# Australian freshwater study

Issues paper | First Peoples' Water Rights | Final | May 2019









# Outline

Since European settlement, Australia's laws and policies have historically disregarded First Peoples' rights and interests in the use, management and control of freshwater systems. There remains a substantial gap between First Peoples' current rights to freshwater in Australia and the rights outlined in the United Nations Declaration of the Rights of Indigenous Peoples (UNDRIP), which Australia supports. This paper provides an overview of five issues facing Australia's First Peoples in improving their water rights and their ability to genuinely engage and participate in water planning and management processes. It is one of six papers produced for the Ian Potter and Myer Foundations' Australian Fresh Water Mapping Study.

## About the Australian Freshwater Study

The Ian Potter Foundation and The Myer Foundation have funded a study of major issues affecting Australia's freshwater systems. The Foundations want to better understand the ways philanthropic investment might catalyse changes to the management of Australia's freshwater resources that will protect their ecological integrity, make access to them more equitable, and ensure Australia's long-term water security.

The consulting firms Point Advisory and Alluvium have been commissioned to undertake the study and have prepared a set of short issues papers covering water governance, economics, freshwater ecosystems, First Peoples' water rights, and social values. The issues papers are the first step in the project. They provide a "long list" of major issues facing the management of fresh water in Australia as well as a general indication of options for philanthropic intervention. In parallel, Point Advisory and Alluvium are working on identifying more detailed options for philanthropy to intervene to catalyse change. Both work streams will be consolidated into a final report that matches issues with options and recommends a short list of specific future interventions to the Foundations for more detailed review.

In this paper, we have used the terms "Australia's First Peoples", "First Peoples", "Indigenous Australians" and "Indigenous communities" to refer to Australia's Aboriginal and Torres Strait Islander Peoples.

## Acknowledgements

Point Advisory and Alluvium would like to thank the following project Expert Panel members who gave time to be interviewed and provided references, advice, insight, introductions and a review of an earlier draft, all of which benefitted this paper:

- Bradley Moggridge, University of Canberra, Brad is a Kamilaroi man from the lower end of the Great Artesian Basin in North West NSW
- Guy Fitzhardinge, farmer, Northern Australian Indigenous Land and Sea Management Alliance (NAILSMA), World Wildlife Fund (WWF)
- Professor Lee Godden, University of Melbourne
- Professor Sue Jackson, Griffith University

We would also like to thank the following people for generously providing their time, insight and advice during the preparation of this paper:

- Ricky Archer, CEO, Northern Australian Indigenous Land and Sea Management Alliance (NAILSMA), Ricky is a Djungan man from the Western Tablelands region of North QLD
- Phil Duncan, Macquarie University, Phil is a Gomeroi man and elected representative of the Gomeroi Nation, former Chair of the First Peoples Water Engagement Council
- Dr Anne Poelina, Deputy Chair Walalakoo (Native Title Body Corporate), Interim Chair Martuwarra Fitzroy River Council, Managing Director Madjulla Inc., Anne is a Nyikina Warwa woman from the Mardoowarra, Lower Fitzroy River, in Western Australia
- Rene Woods, Chairperson, Murray Lower-Darling Indigenous Nations (MLDRIN), Vice Chair, Nari Nari Tribal Council, Rene is a Nari Nari man from South West NSW

- Robyn Grey-Gardner, private consultant
- Miya Isherwood, Torres Strait Regional Authority
- Bruce Lindsay, Environmental Justice Australia
- Julie Melbourne, Nyamba Buru Yawuru Ltd
- Will Mooney, Murray Lower-Darling Indigenous Nations (MLDRIN), Will also reviewed an earlier draft of the paper
- Katherine Taylor, Australian National University

We would also like to thank the respondents to the public consultation process who provided feedback, which has contributed to the final paper. While we are very grateful for all of the assistance provided, responsibility for the final product and any errors rests entirely with Point Advisory and Alluvium.

Citation: Point Advisory and Alluvium Consulting (2019) *Australian Freshwater Study – First Peoples' Water Rights Issues Paper,* report prepared for The Ian Potter Foundation and The Myer Foundation, Melbourne

Image credit: Scott Kelly/NASA, taken 12 October 2015, photo of Australia taken from the International Space Station "#EarthArt A single pass over the #Australian continent. Picture 7 of 17. #YearInSpace". posted to Twitter <<u>https://twitter.com/StationCDRKelly</u>>, accessed via <<u>https://www.flickr.com/photos/nasa2explore/22033597838/in/album-72157659515819800/</u>>



This copyright work is licensed under a Creative Commons Attribution 3.0 Australia licence. To view a copy of this licence, visit <u>http://creativecommons.org/licenses/by/3.0/au</u>. In essence, you are free to copy, communicate and adapt the work, as long as you attribute the work to the authors and the funding Foundations (but not in any way that suggests they endorse you or your use) and abide by the other licence terms.

#### Acknowledgement of First Peoples and Country

We acknowledge Australia's First Peoples and pay respect to the past, present and future Elders of Australia's First Peoples' communities. We honour the deep spiritual, cultural and customary connections of Australia's First Peoples to their lands and waters.

## Context

The Darling River is our ngamaka—our mother. It is Barka and we are Barkandji wiimpatja—Darling River people. We depend on our river for everything—our identity, our food, our stories, our family history, our language, our rules, everything. Without it we are nothing. Our Barkandji native title gave us recognition but not much else. At least we hoped that our recognised native title will give us the right to manage our river for future generations. Nameless public servants and farmers living far away are taking our rights to cultural waters and our native title rights to manage our river, as we have done for 50,000 years. Now we only get water if there is too much water upstream for the farmers upstream to use or store. [...] the public servants send the stored water down to us—wastewater that nobody wants. [...] They send down the salty, oxygen-poor wastewater full of chemicals from the farms and blue-green algae to us at Wilcannia and we have to try and drink it. The fish jump out of the water because they can't breathe and they die in thousands. [...] I want to know: Who gives other people living a long way away the right to destroy those things? We were brought up to know where our Ngatji lives, our Rainbow Serpent. The Ngatji keeps our river health. If the Ngatji dies, our river dies and we won't be Barkandji anymore. I want to know: Why do my people at Wilcannia not have rights to water and rights to jobs—just like the people at Moree or Dubbo, for example? What makes us different? Is it that we are Aboriginal, or is it just that we don't have the numbers to influence the vote? Or are you trying to make us extinct like our river and our river animals? [...] We are Barkandji wiimpatja. We need our river to stay healthy. Everyone in Australia needs our river to stay healthy our children and our grandchildren and for future generations to come.

William Brian "Badger" Bates

The arrival of Europeans in Australia led to the violent dispossession of First Peoples' lands and waters by settlers for urban and agricultural development. [2]-[5] Massacre, introduced disease and the forced removal of First Peoples' from country forced the cessation of First Peoples' land and water management in many places. Settlers cleared native vegetation, drained swamps and wetlands, diverted streams, pumped aquifers, and introduced hoofed grazing animals that compressed and hardened soils altering runoff patterns and increasing erosion and consequent sedimentation in watercourses. During the process of colonisation, settlers forced Australia's First Peoples from their lands, waterways and rivers to secure exclusive access for livestock and crops. These changes created a historical legacy with ongoing impacts on First Peoples as well as Australia's land and waterscapes. [6]-[10]

The settlement of Australia by the British Imperial Government also vested sovereign title to all Australia's land and waters in the British Crown. This legal fiction linked private rights to land with access rights to water resources under British common law riparian doctrine. [6] These rights could only be obtained by a grant from the Crown and Australia's First Peoples were legally, as well as physically, dispossessed of their lands and waters.[7], [8] *Terra nullius* was also "*aqua nullius*". [9], [10] Without land, First Peoples had no ability to access common law riparian rights.[7] Alfred Deakin's late 19<sup>th</sup> century water law reforms did not acknowledge First Peoples' interests in water despite the fact that First Peoples' political campaigns for land and water were active during this era.[7] Since settlement, First Peoples have actively resisted colonisation—from the Frontier Wars to ongoing struggles for recognition of Indigenous sovereign rights to lands and waters including multiple petitions to the British Crown seeking redress and legal recognition of Indigenous rights.[7], [4], [11], [70], [71] None were granted.

