



WATER SERVICES
ASSOCIATION OF AUSTRALIA



CLOSING THE WATER FOR PEOPLE AND COMMUNITIES GAP

IMPROVING WATER
SERVICES TO FIRST NATIONS
REMOTE COMMUNITIES

SUMMARY REPORT AND
KEY RECOMMENDATIONS

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NOVEMBER 2022

Traditional Custodians acknowledgement

Water Services Association of Australia (WSAA) acknowledges Aboriginal and Torres Strait Islander people as Australia's First Peoples and as the traditional owners and custodians of Country throughout Australia. We recognise their continuing connection to land, waters and community and we pay our respects to Elders past and present.

WSAA acknowledges that water is core to life for Aboriginal and Torres Strait Islander peoples and is essential to their identities, cultures and livelihoods. Protecting and managing water is a custodial and intergenerational responsibility.

Aboriginal and Torres Strait Islander peoples have the rights of all other citizens, the right to self-determination and the right to retain their cultural identities, languages, kinships and expressions.

As is clear in this report and in calls to Close the Gap, Aboriginal and Torres Strait Islander peoples do not enjoy the same level of participation in Australia's

economic and social prosperity compared to the non-Indigenous population.

This is particularly evident for Aboriginal and Torres Strait Islander peoples living in regional and remote areas. Such long-term and deeply entrenched inequalities are shaped by the impacts of past government policies and decisions, inter-generational trauma, and structural disadvantage.

Governments across all levels must work with Aboriginal and Torres Strait Islander peoples, and recognise, acknowledge and embrace their histories, knowledge and culture as well as these structural challenges in designing policies and services. Aboriginal and Torres Strait Islander peoples must be closely involved in the development and implementation of policies and programs that impact on them.

This report was prepared on Ngunnawal, Ngambri, Gadigal and Wurundjeri Country.

Contents SUMMARY REPORT AND KEY RECOMMENDATIONS

Foreword	4	Recommendations 1–7	44
Executive summary	6	Closing the water for people and communities gap	53
Overview of current issues in remote areas	10	A review on the management of drinking water supplies in First Nations remote communities around Australia	
Snapshots of arrangements in key jurisdictions	18	Download the Full Report	
Northern Territory	20	 wsaa.asn.au/publication/closing-water-people-and-communities-gap-review-management-drinking-water-supplies/	
South Australia	26		
Western Australia	30		
Queensland	34		
Commonwealth government and national stakeholders	38		

Water Services Association of Australia (WSAA) is the peak industry body representing the urban water industry. Our members provide water and wastewater services to over 24 million customers in Australia and New Zealand and many of Australia's largest industrial and commercial enterprises.

More information

Please contact info@wsaa.asn.au

COVER PHOTO Aerial view of Aputula (Finke), south of Alice Springs, Northern Territory



In late 2022, WSAA will release its first Reconciliation Action Plan, including the artwork above, by Anna Dowling.

The artist

Anna was born in Adelaide, South Australia and is a descendant of the Badimia people of the Yamatji region in Western Australia.

Working in ink on paper, she reflects on her mixed cultural heritage and draws on traditional symbols and patterns. At age 21, Anna Dowling was the recipient of the 2014 Don Dunstan "Our Mob" Emerging Artist Prize. In 2015, Anna was a finalist in the National Aboriginal and Torres Strait Islander Art Awards (NAATSIA) and in 2016 was awarded the Max Indigenous Art Award (youth category winner) at Parliament House in Sydney.

The artwork

The artwork shows the water cycle and healthy water systems in Australia. The importance of the sun (top), native vegetation, animals, and people (gathering at humpies) are shown here. Water systems are connected and flowing above and underground while rain flows to these areas. The important role of water in cooling and greening environments is highlighted. The many circles and cycles in the artwork reflect the water industry's adoption of circular economy practices – an area in which much is being learnt from First Nations people.

Eric Vanweydeveld

AUTHOR OF CLOSING THE WATER FOR PEOPLE AND COMMUNITIES GAP - A REVIEW ON THE MANAGEMENT OF DRINKING WATER SUPPLIES IN FIRST NATIONS REMOTE COMMUNITIES AROUND AUSTRALIA



Eric is a water engineer and project manager who specialises in the conception, planning and delivery of water strategies and infrastructure projects in remote contexts where holistic solutions are required.

Eric is an independent consultant across Northern Australia and in the Pacific by providing technical, economic, strategic, stakeholder engagement and evaluation expertise to various governments and organisations.

Eric spent eleven years working for Power and Water Corporation, delivering a range of water project solutions for regional and remote communities across the Northern Territory. In his last role as Senior Manager Remote Operations, Eric was responsible for providing leadership and strategic direction in the development and delivery of water services to the 72 remote communities across the Northern Territory.

Eric is a Churchill Fellow (2018) and a Peter Cullen Trust Fellow (2022).

In 2019, as part of his Winston Churchill Fellowship, Eric travelled to Israel, United Arab Emirates and the Sultanate of Oman to research proven low-cost innovative water treatment solutions with potential for application to regional and remote Australia.

Acknowledgements

WSAA gratefully acknowledges the contributions of:

- Eric Vanweydeveld, Director and Principal Consultant of Aquanex Pty Ltd, for almost two years of care, persistence and dedication in preparing for **Closing The Water For People And Communities Gap – A review on the management of drinking water supplies in First Nations remote communities around Australia**, which is embedded in the full version of this report.
[VISIT wsaa.asn.au/publication/closing-water-people-and-communities-gap-review-management-drinking-water-supplies/](https://wsaa.asn.au/publication/closing-water-people-and-communities-gap-review-management-drinking-water-supplies/)
- The water utilities and companies around Australia, who have provided knowledge, insights, perspectives and encouragement for this work.
- The government agencies and associated groups who have also provided wisdom, experience, guidance and encouragement, in particular:
 - National Indigenous Australians Agency
 - Commonwealth Roundtable on Indigenous Water Use
 - Department of Climate Change, Energy, Environment and Water
 - South Australian Council of Social Service
 - Centre for Appropriate Technology
 - Desert Knowledge Australia
 - Torres Cape Indigenous Council Alliance
- The Honourable Linda Burney MP, Minister for Indigenous Australians, for launching the report.
- Pam Corbett and Jackie Mahoney from Alpururulam on Alyawarr Country in the Northern Territory, for joining WSAA to launch the report at Parliament House.
- Jimmy Cocking, the community members of the Central Land Council who contributed, and the Northern Territory Government for allowing Jimmy's report to be accessed.
- The community members from all the case studies and interviews who bravely shared their views and feedback.
- Esteemed researchers, academics and associates who have completed valuable work in this sphere, some of which has helped shape WSAA's early interest and thinking leading up to this report, or later. This includes:
 - Dr Kumi Abeysuriya
 - Simone Soeters
 - Professor Pierre Mukheibir, ISF-UTS
 - Dr Melissa Jackson
 - Associate Professor Cara Beal, Griffith University
 - Dr Nina Lansbury, University of Queensland
 - Associate Professor Bradley Moggridge, Kamilaroi Water Scientist, University of Canberra
 - Dr Paul Wyrwoll, ANU Institute for Water Futures
 - Veronica Matthews, CRE-Stride Senior Research Fellow
 - Aunty Mara West, Murdoch University, HEAL WA
 - Darryl Day, CEO of the Peter Cullen Trust for his insights

As well as everyone interviewed and involved. A full list of stakeholders interviewed for Eric's review is located in [Appendix A of the Full Report](#).



ABOVE Jandamarra Rock, named after a leader of the Bunuba people in Windjana Gorge, Kimberley Region, Western Australia

“ Water is precious like a sacred site;
we need to be consulted and asked.
Our ancestors have been here forever and still are.
Working together, better communication.

COMMUNITY MEMBERS FROM YEPERENYE IN NORTHERN TERRITORY



FOREWORD

Improving services to First Nations remote communities



Adam Lovell

EXECUTIVE DIRECTOR
WSAA

ABOVE Visit to Wallace Rockhole and Hermannsburg during the Voices for the Bush Conference, August 2022, with Ralph Hutchins and Shane Papworth (Power and Water Corporation), Paul Volk (Water Corporation), and Adam Lovell (WSAA) by Eric Vanweydeveld

Many communities and stakeholders across Australia are leading important initiatives in **closing the gap** for First Nations peoples, addressing health, social, economic and other aspects of First Nations disadvantage. Yet amid this work, stories regularly emerge about remote communities with limited and sometimes no access to safe drinking water, poor health outcomes associated with lack of clean and reliable water supplies, and unclear accountabilities for providing water services. Most important of all: a water voice – in the provision of water services that people in First Nations remote communities receive.

“When a government listens to people with experience, with earned knowledge of kinship and Country and culture and community ... when we trust in the value of self-determination and empowerment ... then the policies and programs are always more effective.

PRIME MINISTER ALBANESE, GARMA, JULY 2022

We have highlighted in this report, direct feedback of community members from various jurisdictions on their water supplies. This includes comments given to Jimmy Cocking in his work for the Northern Territory Government (NTG) – and other community feedback in different places and contexts. As we emphasise throughout this report, to truly make progress, all planning and delivery of programs and infrastructure must involve direct input with First Nations communities in shared design approaches.

WSAA initiated this review of remote water services to elevate these issues in the national conversation, and to recommend ways to close the gap in the delivery of safe drinking water including water quality (health and aesthetic aspects) and water security (reliability of water supply, particularly in the face of climate change).

In 2021, WSAA commissioned Eric Vanweydevelde, who has spent many years working on water quality and First Nations engagement in the water industry, to research and document the arrangements for water servicing of remote communities across Australia. The focus is on Northern Territory, Western Australia, South Australia and Queensland. In Victoria, the Australian Capital Territory, Tasmania, and New South Wales (to a slightly lesser degree), First Nations communities are more commonly urban communities. Water services are generally supplied from well-established water networks, and the key recommendations are not necessarily applicable. A preliminary report was released in August 2022, at the inaugural **Voices For The Bush** conference in Alice Springs.

Through extensive research and engagement with stakeholders and the communities themselves, Eric has developed a review which maps the complex and opaque arrangements in each jurisdiction, highlighting the linkages, differences and legacies.

The more this issue is explored, the more nuances are revealed, and this will continue in the future phases. In this report, WSAA presents the most complete snapshot that we can of the information we have obtained at time of publication.

Arising from Eric's review, in this report WSAA and Eric propose findings and recommendations about how improving water servicing can help close the gap – and where we can start. We welcome the commitment of the new Commonwealth Government to implementing a renewed National Water Initiative. We believe it is the right vehicle through which governments can refine and embed these recommendations and initiatives, and steer meaningful progress, working with the urban water industry, WSAA, other stakeholders and most importantly, communities themselves.

Most importantly, we need to move past the view that 'we can't do that, as we're not set up to work that way'. We all need to respectfully challenge the legacy structures that are clearly not producing needed outcomes. New outcomes require new approaches, and that all of us work in solutions-focused ways to move past 'whether we can' to 'how will we'.

BELOW Remote Western Australia





Executive summary

Outside of Australia's capital cities, it can be particularly challenging to deliver water services to remote areas of the country – with incredibly varied landscapes, from desert to tropical savannah, often extreme and robust micro-climates and the challenge of long transport times through tough terrain. These areas are, however, not empty, and to the members of many small First Nations communities, this is their Country, this is their home, it is not remote.

The issues

The delivery of safe drinking water plays a critical role in the viability, self-determination, and sustainability of First Nations remote communities. Water is core to life and has an important role in connection to Country. Protecting and managing water is seen as an important custodial and intergenerational responsibility.

Under the **United Nations Sustainable Development Goal 6**, Australia has committed to ensuring the availability and sustainable management of water and sanitation for all. Although challenging, this commitment should support the rights of First Nations people to remain close to their ancestral lands and commit our governments to closing the gap on the provision of safe and secure water services.

A study by Dr Paul Wyrwoll (2022) from the Australian National University has shown that there is significant non-compliance with the **Australian Drinking Water Guidelines** across regional and remote communities.

The study found that at least 25,000 people across 99 locations with populations of fewer than 1,000 people had accessed water services that did not comply with the health-based guideline values at least once in 2018-19.

Studies by the **Productivity Commission** and **Infrastructure Australia** in 2021 have also identified shortcomings in the provision of services to remote communities: "NWI renewal is an opportunity for jurisdictions to develop agreed objectives for the urban water sector and include national principles for best practice in the planning, pricing and delivery of urban water services. It also provides an opportunity to improve service delivery in regional and remote areas, including facilitating commitments made under the National Agreement on Closing the Gap towards equity in access to essential services" (Productivity Commission Final Report, May 2021, p163)

The media too have picked up on unease in our remote communities and highlighted a number of cases where small communities have expressed strong concern about the drinking water they are provided.

There is a widespread collective view from communities, researchers and industry that drinking water in remote communities does not meet the requirements of the Australian Drinking Water Guidelines and a belief in many communities that the water they drink may be affecting their health.

Naturally, water quality and water security go hand in hand and many First Nations communities face water security challenges. In some cases, quality cannot be improved without a rethink on available water security options or vice versa.

Why did WSAA commission this review?

The water industry, along with governments across Australia, is continually working in good faith to address these issues. However, it is clear that the sheer complexity of the institutions involved in the management of these challenges, is itself an obstacle to solutions.

There is a significant gap between the life outcomes of First Nations and non-Indigenous people in Australia. We know that reliable and safe drinking water and wastewater services are vital for the wellbeing and long-term sustainability of remote communities and that water is central to maintaining hygiene, limiting the spread of disease and maintaining affordable health services.

It is our hope that, in the spirit of the **National Agreement on Closing the Gap**, our industry can support structural change in the relationship between government and First Nations peoples and encourage the belief that when they have a genuine say in the design and delivery of services that affect them, better life outcomes are achieved.

