



23 February 2024

Productivity Commission
GPO Box 1428
Canberra City ACT 2601, Australia

Submitted via email: water.reform.2024@pc.gov.au.

Dear Commissioners,

Submission in relation to the Productivity Commission National Water Inquiry – National Water Reform 2024

Thank you for the opportunity to provide a submission in relation to the Productivity Commission's Inquiry into the National Water Reform 2024. ECNT is the peak community sector environment organisation in the Northern Territory, raising awareness amongst community, government, business and industry about environmental issues and assisting people to reduce their environmental impact and supporting community members to participate in decision-making processes and action. ECNT has a decades long history of making policy and law reform submissions on water law and policy in the Northern Territory. ECNT works collaboratively with a range of other stakeholders regarding the management and governance of water in the NT, including land councils, Traditional Owners, peak bodies, community groups and other civil society organisations. ECNT has recently partnered with Pew Charitable Trusts on the [Territory Rivers](#) campaign, which seeks to protect our freshwater river systems from unprecedented threats. ECNT recognises the ongoing custodianship, care and governance of Northern Territory waterways by Traditional Owners, and acknowledges that their sovereignty was never ceded.

The rivers of northern Australia

The Northern Territory's rivers and aquifers are exceptional on a national and global scale. Australia's Far North has one of the world's largest concentrations of free-flowing rivers, and they are unparalleled for their beauty, abundance and ecological and cultural values. Largely unimpeded by dams and weirs, their flows are governed by seasons rather than irrigators. These days, it is a rare privilege and responsibility to live among healthy rivers. 80% of the world's population live where rivers are highly threatened. Careful and ongoing stewardship of rivers in the Northern Territory by Traditional Owners is a primary reason why they remain intact, free-flowing and abundant. Interconnected groundwater and surface water systems, including our magnificent free-flowing rivers, underpin Northern Australia's economy, social and cultural life through the creation of jobs and sustenance of livelihoods.



In the Northern Territory, our rivers and aquifers are facing unprecedented threats. The most prominent threats and challenges are:

- 1) There is significant and longstanding water insecurity in remote Indigenous communities throughout the Northern Territory, including because drinking water is unregulated and unprotected in these places.¹
- 2) Climate change is significantly impacting our water resources, and the viability of life in the Northern Territory, including from harsher and longer droughts, erratic rainfall (and recharge of aquifers), and increased evapotranspiration. Recent research has found that three of the NT's principal ecosystems, the northern savannas and coastal mangrove forests of the wet/dry tropics in the "Top End", and the arid zone interior of Central Australia, all meet the criteria to be classified as "collapsing".² Climate change is also likely to worsen existing inequalities in health, infrastructure provision, lack of educational and employment opportunities, and income in Indigenous communities.
- 3) The Northern Territory Government is preparing for a large-scale hydraulic fracturing industry in the Beetaloo Basin. These plans rely on access to billions of litres of the Northern Territory's groundwater (notably, the Cambrian Limestone Aquifer, which sustains the flows of the Roper and Daly systems) and risk significant contamination from hydraulic fracturing fluids, wastewater and spills.
- 4) The Northern Territory Government is proceeding with plans for a large-scale industrial and water-intensive agriculture across the Northern Territory. For example, there are plans for 168,000 hectares of agribusiness development across the Northern Territory, involving extensive land clearing of NT savannas and the arid zone (which are, as highlighted above, ecosystems on the verge of collapse), and which will require billions of additional litres of the Northern Territory's groundwater and surface water to sustain.³

ECNT submits that the Northern Territory's water laws and policies do not protect our water from these threats and fundamental changes are required to water regulation, enforcement and policy-making. The Environment Defenders Office considers the Northern Territory's water laws amongst the worst in the country.⁴ Prominent water experts from around Australia have [publicly voiced](#) their concern about the state of the Northern Territory's water laws and policy, calling for urgent reform.⁵

¹ 1 Howey, K. and Grealy, L. Inking Water Security: the neglected dimension of Australian water reform , Australasian Journal of Water Resources, (2021), VOL. 25, NO. 2, 111-120.

² Bergstrom, D. M., Wienecke, B. C., van den Hoff, J., Hughes, L., Lindenmayer, D. B., Ainsworth, T. D., Shaw, J. D. et al (2021). Combating ecosystem collapse from the tropics to the Antarctic. Global change biology. doi:10.1111/gcb.15539.

³ NT Farmers, Northern Territory Plant Industries Economic Impact Analysis 2020.

⁴ <https://www.edo.org.au/wp-content/uploads/2021/08/Deficiencies-Water-Law-NT.pdf>.

⁵ Letter from 18 water academics to the Chief Minister of the Northern Territory, 23 November 2022.



Traditional Owners and communities across the Northern Territory are calling for urgent action to protect the natural and cultural values of our freshwater systems. In November 2023, Traditional Owners of the Roper River [delivered a 14 metre map](#) of the Roper River and petition to politicians in Canberra calling for protection of the Roper System. The statement read:

We represent the clans and language groups of South East Arnhem Land: Ngalakgan, Alawa, Mangarrayi, Ngandi, Marra, Warndarrang, Nunggubuyu, Ritharrngu-Wagilak and Rembarrnga.

We are the Traditional Custodians of the Roper River and its catchment. We speak as one voice. We have translated this statement into your language, English, to help you understand us.

Water is life. All our songlines follow the water. We are all connected. If you take our water, you kill our culture. If you kill our culture, you kill our people.