Through the 1970s and 1980s, state, territory and Commonwealth governments began to recognise First Peoples' land rights through statute. However, introduction of statutory land rights for First Peoples from the 1970s did little to improve rights over freshwater resources. The High Court's decision in *Mabo v Queensland (No 2)* rejected the *terra nullius* doctrine and recognised rights and interests held by Australia's First Peoples in their lands and waters under traditional laws and customs. [6], [12] Recognition of native title in 1992 had the potential to establish broad water rights for First Peoples outside Australia's water legislation. [6] Native title's common law and statutory development since 1992 has severely curtailed this potential and has continued to limit First Peoples' rights to water through onerous burdens of proof, a narrow focus on traditional laws and

customs, and widespread extinguishment of native title. [6], [12], [13] Despite the recognition and restoration of substantial portions of the Indigenous Estate, First Peoples' control and influence over water management remains limited. [6], [12], [14]

#### Issues identified

The following five key issues must be addressed to improve First Peoples' water rights and First Peoples' ability to genuinely engage and participate in water planning and management processes.

- 1. First Peoples' water rights and interests are not adequately acknowledged and protected by law.
- 2. Existing water planning and management regimes and institutions need to increase First Peoples' participation, influence, self-determination and control.
- 3. First Peoples' interests in water ownership, management, use and development do not always map easily onto existing "Western" legal, cultural, scientific, environmental and economic frameworks.
- 4. Australia is not meeting its UN Sustainable Development Goal (SDG) commitments for Indigenous Australians living in remote communities (SDG 6).
- 5. We need to invest for the long-term to improve First Peoples' water rights and involvement in water management.

Opportunities for philanthropic organisations to assist in addressing these issues are highlighted along with these issues below.

# 1 First Peoples' water rights and interests are not adequately acknowledged and protected by law

Australia has poorer statutory recognition of First Peoples' water rights than Canada, New Zealand or the United States. [15], [16] Progress has been made in some Australian states and territories. However, no Australian jurisdiction has yet made the substantive legislative reforms required for a meaningful realisation of First Peoples' water rights. [17], [18]

Since European settlement, Australia's freshwater laws and policies have historically disregarded First Peoples' rights and interests in the use, management and control of freshwater systems. [6], [12], [18], [19] First Peoples were excluded from the initial allocation of colonial water rights and consequently from subsequent reallocations of rights as a result of Australia's water reform processes. This exclusion has resulted in significant obstacles for a major and important group of Australians in the management of a crucial economic and cultural resource. (*See also the Governance Issues Paper*, Issue 5.)

First Peoples now own or jointly manage somewhere between 30 and 40% of the Australian landmass under native title, statutory land rights and co-operative management regimes. [20]-[22] Despite the size of the Indigenous Estate, estimates made in 2012 of First Peoples' specific water entitlements suggest these constituted less than one hundredth of one per cent (<0.01%) of Australian freshwater diversions. [3], [7] Even where Australia's First Peoples have native title or statutory traditional ownership rights over land, their ability to determine the ways freshwater systems might be used is usually limited, as is their ability to protect freshwater systems from degradation or depletion. [12], [22]

At best, native title and traditional ownership rights may provide for a limited set of rights over water, including:

- non-exclusive rights to water for traditional uses, including traditional sustenance, ceremonial, spiritual and transportation uses[6], [12], [16]
- rights to water for domestic uses and watering stock[6], [12]
- some leverage in decision-making about developments that might affect water resources and habitats used for traditional purposes, although native title holders are unlikely to be able to prevent projects from proceeding, they may be able to reduce some impacts or argue for compensation[12]

• the ability to deny physical access to land over which native title holders have exclusive possession, which may assist in protecting water resources if rights are proven to exist over all points of access to the water resource. [12]

Native title rights might also extend to allowing the watering of culturally significant sites and non-commercial gardens or for non-commercial aquaculture. [12] However, native title and traditional ownership rights do not usually provide for:

- rights for First Peoples' self-determination about water use, management or control on the Indigenous estate for all purposes[22]
- rights to bring the management of land and water together into an integrated whole (water laws have largely separated land and water management)
- rights to protect water resources and associated habitats against other uses so as to ensure the continuity of First Peoples' uses, which might be reduced or destroyed by water resources development[6], [12], [16]
- commercial use of water for First Peoples' economic development without a water licence [11], [17]
- a legal basis for the grant of water licences to First Peoples, which must instead be bought on the open market (despite many water entitlements having been "grandfathered" to those non-Indigenous landowners who historically had access to water licences granted during periods when First Peoples were excluded from their lands and waters) [11]
- access to the Commonwealth's environmental water holdings through building partnerships in the planning and delivery of environmental water.

It is not always clear how native title rights should into account in water planning and management. Governments and water management agencies have often responded to such ambiguities with inaction. Where native title rights have been extinguished and there are no statutory traditional ownership rights, First Peoples have little ability to influence the management of freshwater systems beyond participating in "stakeholder consultations" held at the discretion of water authorities or by buying water entitlements on the open market the latter presents an ongoing, de facto process of exclusion for First Peoples, who are often some of the most economically disadvantaged people in Australia. Where there are limited or no flows in some highly- or overallocated river systems, for example in parts of the Darling (Barka) River, First Peoples communities are unable to maintain and pass on cultural knowledge linked to the use and management of the freshwater system. [23] The Darling (Barka) River is highly significant for the Barkandji Traditional Owners, who were successful in their native title consent determination in 2015. Despite this successful native title determination and the requirement for recognition of native title rights in the NSW *Water Management Act 2004* and the National Water Initiative (2004), Barkandji rights are yet to be recognised in Water Sharing Plans for the Darling River.

