



AUSTRALIAN FLOODPLAIN ASSOCIATION

Healthy Rivers - Healthy Communities

Submission on the Proposed Amendment to the Basin Plan arising from the Northern Basin Review

The key indicators for a successful Plan for floodplain graziers in the Northern Basin revolve around low to medium flows which have:

1. A shorter time interval between flows;
2. A longer flow duration and,
3. more frequent flow years, than that currently existing.

If these three key indicators are met then so would most of the environmental indicators identified to protect and restore floodplain and wetland ecosystems in the Northern Basin.

The Australian Floodplain Association (AFA) intends to address what it considers to be key issues associated with floodplain grazing and floodplain health rather than all aspects associated with the MDBA recommendation to set the new sustainable diversion limit at 320GL + Toolkit measures.

A Flawed Recommendation

The proposed 320GL+ Toolkit model recommended by the MDBA will not satisfy the key indicators important to the AFA so it **opposes the recommendation in the strongest possible terms and recommends that the 390GL currently in the Plan be retained and tested.**

There is no benefit for floodplain graziers or prospect of improved health of floodplain ecosystems in the Northern Basin if the 320GL plus Toolkit recommendation by the MDBA is adopted.

The Toolkit measures are based on assumptions that are fundamentally flawed:

1. That NSW will protect environmental flows and shepherd them through the Barwon Darling system. This will not happen as the AFA is aware that neither NSW nor the MDBA intend to make the necessary changes to the Barwon Darling Water Sharing Plan.
2. That NSW and QLD can cooperate to coordinate releases of environmental water from storages.

The NSW government has stated that the untested strategies are “unrealistic and unachievable”¹ and it clearly has no will to see these elements of the Toolkit work. The reliance by the MDBA on the Toolkit to complement the 320GL environmental flow is a folly. The NSW government has confirmed their intention to question and test the underlying assumptions driving the MDBA models by partnering with the Victorian government and appointing an expert panel to advise on the matter.

Finally, it should be noted that no modelling was done by the MDBA on the 320GL+Toolkit recommendation, yet it is being recommended.

Statutory Obligations of the Basin Plan

To emphasise the position of the AFA I refer to the Objectives and Outcomes of the Basin Plan (which are based on the Objects of the Water Act 2007).

The objectives of the Basin Plan specifically relevant to floodplain graziers and floodplain ecosystem function are (*note: the bold italics and underlined words are those points emphasised by the AFA*):

5.02 Objectives and outcome for Basin Plan as a whole

- (1) The objectives for the Basin Plan as a whole are:
 - (a) to give effect to relevant international agreements through the integrated management of Basin water resources; and
 - (d) to improve water security for all uses of Basin water resources.***

¹ Northern Basin Review – NSW Synopsis, NSW DPI, November 2016

- (2) The outcome for the Basin Plan as a whole is a healthy and working Murray-Darling Basin that includes:
 - (a) **communities with sufficient and reliable water supplies that are fit for a range of intended purposes, including domestic, recreational and cultural use; and**
 - (b) **productive and resilient water-dependent industries, and communities with confidence in their long-term future; and**
 - (c) **healthy and resilient ecosystems with rivers and creeks regularly connected to their floodplains and, ultimately, the ocean.**

5.03 Objectives and outcome in relation to environmental outcomes

- (1) The objectives in relation to environmental outcomes are, within the context of a working Murray-Darling Basin:
 - (a) **to protect and restore water-dependent ecosystems of the Murray-Darling Basin; and**
 - (b) **to protect and restore the ecosystem functions of water-dependent ecosystems; and**
 - (c) **to ensure that water-dependent ecosystems are resilient to climate change and other risks and threats; and**
- (2) The outcome in relation to subsection (1) is the restoration and protection of water-dependent ecosystems and ecosystem functions in the Murray-Darling Basin with strengthened resilience to a changing climate.

5.05 Objective and outcomes in relation to long-term average sustainable diversion limits

- (1) The objective in relation to long-term average sustainable diversion limits is to establish environmentally sustainable limits on the quantities of surface water and groundwater that can be taken for consumptive use from Basin water resources, having regard to social and economic impacts, and in doing so:
 - (b) **provide greater certainty for all water users, including in times of drought and low water availability;**

A critical examination of the recommendation by the MDBA and the many underlying reports prepared by the MDBA which underpin the recommendation clearly show that it will not satisfy the stated

objectives nor the desired outcomes of the Basin Plan. This has been admitted by MDBA representatives at stakeholder meetings.

