

Submission
No 109

**INQUIRY INTO RATIONALE FOR, AND IMPACTS OF,
NEW DAMS AND OTHER WATER INFRASTRUCTURE IN
NSW**

Organisation: Australian Floodplain Association

Date Received: 22 September 2020



AUSTRALIAN FLOODPLAIN ASSOCIATION

Healthy Rivers - Healthy Communities

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Secretary AFA,**

<https://www.parliament.nsw.gov.au/committees/inquiries/Pages/lodge-a-submission.aspx?pk=2614>

Submission to the NSW MLC Inquiry into the proposed Mole River Dam.

The Australian Floodplain Association (AFA) is a non-government organisation, established in 2006. It represents floodplain and wetland landowners and their communities who depend on healthy rivers, floodplains and wetlands. Its membership resides predominantly within the Northern Murray-Darling Basin and includes floodplain graziers, community groups and shire councils.

Within the context of the Murray Darling Basin we are considered a peak body. Given our wide community based membership we represent a much more diverse range of views than the irrigation industry.

We welcome this opportunity to make a submission to this Inquiry. We are concerned about all 4 dams NSW proposes to build or upgrade in the MDB, ie the Mole River, Dungowan, Wyangala and Macquarie valley weir.

There is nothing confidential in this submission and we consent to any part of it being made public.

The AFA's key concerns relate to connectivity throughout the MDB. Over the past 2 decades we have witnessed a dramatic reduction in the volumes of water flowing from northern tributaries of the MDB into the Barwon-Darling system. There has been a corresponding increase in the periods of 'no flow' in the Barwon-Darling. The periods between small flow events are become longer and when they occur the events themselves are smaller. All of this has lead to a decline in river health and to enormous social, economic and cultural losses for all communities.

The four dams would add 770GL of storage capacity to the MDB. This is roughly equivalent to one third of the volume to be recovered from across the MDB to secure a healthy, working river basin. We are aware that 46.7GL remains to be recovered to meet the revised and legislated Sustainable Diversion Limit that came into effect on 1 July 2019. Approximately 30GL of this is to be recovered from the northern tributaries. It is against the spirit and intent of the Basin Plan to consider constructing more in-stream storage under these circumstances.

(a) the need for the projects, including the historical allocation of water and consideration of other options for ensuring water security in inland regions,

The water crisis we face will not be solved by more of the infrastructure and thinking that created it. AFA vigorously opposes new headwater dams in the MDB. Those built to date have dramatically changed the pulse of our landscape while the over-extraction of water continues to parch and dry it for increasingly long periods.

In the past 2 years several communities on the Barwon-Darling and Lower Darling system plus hundreds of landholders along the river ran completely out of water or had water of such poor quality that it was unsafe to touch nor fit for livestock watering. Reducing the rivers' pulse still further with new dams will exacerbate critical town water supply (TWS) and stock and domestic needs for those in the drier, downstream reaches. In our view it is unconscionable to designate any of the proposed dams as Critical State Significant Infrastructure when there will be huge dis-benefits to many.

We are pleased to note that during preliminary consultation with key stakeholder groups “the need to consider other measures for drought proofing”¹ was flagged. In our view, this is an extremely important matter and should be the subject of extensive public discussion. We cannot supply our way out of our water crisis and need to be water-smart for the 21st century. An audit of the extent to which irrigation tailwater is recycled and reused on farms and the potential for efficiency measures including minimising evaporation and other losses would be a good start.

In a drier, lower rainfall, less run-off future, the key factor for economically viable irrigation is flexibility. We must be more efficient with the water we have available to us. It follows that individual irrigators must be able to tailor their production to the volumes of water available to them. Given the alarming downward trend in rainfall and runoff over the past 2 decades, it would be risky to increase the total area planted with permanent crops of any kind in the Border Rivers - and negligent to advocate the widespread adoption of crops with permanent watering requirements. There is absolutely no guarantee that this would lead to greater economic returns year on year. It would be far more sensible and sustainable for annual crop production to continue as the area planted can be matched to water availability.