There remains a substantial gap between First Peoples' current rights to freshwater in Australia and the rights outlined in the United Nations *Declaration of the Rights of Indigenous Peoples* (UNDRIP), which Australia has endorsed. While UNDRIP is "soft law" and will not have legal force in Australia until such time as its rights framework is included in Australian state, territory or Commonwealth legislation, international standards like UNDRIP have influenced legal and political decision-making in Australia. [24] UNDRIP provides a useful standard against which to evaluate the current state of First Peoples' water rights as well as a framework that has been referred to by First Peoples' in claiming rights to water and defining aspirations for formal recognition of these rights under Australian water law. [19], [22], [25]-[27]

To begin to be consistent with UNDRIP, improvements to the legal recognition of First Peoples' water rights must go well beyond the current limited set of rights for traditional uses. Access to a broader suite of water rights is crucial for First Peoples' self-determination, maintenance of relationships to Country, full participation in Australia's water policy reform processes, and economic development. As pointed out by the First Peoples Water Engagement Council in 2012, First Peoples' water rights are consequently "a central and vital strategy for achieving the full range of *Closing the Gap* targets." [19]

#### What can be done

No single water policy can meet the aspirations of all of Australia's First Peoples. Australia's Indigenous communities have a wide range of views about what they want to achieve with greater rights over water, the ways they want their values to be incorporated into water planning and management, and how they describe

their relationships with water. [17], [19], [28], [29] Changes to Australian water rights regimes for the benefit of First Peoples must begin with approaches that empower Indigenous communities to define water governance and management frameworks for their lands and waters. [17], [30] Such changes would be consistent with UNDRIP's "umbrella principle of self-determination" for First Peoples and require significant improvements to Indigenous water rights under Commonwealth, state and territory law. [26], [31]

The National Cultural Flows Research Project recommended Commonwealth, state and territory water legislation be developed that recognises the rights of First Peoples to "access, use and sustainably manage water resources." [22] The Project recommended the following four models for legislative change that would improve First Peoples' water rights consistent with UNDRIP principles:

- *Pr*ovision of water rights (entitlements and shares)—the allocation or grant of water entitlements or shares to First Peoples under existing state and territory legislation. Such allocations or grants should be provided for "any purpose" to enable First Peoples to determine the use to which they wish to put the water (e.g. cultural purposes, economic development, water trading). [22]
- Protecting and enhancing water rights linked to native title and statutory land rights—options here include amendments to the Native Title Act 1993 and statutory land rights acts to bring together First Peoples' management of land and water by: establishing exclusive possession rights to water under native title through judicial recognition; strengthening statutory land rights to provide more robust control over water resources to First Peoples; and, providing First Peoples with broader commercial and economic development rights over water alongside robust arrangements for the co-management of water resources. [22]
- Providing for statutory First Peoples' water reserves—the establishment in all states and territories of water reserves outside the consumptive pool for the exclusive use of Indigenous communities. Such reserves would need to be for "any purpose" and operate over both surface water catchments and groundwater provinces. Examples of this approach to providing First Peoples with use, access and control over water can be found in the Northern Territory's Strategic Aboriginal Reserves and Queensland's Cape York Peninsula Heritage Act 2007. [22], [32], [33]
- Development of institutions, led by First Peoples, empowered to hold, govern and manage First Peoples' water holdings as per their objectives, values and interests—the above models, if enacted, would create portfolios of different water rights for Indigenous communities. There is likely to be a need for institutions to govern and allocate these rights across Indigenous communities. One option would be the creation of "First Peoples Water Holders" along the lines of existing statutory environmental water holders. [22]

Additional approaches to provide First Peoples with access, management and control of water within existing water markets and water planning processes (see also the following section) or where native title has been extinguished include:

- Working directly with First Peoples to build capacity to understand water legislation, water markets and water planning processes and developing the capacity and networks to allow First Peoples to work together, across the nation, on future water management policies and decisions.
- Provide the required infrastructure (e.g. pumps) to move water from a river or aquifer to on-Country storage or to places that no longer receive water that may be culturally significant or provide opportunities for economic development
- Financial assistance to purchase water allocations and entitlements within existing water markets. This financial assistance could come from governments establishing First Peoples' water funds or from the private or philanthropic sectors. [33]
- Contracts between Indigenous communities and government agencies that provide for First Peoples' access, management and control of water or co-management of existing water holdings. An example of this approach is the agreements between the Ngarrindjeri Regional Authority and the South Australian Government and subsequently the Commonwealth Environmental Water Holder. [34]-[36]

These latter two approaches have the advantage that they allow for "the practical exercise of de facto Indigenous sovereignty—irrespective of a constitutional recognition of de jure Indigenous sovereignty by a non-Indigenous system of law". [37]

Philanthropic investment could assist in supporting First Peoples' policy advocacy for the provision of water rights under the models described above as well as assistance meeting the challenges of equitable implementation of water rights regimes like Strategic Indigenous Reserves. [33] Philanthropy could also help by providing the resources required to negotiate contracts between First Peoples and government agencies, by contributing to the establishment of First Peoples water funds, by assisting First Peoples to purchase water entitlements, by contributing to strategic litigation to establish exclusive possession rights to water under native title through judicial recognition, and by helping First Peoples negotiate the provision of water entitlements in unallocated systems. Any philanthropic investment should ensure that it does not "crowd out" or become a substitute for the investment required from state and Commonwealth governments.

## 2 Existing water planning and management regimes and institutions need to increase First Peoples' participation, influence, self-determination and control

First Peoples need to be recognised as knowledgeable and experienced water managers and fully engaged as partners in Commonwealth, state and territory water planning and management processes. Too often First Peoples have not been engaged in water planning and management or have only been consulted as "stakeholders" or "community participants" without recognition of the important relationships and responsibilities they have to water and Country. [17], [38]

Australia's First Peoples have dwelt in Australia for at least the last 65,000 years. [39] Over this time, they have employed sophisticated and geographically diverse land and water management practices to shape Australia's land and water ecosystems into what has been described as the "biggest estate on earth". [6], [21], [40]-[46] [47] Freshwater systems remain central to Aboriginal and Torres Strait Islander cultures and societies. [10], [48]-[50] The First Peoples Water Engagement Council, convened to advise the National Water Commission in 2010, describes the relationship between First Peoples and their lands and waters as follows:

Aboriginal peoples, the First Peoples of Australia, are the traditional owners and managers of Australia's land and waters. We have maintained strong and vital relationships with our lands and waters since time immemorial. The land and the water – both above and below the ground – give us life: our livelihoods, our cultural identity and our spiritual well-being. We have responsibilities to our lands, territories and waters, and in turn they sustain us.[19]

The improvements to water rights discussed in the previous issue, although crucial, are not sufficient to meet First Peoples' objectives. First Peoples' long history of integrated land and water management demands a broader engagement with current land and catchment management regimes, environmental protection laws and the interests of other land and water users. [22] First Peoples' aspirations for water are not only cultural and economic, they are also political. [36] Substantial power disparities underlie the lack of involvement of First Peoples in water planning and management decisions. First Peoples seek decision-making authority and agency in land and water management processes and acknowledgement of equal status alongside other parties with interests in Australia's lands and waters so that the "planning and ongoing management of water resources will be done jointly with Indigenous Traditional Owners, native title groups and State and Territory water agencies (in accordance with Articles 8, 18, 19, 23, 26-29, & 32 UNDRIP." [26] Selective representation within existing governance structures will not adequately address this issue and alternative governance models may be required. Australia's water reforms have also created a highly complex water management system that requires significant technical knowledge to engage with effectively. These technical complexities can act as another barrier to First Peoples' genuine participation in water management.