What's in the full review?

The full review lays out the results of exhaustive consultation with First Nations people and government and non-government agencies, and leverages the experience and knowledge of a number of past reports and consultations.

Through 15 case studies, the report also highlights some of the positive work being done across the country. Much progress has been made, yet so much more needs to be improved; and Australia has the resources and capability to achieve safe drinking water for all.

In the review, which is set out within the [Full Report](#): **Part 1, Background and Context**, provides useful clarity about the history and underlying meaning behind some key terminology and how it varies across jurisdictions. It unravels the complex history of the Homelands movement, the history of water quality management, the likely impact of climate change and describes the distribution of remote communities through numbers and maps.

Part 1 also overlays key insights and case studies from the communities themselves, which reveal the complexity of issues, the personal nature of their impact and tortuous stories of institutional failure. It's not surprising that these stories also reveal First Nations peoples' underlying distrust of government and concerns for the future. These often confronting statements and case studies, are presented in stark contrast to the examples of leading work also being done, shown throughout.

Part 2 provides a forensic examination of governance arrangements in the Northern Territory, South Australia, Western Australia and Queensland.

The review does not include New South Wales, Victoria, the Australian Capital Territory and Tasmania. First Nations communities in those jurisdictions are more urban than remote, and are generally supplied by major water utilities or local councils from well-established water networks.

Each of the state and territory reviews provide detailed descriptions of the complex web of legislation, land management arrangements, the multiple entities involved in regulation and supply, key programs and policy developments. Powerfully, the governance and funding arrangements are mapped out visually, providing a sobering glimpse at the complexity of bureaucratic arrangements faced by First Nations people and any agency wishing to improve their circumstances.

Part 2 also provides **Key Findings** that home in on the issues in each jurisdiction. These form the basis for WSAA's response and the seven recommendations that WSAA makes to policy makers in state, territory and Commonwealth governments and other agencies that it hopes will set in train substantial improvements for First Nations people in remote communities.

In summary we argue that the Commonwealth Government, state and territory governments, local governments and stakeholders must urgently come together with the water industry to:

- Formally recognise and work towards the goal of every Australian community having access to water that meets the Australian Drinking Water Guidelines.
- Embed the engagement of First Nations communities in water service delivery – every step of the way.
- WSAA estimates that at least \$2.2 billion is required to ensure First Nations remote communities across the country receive drinking water meeting the Australian Drinking Water Guidelines. There is no doubt this is a complex initiative that will take at least a decade, however the urgency is only growing and Commonwealth, state and territory governments should come together and contribute the resources required to ensure Closing the Gap and Sustainable Development Goal commitments are achieved.
- With local communities, reimagine and reorganise governance and bureaucracy, i.e. which is cumbersome and lacking accountability.

“ Consultations have highlighted a number of specific barriers to the provision of safe water in remote Aboriginal and Torres Strait Islander communities. Water sources can be of especially poor quality in remote areas and often require additional treatment to ensure drinking water is safe for human consumption.

PRODUCTIVITY COMMISSION 2021 P176



“ During our summers you can sometimes see people in communities hosing the outside of their Besser brick walls with garden hoses to keep cool despite the water shortages – that’s how desperate they are.

JULIE DOUGLAS, ALICE SPRINGS THE GUARDIAN



“ [T]here is no legal requirement for landlords in the NT to provide safe drinking water to their tenants

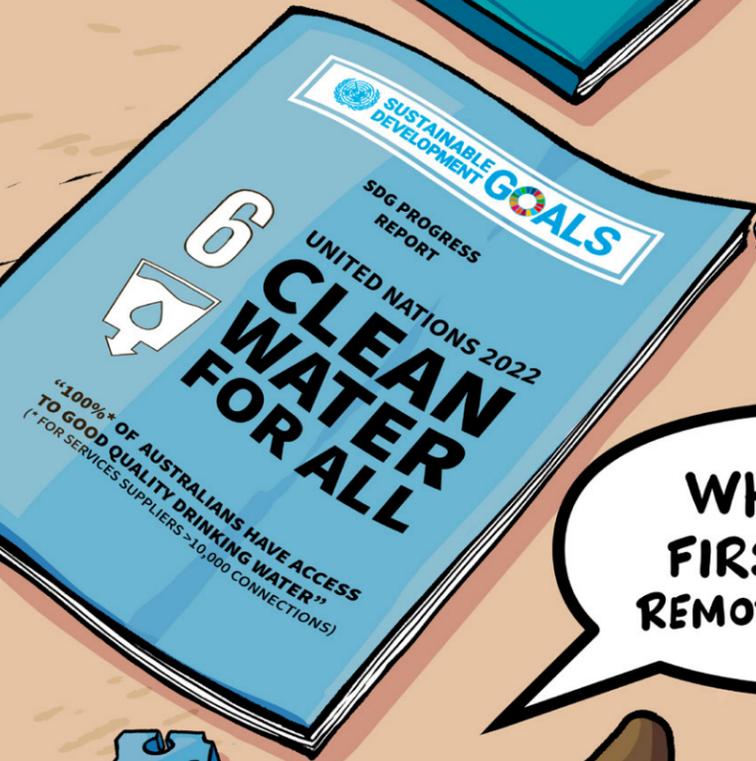
DAN KELLY, AUSTRALIAN LAWYERS FOR REMOTE ABORIGINAL RIGHTS, CALLED IT A 'LEGAL BLACK HOLE' ABC NEWS



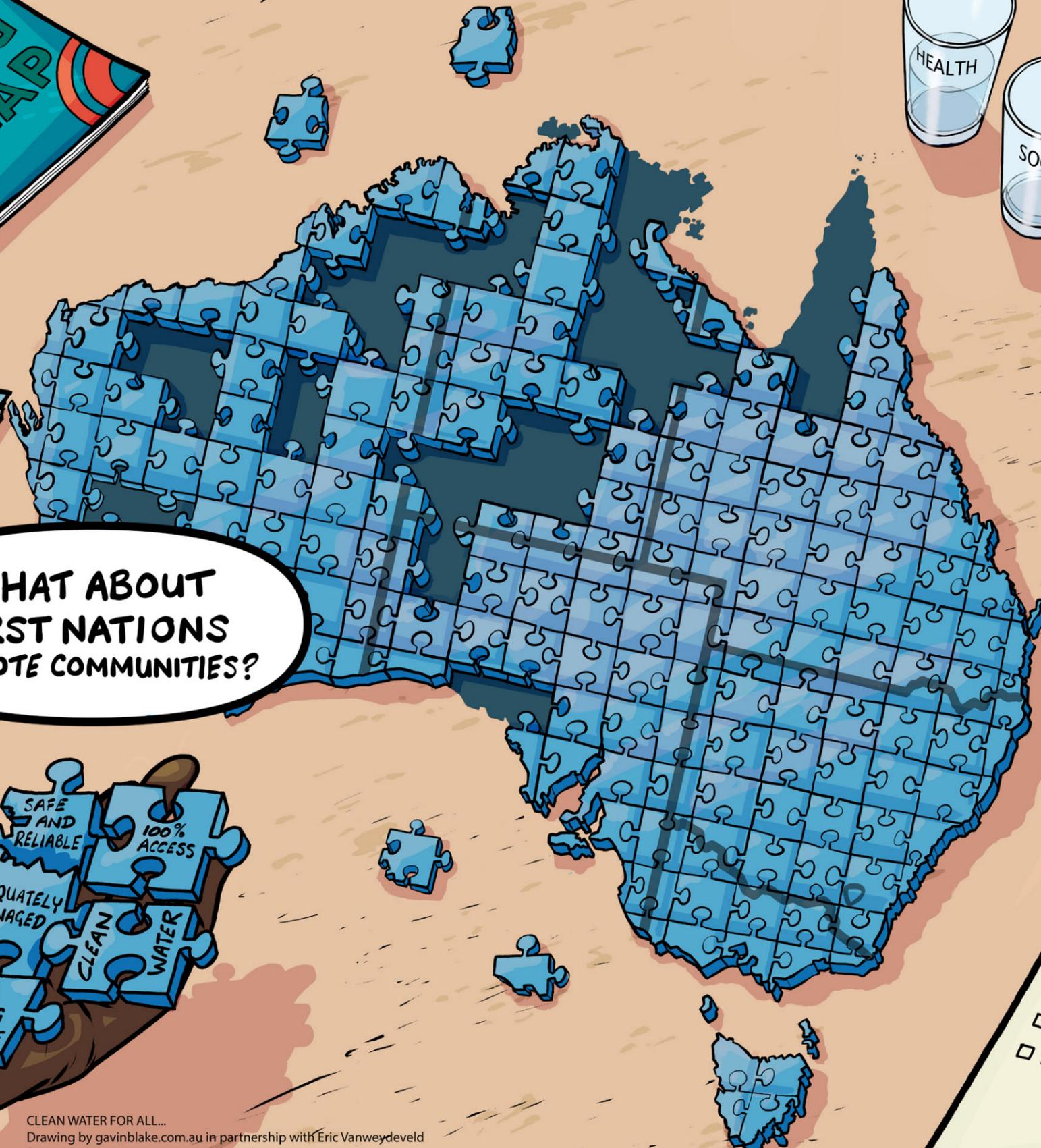
“ Some of the young mums and the parents here find it very difficult and they have no choice but to turn to tap water

ANGELICA MCLEAN, WARBURTON, WA, ABC NEWS

CLEAN WATER FOR ALL...



WHAT ABOUT FIRST NATIONS REMOTE COMMUNITIES?



- ### WATER FOR PEOPLE AND COMMUNITIES CLOSING THE GAP TO DO LIST
- GET TO KNOW THE WATER GAPS
 - EMBED FIRST NATIONS PARTICIPATION
 - ESTABLISH NATIONAL WATER QUALITY REPORTING
 - ADWG COMPLIANCE ACROSS ALL JURISDICTIONS
 - ESTABLISH NATIONAL MINIMUM LEVEL OF SERVICE
 - DEVELOPMENT OF APPROPRIATE TECHNOLOGIES
 - WATER QUALITY TARGETS IN CLOSING THE GAP



ABOVE Children being involved in the That's My Water! Bush Schools Program - World Water Day 2022 - Warruwi community in NT
Credit: Power and Water Corporation

OVERVIEW OF CURRENT ISSUES IN REMOTE AREAS

Every Australian community should have access to safe drinking water

In Australia, the Australian Drinking Water guidelines set out a comprehensive national framework for water quality that is safe to drink and has acceptable taste, colour and odour.

Most of us take this for granted; but as a number of reports have noted, Australia is falling short in its delivery of services to First Nations remote communities, as measured against the **United Nations Sustainable Development Goal 6: Ensure availability and sustainable management of water and sanitation for all**.

Many communities report concerns about their water supplies – with taste, smell, odour, contamination. This is backed up by evidence from various reputable health and epidemiological studies, plus water quality reports from utilities and service providers, which reveal that water quality issues are persistent and in some cases getting worse, in remote communities.

Delays in maintenance and poor customer service compound these issues, increasing the cost of living and leading to neglect. Communities report distrusting government, and that people in remote communities prefer to drink bottled water or soft drinks over tap water. Studies by the Productivity Commission (2021) and Infrastructure Australia (2021) have identified shortcomings in provision of services to remote communities, but there is a lack of available and consistent information.

For First Nations remote communities the delivery of safe drinking water is not only critical in its own right, but fundamental to many Closing The Gap targets, particularly:

Impact on public health

Impact on remote living and integration with public housing

Impact on wellbeing of people and communities



“There’s one community called Nealingkadji where it’s the worst, it tastes really salty. I made a cup of tea from it and I had to tip it out, it wasn’t good to drink at all. People go into town to buy cartons of water just to get through the day, but some people don’t have transport so they’ve got no choice to drink the tap water

YAKANARRA RESIDENT JERMAINE MULLER SAID WATER AT SOME NEARBY COMMUNITIES IS FOUL TO TASTE
ABC NEWS

“People just want to get the calcium out of the water

IMANPA LOCAL AUTHORITY J. COCKING, 2022

“Aboriginal health remains an important priority as the life expectancy rates and chronic disease amongst the people is an area of concern with clean water being essential to assist households to improve health and hygiene in the home and amongst vulnerable individuals.

D. RATHMAN AM PSM FIML
SACOSS STUDY: WATER ISSUES IN REMOTE ABORIGINAL COMMUNITIES, 2020

“At least 25,245 people across 99 locations with populations <1000 reportedly accessed water services that did not comply with health-based guideline values. Including larger towns and water systems, the estimated service gap rises to at least 194,572 people across more than 115 locations. Considering health parameters and the ADWG definition of good aesthetic characteristics, the reported service gap rises further to at least 627,736 people across 408 locations. Forty per cent of all locations with recorded health exceedances were remote Indigenous communities.

P. WYRWOLLE ET AL, 2022

“The most consistent issue raised was a lack of information and engagement of communities in regard to the water quality and source status reports.

J. COCKING, 2022

“The hardness of groundwater is impacting on households and communities. The calcification of household taps, toilets, air conditioning units, kettles and washing machines is costing residents and the NT Government Department of Territory Families, Housing and Communities a lot of money.

J. COCKING, 2022

“Old houses and bad plumbing.
Other houses – hot during
summer, cold during winter.”

YUENDUMU LA MEETING
J. COCKING, 2022

WSAA has identified that there are over 1,100 First Nations remote communities, where around 150,000 First Nations people live. 45% of these communities are in the Northern Territory.

