

The Hon. Natasha Fyles
Northern Territory Chief Minister

23 November 2022

Dear Chief Minister

Re: Poor practice water planning in the Northern Territory

As a group of Australian water experts, we express our concerns about the Northern Territory's approach to water planning and regulation. The Northern Territory's record of water planning does not meet national standards, reflected in recent departures from the principles of national water policy (see attachment).

Progress in rolling out water allocation plans (WAPs) has been extraordinarily and unacceptably slow. As a result, most of the water licenced to industry has been done so outside of a statutory planning process. Further, current licencing primarily addresses needs of individual projects, with insufficient transparent or rigorous assessment of cumulative impacts.

We have considerable concerns about the Contingent Allocation Framework. First, NT's continued reliance on 'contingent allocation rules' over the 95% of the NT not covered by water plans entrenches poor practice and undermines water planning outcomes and processes. We also hold concerns about the use of climatic zones within the framework and the criteria applied to assessing the 'sustainable yield' in the Arid zone. The reliance on water storage volumes to calculate sustainable yield is out of step with sustainable groundwater management principles. Other Australian jurisdictions do not use this method to assess sustainable yield. The largely default Contingent Allocation Framework needs to be replaced by a scientifically defensible and transparent practice of comprehensive water planning.

The recently released *Georgina Wiso Water Allocation Plan (2022-2030)* is particularly poor and regressive. It breaches water planning guidelines of the National Water Initiative (NWI), committed by all jurisdictions and the Australian Government. It risks many significant environmental and Indigenous values. No water advisory committee was put in place, compounding the problem of absent environmental or cultural requirements for water or trigger rules for assessing unacceptable impacts. Potential impacts to groundwater dependent ecosystems are completely overlooked. The scientific and procedural deficiencies identified in the attachment to this letter need to be addressed, supported by a robust program of technical studies, review, and input from the scientific community – in the public domain.

We understand that the NT Government has committed to replacing the *Water Act 1992 (NT)* with modern legislation by 2026. This is an unacceptable timeframe, not least of all because environmental and cultural values will be compromised by deficient WAPs that are adopted in the interim. We therefore urge you to urgently implement the following:

- Halt issuing water licences inside and outside WAP areas until data on groundwater-surface water interactions and the water requirements of ecological and cultural values

have been comprehensively obtained to ensure integrity and transparency in water planning and allocation processes;

- Dedicate resources to developing extensive baseline science for large, data-poor regions, such as the Cambrian Limestone Aquifer, and more robust monitoring programs for all WAPs;
- Establish consultative committees for the Georgina Wiso and all future WAPs to ensure that all voices are heard in the water planning process and processes of scientific and public review are guaranteed;
- Obtain resources in accordance with NWI principles of cost recovery to develop a more rigorous scientific basis for determining sustainable yields for groundwater, including gaining a far better understanding of groundwater recharge, discharge/outflows and inter-aquifer connectivity;
- Undertake detailed supporting modelling (informed by comprehensive field data) to show how extraction at different proposed ESYs and in different regions of the Beetaloo Basin would be likely to alter groundwater conditions and connected values;
- Set aside provisional Aboriginal Water Reserves for all aquifers and catchments prior to the completion of WAPs to avoid water over-allocation; and
- Reform NT water legislation to ensure that WAPs are legally binding on decisions of the Water Controller to issue water licences.

Yours faithfully

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Emeritus Professor Barry Hart, Monash University

Dr Erin O'Donnell, Law School, University of Melbourne

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Adjunct Professor Brad Pusey, School of Biological Sciences, University of Western Australia

Professor Jeff Connor, Business School, University of South Australia

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Professor Quentin Grafton, Crawford School of Public Policy, Australian National University

Background and supporting material

Almost twenty years ago the Northern Territory signed up to national water policy, the National Water Initiative, which commits jurisdictions to 'nationally-compatible, market, regulatory and planning based system of managing surface and groundwater resources for rural and urban use that optimises economic, social and environmental outcomes' (COAG 2004, clause 23).