Consideration of First Peoples "web of interests" in lands and waters, [68] in which "water, land and Indigenous People are intrinsically entwined", [15] explains why such broader engagement is necessary. First Peoples' longstanding responsibilities to care for Country impose obligations under traditional systems of "First Law", [51] which demand First Peoples' engagement in land and water management processes. A water right that delivers a certain quantity of water to a culturally important wetland cannot meet First Peoples objectives if they have not been closely involved in and able to influence the decision-making, if the quality of the water delivered endangers culturally important wetland species, or if water quality contaminates traditional food sources so they cannot be safely eaten.[22] Economic and commercial opportunities arising from recognition of water rights for Indigenous communities often require broader engagement with water planning and management processes. As the First Peoples Water Engagement Council stated in its 2012 Advice to the National Water Commission:

A key part of understanding Aboriginal Water is to recognise that it is not simply about the physical delivery of water to specified locations. It is as much about the positioning of Aboriginal people in the process as it is about achieving particular physical outcomes. Aboriginal involvement in the decision-making process is a central and inherent objective, not simply an instrumental means for identifying what it is that water resource managers should do. Aboriginal Water is not capable of being "delivered" as a passive product or service. It is about the empowerment of Aboriginal peoples to exercise true self-determination and custodianship over their country. [19]

The National Water Initiative (NWI) acknowledges the importance of fresh water to Australia's First Peoples and requires state and territory water planning processes recognise First Peoples' interest in water resources and take account of native title rights to water. Unfortunately, the NWI provisions with regard to First Peoples are discretionary. For example, the requirement to ensure Indigenous representation is included in water planning is a "wherever possible" requirement. [52] A recent NWI module, *Policy Guidelines For Water Planning And Management: Engaging Indigenous Peoples In Water Planning And Management*, provides for stronger recognition of First Peoples' participation in water planning and management. [33] However, the module is not binding and has not been endorsed by all states and territories. [33] The module provides multiple suggestions for engaging First Peoples in water planning processes but stops short of providing standards for best practice. Similarly, the Productivity Commission's recent report on its inquiry into national water reform makes limited, but relevant, recommendations for First Peoples' engagement in water management and planning to be included in any updated version of the NWI.[69]

While First Peoples and their representative bodies will always have a wide range of objectives and aspirations for participation in water planning and management processes, UNDRIP provides a good baseline for best practice in its emphasis on "free, prior and informed consent" (Articles 10, 11.2, 19, 28, 29). [30] The Convention on Biological Diversity, to which Australia is a signatory, also provides for the preservation of "knowledge, innovations and practices" of Indigenous peoples and their application to the "conservation and sustainable use of biological diversity" (Article 8, see also Akwé: Kon guidelines).[74][75] There is a clear role for First Peoples in ecological monitoring and restoration of freshwater systems and associated catchments on Country. However, without clear best practice standards, First Peoples' participation in mainstream water planning processes is likely to remain "driven by a top-down approach that asks 'how do we engage Indigenous people?' [which] has culminated in the ineffective consultative and service delivery processes," which have not delivered equitable partnerships and co-management of water resources between Indigenous and non-Indigenous managers. [36]

#### What can be done

In 2012, the First Peoples Water Engagement Council's Advice to the National Water Commission provided a set of recommendations and principles to improve First Peoples' water rights and engagement in water planning processes. The Advice was based on two years of work and builds on previous work done by First Peoples groups and communities as well as the 2012 First Peoples' National Water Summit, which brought more than 70 Aboriginal delegates from across Australia together to draw up recommendations for governments. [19] Additional recommendations for action have been made in the reports of the National Cultural Flows Research Project. If implemented in good faith by Commonwealth, state and territory governments, these recommendations and principles would go a long way to addressing this issue.

Successful partnerships between First Peoples and Commonwealth, state and territory government institutions also provide good practice models for what can be achieved. These include the:

• Ngarrindjeri Yarluwar-Ruwe Program, which won the Australian Riverprize 2015 for delivering excellence in Australian river management as well as the Ngarrindjeri agreement with the Commonwealth Environmental

Water Holder provide examples of best practice and the ways that Indigenous communities can be "resourced as authorities responsible for reframing water management and planning approaches to facilitate the equitable collaboration of Indigenous and non-Indigenous" approaches to water planning and management. [36]

- The Victorian government's *Yarra River Protection (Willip-gin Birrarung Murron) Act 2017* and associated Yarra River Action Plan establishes the Birrarung Council as a statutory body to provide independent advice with Traditional Owners as members of this Council. [53]-[55]
- The collaborative governance framework developed by the Martuwarra Fitzroy River Council for the Fitzroy River (Martuwarra) in Western Australia provides an innovative partnership model designed to protect the cultural and environmental values that underpin the river's National Heritage Listing. [51]

The Northern Australia Indigenous Land and Sea Alliance (NAILSMA) commented that some partnership approaches developed in southern Australia would need to be modified to be successful in the north.[72] Implementing the First Peoples Water Engagement Council's recommendations and principles across Australia as well as learning from good practice models requires ongoing First Peoples' representation at a national level. Unfortunately, the First Peoples Water Engagement Council was abolished along with the National Water Commission. [17] Council members were transferred through a number of other bodies, including the Indigenous Water Advisory Committee (IWAC), which have all now ceased to exist. Australia now has no national First Peoples advisory body for water. [17]

The Carpentaria Land Council Aboriginal Corporation (CLCAC) suggested that Indigenous Ranger programs in northern Australia have "increased [Indigenous] participation, influence and control of land management activities". CLCAC believes that "if similar investment of time and resources is given to Indigenous Water Management regimes, both the best interests of First Peoples' are met and sustainable water management and planning is possible." However, CLCAC identified a major impediment to the long-term success of such programs is short-term funding (see also Issue 5 below).[73]

Philanthropic investment may be able to intervene in this issue by helping:

- re-establish a national First Peoples advisory body for water, which could be established in the way that the Climate Council was created after the Climate Commission was abolished by the Abbott Government
- First Peoples communities advocate for policy changes that would alter or create the statutory and administrative frameworks required to ensure First Peoples are able to fully participate in water planning and management on their own terms
- establish and ensure long-term funding for Indigenous Ranger programs with a focus on Indigenous leadership in water management regimes
- encourage specific partnerships between First Peoples and Commonwealth, state and territory government institutions to continue to demonstrate the potential of successful collaborative and other 'hybrid' governance frameworks in practice.

# 3 First Peoples' interests in water ownership, use, development and management do not always map easily onto existing "Western" legal, cultural, scientific, environmental and economic frameworks

The laws, customs and practices that inform Australia's First Peoples' relationships with their lands and waters do not translate easily into the concepts and categories of contemporary Western natural resource management. [17], [19], [38], [56], [57] Ensuring First Peoples can participate fully in water planning and management and genuinely influence outcomes requires improvements to the "cultural competency" of water authorities as well as policy support and capacity building for First Peoples communities. [19], [38], [56]

First Peoples' natural resource management practices are grounded in an "established body of laws that allocate rights and interests among particular people". [48] Although there is significant diversity in Indigenous "First Laws" [51] and cultural homogeneity cannot be assumed across Australia's First Peoples, [50] there are

some elements common to the majority of First Law systems. [19] Unlike contemporary Western approaches to water resource management, Australia's First Peoples do not see water primarily in utilitarian terms as a resource to be used for human purposes, nor do they "divide water into separate environmental, economic, cultural, social, and spiritual components". [19] Freshwater systems are often understood as living waters with their own "right to life", [51] embedded within a web of relationships that, as the *Mary River Declaration* of the Delegates of the Mary River Water Forum explains, "intrinsically entwines [...] water, land and Indigenous people". [58]

The *Echuca Declaration* of the Murray Lower-Darling River Indigenous Nations (MLDRIN) and the Northern Basin Aboriginal Nations (NBAN) similarly states: "Water is living being and should be treated accordingly. Many of our ancestral beings are created by and live in water." [28] While the *Fitzroy River Declaration* of the Traditional Owners of the Fitzroy catchment describes the river as a "living ancestral being" that "has a right to life". [17], [29]

The dominance of a contemporary Western water resource management paradigm built on science, economics and engineering can make it difficult for water authorities to authentically acknowledge and incorporate First Peoples' knowledge into water planning and management processes. [17], [50], [56], [57], [59] Taking seriously First Peoples' worldviews where "[I]iving beings, including country itself, are alert to what is happening in the world", [60] Dreaming ancestors have shaped the landscape with their creative activity and imbued specific landscape features with value, [50] and certain people have specific First Law obligations to Country, requires a very different consideration of the planning process than an approach which remains procedurally focussed on providing specific volume of water to a defined water course that is managed separately from the surrounding landscape. [50] Increased participation of First Peoples in water management process raises important issues around the relationships between government organisations and First Peoples that need to be addressed. For example, maintaining the intellectual property of First Peoples over their traditional knowledge.

