Drinking Water Security: The Neglected Dimension of Australian Water Reform

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Abstract

Drinking water security has been a neglected issue in Australian water reform. This article considers Australia's chief water policy of the past two decades, the National Water Initiative, and its aim to provide healthy, safe, and reliable water supplies. Taking the Northern Territory as a case study, we describe how despite significant policy and research attention, the NWI has failed to ensure drinking water security in Indigenous communities in the NT, where water supply remains largely unregulated. The article describes shortcomings of legislated drinking water protections, the recent history of Commonwealth water policy, and areas where national reforms have not been satisfactorily undertaken in the NT. We aim to highlight key regulatory areas that require greater attention in NT water research and, more specifically, in the Productivity Commission's ongoing inquiry process.

Key words: drinking water; National Water Initiative; Indigenous water rights; Northern Territory

1. Introduction

Adequate and safe drinking water is key to human life and health and is vital for the self-determination of Indigenous communities. In the Northern Territory (NT), drinking water security for remote communities is under threat from government neglect (Kurmelovs 2020),

renewed calls for water-intensive development in northern Australia (Allam 2020), and climate change (Allam *et al.* 2019). This article examines Australia's most significant national water reform of the past two decades, the National Water Initiative (NWI), in relation to drinking water regulation in the NT. Specifically, it considers how despite significant policy and research attention, the NWI has failed to ensure drinking water security in Indigenous communities in the NT, where drinking water remains largely unprotected and water services unregulated.

Legacy decisions in the domains of Indigenous affairs and water policy have led to this outcome. We suggest that by 'compartmentalising' (Jackson 2006) Indigenous rights and interests in water to matters of economic development and 'cultural flows' within centralised water allocation planning systems, the NWI has directed focus away from drinking water in remote contexts and has facilitated the exclusion of Indigenous stakeholders from planning and decision-making related to drinking water services and infrastructure. The Australian Government's 2005 reforms towards the 'mainstreaming' of Indigenous essential and other services (so that the state formally assumed responsibility for service provision) have also contributed to this outcome (Willis *et al.* 2008; Altman & Russell 2012). In the NT, this has allowed the continuation of a racialised governance regime that privileges urban, predominantly non-Indigenous communities, over remote Indigenous communities (Grealy & Howey 2020, 2019a). Acknowledging these limitations of the NWI, we show how the NT has nonetheless failed to implement numerous NWI reforms. Put another way, the terms of the NWI have been inadequate but a reformed attention to regulating drinking water is one important means of ensuring amenity in remote Indigenous contexts.

This article summarises the priorities of past reforms under the NWI and the failure of the NT to develop protections for drinking water according to NWI requirements. We commence section two by sketching contemporary threats to water security in the NT and the differentiated regulatory protections for drinking water that do exist. Section three provides a brief description of our methods, while section four provides an overview of national water reform priorities in Australia since the 1990s. Section five offers substantive analysis of the failure of NWI reforms to be properly implemented in the NT, in relation to Indigenous water use, urban water services, community service obligations, and drinking water infrastructure.[1] In conclusion, we argue that urgent legal and policy reform is needed to redress water security issues in the NT, and that such reform must attend to the details of funding, accountability, and institutional arrangements in ways that prior analyses have failed to do.

2. Background

2.1 Context and threats

The NT comprises approximately one sixth of Australia's landmass, yet is the least populous jurisdiction, with approximately 230,000 residents of whom one quarter are Indigenous. Half of NT land is owned as freehold by Indigenous people under the *Aboriginal Land Rights (Northern Territory) Act* 1976 (Cth). Much of the remainder is subject to native title rights and interests under the *Native Title Act 1993* (Cth). Nearly all Indigenous communities are located upon Aboriginal land owned under the *Land Rights Act*.

[1] Urban water services references the NWI category 'Urban Water Reform' (Intergovernmental Agreement 2004), which encompasses drinking water reforms in 'urban' and 'regional' contexts and does not imply any distinction between towns and remote communities in the NT.

