

Introduction

1. I retired in April 2018 after five years as the Commonwealth Environmental Water Holder (CEWH). I have had a long career in nature conservation; natural resource management; and environmental protection within government agencies across three States and the Commonwealth. Prior to my appointment as the CEWH, I was the Secretary of the ACT Department of Environment, Climate Change, Energy and Water and then the Secretary of the expanded Environment and Sustainable Development Directorate. In this role I served as the ACT's representative on the senior officials group which negotiated the draft Basin Plan (the Plan) for consideration by State and Commonwealth Ministers. I also attended the Murray-Darling Basin Ministerial Council (MDB MinCo) meetings which determined the final Plan, as the principal adviser to the then ACT Minister. I hold a first class Honours degree in science (zoology and botany).
2. The Murray-Darling Basin Royal Commission invited my participation. I accepted that invitation because I believe the Commission will improve transparency in decision-making around the implementation of the Plan. Transparency is critical to high-quality decision-making. It is also critical for public trust in administration of the Plan (essential given its an investment of up to \$13B of taxpayers' funds).
3. The opinions expressed in this statement are entirely mine. They are not (nor do they purport to be) the views of the Commonwealth Government or any of its agencies, especially the current CEWH. My views have been informed by my experience in the development of the Plan and subsequently as the CEWH. In that regard I note that I am the longest serving CEWH and had overseen a considerable expansion of the Commonwealth environmental watering program.

Overview

4. The Commission has received submissions and witness statements that provide comprehensive, high quality background and commentary that cover all of the Commission's TOR in considerable detail. I am unable to do so. Instead I have focussed on a small number of key issues around implementation of the Plan. My comments are outlined as an overview in order to facilitate their narrative flow. I also offer minor additional comments on some of the Commission's TORs.
5. There are a number of foundational observations which I believe are critical context for an understanding of the issues surrounding both the development and subsequent implementation of the Plan:
 - the Plan is an attempt to respond to a significant, long-term decline in the environmental health of the rivers, wetlands and flood plains of the Murray-Darling Basin caused by human activity, including (but not limited to) regulation and extraction of water. These impacts are not the temporary effects of severe drought as suggested by some:
 - the Plan is an imperfect political trade-off necessary to secure the participation of SA, Victoria and NSW. It is also the best opportunity

since federation to tackle, at a Basin-scale, some of the serious environmental problems in the Basin;

- the bulk of significant structural (rather than operational) decisions in terms of Plan implementation are made by politicians, singly or collectively through the MDB MinCo, and are therefore political in nature. They will occasionally (or accidentally) reflect best-practice science;
 - proper implementation of the Plan and especially delivery of Commonwealth environmental water is dependent on the Basin States;
 - irrespective of the merits of the volume of Commonwealth environmental water determined in the Plan, there are a suite of mandatory generic and specific environmental outcomes defined in the Water Act, the Plan and the Basin-wide Environmental Watering Strategy. Success is defined and measurable. In this regard, it needs to be noted that these outcomes are Basin-wide. There is occasionally an unhealthy focus by stakeholders on a few, or even a single outcome (eg Murray Mouth opening);
 - achievement of those outcomes is only possible in the long-term (decades) and is reliant on Commonwealth and State managed (or held) environmental water; State planned environmental water; and natural floods. However, early indications from monitoring of Commonwealth environmental water are positive and suggest the program is tracking toward desired outcomes.
6. Against this background, I believe there are two overarching but separate questions in consideration of the Plan. The first goes to the fundamental question of what constitutes an “environmentally sustainable level of take” (ESLT). In other words, whether the 2750GL (or the volume as adjusted through the processes identified in the Plan) of Commonwealth environmental water is sufficient (in conjunction with other environmental water) to deliver the legally mandated level of environmental health in the rivers, floodplains and wetlands of the Murray-Darling Basin. The second, accepting that the Plan is a politically-determined compromise between competing demands for water, is whether the Basin States and the Commonwealth are properly meeting, in a timely way, their obligations under the Water Act, the Plan (and its subsidiary instruments) and all inter-governmental agreements and contracts. My focus is on the second question because as the CEWH my expertise and experience was directed to implementing the Plan as it is written.
7. While I think that it is essential to continue to have an informed discussion on what an improved Plan would look like, it should not be at the cost of commitment to implementing the current Plan. Participants in this discussion must be mindful of the risks associated with diminishing the value and importance of the Plan (and the institutions responsible for its implementation) when there is no viable alternative. This Plan, properly and fully implemented, will deliver significant improvements in the environmental health of the Murray-Darling Basin.
8. Optimal implementation of the Plan is not just a matter of legislative interpretation. The governance framework and the culture of the institutions charged with implementation are also important. Implementation is currently being undertaken under the wrong governance. The Plan is, at its essence, a biodiversity conservation plan. Its implementation should be led by Basin State and Commonwealth environment ministers. I accept this will not, in itself, deal with the obstructionist or undermining approach of the Victorian and NSW Ministers.