We note that in the Border Rivers (Regulated) Water Resource Plan submitted to the MDBA for accreditation that a total of 366.418 GL is allocated. Of this, 1.5GL (at 100% available water determination [AWD]) is currently allocated to High Security licence holders and 210.6GL (at 80% AWD) to General Security. The total in-stream storage capacity of the major dams covered by the Border Rivers Agreement is 642GL. With total allocation comprising almost 60% storage capacity we suggest the most cost effective way of improving water security for all users is to reduce all allocations (by class) by a fixed percentage with compensation determined by water product/licence class. Such a process would be fair, equitable and transparent.

(b) the economic rationale and business case of each of the projects, including funding, projected revenue, and the allocation and pricing of water from the projects,

In the AFA's view the common factor in the economic rationale for the 4 dam proposals is that none of them will provide high security town water supplies. WaterNSW general security users will be the main beneficiaries.

It is hard to comment on this ToR due to the lack of transparency in the process to date. We understand that business cases for some (if not all) of the proposed dams have not (and might not) be made public. In at least one case, the investment of public money into a business case was made without consultation. Unless this current NSW Inquiry's report includes details of the respective business cases, the public will know nothing about the full costs involved nor all benefits or dis-benefits.

We note that the feasibility study conducted for WaterNSW in 2017 showed that the Mole River project was not financially viable.²

(c) the environmental, cultural, social and economic impacts of the projects, including their impact on any national or state water agreements, or international environmental obligations,

AFA's key concern with regard for the Barwon-Darling are to do with the regulating of supplementary events. Supplementary flows have been crucial to maintaining the weak heartbeat of the Barwon-Darling system. The small but irregular flows from the northern tributaries have (just) kept the riverine ecology ticking over while judicious use of community-owned water has benefited some floodplain areas. The system needs time to rebuild resilience. It does not need more blockages and constrictions.

¹ EMM - Mole River Dam Project Scoping Report (March 2020) p20

² Jacobs Mole River Dam Feasibility Study (2017)

Through the *Water Act 2007* the MDB Plan is grounded in the International Convention on Biological Diversity and the Ramsar Convention on Wetlands of International Importance. The Ramsar listed Macquarie Marshes are at risk in the Macquarie case. Like many other important wetlands in the MDB the Marshes have been greatly reduced in extent and their ecological condition has deteriorated due to over-allocation upstream. Yet the Marshes continue to support migratory species listed under international agreements, conventions and national environment laws.

The raising of the Wyangala Dam wall by 10 metres will double the capacity of the dam, thus seriously impacting on the important ibis nesting habitat of the Lower Lachlan where up to 100,000 pairs nest in a big flood. Like the Macquarie Marshes, migratory bird species also frequent this area. International agreements with Japan, China and Korea are jeopardised by the Macquarie and Lachlan River proposals in particular. All projects will have a cumulative negative impact on all downstream wetlands listed under international agreements. Across all the proposed projects, scores of species listed under various state laws may be at risk, including risk of extinction.

The AFA notes with some concern that in proposing 4 new dams NSW is signaling an intention to abandon its commitment to the National Water Initiative (NWI).³

We understand that all 4 sites include significant cultural heritage values such as scar trees and indications of First Nations economic activity. Rivers have always been central to the social and cultural activities of our First Nations people and are integral to the transmission of cultural knowledge to new generations. Further losses of priceless sites and artifacts are unacceptable.

(d) the impacts of climate change on inland waterways, including future projections, and the role of dams and other mass water storage projects in ensuring security of water supply for social, economic and environmental outcomes

Of critical importance to water security and reliability is the climatic data underpinning Water Sharing Plans. The Mole River will become part of the NSW Border Rivers Regulated Water Sharing Plan area. The AFA is deeply concerned as it is our understanding that the Border Rivers IQQM model only utilises data up to 2009. Any model is only ever as good as its inputs and assumptions applied to them. The model does not include the recent climate record of the longest and deepest drought ever recorded and only part of the data showing a clear downward trend in rainfall (and thus runoff) over the past 20 years. It is sheer folly to address issues of water "security" by using incorrect or incomplete data. In AFA's view, the Border Rivers IQQM model should be immediately updated with the recent climate record and re-run as an essential prerequisite to accurately modeling the economic viability of the entire project.