NT Indigenous communities are experiencing significant challenges in relation to adequate and safe drinking water, concerning water supply, water quality, and drinking water infrastructure. Issues undermining water security range from intermittent algal blooms (Maddocks 2016), failing chlorination equipment (McLennan 2017), bore depletion (Beavan 2019), contamination by heavy metals (Kurmelovs 2020), and delays in infrastructural delivery and refurbishment. The impact of climate change on water security is already underway, but this is likely to accelerate in the NT – where 90 per cent of the consumptive water supply comes from groundwater – through increased droughts, erratic rainfall (and aquifer recharge), and extreme temperatures (Northern Territory Government 2020; Nikolakis *et al*. 2011). Climate change is also likely to exacerbate existing inequalities in health, infrastructure provision, lack of educational and employment opportunities, and income for remote residents, prompting political questions about the viability of human habitation in remote communities (Lea *et al.* 2018; Green *et al.* 2009). The NT is also under renewed pressure to develop water-intensive industries, including as a consequence of the Australian Government's (2015) 'White Paper on Developing Northern Australia' (Allam 2020). Water security is thus precarious in the NT, yet drinking water supply is largely unprotected and water services unregulated and unaccountable in the majority of remote contexts.

2.2. Drinking water regulation in the NT

Despite the legal recognition of native title rights and interests in water by the Commonwealth, and extensive Indigenous landholdings under the *Land Rights Act* where Indigenous communities in the NT are generally located, ownership (and control) of water is vested in the Crown in right of the Northern Territory (O'Donnell 2013; O'Neill *et al.* 2016).

The human right to adequate and safe drinking water is not enshrined in legislation (Good 2011). Instead, water is governed by various NT laws and policies, including the *Water Act 1992* (NT) and the *Water Supply and Sewerage Services Act 2003* (NT). This legislation fails to protect drinking water supply against other uses and does not establish minimum quality standards for drinking water across the NT. The following description of these laws demonstrates how weak laws and regulations, combined with ongoing consultation efforts and the publication of policy papers, can create the illusion of an effective regulatory regime for drinking water. The detail is necessary to convey the features and limits of the existing regime, which have been largely neglected from the scrutiny of prior national water reform processes. Such detail must be understood in order to advocate for strengthened protections through specific reforms.

The purpose of the *Water Act* is to allocate, manage, and assess water resources in the NT. Under the *Water Act*, allocations for drinking water exist in areas that have been designated as 'Water Control Districts', where a 'Water Allocation Plan' has also been finalised. There are eight Water Control Districts (WCDs) in the NT and six Water Allocation Plans (WAPs). WAPS predominantly apply to areas surrounding urban centres with comparatively dense human populations. They allocate water between various non-consumptive uses (environmental and cultural) and consumptive uses (including rural stock and public water supply, aquaculture, industry, and agriculture). Public water supply is one of many consumptive uses.

Public water supply services, or drinking water, is only protected or 'allocated' in the NT in areas both declared as a WCD and where a WAP applies. There is no general power in the *Water Act* to reserve water for current and future public water needs. This means that an

adequate drinking water supply is not currently guaranteed to residents in the vast majority of the NT not covered by WAPs, including in most Indigenous communities. Groundwater in these places is neither reserved for public supply, nor is much of its extraction licensed or regulated against other uses.

The *Water Supply and Sewerage Services Act* (WSSS Act) also regulates the provision of public water supply. It requires that provision of 'water supply services' in 'water supply licence areas' be licensed by the NT Utilities Commission, a regulator which oversees essential services provision to NT consumers of water. Power and Water Corporation (PAWC) is the current and sole licensee under the *WSSS Act*, and must 'provide water supply or sewerage services to customers who own land with an authorised connection to [its] water supply or sewerage services infrastructure' (S41[2]). Other requirements are imposed on PAWC through the legislation and its licence, regarding asset management plans for water supply infrastructure (S48), licence compliance reports (S49), and service plans (S51). Accountability to the customer is established in part via a mandated 'customer contract' (S47).