However, it will at least mean the lead agencies in providing advice in each jurisdiction would be their environment departments. All of which understand both nature conservation and environmental water management. It will also mean the MDB MinCo is likely to have a fundamental shift in approach to one of collaborative and constructive problem-solving. Revised governance should include proper COAG scrutiny to ensure that the regular progress reports provided are rigorously analysed and corrective action, if necessary, is directed by the Prime Minister and Premiers. Current COAG review appears token at best.

9. The Plan won't (and cannot) work without the active collaboration of the Basin States; it will only be fully implemented and working optimally if the States meet or exceed their obligations under the Plan, the Water Act and the various inter-governmental agreements. At a minimum, the Basin States must collectively or, where relevant, singly:
 - deliver the full 450GL of the supply measures ("upwater");
 - identify and fix all the major constraints to environmental flows, including those operational rules and practices limiting the efficacy of environmental water;
 - ensure full delivery of the Prerequisite Policy Measures, especially the effective protection of environmental flows throughout the Basin (and the judgement of effective protection should be left to the CEWH acting independently);
 - guarantee the absolute protection of all State-based planned environmental water (PEW) to, at least, the level prior to the establishment of the Plan;
 - for NSW, the full and proper implementation, in a meaningful timeframe of all the so-called tool box measures agreed in return for the 70GL reduction in Commonwealth environmental water in the northern Basin;
 - provide sufficient funding of relevant state agencies (such as the NSW Office of Environment and Heritage) to properly meet their functions. These agencies must also be fully included in all relevant State-based decision-making processes.

10. The Plan does not reveal de novo the fundamental importance of managed environmental water for the maintenance and restoration of the ecological health of the rivers, flood plains and wetlands of the MDB. We already knew that from first principles of the ecology of flow-dependent freshwater systems. We already knew that from the experience of environmental watering programs implemented by the Basin States prior to the emergence of the Plan. We already knew that from the results of environmental watering programs elsewhere in the world. What the Plan's environmental watering program does show is:
 - absolute confirmation of that earlier understanding of the ecological benefits of managed environmental water;
 - an unequivocal demonstration of the significant added value of a large volume of managed environmental water able to be deployed across the entire Basin;
 - the very real benefits of a Commonwealth entity with no jurisdictional limitations (that exist, by definition, for a Basin State) able to make trade-off decisions over space and time that ensure optimal outcomes for the Basin as a whole.

11. The Plan (irrespective of the volume of Commonwealth environmental water) is not enough to restore any reasonable expectation of Basin ecological health. There are other key activities which are absolutely essential (and most are the province of the States), including:
 - fix cold water pollution from all significant water storages;

- install (or make installation mandatory) fish exclusion screens throughout the regulated system;
- immediately cease the stocking of exotic fish species, such as trout;
- protect and revegetate riparian corridors;
- resnag rivers as appropriate;
- wherever possible, remove weirs and other impediments to animal migration;
- subject to legislative approvals, support the introduction of biological control for carp and other invasive species;
- address water quality issues where it compromises ecological outcomes;
- establish and maintain properly funded integrated catchment management.

TOR 1: 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.

12. Whilst CEWH I became concerned at the quality of draft NSW Water Resource Plans. These concerns were part of a broader anxiety I had in relation to the attitude of the relevant NSW Minister and the NSW water department (which has had a number of name changes but at that stage was the NSW Department of Primary Industries Water) in relation to their clear failure to properly implement, in a timely fashion, their responsibilities under the Plan and associated intergovernmental agreements. It was clear to me that the NSW Minister was reluctant to meet those responsibilities in any way which either he or some of the politically active elements of the NSW irrigation industry deemed inimical to the industry's interests. Some of these industry players have an in-principle objection to the Basin Plan and seek every opportunity to undermine it with the ambition of ultimately having it repealed entirely.
13. The importance of, at least, maintaining the rules in Water Resource Plans (WRPs) which protect "planned (or rules-based) environmental water" cannot be overstated. The environmental outcomes identified in the Basin Plan and its subsidiary documents (principally the Basin-wide Environmental Watering Strategy) are dependent on both managed or held environmental water (such as Commonwealth environmental water) and planned environmental water (PEW). It is a fundamental undertaking by Basin States to protect planned environmental water provisions during the revision of WRPs. Indeed, it is a legal obligation under section 10.28 of the Basin Plan. Yet there has been clear evidence that the NSW Government intends to undermine or weaken those provisions. This was the case, for example, in relation to a provision in the Namoi Water Sharing Plan (WSP) aimed at contributing to the conservation of native fish. It was weakened by the NSW DPI Water under pressure from Namoi Valley irrigators. Similarly, provisions establishing translucent flows under the current Murrumbidgee WSP were under threat from local irrigators with the public support of the NSW Minister and the then local MP. Translucent flows have been in operation in NSW (including beyond just the Murrumbidgee) for well over a decade and are fundamentally important to environmental outcomes.
14. It also appears that Victoria may also be weakening protection of baseline PEW flows by arguing that environmental flows included in their bulk entitlements have multiple purposes and cannot be defined as PEW. This is, in my view, a semantic device designed to avoid s10.28 of the Plan. Irrespective of the legal niceties it certainly appears to be an attempt to subvert the Plan's spirit and intent of protecting existing (ie prior to the Plan) environmental