We want our Indigenous water rights properly recognised, including:

- We want a ban on all further water extraction, licenses and surface water harvesting in the Roper catchment, including the groundwater and floodplains that are the life of the River.*
- We want evidence that environmental and Indigenous cultural values are protected and made into law.*
- We want all downstream communities of the Roper to be included in all water joint-decision making from now on. We have never been consulted.*
- Our scientific and cultural knowledge of freshwater and saltwater Country came long before Colonisation and must be listened to and prioritised.*

Flaws in the Northern Territory's water legislation and policies, and the government's management of water has eroded the public's trust. Given the challenges of climate change, the collapse of our biodiversity and ecosystems, in parallel with the proposed rapid expansion of the fracking and agricultural industries, it is crucial proposed reform to the NWI ensured protection for the ecological and cultural values of the rivers and aquifers of the Northern Territory.

The Productivity Commission's 2021 Directions Paper aspires to an increasing level of trust in water resource management.⁶ Despite those aspirations, ECNT is concerned that the Northern Territory government continues using an approach to water management that will further undermine its credibility as a water manager.

ECNT has concerns that the NWI, with its emphasis on the creation of market-based mechanisms to manage, rather than protect water, in largely over-allocated systems in south-eastern Australia, is not

⁶ Productivity Commission. 2021, p. 4-5. 'Ensuring the integrity of water resource management Supporting Paper E: National Water Reform 2020 Inquiry Report no. 96: 28 May 2021.



appropriate for northern Australia. ECNT calls for a different approach to national water reform in northern Australia, that emphasises the importance of protecting our free-flowing rivers and aquifers and their ecological and cultural values. Such an approach must elevate First Nations knowledge systems in decisions about water, and emphasise governance, rather than management, of water.

National Water Initiative compliance in the Northern Territory

The Northern Territory government is failing to adopt NWI principles, objectives and key outcomes in water law and policy development and there are clear steps the Northern Territory government could take to improve NWI compliance and more sustainably manage our water. In its 2021 Implementation Report, the Productivity Commission found that the Northern Territory government had not implemented NWI commitments and was deficient in the following areas:

- failure to enact legislation to create secure, NWI-consistent water access entitlements;
- overallocation of the Katherine Tindall Limestone Aquifer and several groundwater resources in the Darwin Rural area;
- substantial declines in recent years in representation of Aboriginal people in water planning processes in the Territory;
- use of a 'use it or lose it' policy which acts as a trade barrier;
- failure to adopt trade approval service standards;
- inadequate independent economic regulation;
- issues relating to water quality regulation in regional and remote areas;
- lack of drinking water standards set in NT legislation;
- inadequate and ineffective consultation and engagement.

Since this report, the Northern Territory government has committed to introducing standalone safe drinking water legislation by 2024 and to replace the Water Act by 2026, with these commitments contained in a new Territory Water Plan. ECNT has not been involved in any discussions regarding the proposed reform of the Water Act, and it is unclear how or whether stakeholders will be involved in the reform process. ECNT also understands the introduction of safe drinking water legislation has now been deferred to 2026 (it was previously promised before the election in August 2024). Furthermore, the ECNT submits that since 2021, the Northern Territory's progress in water regulation has otherwise regressed, with the introduction of a floodplain harvesting policy and water allocation plans developed with little stakeholder consultation. In the Roper system alone, approximately 300 gegalitres a year has been allocated, or is proposed to be allocated, within a short period of less than 12 months.⁷ This would represent, on the basis of publicly available information, an increase in approximately 1200% compared with current use. ECNT is concerned that significant

⁷ The Georgina Wiso water allocation plan allocated approximately 210 gegalitres per annum from the Cambrian Limestone Aquifer (declared November 2023), the Surface Water Flows – Wet Season Take policy was announced in February 2024 and allocates 5% of the lowest 25th percentile of wet season flows from NT rivers, which the Department has interpreted equates to 34GL per annum for the Roper River (see current water licence application from Australian Ilmenite Resources). The proposed Mataranka Tindall Water Allocation Plan (to be released for consultation in early 2024) will allocate 63GL per annum from the Cambrian Limestone Aquifer.



and unsustainable water allocations will be made prior to any meaningful water reform occurring, and it will be difficult to wind back these allocations once they are made.

The Northern Territory government published a report in October 2023 prepared by Badu Advisory assessing the government's compliance with the NWI.⁸ ECNT understands that this report was obtained by the NT Government to satisfy a "priority action" in the newly approved Territory Water Plan.⁹ The NT Government did not involve the community in the Badu Advisory review, despite the clear public interest and a strong level of community engagement in water decisions in the Northern Territory. It is unclear to ECNT what, if any, stakeholder input was sought as part of the review. That report found that the Northern Territory government's water planning and management were largely consistent with the NWI, despite the shortfalls identified by the Productivity Commission in 2021. We have attached a report obtained by the Environment Defenders Office prepared by water law expert Alex Gardner, obtained by the Environmental Defenders Office, which evaluates the Badu Advisory report and analyses the Northern Territory's water law and policies. The Gardner report found that the Northern Territory Government remains largely non-compliant with the NWI. We understand that Badu Advisory is the consulting firm which effectively re-designed the structure and content of water allocation plans for the NT Government in 2022 and 2023. It is, therefore, questionable whether Badu Advisory was in a position to undertake the review of the NT's water laws and policies (including water allocation plans) against the NWI impartially and objectively.

Deficiencies in the existing water law and governance framework in the Northern Territory

The Northern Territory's poor water regulatory system, weakened by its failure to incorporate key components of the NWI, means that we are ill-equipped to manage urgent and emerging threats and challenges to water conservation in the Northern Territory. The following are examples of deficiencies in the Northern Territory government's approach to water management and its inconsistencies with the NWI.