The NT has not set minimum standards for water quality. Under the *WSSS Act*, the Minister can specify minimum standards that PAWC must meet (S45), and a similar power to prescribe water quality standards exists in the *Water Act* (S73) and in the *Public and Environmental Health Act 2011* (NT) (S133). However, instead of enforceable standards, the Department of Health (2011) and PAWC have entered into a memorandum of understanding (MOU), which concedes that 'no minimum standards for drinking water have been set', although the *Australian Drinking Water Guidelines* (ADWG) 'will be used as the peak

reference' (Department of Health 2011, Clause 4). Despite the appearance of regulation and a measure of public transparency, the MOU is legally unenforceable.

The protections that the *WSSA Act* does provide do not extend across the NT, applying only in 'water supply license areas', which include 18 gazetted towns. The 72 larger Indigenous communities and over 600 Indigenous homelands and outstations are not water supply licence areas and therefore the *WSSS Act* does not apply (see Figure 1). There is thus a fragmented archipelago of water governance in the NT, with distinctive islands of relative regulatory protection and government abandonment, and differences most marked between major towns and Aboriginal homelands (Grealy and Howey 2020; Bakker 2003).

[Figure 1. 'Drinking water regulation in the Northern Territory', Housing for Health Incubator]

For the 72 larger remote Indigenous communities on Aboriginal land, and 79 of the outstations, water services are managed by Indigenous Essential Services Pty Ltd (IES). IES is a not-for-profit subsidiary of PAWC established in 2003. While PAWC is overseen by the Utilities Commission, IES is a private proprietary limited company and its operational structure and legal obligations are opaque, with no legislation mandating licensing or service standards. The standards, duties, accountability, and transparency mechanisms that do exist within the *WSSS Act*, licence, and customer contract do not apply to IES (discussed further in section five). Given the lack of protections for drinking water supply and water services under existing laws in such remote contexts, one might expect the NT regulatory regime to have been the subject of sustained critique by NWI inquiries and academic research alike. Yet such shortcomings have only ever been identified in broad terms, with limited attention

to geographic distinctions, and with commentary based on assurances by the NT government that reforms to meet NWI standards were underway (Productivity Commission 2017). The emphases of reform processes and related academic commentaries have instead been skewed towards water trading, licensing, and pricing (Hart *et al.* 2020; O'Donnell 2013).

3. Methodology

This article builds on a submission that we produced for the Productivity Commission's current Inquiry into the NWI, as contracted researchers for the Central Land Council (2020a). It extends our larger research program on drinking water protections in northern Australia, which in addition to traditional research outputs has included prior submissions (Grealy & Howey 2019b), media advocacy for a safe drinking water act, and participation in an expert roundtable as part of the Productivity Commission's current National Water Reform. The primary method used for this article was policy and legal analysis of the NWI and its implementation in the NT, with a focus on legislation and grey literature related to drinking water supply and services. We have examined submissions made by NT land councils and other Indigenous organisations, key industry stakeholders, and academic researchers to prior NWI inquiries and to NT regulatory reform processes concerning water issues since the establishment of the NWI in 2004. These include the 2015 Our Water Future consultation, the 2017 the Strategic Indigenous Reserve Stakeholder consultation, and the 2018 Water Regulatory Reform process, among others. Submissions have been analysed for their consideration of drinking water supply, services, standards, governance, and infrastructure. Similarly, we have analysed academic literature across the same period to determine the dominant objects and foci of research on the NWI and water in remote Indigenous contexts more generally. This analysis found that a disproportionate focus on the establishment of

water markets and the regulation of water pricing has diverted scholarly attention paid to drinking water (O'Donnell *et al.* 2013; Taylor *et al.* 2016). Where drinking water is considered, this tends to be through a public or environmental health framework, with limited consideration given to the wider regulatory and infrastructural networks required to improve householders' health outcomes (Torzillo *et al.* 2008; Hall *et al*. 2017).

