

SUBMISSION

Submission to the Department of Climate Change, Energy, the Environment and Water

# Submission to Helping Shape a New National Water Agreement

12 September 2024

**The Australian Academy of Technological Sciences and Engineering (ATSE) is a Learned Academy of independent, non-political experts helping Australians understand and use technology to solve complex problems. Bringing together Australia's leading thinkers in applied science, technology and engineering, ATSE provides impartial, practical and evidence-based advice on how to achieve sustainable solutions and advance prosperity.**

ATSE welcomes the Australian Government's commitment to renew the 2004 National Water Initiative with a National Water Agreement (NWA) to modernise Australia's water management framework. ATSE also recognises the inclusion of Objective 1 which envisions safe, secure and resilient urban water services and a skilled water management workforce — both of which ATSE recommended to the Department in our [Submission to the National Water Agreement Consultation](#) (ATSE, 2024a). ATSE has also provided submissions to the initial and interim Productivity Commission consultations on National Water Reform.

In addition to the below recommendations that apply across the draft Principles, ATSE recommends amendments to the draft Principles of the National Water Agreement described in Appendix Table 1.

**Recommendation 1:** Embed a climate-conscious approach to water infrastructure planning in the National Water Agreement.

**Recommendation 2:** Assess Scope 1, Scope 2 and Scope 3 greenhouse gas emissions when making strategic investments in water infrastructure.

**Recommendation 3:** Greater coordinate water licence management between Australian states and territories.

**Recommendation 4:** Fine-tune the National Water Agreement on how proposals to increase economic water rights for Aboriginal and Torres Strait Islander people will be integrated into the existing sustainable water management entitlement system.

**Recommendation 5:** Establish an ongoing management strategy including impartial periodic review of the National Water Agreement.

**Recommendation 6:** Reinstate the National Water Commission to support the National Water Agreement in better aligning jurisdictional strategies to water management and provide assurance of independence in evaluating progress and outcomes.

**Recommendation 7:** Include an underlying principle of enduring research and development funding so that the Objectives of the proposed National Water Agreement can be appropriately met.

## Embedding a climate-conscious approach to decision-making

Climate change poses numerous threats to water security, including increased flooding, storms, pollution from bushfires, sea level rise and drought. ATSE has previously identified four key principles, requiring commitment from industry and all levels of government, that are applicable in the context of a new NWA (ATSE, 2017). These key principles are:

- Adopt long-term bipartisan policies and programs that encourage the actions and investments needed for rapid and intensive deployment of technologies and measures to mitigate greenhouse gas emissions and adapt to the impacts of climate change.
- Inform and test mitigation and adaptation responses, using leading-edge climate modelling and prediction techniques (which should be enhanced in areas where Australia has recognised leadership or unique needs).
- Increase support for low-emissions technology research, development and demonstration, prioritising areas where Australia has recognised leadership or unique needs.
- Support Australian participation in cooperative international programs focused on developing solutions to climate change.

There is scope within the draft NWA for the Department to adopt these proposed concepts to support climate change response. These can be applied at the Principles level of the NWA to embed a climate-conscious lens to decision-making, particularly concerning planning for resilient, future-proof, inclusive infrastructure. A transparent national framework for greenhouse gas accounting would enable the assessment of proposed major infrastructure decisions. As recommended by ATSE's [Submission to a National Urban Policy for Australia](#), requiring all new federally funded infrastructure projects to submit a publicly available greenhouse gas budget would be beneficial in meeting emissions reduction commitments (ATSE, 2024b). This is affirmed by the newly passed Treasury Laws Amendment (Financial Market Infrastructure and Other Measures) Bill 2024, which imposes mandatory climate-related disclosure obligations on large businesses (Parliament of Australia, 2024).

A more climate-conscious approach to infrastructure building and maintenance can be applied to the new NWA, such as planning for water availability to support hydroelectricity generation and storage, as well as

communities and critical industries. ATSE therefore recommends that Scope 1, Scope 2 and Scope 3 emissions are considered when making decisions around water infrastructure.

**Recommendation 1:** Embed a climate-conscious approach to water infrastructure planning in the National Water Agreement.

**Recommendation 2:** Assess Scope 1, Scope 2 and Scope 3 greenhouse gas emissions when making strategic investments in water infrastructure.