flows. I also note that in the Victorian Government's Water and Catchment Amendment Bill 2017 the considerations for utilisation of environmental water reserves have been broadened to allow for "social and recreational uses and values of waterways." My suspicions in this regard appear warranted given the Victorian Minister's apparent undermining of the environmental provisions of the Plan (eg the upwater). She has formed a political alliance with the NSW Minister and they constitute a powerful bloc on the MDB MinCo. More importantly, NSW and Victoria constitute a large and vital part of the Murray-Darling Basin and their lack of commitment to a full and proper implementation of the Plan seriously compromises its environmental outcomes.

15. As to the central question underpinning this TOR, I believe the MDBA has the professional expertise to ensure proper compliance by the Basin States in meeting this obligation. However, they need the strong and public political support of the Commonwealth Minister to bolster their role in making these decisions.
16. There is, in my opinion, a more fundamental requirement for success of the Plan, both in relation to WRPs and across the board. Put simply, in a truly collaborative implementation by the Basin States and the Commonwealth of an agreed and legislated Basin Plan there ought be no need for the MDBA to expend effort, resources and political credit policing the States' compliance. All the Basin States should work with the MDBA and relevant stakeholders (especially the CEWH and other environmental water managers) to prepare revised WRPs that fully meet the Plan's requirements. The Plan, and by extension the environmental health of the Basin, would best be served by a shift in approach from the Basin States (most notably NSW and Victoria) from a position of obstruction, reluctance and reading down of their obligations in relation to environmental protection to one of real commitment and problem-solving. The effort NSW and Victoria put into pursuing the 650GL of "downwater" (which they saw as a benefit to their irrigation industries) comes to mind as the benchmark we should expect on the Plan's environmental provisions. With that shift the legislative requirement for WRPs (and the other environmental elements) may be met. Without it and the continuation of NSW and Victoria's calculated undermining of the Plan, I am pessimistic as to the complete and proper delivery of the Plan.
17. I am not naïve to the realpolitik of the Plan. The only way I see to driving a meaningful shift in the attitude of Victoria and NSW is through proper public scrutiny and forceful Commonwealth oversight. It is unfortunate that independent assessment of the the State's performance by bodies such as the National Water Commission is no longer possible. The Commonwealth needs to consider sanctions against poorly performing States: perhaps in relation to Commonwealth funding. As to public scrutiny, it is no coincidence that NSW, for example, has been more co-operative in a number of areas following the revelations of potential malfeasance and poor practice by 4 Corners and in subsequent media stories.

TOR 2: If any 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.

18. Addressed, to the extent of my understanding, under TOR 1.

TOR 3: 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 450GL provided for in s. 86AA(2) and (3) of the Act, respectively.

19. I have offered commentary on this question in my overview and comments under TOR1. To briefly re-iterate, delivery of the Act and Plan's objects and purposes is dependent on the States meeting all their obligations. I have already briefly discussed my concerns over WRPs. I have similar concerns in relation to the implementation of the PPMs, resolution of the constraints (physical and operational) and the operation of water infrastructure by state water agencies (principally in NSW).
20. For clarity, the attitude and performance of NSW and Victorian state agencies differs widely. The state agencies directly involved in the management and delivery of environmental water (NSW OEH, VEWH and Victorian CMAs) are highly professional, collaborative and determined to deliver on their statutory obligations.

TOR 4: 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.

21. I do not have the expertise or knowledge to comment on this TOR.
22. Aside from the impact of improved technologies, I think implementation requires a different mind-set from the State agencies or utilities managing water regulation to accommodate evolving (ie improved) patterns of environmental watering. Experience in environmental watering at a Basin-scale will grow rapidly and demand of those utilities a flexibility and a willingness to accommodate very different requirements to those of irrigators.