The Issues Paper for the current National Water Reform process frames 'Water Services', and in particular 'Safe and reliable water supply', in a way that notably attributes these issues greater significance than past NWI reviews (Productivity Commission 2020). Our discursive approach to documentary analysis has situated NT regulations in the broader Australian context, to compare jurisdictional approaches to managing drinking water security – a task pursued by the NWI Inquiry itself, under the issue heading of urban water reform. Collectively, these methods underpin our aim to ensure that future reforms are appropriately briefed on the limitations of past assessments and contemporary regulations.

4. National water reform

The complex history of Australian water management between federal and state jurisdictions is outside this article's remit (though see Kildea 2010; McKay 2005). This section considers how the 1994 COAG Water Reform Framework and the 2004 National Water Initiative (NWI) have fundamentally reshaped Australian water management, recognised as comprising 'the most significant water law reform for a century' (Gardner 2009, p. 26). As such, primary focus is given to settler water management frameworks, as distinct from Indigenous knowledge and laws regarding water. The following analysis prioritises consideration of

COAG and NWI recommendations for water regulation, and the extent to which such reforms have been undertaken in the NT in particular.

4.1 The 1994 Council of Australian Governments Water Reform Framework

The Council of Australian Governments (COAG) Water Reform Framework Agreement (1994 Framework) recognised that urgent and united action was needed to arrest widespread natural resource degradation through unsustainable use across states and territories. Reform was driven by '[t]he combined issues of infrastructure debt, poor pricing for water services, service delivery challenges and environmental degradation' (Australian Water Partnership 2016, p. 7). The 1994 Framework recognised that water users were often paying more than the cost of water provision, that refurbishment of rural water infrastructure was required, and that institutions required refined clarity regarding their responsibilities. It sought to 'implement a strategic framework to achieve an efficient and sustainable water industry' (COAG 1994, p. 1). This tranche of recommendations included:

- the conversion of existing water access rights into tradeable property entitlements separate from land title;
- the introduction of water pricing reform based on principles of consumption-based pricing and full cost recovery;
- the reduction of subsidies to promote efficient use of water resources and assets, and to increase the transparency of remaining subsidies; and
- the allocation of sufficient water for environmental purposes by treating the environment as a user of water with rights.

While led by the Commonwealth, most reforms proposed by the NWI require implementation by states and territories, which have jurisdiction over water resources. Indigenous needs and interests in water were not specifically mentioned in the 1994 Framework.

In relation to drinking water (as 'urban water services' and 'rural water supply'), the 1994 Framework proposed that the introduction of marketised water pricing reform would reduce existing subsidies for urban and rural water services. The impact of removing subsidies on domestic consumers was anticipated to be 'offset by cost reductions achieved by more efficient, customer-driven, service provision' (COAG 1994, p. 2). The 1994 Framework was intended to generate the financial resources to maintain water supply systems. However, it also recognised that it would not always be possible to recoup the costs through customer payments, due to factors including remoteness, small populations, maintenance expenses, and inadequate competition in water supply. The 1994 Framework thus specified that:

> where service deliverers are required to provide water services to classes of customer at less than full cost, the cost of this be fully disclosed and ideally be paid to the service deliverer as a community service obligation. (COAG 1994, p. 3)

The use of community service obligation (CSO) payments as a form of government subsidisation is important to remote water services in the NT today. As a funding mechanism, community service obligations (CSOs) are arrangements whereby governments provide non-commercial funding to a service provider, where the service provider cannot achieve full cost recovery through user charges. The aim of categorising and subsidising service delivery in this way is to highlight the cost of such services, as a justified cost given the nature of the service and the factors involved in its provision. Emphasis is placed on making CSO payments transparent, in contrast to the former ad hoc provision of government grants to service providers, or the cross-subsidisation of higher-cost users by lower-cost users. For our purposes, the key point is that the 1994 Framework introduced a marketised approach to water that aimed to remove existing inefficient government subsidisation of water services. It

also required that, where costs cannot be met via pricing mechanisms and subsidisation is necessary, subsidies must be made transparent as a CSO.