Since that time the NT has seen an acceleration in water extraction and heightened interest in exploiting the region's water resources (including involvement with large-scale gas production in the Beetaloo Basin). Water licence decisions are increasingly controversial and contested with several being the subject of legal review. The need for robust and transparent water planning has never been greater.

Water allocation planning is the central organising device through which the National Water Initiative is to be delivered. Water plans provide a transparent means by which the sustainable yield is estimated, beneficial uses quantified, environmental and cultural requirements and protections identified, trade-offs negotiated, and implementation strategies agreed. The definition of environmental sustainability is to be determined by a community process that takes full account of social, economic and environmental issues. Across Australia public participation has been guaranteed through advisory bodies that provide a forum deliberating over the effects of water use on matters of public interest. In the Northern Territory WAPs also provide the legal trigger to the establishment of Strategic Aboriginal Water Reserves (where there is eligible Aboriginal land). Ideally the planning process provides a mechanism for putting all water users on an equal footing and limiting their collective use to sustainable limits.

Yet progress in rolling out water allocation plans (WAPs) in the Northern Territory has been very slow and in most of the NT water managers do not have a thorough understanding of how much water can be sustainably used. Only six plans are currently in effect, covering approximately 5% of the NT¹ and several others are in development. Many WAPs are taking an extremely long time to complete. For example, the Howard River WAP has been in development since 2010, although concerns about environmental impacts of water management practices in the region have been publicly aired since 1998, and the Mataranka Water Allocation Plan (still in draft) has a similar history².

As a result, most of the water licenced to industry has been done so outside of a statutory planning process. According to the Productivity Commission³, only 28% of water licences occur in WAP areas; a figure that compares very poorly with the national average of 80%. The current licence assessment process is tailored to addressing the needs of individual projects

¹ Nikolakis W. & Q. Grafton (2021). Law versus justice: The Strategic Aboriginal Water Reserve in the Northern Territory, Australia. *Australia International Journal of Water Resources Development* 1–19.

² O'Donnell, E., Jackson, S. Langton, M. & L. Godden (2022). Racialized water governance: the 'hydrological frontier' in the Northern Territory, Australia. *Australasian Journal of Water Resources* 26(1): 59-71.

³ Productivity Commission (2021). *National Water Reform 2020: Productivity Commission Final Report, Canberra*.

with little opportunity to assess the cumulative impacts transparently or rigorously⁴. Elsewhere, such licence-by-licence approaches have been shown to be ineffective⁵ and, in our view, the NT's continued reliance on 'contingent rules' is entrenching this practice and undermining water planning outcomes and processes.

The vast spaces of the NT that are not governed by a WAP are subject to the 'Contingent Allocation Framework' which has been in place for twenty years. This policy was based on a rule of thumb referred to as the 80:20 rule which establishes an arbitrary limit on water use from surface and groundwater resources. The rule has enabled the government to continue to allocate water, presumably with the expectation that an 80:20 split would be sufficient to conserve the NT's rivers, wetlands, springs and the groundwaters sustaining them. We are concerned that a policy which appears to have been introduced as an interim measure has become the default framework for water licencing over most of the Northern Territory.

The climatic zones within the Contingent Allocation Framework and the criteria applied to assessing the 'sustainable yield' in the Arid zone is another problematic feature. The Arid zone rule permits 80% of the aquifer's total groundwater storage capacity to be extracted over a century, as long as dependent ecosystems are not harmed. This is a much higher rate of extraction than allowed from the Top End zone. The Arid zone rule has been closely scrutinised by the Larrimah Water Resources Review Panel, the Pepper Scientific Inquiry into Fracking and by independent specialists with hydrogeological and water management expertise, as well as community groups and other stakeholders. These assessments have variously identified weaknesses in the application of the Arid zone rule in several licencing decisions in the Larrimah – Mataranka area and have concluded that reliance on water storage volumes to calculate sustainable yield is out of step with current sustainable groundwater management principles. Such principles are now well established and agreed in the international groundwater science and policy literature. It was acknowledged by the NT Water Controller in 2003 that this rule permitted mining of groundwater⁶ and the Pepper Inquiry considered it 'ecologically unsustainable'. No other Australian jurisdiction that we are aware of uses this method to assess the sustainable yield.