Genuinely implementing the NWI requirement that water plans "incorporate indigenous [*sic*] social, spiritual and customary objectives and strategies for achieving these objectives" [52] requires water authorities to reframe water management practices so that they are able to provide more than token acknowledgement of First Peoples' deep and enduring relationships to water and Country. [19], [38], [59]

#### What can be done

Australia's standard water planning and management practices need to evolve to a point where resource management, allocation planning, and hydrological and ecological assessments can be adequately reframed in ways that permit the full incorporation of First Peoples' distinct relationships with land and water. [17], [50]. This requires contemporary settler water management practices move beyond token recognition of First Peoples' values and the acceptance that long-term investments in change management, capacity building and cultural competency will need to be made in water agencies. [38], [50] Parallel investments will be needed to assist First Peoples to acquire the knowledge and skills to engage fully in water planning and management. [56] Practical investments in increasing First Peoples' participation in water management activities including the following could allow for cross-cultural exchange and learning:

- water plan design and implementation at all levels
- maintaining genuine engagement with First Peoples at all stages of the water planning process
- long-term monitoring of allocation decisions
- compliance and enforcement actions
- ecological and hydrological monitoring and data collection.

Ensuring that Indigenous and non-Indigenous water managers spend more time working collaboratively has the potential to embed Indigenous paradigms and values in jointly-developed modes of practice and problem solving to meet Australia's future land and water management challenges. [50] Specific actions with the potential to increase collaborative work and build capacity for mutual understanding between First Peoples and water authorities include:

• employing Indigenous water planners and managers at all levels

- increasing the number of innovative pilot programs that demonstrate the value of Indigenous and non-Indigenous co-management and cross-cultural exchange and learning in land and water management
- live-in, on-Country courses for Indigenous and non-Indigenous water managers
- capacity building and engagement programs within Indigenous communities linking water and land management with education and employment opportunities
- scholarships for First Peoples men and women to undertake specialist natural resource management degrees
- expansion of existing river ranger and river keeper programs to increase the skills and participation of First Peoples in a broader range of water management activities
- expansion of "working on Country" programs.

Philanthropic investments may be able to intervene in this issue by supporting policy advocacy to drive the genuine engagement of First Peoples in water planning and management as well as directly supporting the specific actions described above.

# 4 Australia is not meeting its UN Sustainable Development Goal (SDG) commitments for Indigenous Australians living in remote communities (SDG 6)

Australia is a signatory to the United Nations Sustainable Development Goals (SDGs). The Sustainable Development Goal for water (SDG 6), obliges the Australian Government to work towards "ensuring access to water and sanitation for all" within Australia and internationally. [61] Australia's First Peoples living in remote communities often do not have clean, accessible and safely managed water supply and sanitation and suffer poor health outcomes as a consequence. [62], [63]

Across Australia, First Peoples living on Country live in hundreds of remote communities. Some remote Indigenous communities have populations of more than 2000 people, others are no bigger than small family groups. [63] In 2011, around 116,000 people lived in remote communities. [64] Since the 1970s, the Australian Government has provided water and sanitation services to remote communities. [63] Access to good quality drinking water and functional wastewater systems has long been understood to be a major determinant of both education and health outcomes and essential to the well-being of communities. [65] Yet, inadequate provision of these services for remote communities has been documented for more than thirty years. [64] Addressing this issue is not helped by the fragmentation of responsibility across local, state and Commonwealth governments.

The Productivity Commission's 2016 *Overcoming Indigenous Disadvantage* key indicators report is the seventh in the series, which originated in the final report of the Council for Aboriginal Reconciliation in 2000. "Access to clean water and functional sewage" is a key indicator for the report and linked to education and health outcomes for Indigenous communities. However, the Productivity Commission acknowledges that there are no current data sources for this indicator as the last data set comes from a 2006 survey. [65]

Australia's remote Indigenous communities have almost universal access to water for drinking and household use. However, drinking water sources are usually very limited for remote communities and quality of this water is highly variable and can be contaminated, contributing to poor health and education outcomes. [62], [66] The Council of Australian Governments (COAG) has provided funding since 2006 under the *Strategy on Water and Wastewater Services in Remote (including Indigenous) Communities*. However, this funding is primarily targeted at providing centralised water treatment infrastructure, which is not always suitable for smaller and more remote communities. A 2015 Western Australian audit revealed a substantial proportion of remote Indigenous communities had major problems with updated sewerage and wastewater services including: breakdowns left unrepaired for long periods; inadequate testing; and, leaks and overflows. [62] Examples of contamination of drinking water and poorly functioning sewage systems as well as the consequent health outcomes in remote Indigenous communities include:

- gastroenteritis being the second-highest cause of hospitalisation for infection for children younger than two years, with rates of infection 11 times higher among Aboriginal children than non-Aboriginal children and rates higher for remote compared to non-remote regions[66]
- in 2006, a nationwide sample of remote Indigenous communities had drinking water supplies tested, 30% of community samples failed to meet Australian drinking water guidelines, [66] for example by testing positive for *E. coli* or *Naegleria* microbes[63]
- almost half (49%) of the remote Aboriginal communities in Western Australia have untreated drinking water and more than half (52%) are without regular water quality testing[66]
- the drinking and household water in many remote Aboriginal communities is supplied from groundwater. Significant concerns exist that groundwater in some areas is contaminated with heavy metals. However, ongoing monitoring does not occur. This is a particular concern for communities living in proximity to mining operations. For example, Energy Resources of Australia's Ranger mine in the Northern Territory leaks 100,000L of uranium-contaminated water into groundwater every day.
   [66] Some remote community water supplies have tested at twice the allowable level of uranium under Australian drinking water guidelines. [63]

Torres Strait Islander and some coastal Aboriginal communities face additional risks from climate change and sea level rise. Problems already exist with salt water inundation of fresh water springs and storage dams close to the shoreline and in some Torres Strait Islander communities expensive, diesel-powered desalination plants are routinely required during the dry season. [67]

Participants in recent University of Queensland/Water Aid research into provision of water and sanitation services in remote communities noted that the ongoing provision of water resources was often a constraint on the future viability of remote communities, limiting the opportunities for First Peoples to remain living on Country. [64] The lack of funding for water services has raised concerns that governments may try to close small, remote communities "by stealth", despite the benefits for Indigenous communities of living on Country.[76] The Productivity Commission notes that "for some important cultural indicators, such as connection with country and language maintenance and revitalisation, outcomes are better in remote areas." [65] Failure to provide adequate water and sanitation services in remote communities consequently puts First Peoples living on Country in remote communities in an impossible bind—retaining important connections to Country, language and culture, as well as fulfilling traditional obligations to care for Country, exposes people to the risk of significant adverse health outcomes that should not be found in a rich, developed nation like Australia.