4.2 The Intergovernmental Agreement on a National Water Initiative 2004

The National Water Initiative (NWI) extended the 1994 Framework agenda for national water reform. It aimed to achieve a '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' (Intergovernmental Agreement 2004, clause 3). Under the Intergovernmental Agreement, Australian state and territory governments committed to:

- prepare comprehensive water sharing plans;
- achieve sustainable water use in over-allocated or stressed water systems;
- introduce registers of water rights and standards for water accounting;
- expand the trade in water rights;
- improve pricing for water storage and delivery; and
- better manage urban water demands.

The National Water Commission was established as an independent statutory authority by the *National Water Act 2004* to assess implementation of the NWI and related national water reform objectives, advising COAG and reporting to the Department of Sustainability, Water, Population and Communities. The National Water Commission was abolished in 2014 and its triennial reporting functions transferred to the Productivity Commission. Federal legislative reform has also occurred as a consequence of the NWI. The *Water Act 2007* (Cth) establishes a detailed regime for the use and management of water resources in the Murray Darling

Basin, leading to the development of the Murray Darling Basin Plan. The NT is not affected by this.

4.3 Indigenous water use and national water reform

Unlike the 1994 Framework, the NWI notes the importance of water planning frameworks that recognise 'Indigenous needs in relation to water access and management' (C25[xi]). This objective has principally found expression in the setting aside of water in planning frameworks for Indigenous social, spiritual, and customary objectives and strategies (often referred to as 'cultural flows' and sometimes as 'Aboriginal water') or commercial purposes. There is considerable scholarship about how the NWI and water allocation legislation more broadly embeds 'water colonialism' that marginalises Indigenous knowledges of water, and situates decisions about water allocation and planning in the state (see Burdon *et al.* 2015; Hartwig *et al.* 2020; Poelina *et al.* 2019; Taylor *et al*. 2016). This scholarship questions the NWI's foundations, including state-controlled water allocation frameworks, the market-based approach, and the decoupling of water licences from land.

However, both this critical scholarship and scholarship more invested in reforming national water policy has paid limited attention to drinking water security as an Indigenous issue. To take one recent analysis of the extent of compliance by northern Australian jurisdictions with the NWI, Indigenous interests in water are described thus:

> Generally, Indigenous communities seek both *cultural water* – non-consumptive water reserved for cultural purposes (eg ceremony and protection of sacred sites) – and *consumptive water* for their economic use. (Hart *et al.* 2020, p. 12)

Jackson (2006) describes this as the 'compartmentalisation' of culture in Australian water governance, where Indigenous interests in water are treated as one of multiple uses of a

consumptive pool. Important work in this regard has been undertaken by a number of Indigenous organisations, including the North Australian Indigenous Land and Sea Management Alliance and its former Indigenous Community Water Facilitator Network (ICWFN) and Indigenous Water Policy Group (IWPG) (Altman 2009). This focus is also evident in, for example, the 2017 COAG *NWI Policy Guidelines for Water Planning and Management on Engaging Indigenous Peoples in Water Planning and Management* (Australian Government 2017). We suggest that the framing of Indigenous interests in water in this way has diverted scholarly attention from sustained analyses of drinking water security.