1. Water allocation planning

A Water Allocation Plan (**WAP**) outlines how water in a particular water resource is to be shared between different interests, for example, the environment, agriculture and mining. Unlike most other Australian jurisdictions, WAPs are not a delegated statutory instrument and often fail to provide clear, quantifiable, consistent and legally binding criteria and targets. This makes WAPs incapable of facilitating sustainable management of water in the Territory. Key deficiencies are summarised below:

- a. As there is no legal requirement to create a WAP, most of the Northern Territory is not covered by a WAP, leaving the majority of the Territory being governed by a two-page

⁸ Badu Advisory, *Review of the NT's implementation of the National Water Initiative in relation to water planning* (13 July 2023).

⁹ The Territory Water Plan commits to commissioning "an independent review of water allocation planning against the NWI (noting the Productivity Commission has already done this for plans declared before 2020) to guide the improvement plan", p 33.



21-year old policy, the “Water Allocation Planning Framework”. Most jurisdictions in Australia have more than 80% of water use managed under water plans. As at 2022, only 28% of the volume of water licences was captured by a WAP. This means that the vast majority of water licence decisions in the Northern Territory (72%) are occurring without appropriate planning oversight, a rigorous and publicly tested scientific basis, or appropriate stakeholder and public engagement.

- b. WAP conditions are not binding on the Water Controller in making water licensing decisions. In other jurisdictions, water plans contain extensive, binding rules which govern water sharing and use. The recent case of *Mpwerempwer Aboriginal Corporation RNTBC v Minister for Territory Families & Urban Housing* [2024] NTSC 4 further undermined the utility of water allocation plans in the Territory. This creates many governance issues, including unfair and inconsistent decision-making. The Water Controller has a broad discretion in granting water licences under the Water Act. The case confirmed that a WAP is only one factor the Water Controller must consider when issuing licences and is not bound by the contents of a WAP. The Water Controller can issue licences that are inconsistent with a WAP.
- c. The Water Act is not prescriptive regarding the contents of a WAP resulting in WAPs being deficient in a number of key respects. The Water Act requires that WAPs allocate water “within the estimated sustainable yield”.¹⁰ However, the Water Act does not define ESY, include methodology for determining an ESY, specify that an ESY must be based on best-available science and cultural knowledge or indicate that an ESY is legally enforceable. This has led to the Northern Territory government applying inconsistent methodologies in determining an ESY in different WAPs across the Territory. A recently published academic paper found that the Northern Territory government failed to comply with the NWI in setting the ESY in the Georgina Wiso Water Allocation Plan, “in that no substantive steps have been taken to understand Indigenous cultural and ecological values sustained by groundwater prior to setting an Estimated Sustainable Yield”.¹¹ The paper found that a more precautionary, inclusive approach to determining groundwater regulations would involve a) setting of conservative water extraction limits combined with trigger levels for ecosystem protection and b) co-management in partnership with Aboriginal peoples, with both consultation and decision-making processes that recognise their inherent rights and interests in water.
- d. WAPs refer to ‘adaptive management’ as a strategy for addressing uncertainty arising from scientific knowledge gaps, climate change and future development pressure.

¹⁰ Water Act, s 22B(5)(a).

¹¹ Matthew Currell, Sue Jackson & Christopher Ndehedehe (2024) Risks in the current groundwater regulation approach in the Beetaloo region, Northern Territory, Australia, *Australasian Journal of Water Resources*, DOI: [10.1080/13241583.2023.2297949](https://doi.org/10.1080/13241583.2023.2297949).



However, adaptive management is rarely used to adapt levels of development to better reflect environmental thresholds and cultural needs and this would rely on the Water Controller imposing conditions on licences to address specific issues, despite there being no legal obligation to do so.

- e. There is no statutory timeframe for the declaration of WAPs. The Mataranka Tindall Water allocation plan has been in development since 2009 and has not yet been finalised despite the significant social, cultural, environmental and economic significance in the region. This risks water being allocated in excess of sustainable limits. In the Ooloo Dolostone Aquifer WAP, the calculated ESY was less than the existing entitlements already granted for use within the plan area.¹²
- f. The Northern Territory's Water Allocation Plans allocate a small amount of water to the Aboriginal Water Reserve. However, where systems are already over-allocated or the ESY is over-estimated, the Aboriginal Water Reserve is not able to be accessed. As the Ooloo WAP states: "The Northern [groundwater management zone] is overallocated. As a consequence the Strategic Aboriginal Water Reserve is notional and cannot be provisioned."¹³ There has also been very limited First Nations stakeholder engagement in relation to this government driven initiative.
- g. Water advisory committees (the only mechanism currently in place to ensure stakeholder and public engagement in water planning) are not functioning effectively, and indeed seem to have been disbanded in many cases. All Aboriginal members of the Mataranka Tindall Water Allocation Plan Water Advisory Committee resigned after failed attempts to have cultural knowledge incorporated into the plan. We also note academic criticism regarding the socio-cultural risks associated with the Aboriginal Water Reserve's division between waters and land.¹⁴

The recently declared Georgina Wiso WAP made the largest water allocation in the history of the Northern Territory. It was developed without a water advisory committee in place and has been criticised by Australia's leading water governance experts, who stated the government took no substantive steps to understand Indigenous cultural and ecological values sustained by groundwater in the development of the plan.¹⁵ The NWI requires "inclusion of Indigenous representation in water planning wherever possible" and water plans will "incorporate Indigenous social, spiritual and

¹² Ooloo Dolostone Aquifer Water Allocation Plan 2019-2029, p 7.

¹³ Ooloo Dolostone Aquifer Water Allocation Plan 2019-2029, p 73.

¹⁴ Sue Jackson, Erin O'Donnell, Lee Godden, Marcial Langton (2024) Ontological Collisions in the Northern Territory's Aboriginal Water Rights Policy, *Oceania*, 93:3, 259-281, <https://onlinelibrary.wiley.com/doi/full/10.1002/occea.5388>.