The AFA believes the recommendation was developed to favour one sector of the community and not the Basin as a system. The security of water to irrigators has not diminished through the state managed water planning process nor the implementation of the Commonwealth managed Basin Plan.

However, this is not the case for floodplain graziers, despite the Plan objective 5.02 (1) (d) ***to improve water security for all uses of Basin water resources***, 5.05 (1) (b) stating the Plan will ***provide greater certainty for all water users, including in times of drought and low water availability*** and objective 5.02 (2) saying;

“The outcome for the Basin Plan as a whole is a healthy and working Murray-Darling Basin that includes:

- (a) communities with sufficient and reliable water supplies that are fit for a range of intended purposes, including domestic, recreational and cultural use; and***
- (b) productive and resilient water-dependent industries, and communities with confidence in their long-term future; and***
- (c) healthy and resilient ecosystems with rivers and creeks regularly connected to their floodplains and, ultimately, the ocean.”***

The approach by the MDBA has not been even-handed.

The objectives of the Plan have not been addressed in an even-handed nor transparent way. This has seriously compromised the triple bottom line objective in the Plan. The objectives were applied to irrigation bodies in a privileged way at the cost of floodplain graziers and other groups who contribute significantly to the socio-economic and cultural fabric of the Northern Basin.

This is confirmed by FOI reports' showing the irrigator bodies were privy to information and meetings not provided to other stakeholders during the Northern Basin Review process, including the MDBA Northern Basin Advisory Committee. If the MDBA was even-handed and transparent during the Northern Basin review process, as it should have been, then the same opportunities to negotiate outcomes should have been offered to other stakeholder groups, including floodplain graziers. This was not done and confirms the MDBA has favoured the irrigator industry above all other stakeholders when FOI documents show irrigator groups had access to the draft

hydrological modelling report or an executive summary of the report about seven months prior to the report being posted on the MDBA website.

Application of Cap Factors

Cap adjustment factors applied by the MDBA suggest that the Macquarie and Gwydir systems have been over recovered; meaning environmental water should be returned for consumptive use.

It is clear that the cap adjustment factors are highly debatable within the modelling world and that uniformity of language and definition is confused. This does not engender confidence in what the MDBA is proposing. The AFA proposes that no Cap adjustment figures be applied to the Northern Basin until there is agreement among key stakeholders on the process and method for establishing Cap adjustment figures and there is confidence that those figures are consistent with the law and associated agreements.

Floodplain and Wetlands Stewardship

The present recommendation will not foster a productive floodplain grazing community with confidence in the long term because rivers and creeks will not be regularly (enough) connected to their floodplains. At Weilmoringle the interval between flows since development has risen from 350 days to 550 days (Ed Fessey pers. comm.). The Lower Balonne Floodplain Grazing Model Report confirms there has been a large increase in the maximum time between in-channel flow events that provide water connectivity (4.4 years to 10.8 years) and small overbank flow events (lignum floods) have increased from 5.3 years to 28.5 years². As a result of these man made changes in river behaviour floodplain graziers in this area have lost 20-25% of their production capacity.

A large factor in this change in river behaviour is linked to the extensive and permissible capture of overland flows upstream in Queensland under current water sharing plan rules. Unless management of overland flow harvest is addressed through amending the relevant water sharing plans no meaningful gains will accrue to floodplain graziers, floodplains or wetlands in the Northern Basin.

From an environmental perspective the Water Hole and Refuge Persistence Analysis conducted in the Lower Balonne and Barwon-Darling Rivers³ for the MDBA concluded

² Lower Balonne Floodplain Grazing Model Report page 11 MDBA 2015

³ Water Hole and Refuge Persistence Analysis conducted in the Lower Balonne and Barwon-Darling Rivers. QLD DSITI and NSW DPI Water December 2015

“To have a high likelihood of sustaining waterholes across the Lower Balonne region, flows should occur very one and half years (550 days). This threshold represents the system at a critical stage with only 10% of modelled waterholes retaining water and none being deeper than half a metre. Spells without flow longer than this would be of major concern for sustainability of waterhole function”. (note TK underline).

The Lower Balonne is therefore at a critical ecological tipping point.

The same can be said for the iconic Narran Lake wetlands which support significant water bird breeding colonies. The MDBA funded Flow and Waterbird Ecology study by Brandis and Gino⁴ recommends that 154,000ML be provided over three months and 20,000ML be delivered in the first 10 days of flows if large waterbird breeding events are to occur. The current recommendation by the MDBA supports the maintenance of the Narran wetlands but not the provision of sufficient environmental water as recommended by Brandis and Gino. Not only does this fail to satisfy the Basin Plan objective to protect and restore the wetland but it compromises the government’s Ramsar obligations, commitments to the Convention on Biological Diversity and migratory bird agreements with Japan, China and Korea.

