



AUSTRALIAN SENATE

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Submission to Productivity Commission Review of the Murray Darling Basin Plan

The Murray Darling Basin Plan was negotiated during the Millennium Drought, in an atmosphere of crisis based on the perception that drought was the new normal. As a result, it is deeply flawed.

This review by the Productivity Commission offers an opportunity to identify its deficiencies and to propose amendments based on sound objectives and data, in the absence of a state of panic. Had the Plan been developed in that context originally, I am confident it would have been substantially different.

I chaired the Senate Select Committee which inquired into implementation of the Murray Darling Basin Plan. I attach a copy of the Committee's report, tabled in Parliament in March 2016, noting that it was not listed in the References to the Issues Paper.

The following comments are based on evidence heard during that inquiry, as well as information received subsequently.

The Murray Mouth

An aim of the Plan is to keep the Murray Mouth open nine years out of ten by increasing the flow of water to at least 2000GL over the barrages. This is not a realistic environmental outcome and should not be an objective of the Plan.

During Spring 2016 there were major floods in the Murrumbidgee, Murray and Goulburn rivers which saw flows to SA in excess of 60,000ML per day for over five weeks, peaking at 94,246ML on November 30. From November 30 until December 18, flows across the SA border exceeded 65,000ML per day.

However, on January 9 2017 the SA government resumed excavation of the Murray Mouth. The five weeks of high flows had failed to clear sand bars at the Murray Mouth. Natural tidal scouring of the Murray Mouth is severely restricted by the presence of the barrages, which prevent the entry of sea water into Lake Alexandrina, and by Bird Island, located directly in front of the Murray Mouth.

Bird Island has only formed since the barrages were erected (1935-1940); it continues to grow in size and impede flow.

The Murray is the only river in Australia with an artificially fresh estuary. That is, sea water cannot enter during periods of low river flows. The barrages have substantially changed it from its natural state. As a result, the mouth of the Murray cannot even remain open one year in ten.

Even if the barrages were removed and the mouth fully opened to the sea, it is not clear that it would remain open for nine years out of ten. Historical records suggest it was regularly closed prior to the installation of the barrages.

The Lower Lakes

The Lower Lakes (Lakes Alexandrina and Albert) evaporate between 800 and 900GL of fresh water per annum. If this evaporation was sea water (or more correctly, a mixture of sea and fresh water), a significant amount of fresh water would be available for consumptive or environmental use further up the system.

Fresh water evaporation is water lost to agricultural production, potentially worth \$300m to \$900m.

No consideration is given to this in the MDB Plan. The barrages that prevent the entry of sea water were erected in order to stop salty water from contaminating the upstream river. The Plan did not consider whether they are still required or if there are better options for achieving this outcome.

A 2014 document, “Building resilience to a changing climate” prepared for the South Australian Murray Darling Basin Natural Resources Management Board, concluded that, irrespective of the Plan, climate change (including rising sea levels) in the future will mean that it will be difficult if not impossible to maintain the Lower Lakes as a freshwater system. This view was also expressed by wetland expert Professor Richard Kingsford in 2009.

The Select Committee heard argument claiming that the barrages should be removed to restore the Lower Lakes to their natural estuarine condition. It was argued that Bird Island should also be removed and the Murray Mouth excavated to ensure the free flow of water.

The risk of salinity to the water supply of Adelaide and the South Australian irrigation districts could be avoided by constructing a weir close to Wellington, which is downstream from their offtakes.

The Committee heard there may also be a case for increasing the size of the pipelines that supply the small number of agricultural users on either side of Lake Alexandrina.

Claims that removing the barrages would have a major disruptive effect on the lakes were not substantiated. While the lake ecosystem (aquatic life in particular) would change as it returned to what it was prior to 1940, this does not necessarily mean it would be any worse off. In particular, there is no reason to believe the tourism or fishing industries would suffer.

It would be appropriate for the Commission to consider whether retention of the barrages is justified on social or economic grounds, given that the environmental case is flawed, and to compare this with the social, economic and environmental benefits of the additional water that could be available upstream.

The Coorong

The Coorong is dying. It is stagnant, highly saline and stinking, and the Plan does nothing to save it.

If the environment was unaltered by humans, sea water entering through the Murray mouth would flush the Coorong. However, this cannot occur because the mouth is rarely open. Fresh water from Lake Alexandrina can only assist when it flows over the barrages, and this is also supposed to keep the Murray mouth open.

Further, 4,000 gigalitres of fresh water which would naturally flow from the region into the Coorong, flows directly into the sea as a result of the South East Drainage Scheme. This diverted water, double the minimum amount sought to flow over the barrages, could substantially improve the health of the Coorong and reduce demand for water from the Murray River.

Although geographically within the Murray Darling Basin, this South East area of SA was deliberately excluded from the Plan. It is a serious flaw that this scheme, its operation and the land area it affects are excluded, while the Coorong and its environmental condition are used as a justification for removing water from communities in four states.

It would be appropriate for the Commission to review this aspect of the Plan, and to recommend water from the South East Drainage Scheme be redirected into the Coorong.

Environmental Watering Plans

In submissions to the Select Committee, the strongest advocates for full implementation of the plan invariably referred to the importance of the water retrieval targets, including additional amounts. However, none pointed to any deficiencies in respect of environmental watering plans. No areas without a plan were nominated, and no areas were mentioned where the watering plan was said to be deficient.