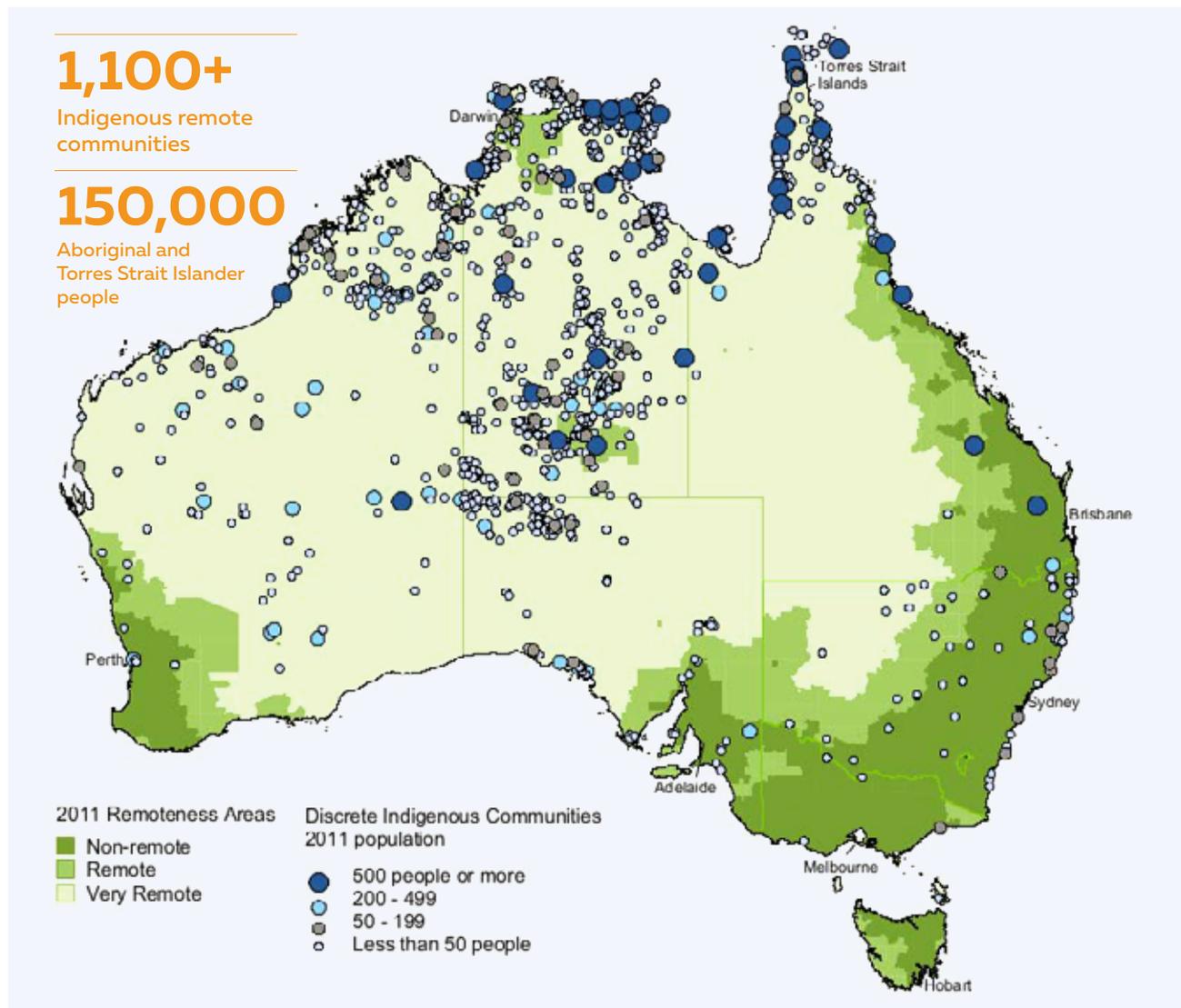
These findings are consistent with the work of Dr Paul R. Wyrwoll from Australian National University who found in recent research that 408 remote or regional communities lacked access to good quality drinking water and 40 per cent of these communities are First Nations communities.

To enable actions to close the gap in drinking water quality, we need to know what the gap actually is.

A recent Western Australian Auditor General’s report, [Delivering Essential Services to Remote Aboriginal Communities](#), highlights a range of issues associated with water quality in small First Nations communities including:

- There was no water quality testing in 51 of the smallest communities previously serviced by the Commonwealth until November 2019. It was reported that the Department of Communities didn’t undertake regular testing because it was neither necessary nor practical and there was no funding for it.
- Microbial contamination and unsafe levels of uranium and fluoride were detected in some communities when water quality testing started.

In line with other studies, we are calling for a national drinking water database and national monitoring program for First Nations remote communities.



SOURCE Introducing Competition and Informed User Choice into Human Services: Reforms to Human Services, Productivity Commission 2017, p279 Figure 9.1 pc.gov.au/inquiries/completed/human-services/reforms/report/human-services-reforms.pdf

Our findings align with Infrastructure Australia's Australian Infrastructure Audit 2019

Page 7

Many remote communities are home to a high proportion of Aboriginal and Torres Strait Islander people, meaning poor standards of water and wastewater services compound historical hardships and reinforce disadvantage.

Page 23

Water and wastewater assets in some remote communities are poorly maintained, routinely fail, or provide services at a standard below their intended design. In 2014-15, around 19% of Aboriginal and Torres Strait Islander households in areas classified as very remote lacked access to working facilities for washing clothes or preparing food. Around 6% lacked access to working facilities for washing. Leaks and blockages can take weeks or months to be fixed due to a lack of technicians or parts and limited access to some communities, particularly during the wet season.

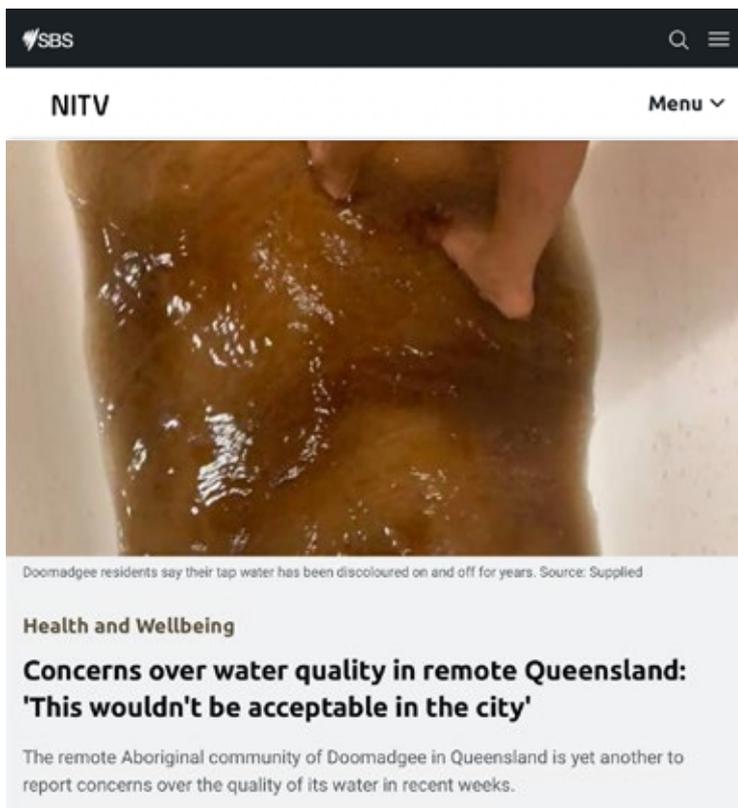
Water quality monitoring in many areas is also inadequate...independent audits of compliance in remote communities are relatively infrequent and often limited in scope. When they are undertaken, their findings are rarely publicly disclosed, and often fail to take into account local water needs, which may vary depending on cultural values and preferences.

The value of water to communities can have strong indirect benefits.

In the Northern Territory, Queensland, South Australia and Western Australia, drinking water in remote communities is predominantly supplied from groundwater sources. Many of these groundwater sources have high concentrations of naturally-occurring minerals and chemical contaminants that affect water quality. As a result, many remote communities have water quality levels that fail to meet the Australian Drinking Water Guidelines. For example, over a two-year period between 2012 and 2014, at least one remote Aboriginal community in Western Australia (of those which were tested) failed to meet the Australian Drinking Water Guidelines each month, with either E.coli or Naegleria bacteria detected in the water source.

Page 24

There is clear evidence that services in many of these remote communities do not meet United Nations' Sustainable Development Goal (SDG) 6: clean water and sanitation for all.100 ... Reporting has indicated that 100% of the population have access to safe water and sanitation, however this is acknowledged by the Australian water industry as inaccurate.



The screenshot shows a news article from SBS NITV. The top navigation bar includes the SBS logo, a search icon, and a menu icon. The article title is "Concerns over water quality in remote Queensland: 'This wouldn't be acceptable in the city'". Below the title is a sub-headline "Health and Wellbeing". The main text begins with "The remote Aboriginal community of Doomadgee in Queensland is yet another to report concerns over the quality of its water in recent weeks." A large image shows a close-up of a hand holding a glass of brown, murky water. A quote from a local resident is visible on the right side of the page.

“The local tap water in the North West Queensland community of Doomadgee has been brown and murky “on and off” for at least two years, according to ... “We’ve got no choice ... five-litre bottles are like \$10. It’s dearer than the price of fuel.”

DELWYN O'KEEFE

LOCAL RESIDENT, SBS NITV

VISIT sbs.com.au/nitv/article/concerns-over-water-quality-in-remote-queensland-this-wouldnt-be-acceptable-in-the-city/d1gy8fu3e



CASE STUDY 4

The struggle for good quality drinking water in Alpururulam

The community of Alpururulam’s 12 year negotiation with the NT Government demonstrates how the long-standing and critical challenges of water access, quality and infrastructure in remote communities in the NT are deeply embedded in historical legacies, and exacerbated by an inequitable regulatory and resourcing regime.

This case study (see part 1 of [Full Report](#)) demonstrates the urgent need for equitable access to safe and palatable drinking water, and points to the broader issues of water injustice for Aboriginal peoples.

Without bold policy and legal reform that takes Aboriginal peoples’ voices into account, we run the risk of focusing only on technical solutions and perpetuating longstanding issues of drinking water insecurity and inadequate services in remote Aboriginal communities.

TOP LEFT Alpururulam, 2020 (Credit: Central Land Council)

TOP RIGHT Scaling on tap, sink & wall in Alpururulam, July 2022

ABOVE CLC presented on the Alpururulam drinking water concerns at the Voices for the Bush Conference, August 2022. From left: Evie Rose, Georgie Stewart, Jackie Mahoney, Pam Corbett, Lesley Reilly and Di Newham.

Issues overview

Access to water is a human right and a national commitment	Access to secure, reliable and safe drinking water is essential to human health and wellbeing, and is a human right under the United Nations Sustainable Development Goals.
Water has cultural significance to First Nations peoples	Protecting and managing water is a custodial and intergenerational responsibility, and underpins connection to Country.
First Nations remote communities face major water access challenges	Many First Nations remote communities experience significant and ongoing challenges in relation to the supply of adequate and safe drinking water.
Water quality is a growing concern for communities	Research and reports indicate that water quality may be having severe health impacts and consequences for First Nations people.
What is this review trying to do?	Map out the complexity of water service delivery to First Nations remote communities, the experience of those affected, and the efforts underway to deliver improved services.
We don't know how wide the gap is	With no comprehensive national monitoring or reporting on water quality, the picture is incomplete within some state and territory jurisdictions, and it is non-existent at a national level.
Microbiological and chemical exceedances pose a risk	Major water quality issues relate to microbiological contamination, nitrate and heavy metals; including uranium; which have severe and detrimental health impacts with prolonged exposure.
Aesthetic parameters of water may lead to health problems	Issues with taste, clarity and smell are not minor issues – they contribute to high rates of diabetes, as people may turn to alternatives such as soft drinks, or lose trust in their tap water.
Water is critical to closing the gap between First Nations and non-Indigenous Australians	Water and wastewater services are also critical to achieving broader government policy objectives, and underpinning progress towards a number of Closing the Gap targets.
Remoteness is a challenge in itself	Including delivering material, chemicals and equipment over long distances, transportation costs, absence of trained personnel, slow emergency response, and lack of preventative maintenance.
Remote communities require tailored and innovative technical solutions	Water treatment solutions for larger cities, are often not economically viable for remote communities. Tailored and innovative solutions require ongoing engagement and investment.
Climate change is a challenge	Longer, more frequent and more extreme drought and drying conditions will put additional pressure on the already stretched reliability of water supplies.
Government needs to get better at listening and hearing	Communities perceive a lack of accountability, transparency and communications between service providers, governments and communities. Structural changes in the relationships are needed.
We need a basic level of service	There is no common definition of a basic 'level of service' that needs to be clarified, agreed upon, consistently applied across all jurisdictions, publicly reported on, and implemented.
Government bureaucracy, and lack of transparency, is itself a major challenge	Policy coherency and effectiveness, infrastructure planning and service coordination, should be improved and supported by legislative reform.

Funding is not well targeted or coordinated

Some state and Commonwealth funding is not well-targeted or well-integrated, and there have been very few noticeable improvements on Closing the Gap indicators.

We need funding arrangements that support financially unviable services

Supplying water services to remote communities is expensive compared to less remote communities, and needs to be viewed in light of human rights obligations.

