Submission No 110

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

Name: Name suppressed

Date Received: 22 September 2020

Cate Faerhmann
Chairperson
Portfolio Committee No 7
Parliament House
Macquarie St Sydney NSW 2000

Tuesday 22 September 2020

SUBMISSION

Inquiry into the rationale for, and impacts of, new dams and other water infrastructure in NSW

Dear Committee
I wish to make a submission in regard to the impact of new dams and other water infrastructure in NSW.

My key assertion is that all these projects, masquerading as significant state infrastructure, are an attempt to provide a windfall gain to low value agricultural enterprises in the various localities at the expense of downstream communities, economies, and the environment within the Basin. In doing so they are attempting to avoid proper assessment by the Commonwealth and the wider legal requirements that underpin the wider health and wellbeing of the entire Basin community.

I therefore urge to Committee to:

1. Repeal the NSW *Water Supply (Critical Needs) Act 2019*
2. Cancel the critical State significant infrastructure development applications for the five projects in focus
3. Release all State government decision-making processes relating to the current funding commitments for the above project proposals.
4. Repeal the 2014 amendment to NSW *Water Management Act 2000* that restricts the use of the drought of record in determining annual water allocations.
5. Amend regulated river water sharing plans to include the lowest inflows on record under Part 10 *System operation rules*

Context

We know habitat loss and degradation, invasive species, overharvesting, pollution and climate change are all damaging Australia's freshwater environment (Dudgeon et al., 2006). Superimposed on this situation is more than 100 years of water resource development - where we try to impose a European idyll of constant water availability on a highly variable and seasonal river system. In doing so we build dams, develop our floodplains, and extract water at the expense of healthy freshwater habitats (Lemly, Kingsford, & Thompson, 2000)

Dams can have some benefits. Australia's population of about 20 million is relatively small, but the country punches above its weight in terms of food and fibre of production. It does this by diverting and storing water in the dryer parts of the country. Irrigated agriculture uses about 76% of the water (17,900 GL) diverted annually and most (90%) is diverted from the rivers of the Murray-Darling Basin (source: National Water Audit). In sum we can benefit because we use the water to produce food that other countries want.

However such infrastructure also has costs. In terms of the environment, such infrastructure ends up destroying floodplain wetlands, particularly in highly variable systems where the timing, frequency and magnitude of flooding events are critical. This is because the diversion of any water upstream of wetlands reduces flooding which in turn causes significant declines in plants and wildlife. Flood-dependent vegetation simply die.

A range of other environmental impacts occur because we disrupt the natural flow of a river in doing so. We disrupt:

1. upstream and downstream connectivity from headwaters to the floodplain necessary for the movement of nutrients, food and animals along the river
2. lateral connectivity between the river and the floodplain preventing the uptake of food and nutrients and disturbing vital breeding processes ; and
3. vertical connectivity between surface water and groundwater

The infrastructure also captures rainfall events, which normally nourish and 'tide over' communities during prolonging drought. Any water released from the dam is generally abnormally cold water and deoxygenated.

There are social impacts as well. Researchers have been exploring the social impacts of dams for over 50 years and while no commonly used framework exists, of the of 217 articles published in the past 25 years the perspective is largely dams have negative social impacts (45% of studies state negative whereas only state 5% positive). The key reason why this is occurring appears to be the researchers have found social assessment is no simple task- there is a complexity and multitude of social impacts occurring over various time, space, and value dimensions.

To understand the context to all this, it is important to note dams are among the most long-lived of infrastructure projects. This means the impacts need be considered over the entire operational timeframe and the footprint needs to encompass the downstream and upstream environments- not just the construction site. Understanding this also provides a foundation/rationale for thorough critical analysis and assessment of these particular projects in NSW.

The cultural, social, and environmental consequences of all this infrastructure cannot be adequately assessed or considered through an unnecessary fast-tracked critical State significant infrastructure planning process.

Addressing Some of Key terms of reference of the inquiry

1. Need for the project and the historical allocation of water

There appears to be no demonstrated need for these projects other than being National Party policy and an election promise.

In October 2019 a joint announcement was made by the Prime Minister and NSW Premier to invest over $1b of public money in new dam projects in NSW. Which were a knee-jerk reactions to the scale and intensity of the 2017 – 2019 drought, exacerbated by poor water management policies in NSW.

However, rainfall events commencing in February 2020 have improved water availability across the state and lessened the immediate threat of towns and cities running out of water.

The real key underpinning threat to future water availability is that there is no scope to consider climate change in the NSW policy and planning process.

To explain further, the Department of Planning, Industry and Environment – Water (DPIE-Water) makes annual allocation water determinations based on models using low inflow records. However it is hampered by two fairly recent political decisions, specifically:

1. the 2014 amendment to NSW *Water Management Act 2000* restricts the use of the drought of record in determining annual water allocations.
2. Amend regulated river water sharing plans to include the lowest inflows on record under Part 10 *System operation rules*

If we were to remove these two amendments, we would also improve the provision of critical human needs during intensive periods of drought by ensuring more conservative management of water storages and water allocations.

The Coalition policy to increase agricultural production by capturing more water from rivers is a misguided and unrealistic approach to water management. Dams do not increase rainfall runoff: they simply trade the 'asset' (i.e. water) from one user to another. It trades water security from one sector or community along a river system to provide for another. Its time we stopped thinking that any water that flows downstream is a waste- rivers by definition require a flow. We need to consider all users and types of use.

As a final point, I wish to state that this 'common sense' understanding that rivers require a flow to keep functioning actually underpins our legislation. Specifically:

- NSW has a responsibility under the WMA to share water between users with the environment having highest priority. The focus of these projects on providing increased water security for general security licence holders ignores the legal hierarchy within water sharing plans.
- NSW also has responsibilities under the National Water Initiative to '*ensure the health of river and groundwater systems by establishing clear pathways to return all systems to environmentally sustainable levels of extraction.'* The construction of large new instream storages to provide more water for extraction is also counter to this agreement.
- The Murray Darling Basin Plan - a bipartisan agreement between the Commonwealth and Basin states - sets sustainable diversion limits in each river valley. The proposed capture of 770 GL of this environmental water will impact on the outcome of the Basin Plan downstream to the Lower Darling and the Murray Mouth.

So to conclude, we know from prior research that such construction can 'cause' a range of environmental and social impacts. What's more the attempt by the NSW Government to bypass due critical analysis and assessment because it is 'critical infrastructure' makes such impacts 'likely'. Thus a risk assessment where we look at 'harm severity' and 'likelihood' using a risk assessment matrix would indicate a much more cautious approach is required. The investment of public funds with little or no broad community consultation, business case, or environmental assessment while planning to fast track these projects is fiscally irresponsible, procedurally unacceptable, and shows a complete lack of business acumen.

Yours faithfully

Literature Cited

Dudgeon, D., Arthington, A. H., Gessner, M. O., Kawabata, Z. I., Knowler, D. J., Leveque, C., … Sullivan, C. A. (2006). Freshwater biodiversity: Importance, threats, status and conservation challenges. Biological Reviews, 81, 163–182.

Lemly, A. D., Kingsford, R. T., & Thompson, J. R. (2000). Irrigated agriculture and wildlife conservation: Conflict on a global scale. Environmental Management, 25, 485–512.

J. Kirchherr, H. Pohlner, K.J. CharlesCleaning up the big muddy: a meta-synthesis of the research on the social impact of dams

Environ. Impact Assess. Rev., 60 (2016), pp. 115-125, 10.1016/j.eiar.2016.02.007