Only the Menindee Lakes were mentioned as lacking a watering plan, by the Broken Hill community, although this was for recreational rather than environmental purposes. The Select Committee was sympathetic to this claim, although it acknowledged the lakes were naturally ephemeral and, being at the end of the Darling River, water supply would always be uncertain.

This highlights the reality that, beyond the issue of the Lower Lakes and the Murray Mouth, there are no obvious gaps in environmental watering. Indeed, there are quite a few claims that watering has been excessive, with negative environmental consequences.

As one witness said at the inquiry, the answer to a healthy environment is not simply to add water. The Australian environment has natural dry periods and only requires water in the right quantities, at the right time. The assumption that the more water is available to the environment, the better the outcome, is false.

It would be appropriate for the Commission to consider whether demands for “implementation of the plan in full” are soundly based, given they are never supported by examples of inadequate environmental watering.

Is the Plan working?

Environmental outcomes in the Basin have improved since the end of the drought. However, it is not clear whether the improvement is due to the 2011 and 2016 floods and improved weather, the results of the existing Living Murray Program initiatives, or from environmental watering under the Plan.

This uncertainty is due in part to the failure to set baseline environmental benchmarks and to report against those benchmarks. This is unacceptable given the expense of the Plan to taxpayers.

Salinity levels have been a key driver of the need to secure additional water for Basin rivers. The Basin Salinity Program report (released November 2015) shows vastly improved salinity levels, leading to the winding back of salt interception programs. Results for July 2012–June 2017 show that salinity target values were achieved at four of the five reporting sites – Murray Bridge, Morgan, Lock 6 and Milang.

Engineering solutions such as the pumping of environmental water at Hattah Lakes and Lindsay Island demonstrate the potential for more dynamic management of salinity (along with other environmental factors) instead of relying on flooding. This has the potential to reduce demand for environmental water.

Native fish health is one of the four key indicators used by the Murray Darling Basin Authority for Basin health. Cold water pollution has been identified as having a major adverse impact on native fish spawning.

Over \$100 million has been spent on research into cold water pollution but little beneficial action has been implemented. Following is an extract from the Senate committee report:

The MDBA advised the committee that the operation of dams is the responsibility of basin states and as such cold water pollution is a responsibility of basin state governments.

However, the MDBA is responsible for native fish health under the Plan. This is an example of poor accountability and contrary to effective implementation of the Plan.

Lack of effective monitoring was of broad concern to the Select Committee. In answer to a question about monitoring and evaluation at the Senate hearings in Canberra, the Commonwealth Environmental Water Holder said:

“We do monitor the effects of Commonwealth environmental water. We are about to publish the first year's results of our long-term intervention and monitoring program, a five-year \$30 million investment in monitoring and evaluation...”

While this seems to be a significant sum, in fact it is mostly spent on just seven key sites.

The Committee was not satisfied with the level of monitoring. Its recommendations 26 and 27 are reproduced below:

26. The committee recommends that the MDBA, Commonwealth Environment Water Holder and basin states conduct greater monitoring, objective evaluation and communication of environmental watering activities, and that the MDBA collate and publicly report this information.

27. The committee recommends that the government fund the expansion of the Commonwealth Environmental Water Holder's existing Long Term Intervention Monitoring Project to include more sites around the basin and provide greater monitoring and evaluation of basin environmental watering activities.

Constraints Management Strategy

The Constraints Management Strategy was devised to deliver an additional 450 GL of water over and above the original agreed 2750 GL.

This 450 GL is to be primarily delivered as 'top-ups' to high natural flows to create floodplain inundation in SA. In order to achieve the flow rate required at the SA border to flood these sites, there will be major flooding of several Victorian tributary rivers and the Murray from at least Yarrawonga weir to the SA border.

Before this can occur, the Plan must be revised to ensure the Commonwealth is liable for the deliberate flooding of private property. It is not possible to deliver the additional water without such flooding.

The modelling used to support this additional water is entirely inconsistent with local and historical knowledge of river flows.

It would be appropriate for the Commission to consider the cost implications to the Commonwealth from implementing the 450 GL additional flow.

Snowy Hydro

With ownership of the Snowy Hydro Scheme to pass to the Commonwealth, the Commission has an opportunity to assess the priorities of energy, environment, social and economic returns from this major water asset.

It would be appropriate for the Commission to review the priorities of Snowy Hydro and whether its use of water is consistent with the objectives of the Plan.

Lack of socio-economic analysis

The Committee considered the most egregious aspect of the implementation of the Plan was the lack of socio-economic analysis of the likely effects of removal of large quantities of productive water from farming and the consequences for regional communities.

This appeared to have the most devastating effects in the Goulburn Murray Irrigation District and the Riverina, where some communities lost up to 30 per cent of allocated water. The recent release of the socio-economic analysis undertaken as part of the Northern Basin Review confirms what farmers and

rural communities had been saying, both in the northern and southern basin: the removal of large quantities of productive water has serious adverse impacts on communities.

The Commission should closely examine the continuing financial and social impact of the Plan on communities, and whether there are appropriate compensating benefits elsewhere. It was the view of the Committee that such benefits could not be found.

Senator David Leyonhjelm