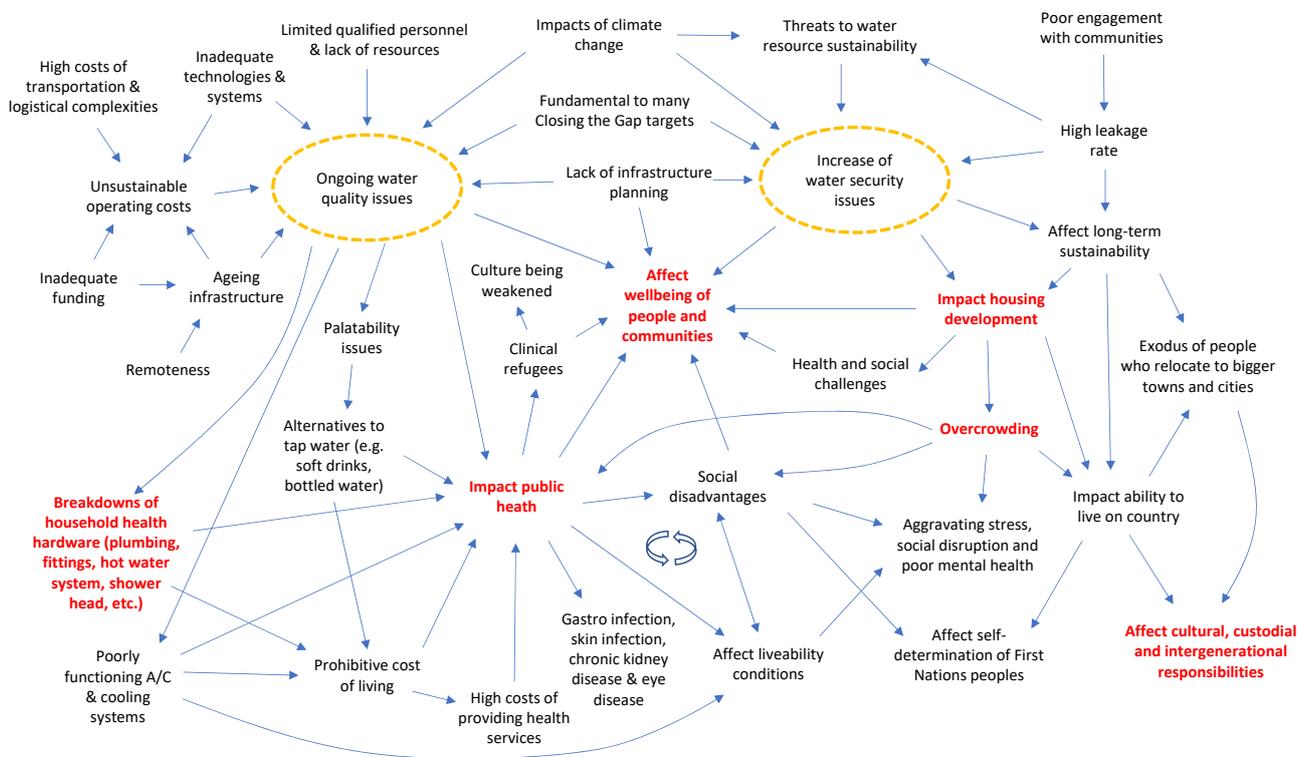
The Productivity Commission says we need reform

The Productivity Commission found that access to safe and reliable water services is an issue, and the renewal of the National Water Initiative provides an opportunity to improve service delivery.

The Ripple Effect

Water quality and water security issues impact other aspects of peoples' lives. The real impacts of this are outlined in Introduction and Overview of the Issues of the [Full Report](#).

Ongoing challenges in relation to the supply of adequate and safe drinking water and the ripple effect on communities





Snapshots of arrangements in key jurisdictions

First Nations communities are subject to a maze of government players, legislation and regulation, much of it disconnected and ineffective. WSAA's review has highlighted some key data and insights into Western Australia, Northern Territory, South Australia, Queensland, and the Federal outlook.

The following maps of the governance and funding, land management arrangements, key programs and policy developments give a sobering glimpse of the complexity of bureaucracy faced by First Nations peoples and any agency wishing to improve the circumstances. These arrangements are legacies of decades of shifting government policies and accountabilities.

The number of players is staggering: the Queensland Productivity Commission (2017) found that for any single remote community, service delivery involves at least 13 Queensland government departments plus the Australian Government. No wonder the sense of frustration from communities as they try to work out who has responsibility.

The [Full Report](#) (Part 2) contains a detailed chapter on each of the key jurisdictions.

The review does not provide a detailed analysis of New South Wales, Victoria, the Australian Capital Territory and Tasmania. An early assessment revealed that First Nations communities in those jurisdictions are more urban than remote, and are generally supplied by major water utilities or local councils from well-established water networks. The focus of the review is remote water services in remote and very remote contexts.

New South Wales

During a high level assessment, a number of stakeholders from key agencies were interviewed including NSW Aboriginal Land Council, NSW Department of Planning and Environment, NSW Health and NSW Water Directorate. From their response, it was concluded that the management of water supplies for discrete First Nations communities across NSW is broadly considered functional, well organised and well-funded.

All stakeholders interviewed acknowledged there are always issues from time to time and room for improvement, but overall, there is evidence of good performance supported by good governance across the state.

Water supplies for 'Discrete Aboriginal Communities' are managed through the NSW Aboriginal Communities Water and Sewerage Program, which started in 2008.

The program is co-funded by the NSW Government and the NSW Aboriginal Land Council and represents an investment of more than \$200 million over a 25-year period to provide funding for the maintenance, operation and repair of water supply and sewerage systems in 62 eligible Aboriginal communities.

This program is considered unique across Australia as it provides ongoing funding specifically for operations and maintenance and is not about capital investment, like in other jurisdictions.

Productivity Commission FINAL REPORT, NATIONAL WATER REFORM, MAY 2021

Issues remain, particularly in some regional and remote communities and especially during droughts, and data are patchy. (p28)

Extreme events (including floods and bushfires) are also likely to occur more frequently, and these water supply shocks will especially challenge the ability of smaller regional and remote service providers to maintain water quality and availability. (p161)

Climate conditions vary significantly across regional and remote Australia, but rainfall can be less frequent or reliable, particularly in inland areas, and there may be fewer alternative supply options (such as seawater desalination or potable groundwater). Some remote communities are entirely reliant on a single groundwater source, without opportunity to access surface water resources or to share bulk infrastructure (such as dams). And water quality issues can arise from many causes, including bushfires, algal blooms and other contaminants P162

Access to safe and reliable water is also an issue, particularly in some remote Aboriginal and Torres Strait Islander communities, with limited access to adequate quality drinking water in some places (Assessment: section 6.1).

This can be due to poor quality water sources, inadequate water distribution and treatment infrastructure, and fragmented arrangements for service delivery. P163



Recommendation 14.1 ... The National Water Grid Authority should broaden its Investment Policy Framework to allow funding for all projects where government involvement may be warranted, including supporting access to essential town water supplies in regional and remote communities. (p13)

NWI renewal advice (Table 2, p15):

Include principles for governance of regional and remote water services where local governments retain ownership of utilities. (12.5)

Monitor and report on water quality and service outcomes in remote Aboriginal and Torres Strait Islander communities. (12.6)

VISIT pc.gov.au/inquiries/completed/water-reform-2020/report



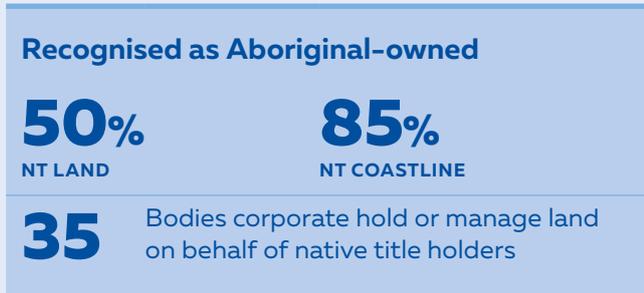
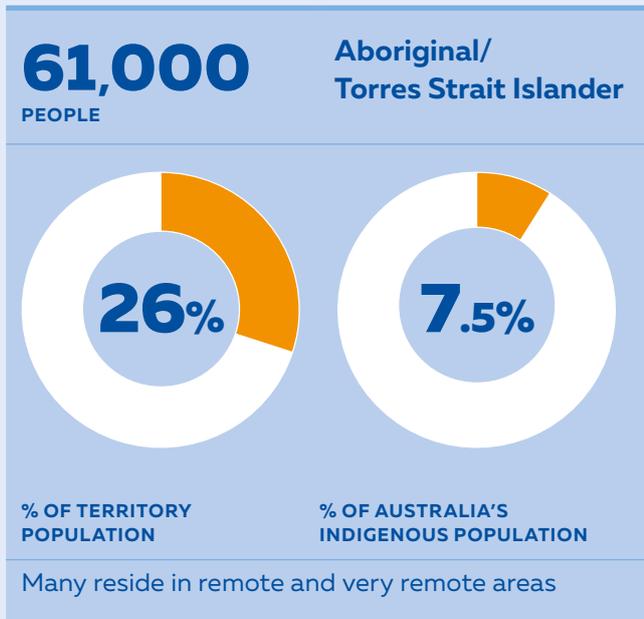
ABOVE Tjoritja (West MacDonnell Ranges) around Alice Springs. Considered of great significance in the local Arrernte Aboriginal culture

Northern Territory

Key insights

<p>No single set of water quality standards in legislation or licensing</p> <ul style="list-style-type: none"> MOU between Power and Water Corporation and Department of Health covers 92 urban and remote settings – other suppliers not covered Power and Water Corporation – Drinking Water Quality Policy endorsed by CEO – and associated management system 		<p>Overlapping departmental functions creates confusion, but also, limited coordination between agencies</p>	<p>Ageing water infrastructure needs large investments</p>
<p>Remote community drinking water supply unregulated, unaccountable</p>	<p>2021: NT Government releases Closing the Gap Implementation Plan – NT</p>	<p>Community Service Obligations for funding not transparent</p>	<p>New, appropriate water treatment technologies needed</p>
		<p>Limited visibility of future funding, and sporadic external funding, impedes long-term planning</p>	<p>BushTel web service and BushReady support remote community engagement</p>

 SEE FULL REPORT, PART 2 FOR FULL DETAILS



NT Government coordinates essential services to

72	Remote communities and 79 outstations	
	People total ESTIMATED	39,000
	People per community	50-2,800
43	Town camps	
	People total ESTIMATED	4,000
\$28 MILLION	IES remote program for water security (not water quality)	
	4 YEARS	
	Indigenous Essential Services, a subsidiary of Power and Water Corporation	