A study by Eileen Willis *et al.* is exceptional in the literature in its consideration of early Indigenous responses to the NWI. This study interpreted the NWI against the contemporaneous policy shift to the 'mainstreaming' of services to Indigenous people across Australia, as outlined in the 2005 National Framework of Principles for Government Service Delivery to Indigenous Australians. Willis *et al.* stated that the NWI represented 'a clear policy injunction for Aboriginal communities to be serviced by mainstream providers, rather than Indigenous-specific providers' (2008, p. 419). We suggest this broader national policy shift in Indigenous policy may explain why the NWI did not treat drinking water (as part of essential service provision) as a specifically 'Indigenous' issue – or an issue that might be subject to Indigenous governance – while compartmentalising other concerns as specifically racialised cultural categories. This point provides essential context to NWI implementation, including the exclusion of Indigenous organisations and communities from drinking water governance, as such reforms were considered the domain of the state (Central Land Council 2020a). Given such exclusions, failures by consecutive governments to implement the NWI to achieve 'mainstream' standards across the NT are even more significant.

5. National water reform in the NT

In its most recent Inquiry report on the implementation of the NWI, in 2017, the Productivity Commission found a number of failures against the NWI recommendations. These include that:

- the NT has not yet unbundled water licences from land;
- water licences are granted for a limited term (usually ten years), not in perpetuity, and are not NWI compliant in their current form;
- water allocation plans are only in place for some catchments;
- trading of water licences is very limited;
- reporting on environmental water use is limited;
- there is Indigenous exclusion from input into, and allocation from, water planning frameworks.

This section does not offer extensive analysis of issues relating to water access entitlements and planning, water access and trading, and environmental water management. Instead, there are four key sections of the NWI that are relevant to the supply of water in NT Indigenous communities:

1. Urban Water Reform, where the main objective is to '(i) provide healthy, safe and reliable water supplies' (clause 90).
2. Rural and Regional Communities, where full cost recovery (while the explicit objective) may not be possible. In these circumstances all subsidies must be transparently reported, including with respect to the payment of Community Service

Obligations (CSOs) (C66[v]). In most Indigenous communities in the NT, this sub-clause would apply.

3. Institutional arrangements, where the roles of water resource management, standard setting and regulatory enforcement, and service provision should be institutionally separated (C74).
4. Investment in water infrastructure, where principles and safeguards for determining the provision of new water infrastructure are established (C69).

These are considered below as 'Healthy, safe, and reliable water supplies', 'Community Service Obligations', 'Institutional reform', and 'Investment in new infrastructure'.

5.1 Healthy, safe, and reliable water supplies

The 2017 Inquiry Report highlighted some failures of the NT to meet NWI reforms in the provision of drinking water in remote Indigenous communities. However, the Commission significantly understates the structural and longstanding problems with respect to water services in remote Indigenous communities. In relation to the NWI commitment of achieving safe and healthy water supplies, the Commission noted that

> compliance issues remain regarding water quality outcomes in the NT. In 2015-16, six of 72 remote communities did not comply with the ADWG's microbiological guidelines and seven did not comply with various chemical parameters, including nitrates, uranium, barium and fluoride (2017, p. 463).

Later, the report states that 'some issues remain in . . . the Northern Territory, particularly in remote areas, but [the jurisdiction] is taking steps to address remaining concerns' (2017, pp. 10, 467).

The NWI aims to ensure the provision of 'healthy, safe and reliable water supplies' across the NT. However, the Productivity Commission fails to consider how the NT's regulatory framework detracts from the likelihood of achieving this outcome. The above analysis highlights that there are no enforceable minimum drinking water quality standards across the NT, and the provision of water services in remote NT communities is unregulated. There are thus no NT government agencies that are legally accountable to the residents of Indigenous communities for the supply of water to them.

5.2 Community Service Obligations (CSOs)

The Productivity Commission also noted as a 'Recent policy effort' that 'Indigenous Essential Services receives a significant annual CSO, in the order of $80 million' (2017, p. 463). The Inquiry Report states that 'greater clarity on the use of CSO payments in the Northern Territory would improve consistency with the NWI' (Productivity Commission 2017, p. 181). For the reasons given in the following paragraphs, this is a significant understatement of the failure of the NT Government not only to comply with NWI expectations about CSO payments and reporting, but to use CSOs to fund a remote services regime subject to little legislative and regulatory oversight.