#### Box 1 - SDG Goal 6. Ensure availability and sustainable management of water and sanitation for all

Action targets:

- 6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all
- 6.2 By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations
- 6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimising release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safer use globally
- 6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of fresh water to address water scarcity and substantially reduce the number of people suffering from water scarcity
- 6.5 By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate
- 6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes

Means of Implementation:

- 6.a By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies
- 6.b Support and strengthen the participation of local communities in improving water and sanitation. [61]

#### What can be done

Poor water quality and poor sanitation and wastewater management services in remote communities remains a "familiar story" in Indigenous communities. [64] These problems have clear, well-understood, long-standing and documented solutions. Experienced NGO representatives commenting in a 2017 University of Queensland and WaterAid study stated: "This is not new stuff. You know, you can look back and do some research for decades and what I'm telling you today is what was being said 20 years ago, so it's not like any of this is new." [64]

The Australian Government has made a number of strong commitments to SDG6 in terms of its Asia Pacific regional aid contribution. However, a similarly strong domestic commitment has not been made. The UN's intention with the SDGs is that they be applied to all situations, both international and domestic, where improvements are required. [63] Commonwealth, state and territory governments need to urgently address the shortfalls in data, funding and action with regard to improving water quality and sanitation outcomes in remote Indigenous communities. It is clear that a "business-as-usual" approach will not deliver against Australia's 2030 SDG6 obligations with regard to remote Indigenous communities. [63] Public health and governance experts recommend Integrated Water Resource Management (IWRM) approaches as the most likely to deliver long-term change in remote Indigenous communities with regard to SDG6. [63] IWRM provides "a systems approach that seeks to identify and understand the interlinkages and feedbacks between physical, economic and social sustainability aspects" in water catchments and communities. Such an approach would link improved water quality and sanitation with the other three major issues discussed in this paper to provide Australia's First Peoples with greater self-determination, economic opportunities, health and education outcomes alongside maintenance and enhancement of connections to Country.

Philanthropic investment can assist in:

- addressing poor water quality and sanitation in remote communities by supporting policy advocacy for Australian governments (local, state and Commonwealth) to meet SDG6 commitments in Australia
- advocating for and potentially funding data acquisition on the status of water and sanitation services in remote communities (note that the latest data available is from 2006)
- helping raise expectations for WASH services in remote communities[64]
- helping create the right partnerships between Indigenous communities, NGOs and Commonwealth, state and territory government agencies[64]
- helping drive innovation, capacity-building and ownership of water quality and sanitation services by remote communities
- helping generate long-term funding streams to provide appropriate infrastructure and training to promote local independence in the management of water and sanitation in remote communities and allow for their long-term sustainability.

# 5 We need to invest for the long-term to improve First Peoples' water rights and involvement in water management.

Addressing each of the four issues identified in this paper requires a solution to a fifth: the need for provision of long-term, sustainable funding. Short-term, ad hoc and project-based funding, disrupted by political cycles, cannot ensure genuine changes in First Peoples' status with regard to water and water management in Australia.

Achieving sustainable outcomes that meet First Peoples' objectives for water rights and full participation in water planning and management processes requires long-term, structural changes to resourcing. Past investments have created momentum, built capacity and created a substantial body of knowledge. [17] However, each funding cycle has ended with skilled people and knowledge dispersed. Useful reports, the results of substantial work by many committed people, are difficult to find and access (as apparent to anyone who has tried to use the National Water Commission's archived website). [17] First Peoples' institutions including the First Peoples' Water Engagement Council and the Indigenous Water Policy Group have been disbanded. Important First Peoples' NGOs like the Centre for Appropriate Technology lose the funding required to roll-out critical knowledge and skills-building programs to enable remote communities to maintain water and sanitation services.

Long-term resourcing that makes genuine changes to First Peoples' status with regard to water and water management in Australia is a matter of social justice and equity for Australia's First Peoples. It is also required if Australia is to meet its commitments under the UNDRIP and its domestic commitments under UN SDG6. As Goff and Crow point out [1]:

The multi- faceted uses of water directly impact daily life and human survival. Different levels and circumstances of water access have the potential to elevate people out of poverty or condemn them to it. Control over water can and often does afford individuals and groups significant social and economic power. Water is a prerequisite for life and for many types of economic and domestic activity. For all these reasons, it is appropriate to question the equity of current access to and distribution of water.

#### What can be done

Sustainable resourcing of First Peoples' water issues requires at least 10-year funding horizons to ensure not only reliable financial resources, but also to develop and retain skilled staff, maintain institutional memory, and continue to build links to and between First Peoples communities. [22] The Murray-Darling Basin Authority has begun to move towards this goal with its new five-year funding arrangements with the Murray Lower Darling River Indigenous Nations (MLDRIN).

Knowledge transfer between First Peoples communities and water institutions can ensure the replication of success stories like the Ngarrindjeri Yarluwar-Ruwe Program elsewhere in Australia. As the First Peoples Water Engagement Council pointed out in 2012, there are important links between water management success and broader solutions to First Peoples' disadvantage including economic development, employment, education and health: *"Closing the Gap* objectives cannot be achieved unless governments take steps to recognise the special relationships and responsibilities that link our people to land, territories and water, to respect our autonomy in decision-making, and to ensure our access to water for our cultural, social and economic development." [19]

Sustainable resourcing is required for all of the potential solutions identified in each of the "What can be done" sections above. Without sustainable, long-term resourcing, attempts to remedy the injustices faced by Australia's First Peoples in relation to water rights, participation in water planning management and provision of water services, face an ongoing cycle of short-term improvements followed by loss of momentum. Along with resourcing, a long-term strategic planning framework built on UNDRIP and SDG6 with targets, measures and indicators of interim success is required.

Philanthropic intervention can help:

- drive policy advocacy to establish the fiscal reforms required to deliver long-term financing for programs across the breadth of issues discussed in this paper (e.g. long-term appropriations in legislation supporting First Peoples' outcomes similar to that provided for energy technologies in the Commonwealth's *Clean Energy Finance Corporation Act 2012*, s.46)
- provide resourcing for developing comprehensive, baseline data on First Peoples water rights and participation in water planning and management across Australia
- provide resourcing for long-term tracking of Australia's performance against the standards set by UNDRIP and SDG6
- demonstrate what is possible through the provision of long-term financing for pilot projects that improve some of the issues outlined in this issues paper.