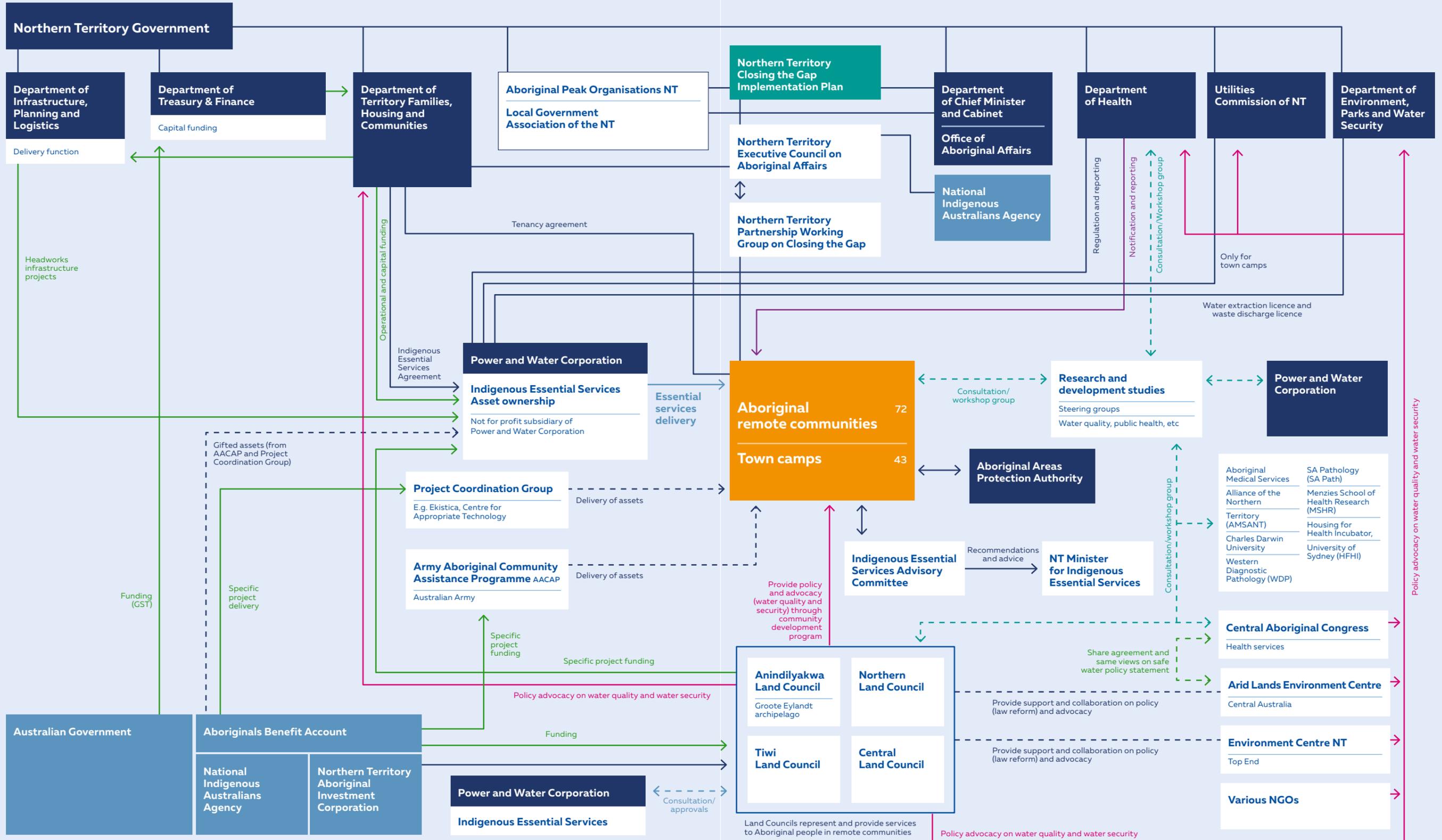
CASE STUDY

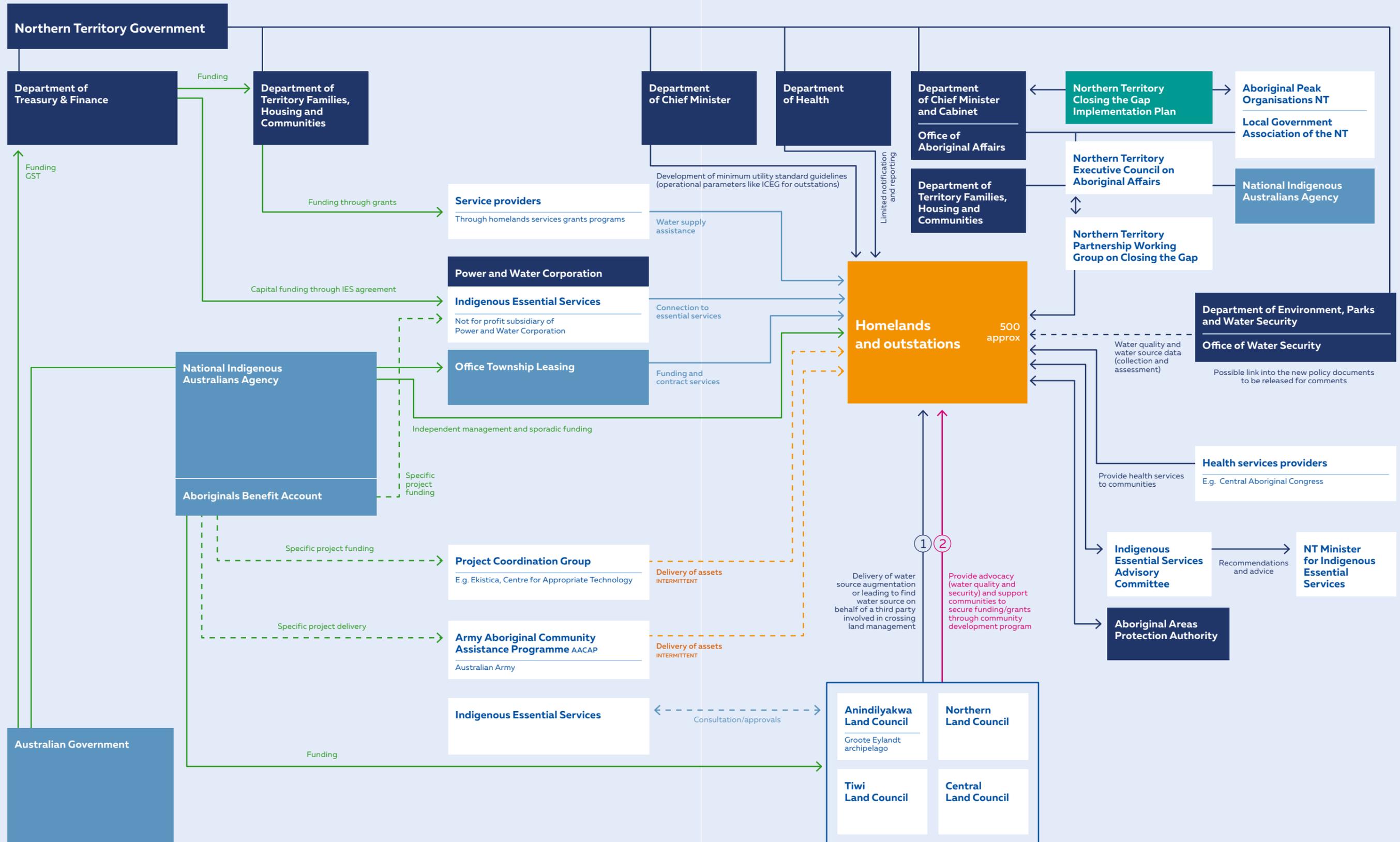
A successful Aboriginal engagement through honest and genuine trusted relationships: the case of Borroloola

Historically, the people of Borroloola have felt ignored by various governments, resulting in deep scepticism. Effective community engagement by Power and Water Corporation has required significant effort. Language and culture can be seen as barriers or opportunities to harnessing support and encouraging trust.

See [Full Report, Part 2](#)









South Australia

Key insights

Minimum drinking water standards exist	<p>In 2021, SA Govt signed South Australian Closing the Gap Implementation Plan</p> <ul style="list-style-type: none"> Target 9b: 'Develop a standard for a basic level of safe and reliable potable water for self-supplied remote communities, including Aboriginal communities' 	Disparity in water pricing and affordability	2020: \$41 million committed in remote community water supply upgrades, +\$7.9 million for asset maintenance and replacement
SA Water receives Community Service Obligation payments		Not all water retailers can access CSO payments	
Inconsistent rules and governance, lack of clarity on roles and asset ownership		No over-arching water security strategy for all Aboriginal communities	High water debts and water restrictions
	High leakage rates		
		Regulatory framework is driving commitment towards safe drinking water	

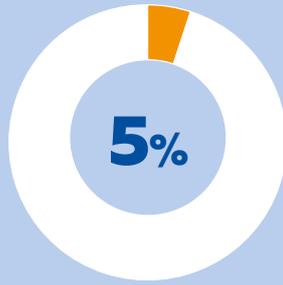
 SEE FULL REPORT, PART 2 FOR FULL DETAILS

43,000
PEOPLE

Aboriginal/
Torres Strait Islander



% OF STATE POPULATION



% OF AUSTRALIA'S
INDIGENOUS POPULATION

Aboriginal/Torres Strait Islander population live in and around

Adelaide	71%
Port Augusta	22%
Port Lincoln	6%
Remote and very remote areas INCLUDING APY LANDS	1%
APY Lands estimated population:	4,000

Native title has been recognised

96% **6,000km²+**
OF STATE EXCLUSIVE POSSESSION LANDS

No native title representative bodies

21 Bodies corporate hold or manage land on behalf of native title holders

Aboriginal owned land

Alinytjara Wilurara (AW) Landscape
INCLUDES ANANGU PITJANTJATJARA YANKUNYTJATJARA (APY) LANDS

Maralinga Tjarutja (MT) Lands

Yalata Aboriginal (YA) Lands

Aboriginal communities

64 Communities of 50–800 (10,000 people)
ESTIMATED

Supplied by

SA Water

Intermediate retailers, eg local governments

Self-supplied

CASE STUDY 9

Building community resilience in partnership with remote communities

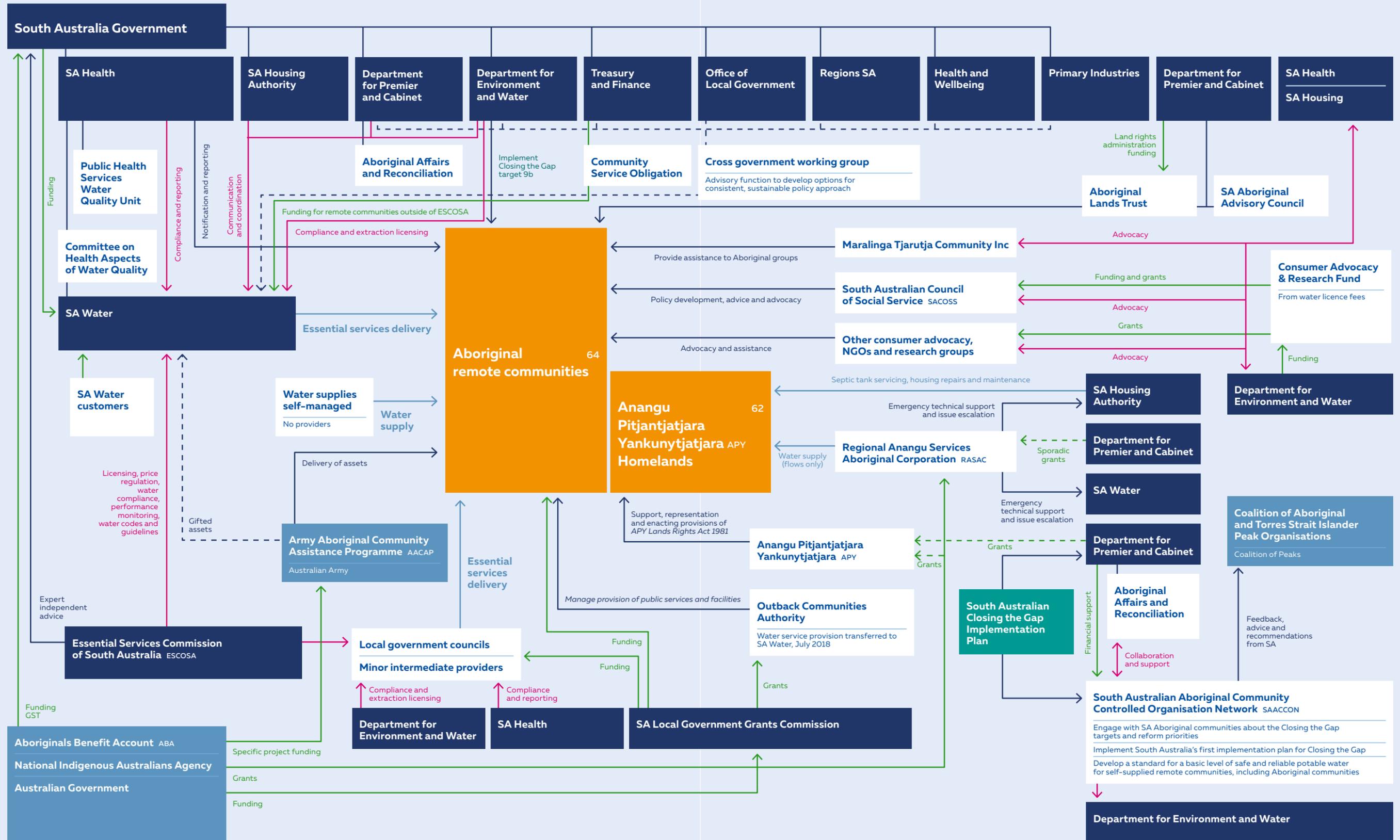
The Anangu Pitjantjatjara Yankunytjatjara (APY) lands is a remote Aboriginal controlled area stretching over 10,000,000 square kilometres. Leaking taps and toilets in these communities often contribute to higher than required water use, and finding a plumber is an ongoing challenge due to the tyranny of distance. This results in many basic plumbing issues being left unfixed. In 2018, working with Anangu students, community members, the APY Trade Training Centre and Regional Anangu Services Aboriginal Corporation, SA Water designed and delivered a basic plumbing course to empower local people to repair leaks in their homes and community. The program has since been expanded to other remote communities.



BUILDING COMMUNITY RESILIENCE IN PARTNERSHIP WITH REMOTE COMMUNITIES SOUTH AUSTRALIA

SACOSS 2021 Report *Falling through the gaps: A practical approach to improving drinking water services for regional and remote communities in South Australia* proposed a minimum level of service.







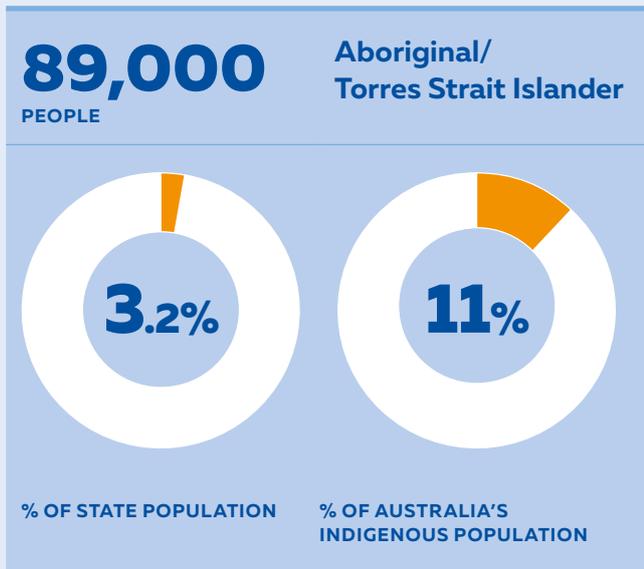
ABOVE Purnululu (Bungle Bungle) in Western Australia is an area of extreme spiritual importance for the Djaru and Gijja people. Purnululu comes from the Aboriginal Gijja people, meaning 'fretting sands'