It is not clear that the annual payments to IES do in fact constitute a CSO as outlined by the Productivity Commission. Power and Water Corporation (PAWC 2019) itself reports these payments to IES as grants, rather than CSOs (which are a separate line item). There are no publicly available policies in the NT guiding the development of CSOs as part of social policy, as exist elsewhere (see NSW Treasury 2019). It is possible these payments may comprise opaque grants or subsidies designed to disguise the true cost of delivering drinking water.

Even if payments to IES do constitute CSOs, there are significant issues with its role as a water service provider. IES provides water, sewerage, and power services to 72 remote Indigenous communities and 79 outstations under an unpublished Service Level Agreement (SLA) with the Department of Local Government and Housing and Community Development (DLGHCD). As described above, IES is a private proprietary limited company with an opaque operational structure; it shares a board with PAWC and it is unclear whether it has direct employees or if so how many. IES is also subject to no legislation mandating licensing or particular levels of service or standards. The standards, duties, accountability, and transparency mechanisms that do exist within the NT *WSSS Act*, licence, and customer contract do not apply to IES. There are numerous issues relating to the operation, accountability, and transparency of IES that have not been identified by the Productivity Commission or prior research. Based on publicly available information, it is not possible to determine an adequate understanding of:

- the methodology for calculating the CSO/grant to IES, and thus whether such calculations are appropriate or adequate;
- what proportion of the CSO/grant to IES is for water infrastructure and services, versus power infrastructure and services;
- the community and outstation breakdown of IES expenditure on water infrastructure and services, or the rationale for this breakdown;
- whether funds are set aside for future asset refurbishment and/or upgrading of government supplied water infrastructure and, if so, how decisions are made to prioritise infrastructure provision in certain contexts above others;
- the performance indicators that IES must comply with to measure the effectiveness of its program and how it is meeting stated policy objectives;

- what drinking water monitoring program is undertaken by IES, including its regularity and whether it operates to any particular standards;
- the policies applicable to IES;
- how IES actually operates, including whether it employs staff directly, or whether it operates as a shell private entity to receive government funding and then sub-contract its operations to PAWC.

Indeed, one could argue that by funneling grants to a private company with no regulatory oversight, the precise opposite of accountability and transparency has been facilitated by the funding of IES through CSO payments. That this has not been identified as a severe shortcoming of transparent governance by prior NWI reviews highlights the need to investigate the details of water service operations across the NT, rather than to seek assurances regarding steps being taken by PAWC to address regulatory concerns.

5.3 Institutional reform

The NWI requires differentiation between water resource management, standard setting, and regulatory enforcement functions. This presupposes the existence of regulatory frameworks for water provision. However, in the NT, there is no regulator of water supply outside the 18 towns where the Utilities Commission provides limited oversight. There is also no regulator of drinking water safety across the NT – the Department of Health instead oversees drinking water safety pursuant to an unenforceable MOU with PAWC. The policy of mainstreaming Indigenous service provision involved the assumption of essential service provision by the state. Simply put, present arrangements do not meet the reforms required by the NWI or by good governance more generally.

5.4 Investment in new infrastructure

The Productivity Commission notes in relation to the NWI that governments seeking to provide funding for water infrastructure should ensure a number of safeguards are met. These include that 'NWI-consistent entitlement and planning frameworks are in place before any new infrastructure is considered' and that 'an independent analysis is completed and made available for public comment before any government announcement on new infrastructure is made' (2017, p. 23). Under the NWI, 'The Parties agree to ensure that proposals for investment in new or refurbished water infrastructure continue to be assessed as economically viable and ecologically sustainable prior to the investment occurring (noting paragraph 66[v])' (C69). However, in the NT, justifications for what water infrastructure is funded in which locations are often opaque. This lack of transparency exacerbates vulnerability that infrastructure spending might be influenced by political prerogatives, rather than obligations to meet adequate service requirements.