## Supporting community involvement and Aboriginal and Torres Strait Islander inclusivity

ATSE commends that the draft discussion paper includes the protection and defining of self-determination and Indigenous Cultural and Intellectual Property in water planning and management processes. ATSE emphasises that the deliberate involvement and empowerment of communities, including Aboriginal and Torres Strait Islander communities, must underpin the National Water Agreement. ATSE's recently published explainer on [Closing the Water Gap](#) outlines approaches that can be made to protect against water inequalities in remote Aboriginal and Torres Strait Islander communities (ATSE, 2024c).

Water entitlements provide those holding a licence with the right to use a share of water (State of the Environment, 2021). Water allocation decisions are region-specific and greater coordination of licence management between states and territories is needed. Objective 3 must also be clarified around how the proposals to increase economic water rights for Aboriginal and Torres Strait Islander people will be integrated into the existing sustainable water management entitlement system. The draft discussion paper additionally implies there are two streams of science, independent of each other (Indigenous and non-Indigenous) — the NWA should provide clarity on the definition of “science” in this context (see Appendix Table 1 for more details).

**Recommendation 3:** Greater coordinate water licence management between Australian states and territories.

**Recommendation 4:** Fine-tune the National Water Agreement on how proposals to increase economic water rights for Aboriginal and Torres Strait Islander people will be integrated into the existing sustainable water management entitlement system.

## Aligning water management strategies for robustness, transparency, and compliance

Alignment across the National Adaptation Plan, the National Urban Policy, the Murray-Darling Basin Plan (beyond 2026), the Nature Positive initiative, and the recently legislated climate-related financial disclosure framework can be addressed by a new NWA. As expressed in ATSE's previous submission, ATSE strongly recommends that the National Water Commission be reinstated so that robustness, transparency, compliance enforcement and verification processes can improve trust and confidence in agencies. Cross-jurisdiction, shared obligations could be facilitated by an independent auditor, such as a National Water Commission. Reinstating a modernised National Water Commission would support the implementation of the new National Water Agreement and overcome some of the challenges in implementing its previous iterations.

In setting up a new NWA, an appropriate ongoing management strategy should also be established — this includes ensuring the impartiality of future reviews of the effectiveness of the NWA. ATSE suggests that such reviews be conducted by independent third parties.

**Recommendation 5:** Establish an ongoing management strategy including impartial periodic review of the National Water Agreement.

**Recommendation 6:** Reinstatement of the National Water Commission to support the National Water Agreement in better aligning jurisdictional strategies to water management and provide assurance of independence in evaluating progress and outcomes.

## Supporting Australia’s research and development capabilities to meet the NWA’s Objectives

Applying Australia’s world-class research and realising the full innovation dividend for the economy requires significant improvements in research translation. ATSE recommends that the proposed NWA includes an underlying principle of enduring research and development funding so that the Objectives can be appropriately met. As emphasised in ATSE’s prior submission to the Department, prioritising knowledge generation enables more efficient, data-driven water management.

Incentivising and facilitating businesses, particularly small and medium-sized enterprises, to efficiently adopt agreed policies and new technologies can further lift innovation, productivity growth and competitiveness. Improving collaboration in Australia, between businesses and publicly funded research organisations would significantly enhance innovation. International collaboration is also critically important — it offers improved productivity and competitiveness of Australian technology-based firms.

**Recommendation 7:** Include an underlying principle of enduring research and development funding so that the Objectives of the proposed National Water Agreement can be appropriately met.

*ATSE thanks the Department of Climate Change, Energy, the Environment and Water for the opportunity to respond to Helping Shape a New National Water Agreement. For further information, please contact [academypolicyteam@atse.org.au](mailto:academypolicyteam@atse.org.au).*