Western Australia

Key insights

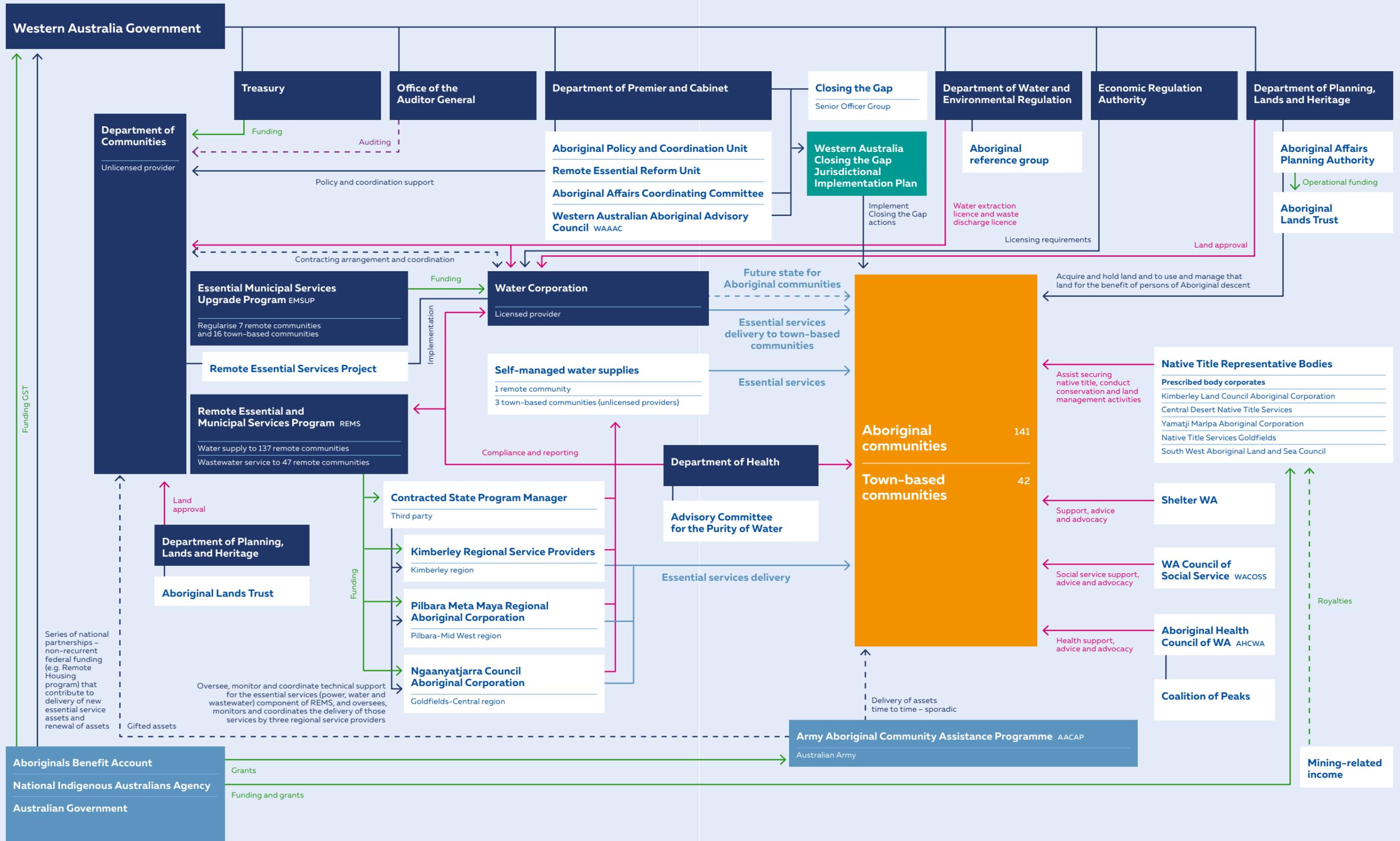
Regulation of drinking water divided into licensed and unlicensed providers	<i>Public Health Act 2016</i> has enabled a public consultation on the regulatory framework for drinking water quality	WA Auditor-General's report (2021): <ul style="list-style-type: none"> • No water quality testing in 51 of the smallest communities • Microbial contamination and unsafe uranium, fluoride levels detected • To plans to test water quality outputs to ensure existing treatment systems' safety 	
No legislative requirement or minimum standards for water quality, or enforcement options, or publicly available reporting	Drinking water and wastewater services to Aboriginal communities and town-based communities unregulated (as reside on Crown Land)	44 communities' water supplies haven't been tested for 10 years	2020: WA Govt commits \$78 million over 4 years for water/wastewater upgrades across 7 communities, then transfer to Water Corporation
Compliance with safe drinking covered through licensing and MoUs with Department of Health	2021: WA Govt released Closing the Gap Jurisdictional Implementation Plan	141 communities of 50+ (138 remote, 3 town-based) receive services from govt-funded REMS program	Promising online drinking water library for remote service providers
		Bulk metering reduces accountability, leads to debt, and increases leakage	

 [SEE FULL REPORT, PART 2 FOR FULL DETAILS](#)



“ I am concerned ... it would help us become a healthier person. We'd rather have clean water ... we're clean people that come from the bush.

BEN WARD, COCKATOO SPRINGS, WA



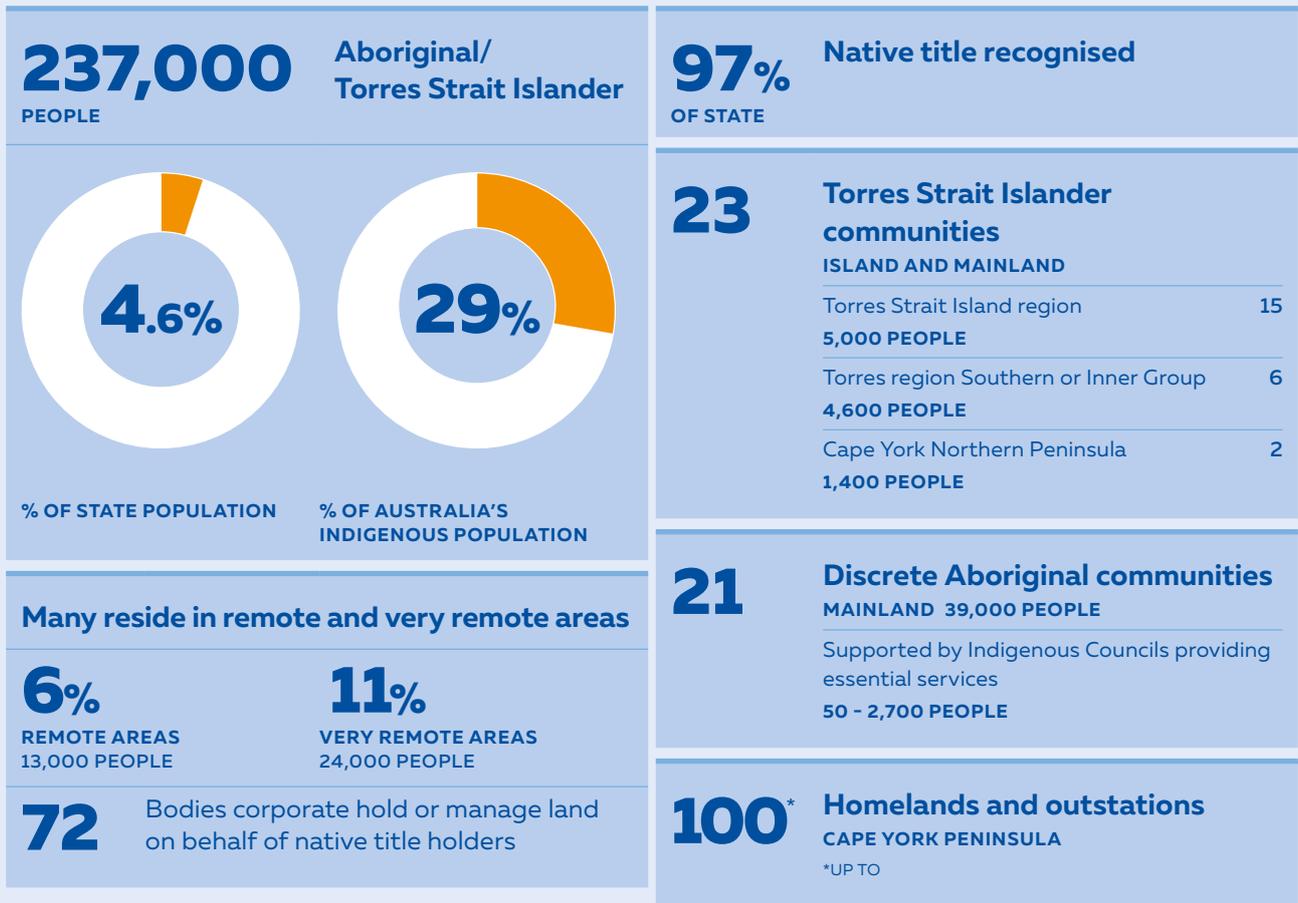


Queensland

Key insights

<p>Fragmented management approach for First Nations communities: the Queensland Productivity Commission (2017) found that for any single remote community, there are at least 13 Queensland government departments plus the Australian Government involved</p>		<p>Water quality regulated by Department of Regional Development, Manufacturing and Water, Queensland Health; 174 registered service providers: very small/remote to large utilities</p>	<p>One Torres Strait Island community had Queensland's longest boil water alert, for over a year</p>
<p>Minimum drinking water quality standards exist</p>	<p>Complex and opaque funding systems, and water pricing for remote supply</p>		<p>Shortage of skilled operators, training, appropriate technology</p>
<p>Low long-term funding certainty, with a shift to grant-based models</p>	<p>2021: Queensland govt released Closing the Gap Implementation Plan</p>	<p>Some remote Aboriginal communities' water receives no treatment or disinfection only</p>	<p>Outstanding 'Safe and Health Drinking Water In Indigenous Local Government Areas' training program</p>

 SEE FULL REPORT, PART 2 FOR FULL DETAILS

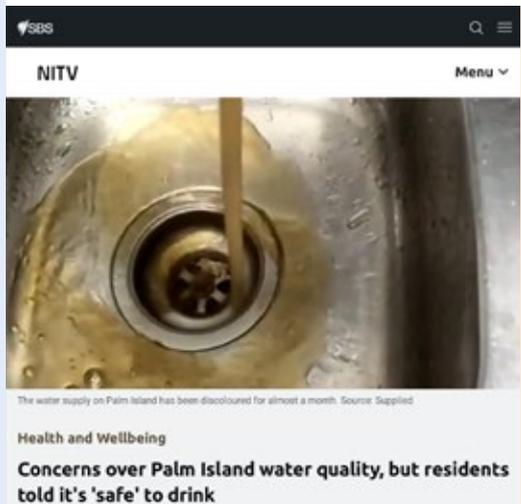


CASE STUDY 15

Safe and Healthy Drinking Water in Indigenous Local Government Areas Program

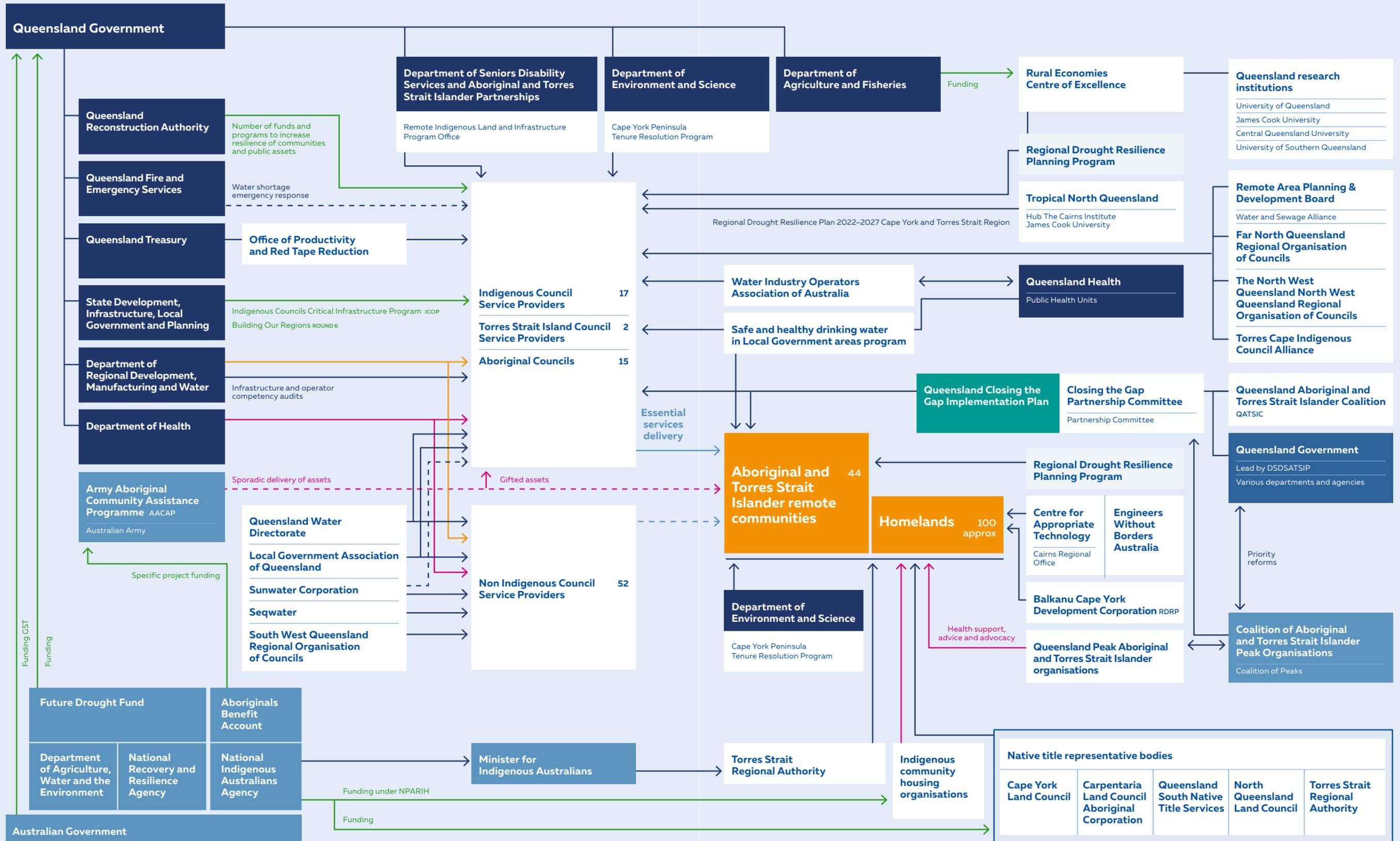
Queensland Health has noted that, "Indigenous Local Governments have struggled with controlling hazards with their drinking water supply in the past because they have not had adequate infrastructure or there have been gaps in operator skills and knowledge" - this media story is an example.

