

To whom it may concern,

Submission to Inquiry into the National Water Initiative 2024

The ACT Commissioner for Sustainability and the Environment is an independent statutory position established by the *Commissioner for Sustainability and the Environment Act 1993*. My Office embraces transformative change for an environmentally sustainable future and encourages sound environmental practices and procedures to be adopted by the ACT.

While my jurisdiction is limited to the ACT, examinations of water management conducted by my Office over the past few years include relevant lessons and observations which will be applicable to the broader Australian context.

My Office supports a stronger emphasis on environmental and First Nations water management and allocations under the National Water Initiative.

Successive State of the Environment Reports for Australia and for the ACT have shown consistent decline in environmental condition over many decades, including for freshwater ecosystems. The list of threatened species and habitats in Australia also continues to increase annually. I therefore urge for environmental protection to be the primary consideration for water management in Australia.

Climate change uncertainty

Climate change is the most significant environmental challenge facing water management, as it will strongly intensify the effects of most threats and pressures. Reduced rainfall, hotter temperatures and increased evapotranspiration all have severe consequences, including:

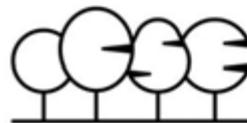
- reduced flows and reduced wetland inundation
- reduced deep water habitat refuges
- higher water temperatures and lower dissolved oxygen concentrations
- extended dry periods punctuated by severe storms which result in large nutrient, sediment and other pollutant pulses
- increased algal blooms, and
- more frequent and severe bushfires which compromise water quality and riparian vegetation.

For the species which depend on our waterways, such effects are often disastrous and may cause irreversible harm to ecosystem function and to impacted populations of plants and animals.

In preparing the ACT State of the Environment Report 2023¹ (due for release in March 2024), my office noted that:

Current knowledge about the detailed ecology of many native aquatic species is incomplete and this makes it challenging to know which targeted management interventions are needed. Therefore, protection of aquatic and riparian habitats through broadscale actions for water quality and habitat improvement, such as prevention of

¹ <https://envcomm.act.gov.au/>



sedimentation and removal of invasive species, is likely to offer the best option for the conservation of surviving native aquatic species.

This finding is in keeping with those of the National Climate Change Adaptation Research Facility, who note in their 2017 *National Climate Change Adaptation Research Plan: Freshwater ecosystems and biodiversity*² that:

...our current level of understanding concerning Australian freshwater ecosystems and biodiversity is insufficient to adequately inform many adaptation approaches previously explored. In particular, we have a very poor and fragmented understanding of the legacies of past disturbances on freshwater ecosystems and how these might interact with contemporary disturbances.

This uncertainty underpins the importance of applying the precautionary principle with regard to environmental water management and allocations in Australia. This will give our native aquatic species and ecosystems the best possible chance for survival. Climate change is likely to push environmental conditions beyond the adaptive tolerances of some native species, as extremes of temperature and rainfall move beyond the parameters of historical experience.

My Office therefore strongly supports allocating as much water as possible for environmental purposes, rather than the minimum amount deemed to be sufficient. This principle should be embedded in water sharing agreements.

Management and monitoring effectiveness

In 2022, my Office published an investigation of the *State of the Lakes and Waterways in the ACT*³. While this investigation focussed on urban water management, a number of its findings can be applied more broadly to water management in the ACT. In particular, the investigation concluded that:

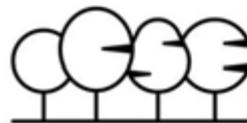
...the ACT Government has many plans and strategies in place which cover various aspects of...water management. However, responsibility for these falls across a range of agencies responsible for various aspects of urban water quality and condition, and these appear to lack an overarching holistic approach to water quality and urban waterway management. As a result, ACT Government policies and strategies are not considered effective for supporting integrated catchment planning and management...Many of the strategy documents...outline high level policy objectives, but the demonstration of achievement through target setting, audit and systematic review of achievement of objectives is patchy.

Similarly, this investigation found that while data collection is extensive, it is not currently conducted in a way which enables monitoring of management interventions in a way that would enable managers to determine whether such interventions are effective. For example, the most recent independent review⁴ of the ACT Environmental Flow Guidelines conducted in 2017 found that

² https://nccarf.edu.au/wp-content/uploads/2019/05/NARP_Update_Freshwater-ecosystems-and-biodiversity-2017.pdf

³ <https://envcomm.act.gov.au/wp-content/uploads/2022/08/State-of-the-Lakes-Report-Digital.pdf>

⁴ https://hdp-au-prod-app-act-yoursay-files.s3.ap-southeast-2.amazonaws.com/5515/2988/3497/2017EFG_Review_Report_Final_revised_002.pdf



although environmental flow requirements were being met, monitoring data and indicators were inadequate for determining whether they were having their intended effect.

The difficulties of measuring and accurately attributing the effects of management interventions within the 'noise' of background environmental and weather events is acknowledged. This difficulty is exacerbated by the fact that, as noted above, our understanding of aquatic ecosystems in Australia is incomplete. However, we are running a very real risk that these ecosystems will become degraded beyond repair before we have a chance to build that knowledge. The consequences of this will be detrimental not just to native plants and animals, but to the people who rely on ecosystem services for the provision of clean water for domestic use and for irrigation.

More resources should be allocated to building a consistent and shared national approach to long-term monitoring and reporting on water quality and ecological condition. This should especially include focussed monitoring on areas where management interventions have been applied to assist with determining effectiveness of management actions. At the national level, resources should be allocated to interrogate data provided by all states and territories with the aim of identifying effective management approaches and sharing these with water managers across Australia. This should be accompanied by public reporting on the condition of Australia's waterways and water bodies.

First Nations Knowledge

Traditional Ecological Knowledge held by the First Nations people of Australia incorporates thousands of generations of wisdom and experience, as well as an intimate understand of specific waterways and wetlands. As such, this knowledge has already assisted adaptation to changing climates and environments over many years. In many cases, Traditional Knowledge can provide critical insights into how to increase waterway resilience in the face of climate change and help to fill the gaps in Western science.

The value of Traditional Knowledge about Australia's waters needs to be recognised, appropriately valued, and incorporated into the contemporary management of waterways. Such work must be conducted in partnership and include formal recognition of the cultural importance of waterways to the First Nations people through whose Countries they flow.

Thank you for your consideration and please do not hesitate to contact me if you have any queries.

Yours sincerely

Dr Sophie Lewis
Commissioner for Sustainability
and the Environment

30 January 2024