¹⁵ Matthew Currell, Sue Jackson & Christopher Ndehedehe (2024) Risks in the current groundwater regulation approach in the Beetaloo region, Northern Territory, Australia, *Australasian Journal of Water Resources*, DOI: [10.1080/13241583.2023.2297949](https://doi.org/10.1080/13241583.2023.2297949).



customary objectives and strategies for achieving these objectives wherever they can be developed”.¹⁶

The Georgina Wiso area covers a significant portion of the Beetaloo Basin, an area earmarked for substantial fracking production. The Plan increases water extraction in the region by 1400% and commits the extraction of water at a greater rate than the aquifer recharges and replenishes. It contains no guidance as to where and how groundwater can be taken. Environmental impacts could differ, for example, where billions of litres of groundwater are extracted from one part of the aquifer covered by the plan.

Professor Sue Jackson, a specialist in water governance from Griffith University, found the Plan breaches the NWI rules around public consultation and standards of scientific evidence.¹⁷ The NWI requires that water plans are developed with allocations for the environment, and that any water use in over-allocated or stressed water systems is sustainable. The Georgina Wiso WAP fails to make an allocation of water to sustain the environment. The Plan also fails to adopt climate change modelling and does not consider the cumulative impacts of water extraction on the Roper River catchment or the entire Cambrian Limestone Aquifer. This is despite a report by Professor Matthew Currell and Dr Christopher Ndehedehe (**attached**) which found that the plan could “lock in negative impacts on environmental and cultural values”, including irreparably damaging the Roper River and associated springs, as well as sacred sites, the tourism industry, the recreational fishing industry and water supply to the downstream Indigenous community of Ngukurr.

2. Conservation water systems

The National Water Initiative prescribes that a State or Territory may determine, when a plan is prepared, the detail, duration and time of review, and the resources devoted to its preparation “based on an assessment of the level of development of water systems, projected future consumptive demand and the risks of not having a detailed plan.”¹⁸ There are three attributes of the Northern Territory’s water allocation planning system inconsistent with this principle. The NWI policy guidelines state that “all plans should specify the sustainable water extraction regime for the system” and suggest a “water system classification” that recognises conservation water systems, low development systems and high development water systems.

Inconsistently with the NWI, the Northern Territory government gives no recognition to planning for conservation water systems in water resources planning. It addresses only low development systems that do not require a WAP and higher development systems that may or will require a WAP.

Many of the Northern Territory’s rivers are largely untouched by water resources development, with little to no extraction by industry. They have significant ecological and cultural value. It is ECNT’s position that instead of treating these water systems as either high or low development systems, the

¹⁶ NWI, Schedule E.3.

¹⁷ <https://www.abc.net.au/news/2023-11-14/nt-water-plan-released-georgina-wiso-oil-gas-cotton-sectors/103099618>.

¹⁸ Intergovernmental Agreement on a National Water Initiative 2004, paragraph [38].



Northern Territory government is missing an important opportunity to minimise impacts on these conservation, ecological and cultural values. The Northern Territory government should instead consider mechanisms for protection of these places. For example, it could adopt the approach taken in New South Wales and Queensland governments, which introduced legislation to protect rivers of low resources development and high conservation value from ecological damage by extraction.

3. Contingent allocation rules

The Northern Territory government applies policies to guide licensing decisions in areas not subject to a WAP.

The Water Allocation Planning Framework is over 20 years old and applies to water allocations in areas outside a WAP. The contingent allocation rules for Top End rivers and aquifers allocate 80% of water for environmental and other public benefits and new licences will not be granted if they will exceed the 20% threshold. In the Arid Zone, at least 95% of flow at any time in any part of a river is allocated to the environment, and groundwater extractions are not to cause a “deleterious change in groundwater discharges to dependent ecosystems” or to exceed 80% of total aquifer storage over a period of 100 years from the start of extraction – a proposition that seems directed at sustaining 80% of the original aquifer storage over a period of 100 years. Each of these principles forbids new licences to be granted “unless supported by directly related scientific research”, but what constitutes “support” is quite unclear.

Increasingly, the Water Controller has applied the Arid Zone rules in the Top End zone in licensing decisions, which is inappropriate where Top End aquifer recharge is episodic. In deciding whether to grant a water extraction licence, the Water Controller is not required to ascertain the estimated sustainable yield for a resource, nor allocate licences in accordance with that sustainable yield. This has led to inconsistent and capricious decision-making. For example, in the case of the overturned Larrimah licence (to NT Land Corporation), the Acting Water Controller capriciously departed from established practice to apply the Arid Zone contingent allocation rules instead of the Top End contingent allocation rules in the Water Allocation Planning Framework. The Northern Territory government are increasingly relying on the depletion of a percentage of aquifer storage as a basis for WAPs, despite the plan areas covering aquifers reliant on episodic recharge.

The Badu report found that there is particular concern with “the extent to which groundwater storage can be allocated” under contingent allocation rules, particularly in the Arid Zone.¹⁹ It comments that this practice seems “intended to enable access to groundwater storage for urban water supplies and not as a default level of allocation for consumptive purposes (such as agriculture).”²⁰ The Badu report recommends limiting the circumstances for such allocations. The Gardner report finds that “both the statutory concept of ESY as including non-consumptive uses and the designation of long-term storage of groundwater for environmental conservation values and

¹⁹ Badu Review, section 6.2.4, “Precautionary decision making outside water allocation plan areas”, pp.16-17, and section 6.2.7.