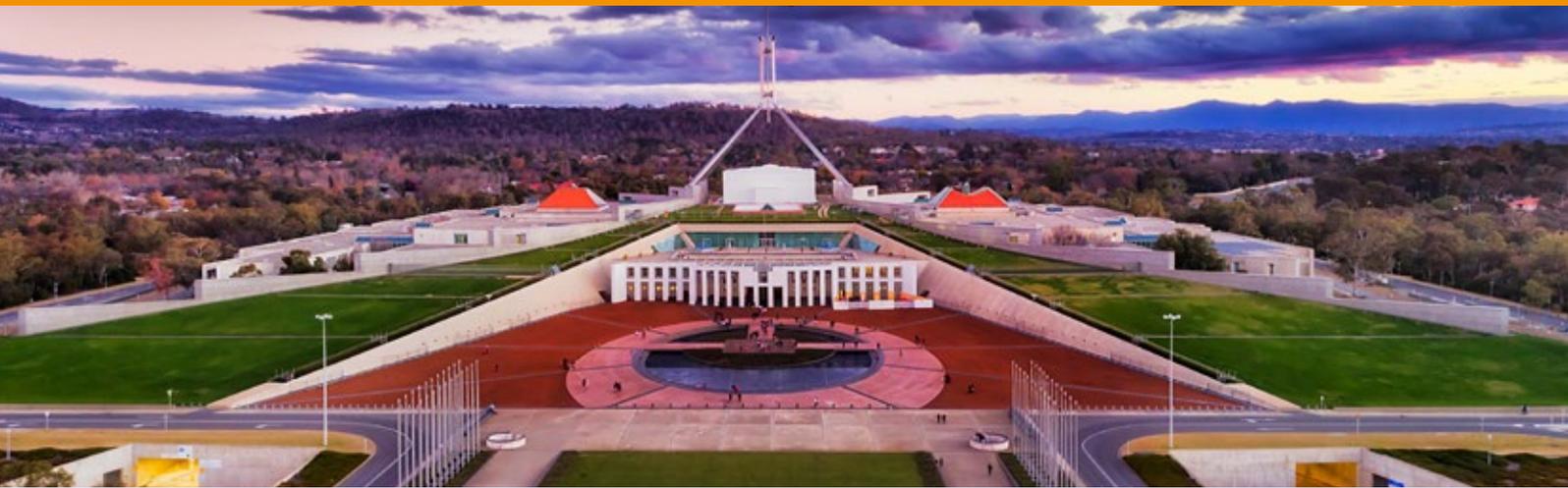
The case study outlines how Queensland Health has partnered with Queensland Aboriginal and Torres Strait Island local governments, to build the capacity of First Nations water operators. The program sets a benchmark for best practice in the delivery of public health improvements in Aboriginal and Torres Strait Islander communities, and has demonstrated that improvements in water quality, operator competence and regulatory compliance can be achieved within a relatively short period of time - with undeniable impacts on communities' health and wellbeing. [Part 2 of Full Report](#)



“In 2001, the 2000 residents of Palm Island - a small Aboriginal community off the coast of Townsville - received murky and discoloured for about a month. A \$1.4 million water treatment plant had been installed the previous year, but local resident Victor Daisy claims local staff didn't receive adequate training to manage the new facility.

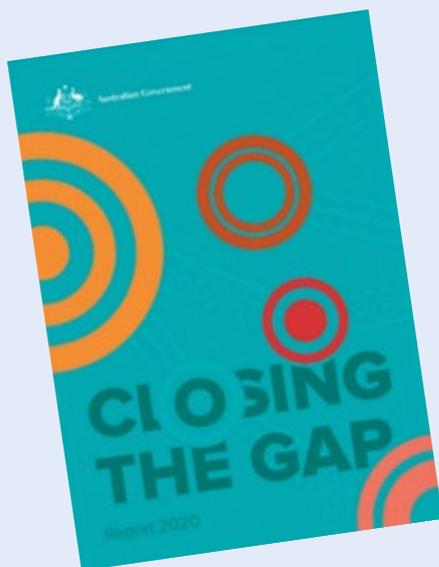
SBS NITV sbs.com.au/nitv/article/concerns-over-palm-island-water-quality-but-residents-told-its-safe-to-drink/9gj6l19qh





ABOVE Australian Parliament, Ngunnawal country – Canberra has always been a significant “meeting place” for the Ngunnawal People and their neighbouring peoples: the Gundungurra to the north, the Ngarigo to the south, the Yuin on the coast, and the Wiradjuri inland. Important ceremonies were held, art was painted in rock shelters, marriages were arranged, goods were traded, important news was shared and old friends met again. People from the region came together to make use of resources which were seasonally abundant (most famously the Bogong moth and the Yam Daisy).

Commonwealth government and national stakeholders



Closing the Gap

Agreement between Coalition of ATSI Peak Organisations (Coalition of Peaks) and all Australian governments

Four priority reform areas

- 1 Formal partnerships and shared decision-making
- 2 Building the community-controlled sector
- 3 Transforming government organisations
- 4 Shared access to data + information at a regional level

17 socio-economic targets

Covering themes including:

- Education
- Employment
- Health and wellbeing
- Justice
- Safety
- Housing
- Land and waters
- ATSI languages

Two additional targets are being developed to further strengthen the National Agreement:

- 1 Community infrastructure: measure progress towards parity in infrastructure, essential services and environmental health conditions. This will include data collection to measure essential service provision to Aboriginal and Torres Strait Islander communities, including water and sewerage, waste management, road reserves and electricity supply.
- 2 Inland waters: measure progress towards securing Aboriginal and Torres Strait Islander interests in water bodies inland from the coastal zone under state and territory water rights regimes. This will also include data capture to ensure a nationally consistent measure for inland waters encompassing, for example, water licenses, water rights and water allocation plans.

At the Voices for the Bush conference in Alice Springs in August, inspiring stories and outlooks were heard from many speakers including Senator Malarndirri McCarthy and Pat Turner AM



**Senator
Malarndirri McCarthy**

Senator for NT
Assistant Minister
for Indigenous Australians
Assistant Minister
for Indigenous Health

- “ I look forward to delivering practical and life changing policies for First Nations peoples. Our Songlines map water sources across Country. Sources of water – rivers, creeks, waterholes and soaks – are a key feature of our landscapes and culture. Yet water security in regional and remote Australia is being undermined.
- “ Depletion of groundwater due ... to increasing frequency of drought as a result of climate change. Access to water services is a basic right for all Australians. Australians living in regional, rural and remote areas should not have poorer living conditions than those in urban settings.
- “ Historically, First Nations peoples have faced multiple barriers to influencing and participating in water policy, planning and management ... resulting in an under-representation of First Nations voices and knowledge in water policy dialogue across all tiers of government.
- “ Without water security ... we cannot continue to Close the Gap.



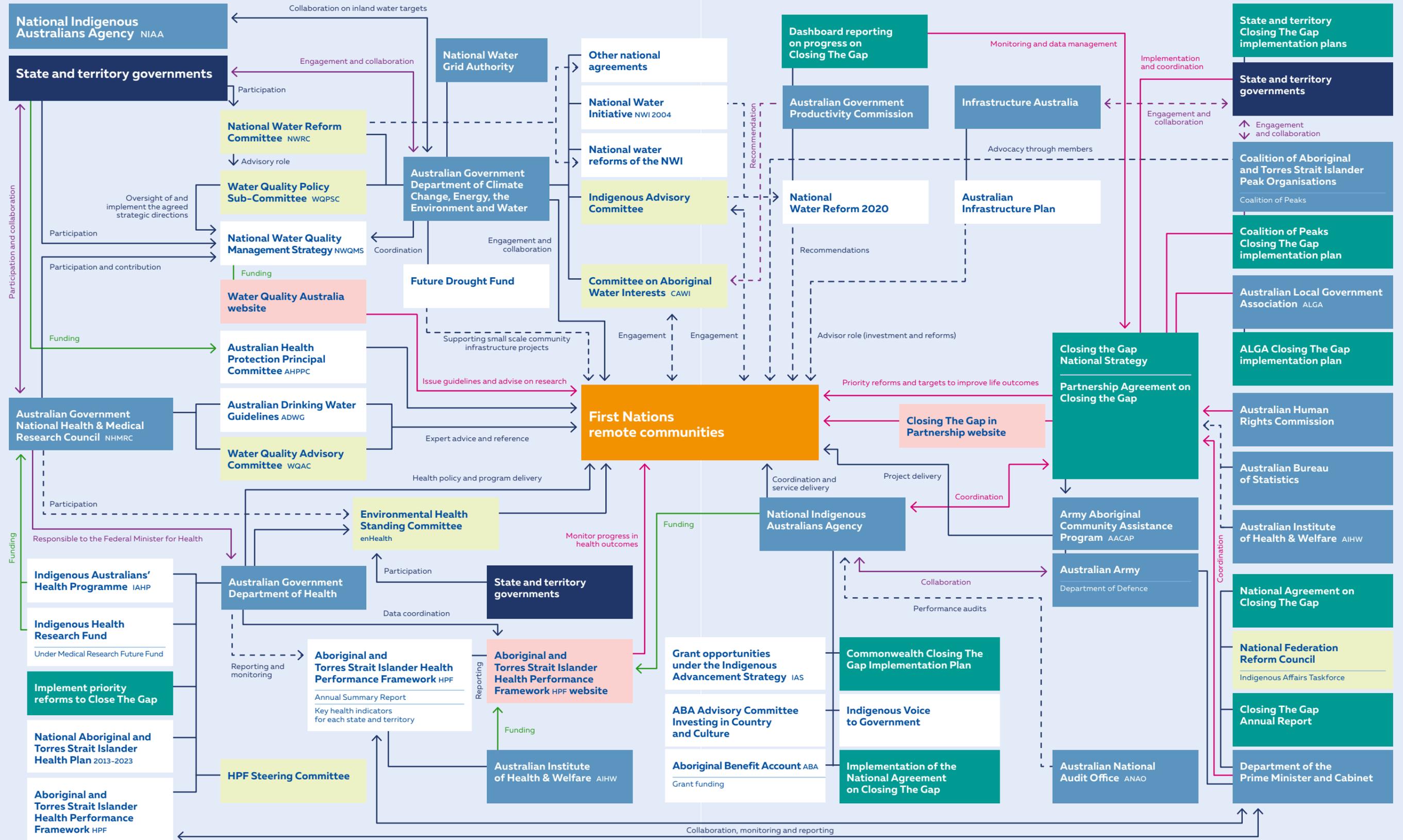
**Pat Turner
AM**

CEO of National Aboriginal
Community Controlled
Health Organisation

- “ Aboriginal and Torres Strait Islander peoples need to be at the centre of Closing the Gap policy.
- “ Poor living conditions enforced on my people includ[e] poor water quality and access, plumbing, overcrowding and poverty.
- “ When sixteen people are living in a three-bedroom home with only one toilet and one shower, it is inevitable that the health hardware will be under immense pressure. A leaky basin tap which hasn't been promptly repaired by the government landlord drains away litres of this precious resource.
- “ The strength of your collaboration with Aboriginal and Torres Strait Islander people is THE vital ingredient. Your respect for our right to self-determination, and the need to respectfully shift control is key.
- “ Water services and initiatives will have limited impact UNLESS they are controlled in their co-design and delivery.

FEDERAL

Overview of key agencies and stakeholders involved in funding and coordination of national initiatives and programs in relation to remote water supplies SEE FULL REPORT FOR MAP EXPLANATION





Getting clean drinking water into remote Indigenous communities means overcoming city thinking

Published: November 21, 2018 5:47am AEDT

Wallace Rockhole, NT, Nina Hall, Author provided

- Email
- Twitter 28
- Facebook 607
- LinkedIn

Many people in Australia do not have access to safe drinking water. It's particularly difficult in Indigenous communities because they are small, remote and challenged by additional issues to secure essential power and water services. To make sure

Authors

 **Nina Lansbury**
Lecturer, Environmental Health Unit, School of Public Health, The University of Queensland

“Only now are government agencies and water utilities starting to realise that there are no “one size fits all” or simple technological fixes for treating water in remote areas. Instead, they are beginning to seek water treatment technology specifically designed for these regions

AUTHOR NINA LANSBURY, THE CONVERSATION, 2018

First Nations remote communities need government agencies to respect them as real partners in the development of water services

Research commissioned by WSAA to support this work in its early stages was led by esteemed academics Kumi Abeysuriya, Simone Soeters, Pierre Mukheibir, Melissa Jackson, Cara Beal, and Nina Lansbury.

The work helped us understand that communities need agencies to support them in planning for the long-term and they need them to make sure that any work on improving services leaves the community with a strengthened capacity. Not just a strengthened technical capacity, but their work should also contribute to strengthened community wellbeing.

Remote communities also need government agencies working with them to build a stronger understanding of the community, their culture and build their capacity to develop and sustain partnerships.

CITATION ABEYSURIYA, K., SOETERS, S., JACKSON, M., LANSBURY, N., MUKHEIBIR, P. & BEAL C. 2019. Safe water and sanitation for all in remote Indigenous Communities: Exploring the roles and opportunities for the water industry. Prepared for the Water Services Association of Australia (unpublished).



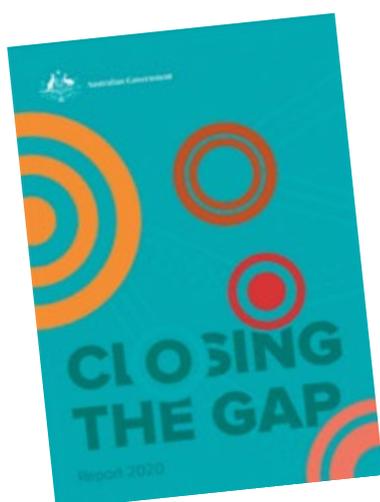
KEY FINDINGS AND RECOMMENDATIONS



How can we start to close the water quality gap?

WSAA welcomes the 2023 Federal Budget that stated 'the Australian Government announced changes to the Investment Framework in October 2022 to allow for a broader range of projects to be considered. This includes essential town water supplies in regional and remote communities, as well as increased project involvement of First Nations Peoples.