Water infrastructure projects in remote communities appear to have been funded in the NT without attendant or ongoing governance arrangements that would create accountable, enforceable obligations for these assets. It is also unclear whether these investments have undergone cost/benefit analyses or assessments of ecological sustainability, as required by the NWI (Grealy and Howey 2020). The opacity of infrastructure funding arrangements can be exacerbated by sporadic Commonwealth funding injections into remote communities. For example, the *Strategy on Water and Wastewater Services in Remote (including Indigenous) Communities* was a separate 2011 strategy entered into by the NT Government under the COAG Water for the Future Initiative. The NT Government's (2011, p. 1) Implementation Plan outlines a strategy for water security and climate change adaptation in remote communities, including safe water supplies, and aims to 'provide a level of service that meets regulatory standards that would apply to any other community of similar size and location.'

This strategy provided for the funding of approximately $20m in water infrastructure to some remote NT communities. Noting that these communities are serviced by IES, this funding has been provided without transparent regulatory arrangements governing these assets.

Across the NT, there is thus a serious absence of public clarity about which water infrastructure projects are funded and why. The situation described above – in which the Department of Local Government, Housing, and Community Development provides recurrent grant funding to IES, which itself appears to contract PAWC to deliver its services in 72 remote communities and 79 outstations – further complicates the question of which authorities have the capacity to approve new water infrastructure and on what grounds. While there is severe need of infrastructural replacement and refurbishment in numerous communities (Beavan 2019; Kurmelovs 2020), there is often no clear rationale for what projects garner funding support. Indigenous organisations and remote community residents have been excluded from these planning and decision-making processes, which demands further academic attention.

6. Conclusion

Drinking water governance in the Northern Territory is fragmented and inequitable, and threatens the viability and self-determination of Indigenous communities. The implementation of the most significant national water reform in Australian history, the National Water Initiative, has failed to rectify, or even detect, the structural inequalities embedded in the laws governing drinking water in the NT. This article has argued that the selective focus of Indigenous water use in the NWI (limited to ‘cultural’ or ‘economic’ allocations) can be seen as a product of the policy emphasis on ‘mainstreaming’ essential

service provision to Indigenous communities. This has led to the exclusion of Indigenous organisations and communities from planning and decision-making about the provision of drinking water across the NT. The inadequate consideration of remote drinking water security as part of NWI reform efforts has also facilitated the continuation of a racialised regime governing urban/regional water to the detriment of Indigenous people in remote contexts. Drinking water security for Indigenous communities has been subordinated to other water concerns, and is the neglected dimension of reform under the NWI.

While the NWI aims to ensure the provision of 'healthy, safe and reliable water supplies', this has not occurred uniformly in the NT. The conceptual foundation of the NWI, which characterises water as a commodity, may not be appropriate to achieve this outcome. Other policy domains, including public and environmental health, Indigenous affairs, housing, and climate change adaptation must also be integrated with water policy to achieve safe and adequate drinking water in remote contexts. These are policy domains to which the marketised approach underpinning the NWI cannot be readily applied.

In the context of ongoing policy and regulatory reform, we note that the four land councils in the NT recently mobilised to demand safe drinking water legislation for all residents of the NT (Central Land Council 2020b). Such legislation should at a minimum require registration of drinking water providers with the Department of Health, necessitate approval of risk management plans that are compliant with the *Australian Drinking Water Guidelines,* and contain strong complaint, compliance, monitoring and enforcement provisions. However, as highlighted in this article, the operations, funding, and governance of water service delivery and infrastructure in remote communities are opaque to those outside the NT Government and its agencies. The Central Land Council (2020a) has thus called for extensive and urgent

reforms to implement core components of the NWI (as they apply to drinking water security) and for such reforms to embed the principles of safety and health, transparency, accountability, adequate resourcing, and Indigenous decision-making. We suggest that governments collaboratively partner with land councils (and other appropriate Indigenous organisations, depending on context), and adopt a strategic, transparent, and risk-based approach to water infrastructure and service provision across the NT that incorporates these core principles.

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