²⁰ Badu Review, section 6.2.4, “Precautionary decision making outside water allocation plan areas”, pp.16-17, and section 6.2.7.



consumptive use access are inconsistent with the central principles of consumptive pool management of share entitlements subject to prior environmental allocation.”²¹

Both the Top End and Arid Zone rules have also been criticised by leading water academics as being “poorly suited to protect ecological, Indigenous socio-cultural and other water use values.”²² The rules, as currently applied, allow the depletion in area that fall within the Arid Zone, which “risks the reduction or loss of groundwater flows to ecosystems and stygofauna habitat and reduced throughflow of groundwater between different regions, within the highly connected CLA system. This may disrupt water flows that sustain local livelihoods and those that are integral to Indigenous peoples’ beliefs and cultural practices.”²³ They state that a more inclusive approach to water management would involve setting conservative water extraction limits combined with trigger levels for ecosystem protection, and co-management of water resources in partnership with Aboriginal peoples.

The government has also recently introduced the Wet Season Flows policy, containing a contingent allocation rule applying to wet season take from Top End rivers and which may inform licensing decisions. It involves a formula for calculating a consumptive pool based on data across 50 years. A consumptive pool is calculated at 5% of the 25th percentile of total flows during the three highest flow months of the year (generally January – March). The extraction entitlement will be set by licence conditions as to location and rates of take, and licensees will be required to monitor, record and report on the conditions of take. The policy does not address how licence entitlements would be allocated between competing licensees. The policy is described in the Gardner report as generally inconsistent with the NWI Policy Guidelines.²⁴

4. The Water Act

The Environment Defenders Office considers the Northern Territory’s water laws to be some of the poorest in the country.²⁵ The Northern Territory’s outdated water laws are a product of a mid-20th century, rather than a 21st century mindset. The Water Act is skeletal in form and substance, lacks prescription, embeds significant discretion in most water management decisions, facilitates conflicts of interest and political interference, and barely refers to the environmental or cultural values that are so cherished in the Northern Territory.

²¹ Professor Alex Gardner, *Evaluation of the Badu Advisory Report: Review of the NT’s implementation of the National Water Initiative in relation to water planning* (12 February 2024), 37.

²² Matthew Currell, Sue Jackson & Christopher Ndehedehe (2024) Risks in the current groundwater regulation approach in the Beetaloo region, Northern Territory, Australia, *Australasian Journal of Water Resources*, DOI: [10.1080/13241583.2023.2297949](https://doi.org/10.1080/13241583.2023.2297949).

²³ Matthew Currell, Sue Jackson & Christopher Ndehedehe (2024) Risks in the current groundwater regulation approach in the Beetaloo region, Northern Territory, Australia, *Australasian Journal of Water Resources*, DOI: [10.1080/13241583.2023.2297949](https://doi.org/10.1080/13241583.2023.2297949).

²⁴ Professor Alex Gardner, *Evaluation of the Badu Advisory Report: Review of the NT’s implementation of the National Water Initiative in relation to water planning* (12 February 2024).

²⁵ <https://www.edo.org.au/wp-content/uploads/2021/08/Deficiencies-Water-Law-NT.pdf>.



Nothing short of complete reform of the Northern Territory Water Act is required to bring the Northern Territory regime into line with contemporary standards of water governance and environmental regulation. The current approach of water laws in fact embeds ad hoc lawmaking on-the-run, inhibits meaningful engagement with the public and key stakeholders, and further undermines confidence in the Northern Territory Government social licence to regulate.

There is no independent oversight, reporting or auditing of the Northern Territory's management of environmental and cultural water. Monitoring, compliance and enforcement functions are either extremely poor, or absent. There is no public reporting of these functions, significantly undermining the transparency of the water regulatory regime.

Water laws in the Northern Territory should reflect the unique ecological, social and cultural values of the Northern Territory, by explicitly ensuring these values are recognised and protected. In recognition of extensive Indigenous property interests across the vast majority of the land and waters of the Northern Territory, Traditional Owners and their representative institutions must be centred in all decisions about management and use of water in the Northern Territory.

5. Centralised decision-making

There is limited institutional separation between water service delivery, policy-making and regulation with respect to water in the Northern Territory. Each of these roles appear to be performed by the one department. It had long been standard practice in the Northern Territory that the Water Controller is also the CEO of the relevant Department, who reports to the Environment Minister. While the recent decision to appoint an independent Water Controller is welcomed, it is unclear whether or if this position is genuinely independent. ECNT understands that the Water Controller does not have access to independent research, and there has been no attendant increase in funding to support this role or achieve genuine regulatory separation. Currently, there is no independent economic regulation of water in the Northern Territory and funding appears to be a barrier.

6. Safe drinking water legislation

In 2023, the Northern Territory government committed to introducing safe drinking water legislation following a long campaign by community members. There are currently no legal protections and no minimum standards for drinking water quality in the Northern Territory. There is no general power to reserve water for current and future drinking water supply against other uses. Drinking water provision is completely unregulated in remote Indigenous communities, with longstanding issues regarding quality and supply.²⁶ Although safe drinking water legislation has been proposed, ECNT understands that this commitment has recently been delayed until 2026. Any proposed legislation must ensure equitable access across the Territory.

²⁶ Kirsty Howey and Liam Grealy (2021) Drinking water security: the neglected dimension of Australian water reform, *Australasian Journal of Water Resources*, 25:2, 111-120, DOI: 10.1080/13241583.2021.1917098, Liam Grealy & Kirsty Howey (2020) Securing supply: governing drinking water in the Northern Territory, *Australian Geographer*, 51:3, 341-360, DOI: 10.1080/00049182.2020.1786945.



7. Funding for water resource management

The Northern Territory is the only jurisdiction (apart from Western Australia) that does not charge irrigators for water. This means that:

- a. The key mechanism to fund water resource management by the Northern Territory Government is absent, seriously impeding the compliance, monitoring and enforcement functions which are essential for the success of any water allocation system.
- b. Water licensing in the Northern Territory currently involves the direct transfer of public wealth into private hands and appears to constitute a significant mismanagement of public resources. The Northern Territory has recently introduced water trading within water allocation plan areas, which means that irrigators can trade a public resource obtained by them for free at a profit.