Hydrological Modelling Concerns

The release of the hydrological modelling Report for the Northern Basin just 10 days before submissions were initially due to close was an affront to stakeholders and suggests the MDBA held non-irrigator groups in contempt.

An examination of the hydrological report highlights key areas of concern. They are:

- The inflows to Menindee Lakes and South Australia quoted by the MDBA changed following release of the report and the final figures proposed by the MDBA have no support from a model run.
- The MDBA used a Barwon Darling model that did not reflect the existing Barwon Darling Water Sharing Plan which had significant policy changes included just prior to the signing of the Basin Plan. Therefore the model results are meaningless.
- Since 1993/94 when the cap was set (but not implemented) and on which the model is based, there has been a large increase in development and storage capacity in the Northern Basin.
- The model is based on the assumption that there will be exquisite coordination of environmental flows between tributaries. This is totally unrealistic in such a large and variable catchment as the Northern Basin.

⁴ Brandis, K; Bino, G (2016) A review of the relationships between flow and waterbird ecology in the Condamine-Balonne and Barwon-Darling River Systems. Final Report to the Murray Darling Basin Authority

- The approach of averaging environmental flows over 114 years is unsound. Averaging any flows over such a long term is one of the reasons we are in such a mess at the moment, especially in the light of climate change which is also unaccounted for in the MDBA recommendation

Socio-Economic Impact Downstream of Bourke

It is difficult to see how the present recommendation will provide communities downstream of Bourke, in the Lower Balonne and around Brewarrina with ***“sufficient and reliable water supplies that are fit for a range of intended purposes, including domestic, recreational and cultural use”*** (see the 12 November 2016 NBAC business paper by Geoff Wise on Wilcannia’s historical water flows⁵). AFA members downstream of Bourke have stock and domestic water issues due to the current water management rules of the 2012 Water Sharing Plan (WSP) for the Barwon Darling system. While the WSP is a state instrument it has to be approved by the MDBA as complying with the objects of the Basin Plan. If the MDBA does not insist on certain amendments to this WSP the Darling River downstream of Bourke and the communities it supports will be severely impacted socially, culturally, economically and environmentally. The last sentence of page 11 of the Lower Balonne Floodplain Grazing Model Report describes this situation; “ Properties that rely on the river for stock and domestic water, particularly on those most affected rivers and furthest downstream, have increasingly experienced problems in relying on and accessing this water source.”

It should be noted that socio economic studies were not conducted by the MDBA on the non-irrigator communities of Louth, Tilpa, Wilcannia, Menindee or Pooncarie. But huge emphasis was placed on the irrigation community of Dirranbandi which had a population of 446 (2011 Census). Both Wilcannia (pop. 604) and Menindee (pop. 449) had higher populations equivalent to or greater than Dirranbandi at this time. When the populations of Pooncarie (328), Tilpa (159) and Louth (103) are added the total population of these communities at the 2011 Census was 1643, almost quadruple that of Dirranbandi, yet they were ignored by the Northern Basin Review. The credibility of the socio-economic study therefore has to be seriously questioned as all the above-mentioned communities are connected via the river and impacted by water management decisions taken within that system.

⁵ Wise, G (2016) Achieving Sustainability on the Darling River Downstream of Bourke. Northern Basin Advisory Committee Business Paper November 2016.

Conclusion

The AFA :

1. Rejects the recommendation to amend the Basin Plan as proposed by the MDBA.
2. Supports the retention in the Plan of the current SDL of 390GL.
3. Recommends the MDBA insist on amendments to the Barwon Darling WSP and others which will improve the reliability of healthy, adequate low to medium flows to communities downstream of Bourke.
4. Recommends the MDBA demand that Queensland amend its WSPs to prevent the harvest of overland flows.
5. Notes that the MDBA has not been even-handed and transparent in its negotiations with key stakeholder groups and asks that it be so in the future.
6. Requests that the MDBA not apply Cap adjustment factors throughout the Basin until agreement is reached between stakeholders on a Cap adjustment method and process.
7. Requests that the MDBA insists the NSW and Queensland governments install real time monitoring of extraction for all entitlement holders in the Northern Basin.
8. Believes the hydrological model used by the MDBA has such serious flaws its findings should be rejected.

Terry Korn

President

Australian Floodplain Association