## Works cited

- M. Goff and Ben Crow, "What is water equity? The unfortunate consequences of a global focus on 'drinking water'," *Water International*, vol. 39, no. 2, pp. 159–171, Mar. 2014.
  J. K. Weir, "Water Planning and Dispossession," in R. Q. Grafton and D. Connell, Eds. *Basin futures: water reform in the Murray-Darling Basin*, Canberra: ANU Press, 2013, pp. 179–191.
- [3] S. E. Jackson and M. Langton, "Trends in the recognition of Indigenous water needs in Australian water reform: the limitations of 'cultural' entitlements in achieving water equity," *Journal of Water Law*, vol. 22, pp. 109–123, 2011.
- [4] H. Reynolds, *The other side of the frontier: Aboriginal resistance to the European invasion of Australia*. Sydney: UNSW Press, 2006.
- [5] H. Reynolds, *This whispering in our hearts*. Sydney: Allen & Unwin, 1998.
- [6] A. Gardner, R. Bartlett, J. Gray, and R. Nelson, *Water resources law*, 2nd ed. Chatswood, NSW: LexisNexis, 2018.
- S. E. Jackson, "Enduring and persistent injustices in water access in Australia," in A. Lukasiewicz, S. Dovers, L.
  Robin, J. McKay, and S. Graham, Eds. Natural resources and environmental justice: Australian perspectives, Collingwood: CSIRO Publishing, 2017, pp. 121–132.
- [8] L. O'Neill, L. Godden, E. Macpherson, and E. O'Donnell, "Australia, wet or dry, north or south: Addressing environmental impacts and the exclusion of Aboriginal peoples in northern water development," *Environmental and Planning Law Journal*, vol. 33, no. 4, pp. 402–417, 2016.
- [9] K. S. Taylor, B. J. Moggridge, and A. Poelina, "Australian Indigenous Water Policy and the impacts of the ever-changing political cycle," *Australasian Journal of Water Resources*, vol. 20, no. 2, pp. 132–147, Sep. 2017.
- [10] V. Marshall, "Overturning Aqua Nullius: Pathways to National Law Reform," in *New Directions for Law in Australia: Essays in Contemporary Law Reform*, Canberra: ANU Press, 2017, pp. 221–230.
- [11]Murray Lower Darling Rivers Indigenous Nations (MLDRIN), Northern Basin Aboriginal Nations (NBAN),<br/>North Australian Indigenous Land and Sea Management Alliance (NAILSMA), Dhungala Baaka: Rethinking<br/>the Future of Water Management in Australia, National Cultural Flows Research Project, Jun. 2018.
- [12] N. Duff, *Fluid mechanics: the practice use of native title for freshwater outcomes*, Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS), Canberra, Jun. 2017.
- [13] S. Morris, "Re-evaluating Mabo: the case for Native Title reform to remove discrimination and promote economic opportunity," *Land, Rights, Laws Issues of Native Title*, vol. 5, no. 3, pp. 1–16, Aug. 2012.
- S. E. Jackson, "The cultural politics of environmental water management in Australia," Water and Society III, vol. 1, no. 200, pp. 29–41.
- [15] Aboriginal and Torres Strait Islander Social Justice Commissioner, *Native Title Report 2008*, Australian Human Rights Commission, Sydney, Feb. 2009.
- [16] M. Durette, "A comparative approach to Indigenous legal rights to freshwater: Key lessons for Australia from the United States, Canada and New Zealand," *Environmental and Planning Law Journal*, vol. 27, no. 4, pp. 296–315, Jul. 2010.
- [17] K. S. Taylor, B. J. Moggridge, and A. Poelina, "Australian Indigenous Water Policy and the impacts of the ever-changing political cycle," *Australasian Journal of Water Resources*, pp. 1–16, Jul. 2017.
- [18] National Native Title Council, *Recognising Indigenous water interests in water law: a submission by the National Native Title Council to the 2014 review of the Water Act 2007*, 2014.
- [19] First Peoples' Water Engagement Council, *Advice to the National Water Commission*, National Water Commission, Canberra, ACT, May 2012.

| [20]         | J. Altman and S. Jackson, "Indigenous land and sea management," in <i>Ten Commitments Revisited: Securing Australia's Future Environment</i> , S. Morton, D. Lindenmayer, and S. Dovers, Eds. CSIRO Publishing, 2014, pp.  |
|--------------|--|
| [21]         | 1–10.<br>E. Fry, "Unlocking the potential of the Indigenous Estate," presented at the National Native Title  |
| [22]         | Conference, Darwin, 01-Jun-2016, pp. 1–5.<br>R. Nelson, L. Godden, and B. Lindsay, <i>A multi-layer plan for cultural flows in Australia: legal and policy<br/>design</i> , National Cultural Flows Research Project, Jun. 2018.   |
| [23]         | Will Mooney, Executive Officer, MLDRIN, pers comm. 05-Oct-2018.  |
| [23]         | M. Davis, "To Bind or Not to Bind: The United Nations Declaration on the Rights of Indigenous Peoples Five   |
|              | Years On," Australian International Law Journal, vol. 19, pp. 17–48, 2012.   |
| [25]         | First Peoples' Water Engagement Council, <i>Policy Framework</i> , National Water Commission, Canberra, ACT,<br>Jun. 2012.   |
| [26]         | Indigenous Water Policy Group (IWPG), <i>A Policy Statement on North Australian Indigenous Water Rights,</i><br>Northern Australian Indigenous Land and Sea Alliance (NAILSMA), 2009.  |
| [27]         | D. A. Rawls, <i>Tracking the DRIP: How the United Nations' Declaration on the Rights of Indigenous Peoples</i> ( <i>DRIP</i> ) is being implemented in Australia, National Centre for Indigenous Studies (ANU), Canberra, Nov. 2013.   |
| [28]         | Murray Lower-Darling River Indigenous Nations, Echuca Declaration 2009. 2010.  |
| [29]         | Traditional Owners of the Fitzroy Catchment, Fitzroy River Declaration. 2016.  |
| [30]         | United Nations, United Nations Declaration on the Rights of Indigenous Peoples, Mar. 2008.   |
| [31]         | J. Robinson, B. Cosens, S. Jackson, K. Leonard, and D. McCool, "Indigenous water justice," <i>Lewis Clark Law Review</i> , vol. 22, no. 3, pp. 873–953, Jul. 2018.   |
| [32]         | Department of Environment and Natural Resources (NT), Strategic Indigenous Reserves: Stakeholder   |
| [52]         | discussion paper, Department of Environment and Natural Resources (NT), Darwin, Feb. 2017.   |
| [33]         | Council of Australian Governments, <i>Module to the National Water Initiative (NWI) Policy Guidelines for</i>  |
| []           | Water Planning and Management, Council of Australian Governments, Canberra, Feb. 2017.   |
| [34]         | Ngarrindjeri Regional Authority and G. O. S. Australia, Kungun Ngarrindjeri Yunnan Agreement (KNYA):   |
|              | Report 2014 to 2015, Government of South Australia, Adelaide, Aug. 2016.   |
| [35]         | Commonwealth of Australia, Agreement in relation to the delivery of environmental water to environmental assets in the lower River Murray region, South Australia, Nov. 2015.  |
| [36]         | S. Hemming, D. Rigney, S. L. Muller, G. Rigney, and I. Campbell, "A new direction for water management?  |
|              | Indigenous nation building as a strategy for river health," E&S, vol. 22, no. 2, pp. 13–24, 2017.  |
| [37]         | D. Rigney, S. Bignali, and S. Hemming, "Negotiating Indigenous modernity. Kungun Ngarrindjeri Yunnan—<br>listen to Ngarrindjeri speak," <i>Alternative: An International Journal of Indigenous Peoples</i> , vol. 11, no. 4, pp.<br>344–349, Dec. 2015.  |
| [38]         | J. Mackenzie, Facilitators' guide to Indigenous water planning, Northern Australian Indigenous Land and Sea  |
|              | Management Alliance, Darwin, N.T., 2012.   |
| [39]         | C. Clarkson, Z. Jacobs, Ben Marwick, R. Fullagar, L. Wallis, M. Smith, R. G. Roberts, E. Hayes, K. Lowe, X.<br>Carah, S. A. Florin, J. McNeil, D. Cox, L. J. Arnold, Q. Hua, J. Huntley, H. E. A. Brand, T. Manne, A. Fairbairn, J.<br>Shulmeister, L. Lyle, M. Salinas, M. Page, K. Connell, G. Park, K. Norman, T. Murphy, and C. Pardoe, "Human |
|              | occupation of northern Australia by 65,000 years ago," <i>Nature,</i> vol. 547, no. 7663, pp. 306–310, Jul. 2017.  |
| [40]         | B. Gammage, <i>The biggest estate on Earth: how Aborigines made Australia</i> . Sydney: Allen & Unwin, 2011.   |
| [41]         | J. Russell-Smith, D. Lucas, M. Gapindi, B. Gunbunuka, N. Kapirigi, G. Namingum, K. Lucas, P. Giuliani, and G. Chaloupka, "Aboriginal Resource Utilization and Fire Management Practice in Western Arnhem Land, Monsoonal Northern Australia: Notes for Prehistory, Lessons for the Future," <i>Human Ecology</i> , vol. 25, no. 2, pp. 155         |
| [42]         | pp. 159–195.<br>P. Humphries, "Historical Indigenous use of aquatic resources in Australia's Murray-Darling Basin, and its   |
| [72]         | implications for river management," <i>Ecol Manage Restor</i> , vol. 8, no. 2, pp. 106–113, Aug. 2007.   |
| [43]         | R. Bliege Bird, B. F. Codding, P. G. Kauhanen, and D. W. Bird, "Aboriginal hunting buffers climate-driven fire-  |
| [44]         | size variability in Australia's spinifex grasslands," PNAS, vol. 109, no. 26, pp. 10287–10292, Jun. 2012.  |
| [44]         | D. W. Bird, R. B. Bird, B. F. Codding, and N. Taylor, "A Landscape Architecture of Fire: Cultural Emergence<br>and Ecological Pyrodiversity in Australia's Western Desert," <i>Current Anthropology</i> , vol. 57, no. 13, pp. S65–<br>S79, Jun. 2016.   |
| [45]         | R. B. Bird, D. W. Bird, and B. F. Codding, "The "fire stick farming" hypothesis: Australian Aboriginal foraging strategies, biodiversity, and anthropogenic fire mosaics," <i>PNAS</i> , vol. 106, no. 39, pp. 1–6, 2008.  |
| [46]         | A. Paterson, "Once were foragers: The archaeology of agrarian Australia and the fate of Aboriginal land management," <i>Quaternary International</i> , vol. 489, pp. 4–16, Sep. 2018.  |
| [47]         | B. Pascoe, Dark emu, black seeds: agriculture or accident. Broome: Magabala Books, 2014.   |
| [47]<br>[48] | M. Langton, <i>Freshwater</i> . ATSIC Briefing Papers, 2002.   |
|              | NAILSMA, Indigenous Rights and Interests in Water Resource Management, Northern Australian Indigenous  |
| [49]         | Land and Sea Management Alliance, Darwin, 2007.  |
|              |  |