To implement a recommendation of the Scientific Inquiry into Hydraulic Fracturing, the Northern Territory Government recently introduced a “[price](#)” for water licences for hydraulic fracturing. However, this is a flat fee of \$3000 and cannot, in ECNT’s view, be properly described as pricing water as contemplated in the NWI.

8. Catchment or ecosystem based-management

There are no mechanisms for catchment or ecosystem-based management of water resources in the Northern Territory. Transitioning to a catchment or ecosystem-based water management system could allow for more holistic water planning and provide better oversight of environmental and cultural water. Catchment based management is common in other jurisdictions and the Northern Territory’s piecemeal approach to water planning is allowing large allocations without assessment of the cumulative impacts.

The only notable attempt at catchment management in the Northern Territory was the Daly River Management Advisory Committee (DRMAC), which was established as a water advisory committee under the Water Act. DRMAC was established in 2006 by the NT Labor Government at a time when there was significant community concern about land clearing and development plans and proposals for the Daly River region. It developed a strategic plan, and members of DRMAC were appointed by the Minister for Natural Resources, Environment, and the Arts.²⁷ A report, [River Health in the Daly Catchment](#), was produced to provide the basis for ongoing assessment and maintenance of the health of the catchment. A River Health Monitoring Strategy and Plan for the Daly River was also developed as the basis for ongoing community involvement in the assessment and maintenance of high standards of water quality. Despite a number of achievements and effective collaborations with civil society and universities, DRMAC was dismantled in 2012 by the new CLP Government and

²⁷ DRMAC’s members included: an independent Chair; three Traditional Owners (supported by the Aboriginal Reference Group – see below); three people representing pastoral, horticultural agricultural interests; fishing; two commercial tourism and recreation fishing representatives; one conservation representative as well as the relevant government managers.



was not re-established. The DRMAC case study highlights the vulnerability of NT catchment management approaches to political agendas, and demonstrates the legal weakness of such structures under existing NT law. DRMAC worked well with a supportive Minister and Government, but when this changed, they were vulnerable and ultimately dismantled.

9. Floodplain harvesting policy

In February 2024, the government released policies prescribing rules for surface water and floodplain harvesting. The introduction of specific policies to facilitate harvesting of water from Northern Territory rivers and floodplains during the wet season comprises one of the most significant water policy changes in the Northern Territory since it became a signatory to the National Water Initiative in 2004. There was widespread opposition to these policies, including by water academics.

ECNT acknowledges that the policy does not use the term “floodplain harvesting”. However, the policy would apply to any capture of water from floodplains, as well as other forms of extraction from rivers and floodplains during the wet season including pumping from rivers into storages/dams. ECNT concerns regarding the policies apply to all forms of surface water extraction covered by those policies, although we have specific concerns about the practice of floodplain harvesting and the difficulty experienced in the Murray Darling Basin in attempting to call back allocations.

The NWI commits signatories to ensuring that the consumptive pool of a specified water resource should be determined via a water sharing plan. Water sharing plans are aimed at achieving a strategic and catchment-based approach to extraction, which would see a water balance developed, any proposed surface water extraction modelled together with other outputs such as groundwater extraction, environmental and cultural objectives defined, engagement with stakeholders about trade-offs between competing outcomes, and a sustainable yield (or consumptive pool) established. The draft policy and guideline do not achieve these objectives. They treat wet season flows as a separate category of water disconnected from other hydrogeological components. Wet season flows should not be artificially carved out from dry season extraction in this way. Extraction in one season may have impacts at other times of the year, or on other hydrogeological components of the system. The recent CSIRO NAWRA assessment for the Darwin catchment stated that “water harvest scenarios have the potential to reduce dry-season flows and the duration of wet season flows.”²⁸ Treating wet season flows as a separate category of water is likely to pose a considerable risk to those systems. An integrated approach to any proposed surface water harvesting is required, which considers the system as a whole.

The harvesting of water from Northern Territory rivers and floodplains during the wet season, and subsequent storage of that water in off-stream storages or dams is not a well-established practice. However, in recent years the cotton industry has revealed significant expansion plans in the Northern Territory which rely on floodplain harvesting (or overland flow capture). For example, NT Farmers 2020 “Northern Territory Plan Industry Economic Impact Analysis” estimated that 520 GL of additional water may be available from the Daly River Basin alone. The presentation by NT Farmers

²⁸ Creswell, R et al, “Water Resources in Northern Australia”, Northern Australia Land and Water Science Review, October 2009, p 279.



to the Surface Water Harvesting Steering Group (of which ECNT was a member) convened by the Department of Environment, Parks and Water Security also made clear that the primary driver for these policies is the cotton industry. The environmental, economic, cultural and social impacts of the cotton industry's practices of floodplain harvesting in the Murray Darling Basin have been very significant. Estimates of extraction of floodplain harvesting in the Murray Darling Basin have tended to be inaccurate, the practice has been notoriously difficult to regulate (including in relation to monitoring and compliance), and it has caused significant diminution in flows in the Murray Darling Basin which regulators are now trying to claw back. There is a real risk that the mistakes of the Murray Darling Basin will be repeated in the Northern Territory if these policies are finalised.

The guideline provides guidance for when and in what circumstances a permit to interfere with a waterway will be granted. Applicants self-assess whether they required a permit – for example, no permit is required where a proponent determines that their proposed action will not cause a material change to a waterway. There is a considerable risk that the Department will accept the self-assessment made by a proponent. For example, Australian Ilmenite Resources applied to capture up to 2.9 GL of catchment runoff a year and to construct an 8 GL dam. The Department directed AIR to apply to the draft policy. AIR assessed their project as having no material change to a waterway and the Department agreed with that assessment, despite applicant proposing to capture 99% of two tributaries to the Roper River which would fundamentally alter the water course of these two tributaries.

