FRIENDS OF THE GIPPSLAND LAKES

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FOGL Submission on the Murray–Darling Basin Plan Review

Executive Summary

The Murray–Darling Basin Plan must be strengthened so that it secures reliable environmental water for drought refugia, floodplain inundation, and ecological connectivity, not merely for wet years. Climate change is already reducing inflows and increasing the frequency, severity, and duration of drought across the Basin (Chu et al., 2025; Hart, 2022). Under these conditions, environmental water cannot remain the residual claimant. It must be protected, expanded, and delivered with priority when ecosystems are under greatest stress.

This submission argues that the next Basin Plan must:

- guarantee environmental water for drought refugia and floodplain wetlands;
- increase environmental water recovery and reliability in light of climate-adjusted inflows;
- embed climate risk directly into diversion limits and allocation settings;
- recognise that biodiversity loss and ecosystem collapse are irreversible harms; and
- give greater weight to ecological function than to short-term economic interests that can be supported by policy and can recover.

1. Climate risk is already reducing the water available for ecosystems

The Basin is no longer operating under the hydrological conditions that shaped the original Basin Plan. Climate-driven reductions in rainfall, rising temperatures, and increased

evaporative demand are reducing streamflow and compressing the availability of water precisely when ecological demand remains high (Chu et al., 2025; Jennings et al., 2016).

Recent analysis of the Northern Murray–Darling Basin found that long-term meteorological trends explain all of the streamflow decline in catchments with little or no irrigation withdrawals, and about half of the decline in more heavily irrigated catchments (Chu et al., 2025). That matters because it shows the Basin is not simply facing a distribution problem between users; it is facing a shrinking water supply. In a hotter and drier climate, the amount of water available to support floodplain vegetation, wetlands, fish breeding, amphibian recruitment, and bird reproduction is falling.

The implication is direct: if diversion limits and environmental water settings are not adjusted for climate change, environmental water will be squeezed harder than consumptive water. Hart (2022) argues that climate change is already disproportionately affecting environmental water and that policy settings must change to protect it. Alexandra and Rickards (2024) likewise emphasise that climate change requires fundamental redesign of water allocation frameworks rather than minor adjustment at the margins.

2. Environmental water works, but only if it is secure in dry years

Environmental water has demonstrably delivered ecological benefits in the Basin. Bennett et al. (2025) show that Commonwealth environmental water at approximately current volumes can inundate key refuge wetlands that support fish, frogs, waterbirds, invertebrates, and plants. That is important evidence: it confirms that environmental water can maintain ecological function and identify wetlands that operate as climate refugia.

But the same evidence also shows the limit of the current approach. Those benefits are most apparent in wetter periods or when there is enough water in the system to deliver environmental pulses. They are far less secure during drought, when water scarcity is greatest and competition from consumptive demands intensifies. In other words, the system performs best when risk is low and worst when ecological need is highest.

That is a structural weakness, not a minor implementation issue. If environmental water cannot be guaranteed during drought, then the very periods when refugia are needed most become the periods when they are least protected. This is precisely when wetland contraction, fish kills, vegetation dieback, and local extinctions are most likely.

3. Drought refugia and ecological connectivity must be treated as core Basin functions

The Basin's rivers, wetlands, floodplains, and terminal lakes are not isolated assets. They form a connected ecological network that depends on periodic wetting, drying, and reconnection. Environmental flows are not an optional enhancement; they are the mechanism by which the system reproduces itself.

Bennett et al. (2025) found that environmental water delivery is reaching refugial wetlands that support a large share of ecosystem and species diversity, although some taxa are still poorly represented. That means the current environmental water portfolio has value, but it is still incomplete and too limited to secure the full range of ecological functions needed under climate stress.

The Basin Plan must therefore do more than protect a minimum channel flow. It must secure enough water to:

- keep refuge wetlands wet through drought;
- maintain hydrological connectivity between rivers, floodplains, and wetlands;
- support breeding and recruitment events for native fish, frogs, and waterbirds; and
- preserve vegetation communities that depend on periodic inundation.

The current recovery target was designed around a different climate and a narrower ecological ambition. The original Basin Plan's primary water recovery target of 2,750 GL per year was a necessary step, but it was never sufficient to protect all levels of floodplain function. Victoria's own guidance notes that the current 2,750 GL target was only enough to protect low-lying floodplains, not mid- to upper-level systems. That limitation matters because many of the Basin's most valuable refugia sit above the lowest floodplain levels.

4. The Basin is a critical biodiversity area and losses are irreversible

The Murray–Darling Basin supports a large number of threatened, endemic, and migratory species, including birds, fish, amphibians, invertebrates, and wetland plants. Environment Victoria (2023) reported that the recovery of at least 140 threatened species in Victoria is dependent on restoring adequate environmental flows in Basin rivers, floodplains, and wetlands. DCCEEW's guidance on the River Murray–Darling to Sea threatened ecological community also confirms the Basin's importance for a wide range of dependent species and habitats.

