

Murray-Darling Basin Plan: Five-year assessment - Productivity Commission 2018

Submission by Bob Newman

Review Process

The Productivity Commission review process is limited due to the short time for submissions especially as the publicity for the review was minimal at the outset. I only discovered the dates for the consultation meetings and the submissions very late and practically by accident. Accordingly this submission is an early draft of my thinking and is based on opinion rather than evidence. I am happy to elaborate and substantiate my comment if I can be granted a reasonable time.

Triple Bottom Line

The Basin Plan Implementation appears to focus / bias towards socio- economic outcomes rather than ecological priorities. It was unreasonable at the outset to expect a Water Plan to drive regional restructuring. The notion that the river communities are wholly dependent on irrigation requiring continued overallocation and water take is naive and simplistic. The irrigation industries have a history of crises resulting from poor market decisions, with the recent dairy industry woes as a prime example.

In my opinion Australia needs to embark on a regional development planning approach to cope with the rapid population growth which is causing so much consternation in Sydney & Melbourne. The Productivity Commission should examine how its investigations could foster a more integrated understanding of Australia's broader issues.

The Australian climate and consequent stream flow is highly variable (more so than any other major global river basin). Reconfiguration of inland economies needs to recognise this fact and become less reliant on continued unsustainable water take. Inland tourism including ecotourism is growing rapidly and the evidence is growing that this could become more valuable than irrigated agriculture. The marring of the landscape with irrigation ventures that scar the landscape is in itself a drag on tourism potential.

Market mechanisms

The Basin Plan necessitated the establishment of a wider market in water rights. Whilst this has the potential to ensure that water rights pass to the highest value opportunities the approach is flawed if the rights were not well defined and in fact were often not 'real'.

Given the complexities of the hydrology of rivers and the lack of data and model simulations, the 'market' got ahead of the 'governance'. The water allocation products were incredibly diverse and often defined on transient flow regimes rather than a long run (114 year) dynamic right. The water rights that the CEWH has acquired is poorly defined and will be difficult to manage in an integrated way

The expansion and perhaps distortion of the water market has enabled some water trades to generate extraordinary financial windfalls to some individuals. The growth of corporate investment in irrigation farms has changed the nature of irrigated agriculture. Many believe to the detriment of regional communities.

Perhaps a target measure that has not been considered in the Plan is the value of Jobs per GL!

Governance and institutional arrangements

The need to arrest the decline in ecologic health of the whole Basin or at least the river corridors was first acknowledged in the 1985 Basin Environmental Assessment which led to the setting up of the MDBC from the earlier River Murray Commission which had been focussed on infrastructure and river operations. Important decisions were made in relation to salinity management, the Cap on diversions and the first step decision for the Living Murray. Whilst these decisions were slow to evolve they do appear to have been made by interstate negotiations in good faith based on solid evidence and taking community aspirations and concerns into account. The governance involved a unanimous approach by six governments. Decisions once made were difficult to 'unmake' due to the veto arrangements. In recent times it appears that a more combative approach has emerged with individual States and powerful lobby groups becoming entrenched.

Targets

There is no doubt that the ecological health of the Basin's river corridors has been heavily modified by the level of river regulation and water take which was allowed to develop over more than a century. The challenge for the Basin Plan was to identify the overall outcome for a choice of levels of intervention. The eventual choice of 3200 GL/a (2750 GL/a + 450 GL/a) was clearly a compromise but nevertheless was associated with a set of biophysical ecological outcomes. This approach has the potential to mask the opportunity for a comprehensive integrated ecological outcome. It is a surrogate and very much a river manager's approach. Given the drivers for the Basin Plan perhaps that can be accepted.

The conversion of a suite of ecological outcomes to ecological targets and subsequently to hydrologic targets is a somewhat simplistic approach. There is a need for a clearer definition of the overall ecological aspiration / outcome/ goals and targets. Are we continuing with an icon site protection (ecological museums) or a whole of system recovery? What are we expecting for the whole system recovery and improvements, arrest in decline or just avoid a collapse?

The specific ecological outcomes and targets are very difficult to identify and a variety of terminology appears to have been used in different documents. In the absence of sufficient data and scientific analysis, the approach of expert panels was probably the most efficient. However, the subsequent conversion of the hydrologic targets to equivalent ecologic outcomes in the context of SDL adjustments distorts the original objectives. The approach begins to fail when those flow regimes or flooding regimes at particular locations become the goal and are then used to revise the SDLs. This leads to perverse outcomes whereby the ecological outcomes at other locations are no longer considered in detail.

Models

The MDBA, and its predecessors the MDBC and RMC, have a long and comprehensive history of generating hydrologic models. There is an excellent hydrographical record (back to 1896 and earlier) on account of the early development of river regulating structures (dams and weirs) for the shared rivers (Murray and Darling below Menindee). The tributary rivers have a much sparser data set, especially in the early part of 20th Century and the models have been in a constant state of transition even over the past 20 years.

There is no comprehensive integrated basin model. The modellers have had to cobble together a disparate suite of models and this has resulted in considerable mismatch at the boundaries. Clearly some effort has been made to overcome this but I am advised that scenario modelling requires a lot of 'human intervention'.

Model Reviews: There appears to be a heavy reliance upon a single reviewer who has past close involvement with State's model development. Some international review overview should have been sought for such a critical task.

Allocation & Diversion History

I am familiar with the history of diversions and metering in SA and recognise that there has been some misgivings over the period since the first SA Water Act when the concept of mechanical diversion meters was first taken on prior to that diversions were not metered but related to crop areas and theoretical understanding of crop requirements. The meters were established to a standard which was not always complied with. Consumption at individual farm scale was often not well measured especially in the days of flood irrigation. System losses were also poorly documented. Nevertheless this is the Gold Standard for long term metering history. My perception is that the upstream States have a far less well documented history. Accordingly the history of water take and the compliance with the 1997 cap on Diversions is questionable. Accordingly, the upstream tributary models are compromised from both a historic flow and diversion perspective.

Water Management Plans

The WM plans depend upon the accuracy of the models over the 114 year history period. For the reasons explained above these models have low confidence. It appears that some upstream States are using this uncertainty to re-write history to the advantage of local opportunists and with disregard for downstream obligations both locally and further downstream.

Temporary closure: this submission is a first draft and has been temporarily terminated due to time constraints; Hopefully I'll have an opportunity to revise and complete it.

Bob Newman