The AFA is certain that the construction of 4 new dams will not make it rain but they certainly will capture water that would otherwise provide crucial supplies for downstream communities and the environment.

The BCA for these projects should carefully investigate and appropriately value the social and economic impacts of reduced connectivity downstream. For the Mole River in particular, the impacts on flows into the Barwon-Darling system must be accurately modelled.

A friendly economist advises us that using the NSW Treasury recommended cost-benefit analysis discount rate of 7% the project has a substantial negative value of (- \$170 million). A discount rate of around 2.8% would be needed for the project to be deemed a worthwhile investment; we are further advised that this is considered very low and inconsistent with NSW government recommendations. Clearly, the project is not financially viable. Millions of dollars should not be spent on this asset when there are other worthwhile alternatives some of which could meet multiple and/or long-term objectives.

³Clause 65 of the NWI addresses *Water Storage and Delivery Pricing* and (65ii) states "full cost recovery for water services to ensure business viability and avoid monopoly rents, including recovery of environmental externalities when feasible and practical;" Clause 69 *Investment in new or refurbished infrastructure* states "The parties agree to ensure that proposals for new or refurbished infrastructure continue to be assessed as economically viable and ecologically sustainable prior to the investment occurring"

The dam will shift local economic activity and benefits downstream to users in the regulated section of the Dumaresq and Macintyre rivers. A large piece of the most productive area of the Mole River valley (ie its alluvial soils) will be permanently lost to food production of any kind.

The socio-economic impacts of downstream communities and landholders running out of water or of only having access to poor water quality with high treatment costs should be part of the Benefit Cost Analysis.

(e) water infrastructure technologies that may promote enhanced environmental outcomes,

The lost opportunity costs of massive infrastructure projects should not be ignored. Nor should the need to create long-term, socially useful work in regional areas.

Recent advances have been made in irrigation techniques and infrastructure and in reducing evaporation, seepage and other losses. The scope for these to increase water efficiency should be thoroughly investigated before the dam proposals are progressed further. This is especially so for the Wyangala dam proposal where we believe replacement of ageing irrigation infrastructure could secure the proposed 21GL savings projected from doubling the dam storage capacity.

(f) any other related matter.

Here we reiterate our connectivity and supplementary flow concerns. We note that one of the justifications for the Mole River project is that it “Supports the downstream Barwon-Darling system through increased flow reliability and associated environmental health outcomes.”

The AFA recommends careful investigation of this claim. Supplementary flows – from most of the northern Basin's regulated tributaries - are currently very important to maintaining inflows to the Barwon-Darling and connectivity from that Water Plan area to the next one downstream (Lower Darling). The Barwon-Darling itself has suffered enormous reductions in flows due to the cumulative impact of development in most of the northern tributaries; and this has meant the Barwon-Darling now rarely connects to the Lower Darling. For this reason we recommend that the cumulative impacts of the Mole River, Dungowan (Peel valley), the re-regulating weir in the Macquarie and the raising of the Wyangala Dam wall be modelled to accurately assess combined and cumulative social, cultural, economic and environmental impacts throughout the Basin.

In our view, there is no justification for any of these dams to be listed as CSSI under the NSW Water Supply (Critical Needs) Act 2019. Indeed, it is communities on the Barwon-Darling system who are in critical need of adequate, fit for purpose water - not irrigators who already have access to volumes that are the stuff of western communities' dreams.

The AFA concludes that the rationale for the new dams to improve water security for downstream general security license holders cannot be justified. A privileged few will benefit at the expense of many less fortunate members of downstream communities. In our view the economic, social and environmental costs of these projects are unacceptable.

Yours sincerely,

Sarah Moles,
Secretary