The recent announcement relating to the *Georgina Wiso Water Allocation Plan (2022-2030)* for the Beetaloo Basin gives cause for further concern. In our view this new model of water planning represents a significant departure from the tenets of the NWI and puts at risk many significant environmental and Indigenous values. Unlike all other NT water allocation plans, the draft *Georgina Wiso Allocation Plan* has been prepared without input from a water advisory committee, nor does it establish environmental or cultural requirements for water, or trigger rules for assessing unacceptable impacts.

⁴ Hart, B., O'Donnell, E. & A. Horne (2019). Sustainable water resources development in northern Australia: the need for coordination, integration and representation. *International Journal of Water Resources Development*, 36(5): 777–799.

⁵ Franks, S., Brereton, D. & C. Moran (2010). Managing the cumulative impacts of coal mining on regional communities and environments in Australia. *Impact Assessment and Project Appraisal* 28:4, 299-312.

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https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Rural_and_Regional_Affairs_and_Transport/Completed_inquiries/2002-04/water/index

Clause 25 (iii) of the NWI states that the parties' water access entitlements and planning framework's should 'be characterised by planning processes in which there is adequate opportunity for productive, environmental and other public benefit considerations to be identified and considered in an open and transparent way'. The NWI Guidelines for Water Plans and Planning Processes expect jurisdictions to 'consult with stakeholders including those within or downstream of the plan area'. Furthermore, sub-section (vi) states that parties should 'identify and acknowledge surface and groundwater systems of high conservation value, and manage these systems to protect and enhance those values'. Environmental outcomes are to be described and appropriate water management arrangements to be defined (S. 37(1)). Water plans are also expected to incorporate 'indigenous social, spiritual and customary objectives and strategies for achieving these objectives wherever they can be developed' (s 52(ii)). None of these steps has been taken in the formulation of the draft *Georgina Wiso Allocation Plan*.

In addition to public input and deliberation, thorough scientific work is needed to address knowledge gaps regarding the ecological, cultural and water use values sustained by Cambrian Limestone Aquifer groundwater in the Georgina and Wiso Basins, where data and knowledge are to date generally lacking. Yet the Plan has been released prior to the conclusion of assessments to be conducted under the Beetaloo Strategic Regional Environmental and Baseline Assessment (SREBA) (a recommendation of the Pepper Inquiry). According to the WAP's Implementation Plan, Indigenous cultural values will be documented *after* significant water use is to be permitted; key cultural sites relying on water resources and their requirements will not be identified until 2026 and other social and cultural values not identified until 2030. The key groundwater dependent values of each region need to be clearly outlined before development commences. For decision makers to approve water extraction in the absence of adequate baseline data runs counter to sound environmental regulation.

The proposed ESY for the Georgina and Wiso Basins is 260,800 ML/year which represents approximately 0.04 percent of total storage or 40 percent of the currently estimated average annual recharge. It must be stressed that the recharge rate is currently poorly constrained, and as such the proposed ESY may actually be a much higher proportion of recharge. It must be stressed that the best available science indicates that recharge to these aquifers is highly episodic (most likely only happening three times in the past 50 years since water level monitoring began) and in most years the ESY will far exceed recharge. The estimated water budget contained in the plan has further questionable figures – such as the assumption of a lack of groundwater discharge/outflow to surface features or use of groundwater by vegetation, which may reflect a lack of appropriate field data and surveys rather than the lack of existence of such outflows. The question of possible impacts to GDEs, including potential surface expressions of groundwater (e.g. at springs in the western Wiso basins), access to groundwater by deep rooted vegetation, or impacts on stygofauna communities, appears to have been completely overlooked in the plan. Similarly, assumptions that there will be a lack of significant impact on groundwater throughflows to the Tindall Limestone at the northern boundary of the plan area, which ultimately sustain the Roper River and Mataranka Springs, is poorly supported or understood at present. These deficiencies could have been addressed, had a robust program of technical studies, review and input from the scientific community – in the public domain – had been conducted to support drafting of the plan.