- ❖ Consideration of salinity issues in weir pools.
- ❖ Better use of local government knowledge.
- ❖ All measures must aim to balance environmental, social, and economic impacts.

Transparency in the measurement and monitoring of both environmental and consumptive water flows is also essential. A lack of effective monitoring and reporting mechanisms, as well as a lack of action on non-compliance has contributed to an erosion of confidence and fuelled state and regional divisions across the Basin.

Clearly there is a lack of a transparent system for identifying and reporting upon licence conditions, pumping rules and pump installations.

On the matter of what information should be included in a public register, the MDA believes:

- ❖ There needs to be a single point of access register that provides easily accessible information.
- ❖ Information about when pumping is and isn't allowed needs to be articulated in common language.
- ❖ There needs to be a greater alignment between interstate and interagency nomenclature.
- ❖ The MDA has been advocating for investment in enhanced water literacy across the Basin and has prepared several project proposals.

On what information should not be made public, the MDA believes:

- ❖ Commercial information that may risk the commercial competitiveness of a business should not be made public, however this would have to be stridently administered for commercial sensitivity not to provide a blanket avoidance of disclosure.
- ❖ Sensitive information should still be reported and monitored in live time by the relevant agencies.

The MDA is concerned about the impact of diversions from the floodplain on the greater river system, the environment and other water users.

It doesn't seem clear who is responsible for policing this take and regulating works on the floodplain. The MDA believes such works should be subject to rigorous permission processes and should go through a community consultation process.

The MDA believes rainfall collected in floodplain diversions should be included in the licensing framework and measured in entitlements.

MDA members broadly support a no meter, no pump policy. This is required to restore accountability and confidence and trust in the Basin Plan. MDA members recognise the limitations of an absolute policy and agree that a metering target of 95 per cent of water take would be sufficient. All large irrigators should be metered completely, with no exceptions.

On what additional objectives should be considered, the MDA believes:

- ❖ Adequate and appropriate penalty and prosecution frameworks must be in place to deter water users from calculating penalties as the cost of doing business.
 - ❖ Action must be taken to inspect and remove illegal river diversions or blockages.
 - ❖ The Barwon-Darling Water Sharing Plan needs to be independently reviewed.
 - ❖ Changes such as the increase in pump sizes for A Class licenses need to be reviewed and previous pump sizes reinstated to protect environmental water and permit a more even flow of water to downstream irrigators.
 - ❖ Licences should remain with the property they were issued to and not be transferrable;
 - ❖ Greater independence and oversight of the relationship between Government and irrigators.
 - ❖ Accurate and standardised metering is paramount. Meters must be maintained.
- **On whether water that is purchased by the Commonwealth for the purposes of achieving the objects and purposes of the Act and Basin Plan and/or the ‘enhanced environmental outcomes’ and the additional 450 GL referred to above will be adequately protected from take for irrigation under water resource plans, and any recommendations for legislative or other change if needed.**

Environmental water is essential to the health, wellbeing and sustainability of the Murray-Darling Basin system and the communities within it.

MDA member councils keenly acknowledge the numerous benefits of environmental water to land and water ecosystems and support the legislation that ensures provision of such volumes of water as may be sufficient to maintain the health of that environment.

The impacts of environmental watering events are complex and differ from wetland to wetland, community to community and government to government.

The MDA acknowledges the importance of the role of the CEWO and our state based natural resource management agencies in administering complex legislation and managing the use of environmental water. The MDA and its member councils have always valued a constructive and respectful relationship with the CEWO.

Formal inclusion of local government through the MDA – along with local land services, catchment management authorities and CEWO local engagement officers - in the planning for environmental watering would foster greater public confidence in environmental watering and maximise the use and benefit of environmental water for the protection and restoration of environmental assets.

Environmental water management could be enhanced by greater investment in and reliance on local knowledge to develop solutions to unintended and adverse consequences inherent in environmental watering events.

These consequences include the proliferation of carp spawning associated with overbank flows, overwatering of redgum forests, cold water pollution, and accelerated river bank undermining and degradation associated with river pulses.

On whether the Basin Plan in its current form, its implementation, and any proposed amendments to the Plan, are adequate to achieve the objects and purposes of the Act and Basin Plan, the ‘enhanced environmental outcomes’ and the additional 450 GL referred to above, taking into account likely, future climate change.

Current Basin Plan SDLs are based on an assessment of historic climate variability over the past century and do not consider the likely impacts of climate change on future water availability. We know that climate change is likely to result in lower average rainfall patterns and more frequent and extreme droughts. CSIRO has predicted that median river flows in the southern Murray Darling Basin will decline 13% by 2030. Current SDLs may quickly become unsustainable when dryer average conditions happen. It is essential that any future SDL reviews take the likely impacts of future climate change into account.

In the absence of natural upstream river flows, both the barrages and sufficient freshwater flows are essential for maintaining the environmental values of the system as well as an appropriate supply of “fit for purpose” water to existing users across the Basin.

Consideration should be given to the impact that future sea level rise is likely to have on the effective operation of the barrages and correspondingly, on the ecology and economic productivity of the Lakes & Coorong region.

Current projections from the CSIRO’s Climate Change in Australia website indicates that sea levels in the Murray Basin region could rise above the 1986-2005 level by up to 0.64M by 2090 under a medium emissions scenario and by up to 0.84m by 2090 under a high emissions scenario. Whilst the existing barrages do have some inbuilt adaptive capacity, it is generally accepted that under these long-term projected conditions the barrages would struggle to perform their function (i.e. separating the freshwater of Lake Alexandrina from the estuarine water of the Coorong and Goolwa Channel) on a regular basis without adaptation.

No detailed modelling has been publicly released on the potential frequency, duration, extent and/or impacts of barrage failure under varying amounts of sea level rise. Nor are we aware of any detailed quadruple-bottom line assessments (i.e. social, economic, cultural, and environmental) of potential adaptation responses.

The barrages are “River Murray Operation Assets” and jointly controlled by the Australian, New South Wales, Victorian and South Australian governments. By agreement of the four asset controlling governments, the Murray Darling Basin Authority (**MDBA**) manages the River Murray Operation Assets and under this structure, SA Water is appointed as the operating authority. We suggest that State and Federal government investment is needed to undertake the following:

- detailed modelling of the potential frequency, duration, and extent of barrage failure under varying levels of sea level rise;
- a review of existing literature and commissioning of further research to evaluate the likely social, economic, environmental, and cultural impacts of various adaptation responses to develop a preferred long-term adaptation pathway; and
- delivery of a supporting community education and engagement strategy to promote informed local debate about the future barrage upgrades and operation.

The MDA acknowledges the significant contribution of MDA Regional submissions in informing the above paper, and we urge the Commission to closely consider all feedback and submissions from local governments across the Basin. Local government is deeply attuned to the issues impacting our local communities and environments and has much of value to add.

On behalf of local government across the Murray Darling Basin, we thank you for the opportunity to make this submission and look forward to providing comment at the hearings in due course.

Yours sincerely,



Emma Bradbury
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Murray Darling Association