10. Climate change

Climate change is projected to have significant impacts on flows of Northern Territory rivers. We note that recent CSIRO research indicates very high rates of evapotranspiration under current scenario modelling, which might significantly impact streamflow of major Northern Territory rivers.²⁹ Climate change is also likely to exacerbate the impacts of water extraction since “groundwater extraction at rates that exceed recharge even temporarily (due to its episodic nature) could coalesce with prolonged droughts, to deplete storage faster than expected, lowering the water table and ultimately damaging GDEs and their unique biodiversity”.³⁰

The Northern Territory Government's Gulf Water Study (Technical Report 16/2009D) identifies a number of serious impacts on the Roper River from extraction from Mataranka Tindall Limestone Aquifer during dry climatic periods. This report found that in drier times, the freshwater and saltwater interface can move more than 70km upstream, causing the usually freshwater reaches to become saline. In addition, the study found that significant groundwater extraction in the Mataranka area during a drier period can:³¹

- result in less discharge to the river (less spring flow to the river)

²⁹ https://depws.nt.gov.au/__data/assets/pdf_file/0011/944831/state-of-the-science-and-climate-change-impacts-final-report.pdf.

³⁰ Currell, M, Ndehedehe, C, The Cambrian Limestone Aquifer, Northern Territory: Review of the Hydrogeology and Management Rules to Ensure Protection of Groundwater Dependent Values (2022).

³¹ Gulf Water Study Roper River Region (2009). Northern Territory Government Technical Report 16/2009D.



- which results in less flow downstream in the losing section of the river
- which can cause the river to cease to flow at Roper Bar and further upstream
- which reduces water availability to users (stations) upstream of Roper Bar
- and which can cause the salt water interface to migrate upstream in the estuary affecting Ngukurr's water supply and potentially the ecology of the Roper River of which we know little about.

The findings in this study have been corroborated and supplemented by a number of sources, including a report commissioned by ECNT by Professor Matthew Currell and Dr Christopher Ndehedehe (**Currell Report, attached**). The Currell Report discloses a range of serious risks to aquatic ecosystems associated with an increase in groundwater extraction from the Cambrian Limestone aquifer, including reduced flows of groundwater to the Roper River. Professor Currell notes, "if these groundwater discharge flows and/or CLA groundwater levels were to decline below key thresholds, complete loss of springs and baseflow to rivers may occur. This would lead to the loss of vegetation communities and animal habitat, and incalculable loss and damage to the cultural values associated with both specific sites (for example, springs, waterholes and wetlands) and the health of 'country'". Furthermore, and catastrophically for the Roper River, Professor Currell found that the depletion of storage in the Cambrian Limestone Aquifer could result in throughflow no longer sustainable the Tindall Limestone, and a change to net loss of groundwater throughflow, with groundwater from the Tindall Limestone instead flowing south (rather than north).

We note that, considerable additional groundwater has been allocated, or is contemplated to be allocated from the Cambrian Limestone Aquifer. For example, the Georgina Wiso Water Allocation Plan was declared at the end of 2023, which allocated 210 billion litres of groundwater per year from the aquifer to consumptive uses. In addition, we understand that the draft Mataranka Tindall Water Allocation Plan (once declared) could allocate an additional 62 gegalitres of water per annum from the area covered by the plan, which would allocate double the water currently licensed in the plan area, and 6 times the water currently used in the plan area. Accordingly, the combined proposed allocation from the Cambrian Limestone Aquifer is over 265 billion litres of water per annum.

There is an urgent need for the Northern Territory's water management regimes to incorporate climate change modelling and analysis of the ecological impacts of such substantial water extraction in this area. We note that there is little transparency regarding modelling used in the development of water policies, however ECNT understands that in some circumstances, water policy is developed using historic climate data, rather than climate projections or modelling. We support the recommendations made in the Environment Defenders Office's submission made to the Productivity Commission on the National Water Reform Inquiry regarding the urgent need for integrating climate change into water laws and we support their submission that the key elements of climate-ready water laws should be adopted in the Northern Territory.³²

³² Environmental Defenders Office, Submission to the Productivity Commission on the National Water Reform Inquiry (21 August 2020) 15.



Recommendations

In summary, ECNT calls for urgent reform of the Northern Territory's water regulatory system grounded in the principles of water justice and good water management, which ensure:

- that Traditional Owners, and their representative institutions, are centred in all decisions about management and use of water in the Northern Territory;
- that everyone's basic water needs are met;
- that the high ecological, cultural and social value of the Northern Territory's waterways are recognised and protected;
- that people who are affected by decisions about water are given a seat at the table; and
- that our water is recognised as a valuable public good that should not be squandered.

Any reform of the Northern Territory's water laws should be guided by these principles. The Territory's water laws should be brought into line with contemporary standards of water governance and environmental regulation and reflect the unique ecological, social and cultural values of the Northern Territory's waterways, by explicitly ensuring these values are recognised and protected. In recognition of the extensive property interests across the vast majority of the land and waters of the Northern Territory, Traditional Owners and their representative institutions must be centred in all decisions about the management and use of water in the Northern Territory. Any reforms to the Water Act should occur as a holistic package following considerable consultation with key stakeholders and deliberation about the package as a whole.

ECNT calls for the following specific reforms to the Northern Territory's water regulatory system to achieve water justice.

Recommendation 1: Introduce a new Water Act which incorporates the principles of ecologically sustainable development and principles of water justice, requires the consideration of community views and environmental impacts in decision-making, ensures transparency and accountability mechanisms and enables a strong water regulatory and policy framework to support the Act's objectives.