## Appendix

**Table 1:** Advice from ATSE on adjustments to the draft National Water Agreement.

	<b>Principle/s</b>	<b>ATSE's suggested amendments</b>
<b>Objective 1</b>  <i>The safe and secure supply of sufficient water quality and quantity to sustain our natural environments, Culture, economic prosperity and communities.</i>	1.2	Include reference to collecting baseline data on drinking water supply quality.
	1.4, 1.10, 1.11	Include reference to 'recycled water'.
	1.5	Specify that decisions also consider 'carbon accounting' — the cost to the environment.
	1.10, 1.12	As per the Australian Government's Rural, Remote and Metropolitan Area (RRMA) classification (DHAC, 2021), include reference to metropolitan, rural and remote zones.
	1.16.2	Include recovery of costs from research and development in meeting science and technology objectives and principles to ensure continually improved efficiency.
	1.23	Essential research and development should be included as a necessary cost of operating a business that is responding to changing circumstances (such as climate change and technological change).
	1.34	Ensure metropolitan, rural and remote zones are included in this.
	1.39	Specify what principles can be adopted in identifying 'other forms of regulation'.
<b>Objective 2</b>  <i>Investment in major water infrastructure that is effective, strategic and transparent.</i>	2.1	In informing investment decisions on water infrastructure, Scope 1, Scope 2 and Scope 3 greenhouse gas emissions should be assessed. For emissions, consider estimation and/or direct measurement, including demonstrated evidence of design and planning that seeks active decarbonisation.
	2.1	Consider an Environment Social Governance (ESG) framework approach for businesses to operate in a transparent, environmentally and socially responsible way (such as the Global Reporting Initiative or similar) (Standards Australia, n.d.). This would address many of the sub-principles.
<b>Objective 3</b>  <i>A water management framework, underpinned by national and international human rights principles, which recognises and protects Aboriginal and Torres Strait Islander Peoples'</i>	General comment	ATSE appreciates the recognition and protection of Aboriginal and Torres Strait Islander Peoples' cultural, spiritual, social, environmental and economic water interests and values. Greater clarity is needed in Objective 3 on how the proposals to increase economic water rights for Indigenous people will be integrated into the existing sustainable water management entitlement system.

<i>Cultural, spiritual, social, environmental and economic water interests and values.</i>		
<b>Objective 4</b>  <i>The robust and coordinated use of science, data and Cultural knowledge underpins evidence-based decision making in water management.</i>	General comment	In line with the coordinated approach outlined in Objective 4, it would be beneficial for the priorities to support the establishment and use of shared and publicly available data lakes and digital hubs, so that transparent sharing of knowledge and co-development of new knowledge can be supported.
	4.1	Include an underlying principle of enduring research and development funding so that the Objectives and Principles of the proposed NWA can be appropriately met.
	4.1.3, 4.10	The NWA document should clearly define 'science' in the context of Aboriginal and Torres Strait Islander expertise and how this integrates with data, cultural knowledge and the remainder of the community.
	4.2	In addition to using a 'common language', also use a common set of definitions for legislative and regulatory use.
	4.14 to 4.19	The draft discussion paper implies there are two streams of science, independent of each other (Indigenous and non-Indigenous). The NWA should provide clarity on the definition of "science" in this context.
	4.18	Within this Principle, the NWA should clarify that the 10,000+ years of Aboriginal and Torres Strait Islander history is evidence of sustainable practices.
<b>Objective 5</b>  <i>Sustained community trust and confidence in government, water agencies, water managers and users.</i>	General comment	ATSE suggests the National Water Commission be reinstated so that robustness, transparency, compliance enforcement and verification processes can be provided without conflicts of interest and promote trust and confidence in agencies.
	5.13	Require an independent National Inspector-General of Water Compliance, which could be part of the independent audit body.
<b>Objective 6</b>  <i>Environmentally sustainable water planning and management that is interconnected, adaptive and responsive to climate change and other circumstances.</i>	6.4	Base water planning on a verifiable Environmental, Social & Governance framework (Standards Australia, n.d.).
	6.7.4	Define the meaning of "longitudinal and latitudinal waterway connectivity".
	6.14	Clarify if water plans need to be congruent with the proposed NWA. Implement a common language and set of definitions for water plans prior to approval and adoption.
	6.20	Clarify if economic development proposals involving water should be contingent on a water plan already being in place.

	6.21.5	This could be undertaken by a re-established National Water Commission.
<b>Objective 7</b> <i>Water management frameworks that facilitate the judicious and efficient use of water.</i>	7.6.1 and 7.6.2	Clarify the use of the phrasing “such as”, as this leaves the points open for additions. Consider using wording this as “including but not limited to”.
	7.6.1	Define what ‘opportunistic allocations’ means.
	7.15.3	Resolving cross-jurisdiction shared obligations could be facilitated by an independent auditor, such as a National Water Commission. Incentives as formerly used in National Competition Policy resolutions could be considered.
	7.29	Specify who is reconciling the water resource accounts.

## References

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