- [50] S. Jackson and M. Barber, "Recognition of indigenous water values in Australia's Northern Territory: current progress and ongoing challenges for social justice in water planning," Planning Theory & Practice, vol. 0, no. 0, pp. 1–0, Oct. 2013. A. Poelina, "Martuwarra Fitzroy River Council: A cultural approach to collaborative water governance in an [51] Aboriginal and National Heritage listed area," Unpublished paper, pp. 1–27, Aug. 2018. [52] Council of Australian Governments, Intergovernmental Agreement on a National Water Initiative, Council of Australian Governments, 2004. Department of Environment, Land, Water and Planning & Wurundjeri Council, Yarra River action plan-[53] Willip-gin Birrarung murron, Victorian Government, Melbourne, Mar. 2017. [54] Parliament of Victoria, Yarra River Protection (Wilip-gin Birrarung murron) Act 2017. [55] K. O'Bryan, "New law finally gives voice to the Yarra River's traditional owners," The Conversation, no. 25, 25-Sep-2017. T. Tran, "The (Non-Legal) Guide to Meaningful Recognition: A Case Study from the Canning Basin, Western [56] Australia," in Indigenous Studies and Engaged Anthropology: The Collaborative Moment, Routledge, 2015, pp. 163-178. [57] P.-L. Tan and S. Jackson, "Impossible dreaming - does Australia's water law and policy fulfil Indigenous aspirations?," Environmental and Planning Law Journal, vol. 30, pp. 132–149, 2013. [58] Delegates of the Mary River Forum, Mary River Statement, Northern Australian Indigenous Land and Sea Management Alliance, Darwin, N.T., 2009. M. Ayre and J. Mackenzie, "'Unwritten, unsaid, just known': the role of Indigenous knowledge(s) in water [59] planning in Australia," Local Environment, vol. 18, no. 7, pp. 753–768, Aug. 2013. [60] D. B. Rose, Wild Dog Dreaming. University of Virginia Press, 2011. [61] United Nations, Transforming our world: the 2030 Agenda for Sustainable Development. United Nations General Assembly, 2015. N. Hall, "Australian Indigenous remote communities & water, sanitation & hygiene," Water e-Journal, vol. 3, [62] no. 2, pp. 1-9, 2018. N. Hall, "UN Sustainable Development Goals for water and sanitation: how should Australia respond within [63] and beyond its borders," Global Change Institute Discussion Paper, no. 2016, Jul. 2016. [64] N. Hall, D. Currie, P. Hall, S. Reid, L. Selvey, M. Barbosa, S. Naylor, A. Dean, B. Head, and J. Willis, "Water, sanitation and hygiene in remote Indigenous Australia: A scan of priorities," Water Aid Discussion Paper, no. 2017, Jun. 2017. Productivity Commission, Overcoming Indigenous Disadvantage: Key Indicators 2016 - Report, Productivity [65] Commission, Nov. 2016. [66] H. Clifford, G. Pearson, P. Franklin, R. Walker, and G. Zosky, "Environmental health challenges in remote Aboriginal Australian communities: clean air, clean water and safe housing," Australian Indigenous Health Bulletin, vol. 15, no. 2, pp. 1–14, May 2015. M. Isherwood, (TSRA) pers. comm. regarding risks to drinking water supplies in the Torres Strait, 08-Nov-[67] 2018. V. Marshall, Overturning Aqua Nullius: Securing Aboriginal Water Rights, Aboriginal Studies Press, Canberra, [68] 2017. [69] Productivity Commission, National Water Reform, Report no. 87, Canberra. [70] J. Connor, The Australian frontier wars, 1788-1838. UNSW Press, 2002. [71] R. Evans and R. Ørsted-Jensen. "I cannot say the numbers that were killed': assessing violent mortality on the Queensland frontier. 2014". Available at SSRN 2467836. [72] Northern Australian Indigenous Land and Sea Alliance (NAILSMA) comments on draft First Peoples' Water Rights issues paper, 2018. [73] Carpentaria Land Council Aboriginal Corporation (CLCAC) comments on draft First peoples' Water Rights issues paper, 2018. [74] Convention on Biological Diversity, 1992. [75] Murray-Darling Basin Royal Commission, Murray-Darling Basin Royal Commission Report, Jan. 2019. Calla Wahlquist, "Fears Western Australia will close remote Indigenous communities 'by stealth'", The [76]
  - Guardian, 14/07/2016, accessed 20 March 2019 at https://www.theguardian.com/australianews/2016/jul/14/fears-western-australia-will-close-remote-indigenous-communities-by-stealth.