Recommendation 2: Strengthening of the NT's water allocation planning process. Reform of the Water Act should ensure that water allocation plans are the centrepiece of water management in the Northern Territory and comply with the recommendations of the Productivity Commission's 2020 Water Reform report, including:

- a. There must be a legal requirement to create water allocation plans within certain specified timeframes;
- b. There must be an ability for relevant decision-makers to withhold water from allocation so that the resource is not fully allocated by the time a WAP is established;
- c. Minimum criteria for WAPS must be established by legislation, including a definition of the estimated sustainable yield;



- d. WAPs must be legally binding/enforceable;
- e. WAPs must define pathways for returning to sustainable levels of extraction where resources are overallocated;
- f. WAPs must recognise the needs of Aboriginal and Torres Strait Islander people, including appropriate engagement with Traditional Owners, and the incorporation of cultural values into WAPs;
- g. WAPs must include clear, measurable and well-informed cultural and environmental objectives and outcomes that can be monitored and reported against;
- h. WAPs should ensure that trade-offs are made in line with community values, with the following principles to guide the decision-making process: effective community engagement; use of the best available scientific, social and economic data to inform decisions; consideration of all economic, social and environmental values associated with the system, including dependent downstream environments and industries.
- i. WAPs must include modelling for climate change;
- j. WAPs must require public reporting on compliance, monitoring and enforcement activities with respect to water licences and water allocation plans, including with respect to environmental and cultural water objectives and outcomes;
- k. WAPs must ensure that planning processes include independent review, which is necessary for improving transparency, holding governments to account, and identifying areas for improvement.

Recommendation 3: Introduce evidence-based and legally binding sustainable limits for water extraction for Water Allocation Plans and water licences. The Water Act must be amended to clearly define “estimated sustainable yield”. It should include a methodology for determining the estimated sustainable yield based on best-available science and cultural knowledge.

Recommendation 4: The Water Act must clearly define and report on environmental objectives and outcomes and ensure transparency of scientific information. The Water Act must contain prescription or guidance to safeguard the high ecological, cultural and social value of the Northern Territory’s waterways. There should be clear, measurable and well-informed environmental objectives and outcomes defined in WAPs and licences, performance indicators should be established, and there should be public reporting on environmental and cultural flows, and how these are being protected.

Recommendation 5: The Northern Territory government should consider catchment-based management of waterways and a focus on planning for conservation management systems. Catchment-based or conservation management would enable consideration of a wider array of issues (including protection of environmental and cultural values, biodiversity, land clearing, non-pastoral use permits, planning proposals, pollution concerns). While there is no single model, the basic principles of ‘integrated’ catchment management are to:

- a. Take a holistic approach to the management of land, biodiversity, water and community resources at the water catchment scale
- b. Involve communities in planning and managing their landscapes



c. Find a balance between resource use and resource conservation

The Northern Territory Government should investigate establishing mechanisms for integrated whole of system catchment or ecosystem-based management of waterways in the Northern Territory. The model for this should be developed collaboratively with key stakeholders and the public. This function should be performed by an independent (government-funded) panel of experts, land and water users, key civil society organisations and community members, including Traditional Owners or their representative institutions.

Recommendation 6: The Northern Territory government should ban the practice of surface water harvesting.

Recommendation 7: The Northern Territory government should ensure that safe drinking water legislation is developed with urgency and in an equitable way, ensuring that funding for water service infrastructure and management is adequate, transparent and risk-based.

Recommendation 8: The Northern Territory government should ensure institutional separation between service delivery, policy-making and regulation with respect to water, which is a requirement of the NWI. It should also ensure that water management and regulation occurs, including compliance and enforcement.

Recommendation 9: First Nations cultural values and objectives for water planning must be independently ascertained in accordance with processes determined by Traditional Owners and integrated into water policy development and decision-making.

Recommendation 10: ECNT calls for the following specific changes to the National Water Initiative framework:

- 1) The re-establishment of the National Water Commission to assist with the effective implementation of the NWI.
- 2) The Northern Territory government is failing to adopt NWI principles, objectives and key outcomes in water law and policy development. Challenges associated with the enforceability or accountability associated with jurisdictional adoption of NWI principles, objectives and key outcomes is a key barrier to the development of water policy consistent with the NWI in the Northern Territory and must be addressed.
- 3) The NWI must require the Northern Territory government to:
 - a. Meaningfully involve First Nations communities in water management and decision-making in the Northern Territory.
 - b. Develop co-management models to allow for First Nations co-management of water catchments and groundwater in the Northern Territory.
- 4) To ensure state and Territory compliance with the NWI all federal funding for major projects through Infrastructure Australia should be contingent on compliance with the NWI.
- 5) The NWI must adopt an environmental protection form of water governance, focused on the conservation of freshwater and water-dependent ecosystems, rather than treating water as a resource for distribution.



Given the commission is explicitly tasked with providing recommendations on how to support the involvement of First Nations communities in water management, the Commission should make efforts to proactively seek input from First Nation communities as part of this consultation process – beyond the online call for submissions. As highlighted in this submission there are many risks to NT water and communities most likely to be impacted are First Nations communities, for this reason ECNT suggest the Commission make special effort to reach those communities for insights and reform recommendations.

Attachments

- 1) Matthew Currell, Sue Jackson & Christopher Ndehedehe (2024) Risks in the current groundwater regulation approach in the Beetaloo region, Northern Territory, Australia, *Australasian Journal of Water Resources*.
- 2) Professor Alex Gardner, *Evaluation of the Badu Advisory Report: Review of the NT's implementation of the National Water Initiative in relation to water planning* (12 February 2024).

If you have any questions in relation to ECNT's submission, please contact Kirsty Howey

Yours faithfully

Kirsty Howey
Executive Director
Environment Centre NT

Chloe Badcock
Freshwater Campaigner
Environment Centre NT