This matters because the ecological harms at stake are not temporary. If species are lost from a site, if breeding wetlands dry out repeatedly, or if floodplain forest communities cross a decline threshold, the damage can become irreversible. Extinction cannot be fixed by later compensation. Nor can the collapse of a functioning wetland community simply be reversed by restoring some water years later.

That is why ecological irreversibility must be given greater weight than recoverable economic interests. Economic production can often be adjusted, subsidised, or restructured. Ecosystem collapse cannot. A short-term loss in irrigation output is not equivalent to the permanent loss of a species, a breeding habitat, or a functioning river reach.

5. The next Basin Plan must protect environmental water during drought, not just in wet years

The most important reform is simple: guaranteed water for floodplain inundation must be built into the next Plan, especially in periods of drought.

At present, environmental water is too vulnerable to being deferred, diluted, or effectively postponed until conditions improve. That approach is backwards. Drought is precisely when refugia matter most. If the Basin cannot maintain ecological function through drought, then it is not resilient.

The Plan should therefore require:

- a dedicated drought-refugia water reserve;
- minimum environmental delivery rules during low-flow periods;
- explicit protection for wetlands and floodplains that function as climate refugia;
- allocation settings that do not allow environmental water to be displaced by increasing consumptive pressure in dry years; and
- transparent reporting on whether environmental water actually reaches the targeted refuge sites.

6. Economic considerations should not override ecological survival

It is appropriate for the Basin Plan to consider social and economic impacts. It is not appropriate to treat them as equal to irreversible ecological loss.

Chu et al. (2025) show that even significant reallocation to mitigate flow decline would reduce irrigated agricultural value, but not destroy the sector. That is an adjustment cost. By contrast, species extinction and ecosystem collapse are not recoverable. The Basin Plan should therefore adopt a precautionary hierarchy: secure ecological survival first, then manage economic transition around that constraint.

This is also the most defensible long-term policy position. A degraded Basin will impose larger costs on everyone over time, including irrigators, regional towns, tourism, First Nations communities, and governments that will later be forced into expensive remediation.

7. Legal imperative

- The Basin Plan must set long-term limits on how much water can be taken from the Basin based on environmental needs, not economic or political trade-offs (Environmental Justice Australia [EJA], n.d.).

8. First Nations rights and cultural water

The Basin Plan should also recognise and support First Nations water rights in line with UNDRIP principles. Over 50 First Nations have cared for Basin Country for tens of thousands of years, and First Nations rights and knowledge should be embedded in Basin governance.

That means:

- genuine co-governance, not consultation after decisions are already made;
- cultural flows that are secure, not symbolic;
- Traditional Owner involvement in identifying and managing refugia; and
- recognition that First Nations stewardship improves ecological outcomes as well as justice outcomes.

9. Recommended reforms

FOGL submits that the Basin Plan Review should adopt the following reforms.

A. Expand and secure environmental water

Increase environmental water holdings and secure them against reallocation. Environmental water should be adequate not only to recover wetland condition in good years, but to keep key refugia alive through drought.

B. Recalculate diversion settings for a changed climate

The Sustainable Diversion Limits should be revised to reflect long-term climate decline in inflows. Basin planning must assume that the future will be drier and hotter than the conditions used to set the original limits.

C. Build drought priority into delivery rules

Environmental water allocations should include explicit drought-priority provisions so that refuge wetlands and critical habitats are watered when the system is under greatest stress.

D. Strengthen monitoring and compliance

Delivery, extraction, and trade data should be transparent, timely, and independently audited. Environmental water only has value if it is actually delivered where and when it is needed.

E. Give ecological irreversibility priority

Decision-making should expressly recognise that extinction and ecosystem collapse are irreversible and must outweigh short-term economic gains that can be managed through policy, transition support, or recovery measures.

10. Summary table

Issue	Current problem	FOGL position
Climate risk	Basin settings do not adequately account for declining inflows and rising drought risk	Diversion limits must be climate-adjusted and conservative
Environmental flows	Environmental water is effective, but only when enough water is available to deliver it	Secure and expand environmental water holdings
Drought refugia	Refugia are vulnerable when flows are lowest	Guarantee minimum water for refugia in dry periods
Biodiversity	Threatened species depend on basin wetlands, floodplains, and flow pulses	Treat biodiversity loss as an irreversible harm
Economics	Short-term irrigation impacts are recoverable through policy	Economic interests must not override ecological survival
Governance	Delivery can be delayed, diluted, or poorly targeted	Strengthen legal protections, monitoring, and compliance

Conclusion

The Basin Plan Review is a once-in-a-generation opportunity to reset water management for a climate-changed future. The evidence now shows that the Basin's environmental systems are under sustained pressure and that current settings are not enough to protect ecological function in drought.

FOGL therefore urges the MDBA to move beyond incremental reform. The next Basin Plan must secure sufficient environmental water to maintain refugia, protect floodplains, and sustain biodiversity through drought. Anything less risks irreversible ecological loss in one of Australia's most important river systems.

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