TOR 5: If 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 450GL 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?

23. I have already provided some commentary on this question (especially in regard to governance, culture and the need for the NSW and Victorian Ministers to stop their active undermining of the Plan's environmental provisions). I have not considered legislative amendments because I have chosen to focus on implementation of the Plan as it is currently written. However, some consideration could be given to amendments which make it obligatory to consult the CEWH and related state entities on relevant decisions. For matters critical to their operational environment (eg the protection of environmental flows) it might be useful to make them concurrence authorities.

TOR 6: 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 450GL referred to above, and any recommendations for legislative or other change if needed.

24. As already outlined, my commentary is centred on ensuring that the Basin States and the Commonwealth meet their legislative and contractual obligations. Compliance with those obligations will go a very long way to achieving the objects and purposes of the Act and Plan.

TOR 7: 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 450GL, referred to above.

25. The matter of illegal take of water has been adequately covered in a number of submissions to the Commission. In my role as the CEWH, I had an expectation that the States would properly administer their water management systems, including metering, monitoring and compliance. And in the northern NSW Basin my focus was on trying to ensure NSW dealt with the legal taking of Commonwealth environmental water (initially through Ministerial embargoes on pumping and in the long-term by rule-based shepherding). I was surprised at the revelations contained in the 4 Corners report on alleged illegal actions by some irrigators. My own limited dealings with NSW in regard to compliance matters were unsatisfactory. However, I note the very useful work done by Ken Mathews, the subsequent timely and comprehensive response by the MDBA and the changes around monitoring and compliance by the NSW Government. This should prove a good basis for reestablishing trust by irrigators and the community generally in the rigour and integrity of NSW's water management. In regard to compliance I am also hopeful that State and Commonwealth agencies will make the necessary investments to utilise best available technology capable of supporting compliance.
26. I want to make a point around the issues related to activities which are legal but inimical to achieving the objects and purposes of the Act and the Plan. Floodplain harvesting is a good example. Monitoring, metering and policing floodplain harvesting in NSW (and Queensland) doesn't rectify the fatal flaws of the underlying policy. Floodplain harvesting is bad for the environment and must be reviewed with a view to abolishing it or greatly reducing it. This issue is addressed more comprehensively in Professor Kingsford's submission.

TOR 8: In relation to any found instances of illegal take or work, whether appropriate enforcement proceedings have been taken in respect of such matters and if not, why.

27. Refer to my previous comments. As I said, my limited experience in NSW was unsatisfactory. I remain hopeful that the reforms at the Commonwealth and State level will rectify the problem. It is critical in this matter, as in others under the Plan, that there is complete transparency in government decision-making. We must move away from a system which relies on NGOs embarking on drawn-out and often unsatisfactory FOI processes to find out what governments are doing on matters of public interest.

TOR 9: 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.

28. As I've said, the new arrangements on enforcement and compliance need to be continually assessed to ensure they are adequate.

TOR 10: 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 450GL referred to above.

29. In terms of environmental watering, the Commonwealth and all Basin State governments must significantly increase their funding of long-term ecological monitoring. Without it there is no possibility of best practice adaptive management and the chances of delivering mandatory environmental outcomes are diminished. The Commonwealth's LTIM is outstanding but it needs to be expanded.

30. I have already noted the need for far greater transparency in implementing all aspects of the Plan. As CEWH I had at least 10 reporting obligations on me (including to Parliament). Government (State and Commonwealth) agencies managing the consumptive use of water should have to meet the same standard.

TOR 11: 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.

31. See my earlier comments on this matter. Let me re-iterate that the NSW Government's approach to its obligation to protect environmental water (through crediting return flows, shepherding and the like) was wholly unsatisfactory. And in relation to the particular issue around environmental flows in the Barwon-Darling, I note with real pleasure the recent use of Ministerial embargoes by NSW to successfully protect Commonwealth environmental water from legal take. I also note that I had requested this action by NSW a number of times to be told unequivocally that the use of Ministerial embargoes would never happen and I should negotiate directly with irrigators to purchase protection of Commonwealth water. I can only assume that media and public scrutiny led to a change in policy by the NSW Minister.

TOR 12: 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 450GL referred to above, taking into account likely, future climate change.

32. Dealing with the likely impacts of climate change on environmental watering remains a work-in-progress by Government agencies. As the CEWH my initial focus was on trying to improve ecosystem resilience and lateral and longitudinal connectivity. But it is clear that much more needs to be done and there needs to be better use made of scientific research for management decisions. Professor Kingsford's submission offers some useful commentary on this.

TOR 13: Any other related matters.

33. It is imperative that all relevant Governments properly fund the agencies responsible for Plan implementation to the level necessary to meet their legislative obligations.