VISIT infrastructure.gov.au/sites/default/files/documents/regional-ministerial-budget-statement-2022-23-investing-in-our-regions-with-purpose-and-integrity.pdf



However, we would like to see greater urgency and clear accountability. We urge the water voices of First Nations remote communities be heard and engaged. Finally, we urge greater investment and a new way of thinking as part of those investments. In summary we found:

- Multiple and regular exceedances of the Australian Drinking Water Guidelines for analytes including uranium, arsenic, fluoride, manganese and nitrate
- Over 500 remote communities without any water quality monitoring
- Underinvestment in the order of \$2.2 billion in drinking water quality – even more when water security is considered
- High variation in formalising the Australian Drinking Water Guidelines across the states and the Northern Territory

Following extensive stakeholder interviews, data, information and analysis gathered across various jurisdictions and communities, review of other research and production of detailed issues maps of stakeholder interactions, WSAA proposes the following nationally significant recommendations.

Establish a First Nations water advisory group to focus on safe drinking water supplies for First Nations remote communities

Establish a water voice for First Nations people in remote communities by funding a national roundtable on remote water quality and water security. In future this could expand to benefits from other essential services such as communications, along with good sanitation and water recycling.

The group should include community representatives, the Coalition of Peaks, all levels of government, regulators, service providers, water utilities and research institutions.

This group would set, and be an ongoing reference for, high-level objectives for water services in:

- the infrastructure targets in Closing the Gap priority reforms and implementation plans; and
- the reporting mechanisms for the National Water Initiative, including the National Performance Report and the ongoing reporting work undertaken by the Productivity Commission.

Implicit in this recommendation is that state and territory governments as well as local governments and water service providers engage with First Nations communities on a local level at a local scale.

The evidence is clear: First Nations communities seek regular and genuine and equal involvement in water quality and water security matters, in order to manage their resource wisely (e.g. demand management) and to unlock community benefits through various water use options (e.g. use of recycled water for green space, orchards and gardens).

This recommendation is first, as it creates a foundation for Aboriginal and Torres Strait Islander peoples to be centrally engaged in progressing all other actions.

“Irrigating the oval is under investigation, priority is drinking water at the oval

PAPAYUNA

BELOW Water storage in Warruwi in Arnhem Land in the Northern Territory (Credit: Power and Water Corporation)



Establish the Gap

Establish a national water quality monitoring program, funded for to least \$30 million of operating expenditure, to be led by the Commonwealth Government before being transitioned to the states and territories over time.

The program would document the current source, process and quality of drinking water supplies in each First Nations remote community, track compliance with appropriate service standards including the Australian Drinking Water Guidelines, and be used to report progress with Closing the Gap targets. The findings will fine tune future capital investment estimated to be at least \$2.2 billion by providing a more comprehensive picture of the gaps that exist today.

The Closing the Gap target is as follows, and will be incorporated into the National Agreement on Closing the Gap:

- Target 9b: By 2031, all Aboriginal and Torres Strait Islander households:
 - Within discrete Aboriginal and Torres Strait Islander communities receive essential services that meet or exceed the relevant jurisdictional standard.
 - In or near to a town receive essential services that meet or exceed the same standard as applies generally within the town (including if the household might be classified for other purposes as a part of a discrete settlement such as a “town camp” or “town-based community”).
- This will primarily involve operating expenditure. If certain government entities (such as the National Water Grid Authority) are currently scoped to only contribute to capital costs, WSAA recommends looking to overcome this, and/or investigating other pathways for operating expenditure to be allocated to this activity. WSAA’s view is that water services for First Nations remote communities require a different approach to the same water services delivered to capital cities and regional centres.
- The Government should also invest further resources in the redevelopment of the Community Water Planner through the National Health and Medical Research Council, to give local communities a direct role in the provision and monitoring of safe drinking water services.



The Commonwealth Government establish a multi-year innovation investment fund to develop and implement emerging programs and technologies that create specific water treatment solutions for remote communities.

The fund should:

- Address the specific needs of remote communities, such as fit-for-context operations and maintenance requirements, increased use of renewable energy, and integration with other essential services such as telecommunications for better resilience;
- Enhance existing programs including those of the National Water Grid Authority, the Centre for Appropriate Technology, Desert Knowledge Australia, utility and government research programs with research institutions, Water Research Australia and targeted Cooperative Research Centre Programs (CRC-P);
- Help support partnerships between water utilities, the private sector and universities to invest and collaborate in the development of new technologies (as highlighted in Case Study 11: A novel partnership in developing a next-generation of water treatment technology for the provision of safe drinking water to regional remote communities (see [Part 2 of the Full Report](#));
- Build in resilience to extreme events (floods, bushfire, droughts) and also the long-term impacts of climate change; and
- Build a genuine partnership of traditional knowledge, contemporary science and local expertise, to develop sustainable solutions that provide water services, in ways that support the self-determination journeys of First Nations communities, and ensure First Nations intellectual property is appropriately valued and remunerated.

Given the urgency to ensure water security and water quality in the face of climate change, WSAA recommends that the fund be at least \$20m per year for 3 years as a starting position.

BELOW Water supply disinfection system for the community of Laramba in the Northern Territory. Credit: Eric Vanweydeveld.



Innovate for more efficient essential services, including service integration opportunities

Integrated servicing

Investigate opportunities for integrated servicing, through a more circular approach, to demonstrate the effectiveness and cost efficiency of providing essential services jointly – water, wastewater, energy, telecommunications, and even solid waste management.

This can also include geographical aggregation of services, for example management programs and structures that could operate across whole regions.

- The private sector already delivers water and other essential services in some situations, and may be well placed to deliver pilots that could verify the cultural, economic and technical efficiency and benefits of bundled essential service management.
- This could include technical design, program management, operational and maintenance aspects.
- It should include ongoing asset and program performance monitoring.

All work in this space should recognise and reinforce that some communities may own or occupy traditional lands that will provide opportunities for renewable energy development and/or carbon sequestration – solar farms, wind farms, wetland restoration, mangrove regeneration. These communities should be comprehensively supported, protected and enabled to appropriately participate in emerging economies of the future, such as carbon-related markets, and retain the economic benefits that ensue.

Drinking water and sanitation

Two sides of the ‘water coin’

Water services involve provision of drinking water, and disposal of used water (wastewater).

While providing drinking water is the most important priority and is covered in detail in this report, this innovation work should also look at solutions that further enhance public health through good sanitation (safe disposal of wastewater), and the opportunities arising from reuse of treated wastewater to improve water security and enhance liveability. Urban communities expect to have water available to enable green leafy suburbs; what does liveability look like in practical terms in remote communities? How can we enable more irrigated, grassed sporting ovals, to support physical and mental health?

Good modern water servicing is recognised to be less linear, more circular, harnessing the value of water at all stages of the water cycle. As noted in the statements of community members, there are distinct benefits to be gained by re-using water for applications such as greening, cooling, and public space irrigation. If substantial investment is to occur to lift water servicing, it would be a missed opportunity to not consider investing in approaches that can incorporate recycling and deliver broader benefits and/or economic opportunities as well.

- WSAA could assist in exploring further work in the sanitation space, including looking at research and reports undertaken previously and considering what gaps still warrant further research.

“ Desire for water to be used for community recreation including water play areas, irrigated ovals and swimming pools

J. COCKING, 2022

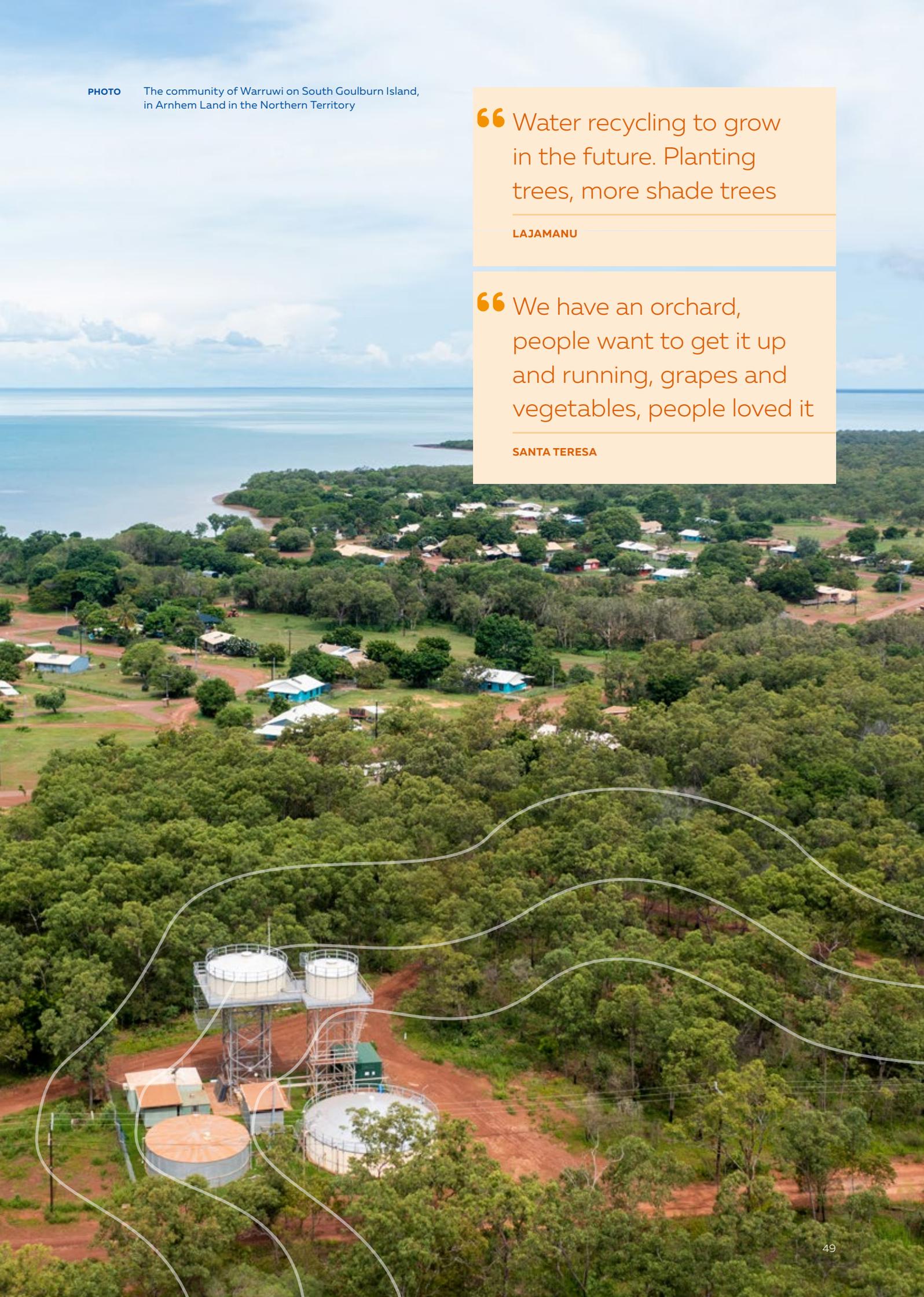
PHOTO The community of Warruwi on South Goulburn Island, in Arnhem Land in the Northern Territory

“ Water recycling to grow in the future. Planting trees, more shade trees

LAJAMANU

“ We have an orchard, people want to get it up and running, grapes and vegetables, people loved it

SANTA TERESA



Deliver community-based solutions that provide better integration of essential services

This Recommendation captures the need for a clear implementation phase. As appropriate technologies emerge, there will need to be a coordinated roll-out of fit-for-purpose solutions for different communities. Developing culturally appropriate skills and training initiatives to assist communities to self manage services should receive priority.

All levels of government, including Commonwealth, state and territory and local government, must move quickly to invest more funding for water and sanitation systems for First Nations remote communities.

WSAA estimates that the gap to uplift drinking water to meet the Australian Drinking Water Guidelines is in the order of \$2.2 billion (not including operational and maintenance costs) across WA, NT, SA and Queensland.

We recommend that detailed plans for implementing appropriate solutions need to be co-developed at a local scale, with and by remote communities, that consider the end-to-end process, opportunities for circularity and detail how service delivery would be better integrated. Ongoing monitoring needs to be included. The solutions include not only water treatment systems but technology across all aspects of water, including sanitation, alongside other essential services.

The findings of Recommendation 2 will help shape the order of rollout, targeting communities most in need, first.

- Deploy the Community Water Planner (trialled with communities, and recommended for reinvigoration in Recommendation 2) to assist in co-development of water management.
- A fundamental design principle is to move towards enabling First Nations communities and local businesses to develop, manage and maintain their own water systems in line with their preferences and journeys towards self-determination.
- Invest in further building the skills, capacity and capability of local First Nations communities to operate local infrastructure, ensuring culturally sensitive approaches and innovations.

“ A lot of people used to waste water. Now really looking after it. People just started caring about water. All know that water is precious to us

SANTA TERESA LA MEETING

A renewed National Water Initiative to galvanise action

The Commonwealth Government should use its leadership position and processes for a renewed National Water Initiative to:

- Give effect to the 'voice for water services' as envisaged in Recommendation 1;
- Gain all state and territory governments' commitment to improving the quality and security of water supply to First Nations remote communities, and enshrine these outcomes within the renewed National Water Initiative;
- Make concrete steps to include targets for sanitation services and the options for water efficiency programs and water recycling for liveability purposes;
- Gain the state and territory governments' agreement to review, formalise or develop safe drinking water legislation and minimum drinking water standards;
- Establish a minimum level of service to apply across all jurisdictions, for provision of drinking water services to remote and regional communities. This would include targets and associated monitoring programs on:
 - Health and aesthetic aspects of drinking water quality
 - Engineering and plumbing standards
 - Service reliability (tolerated levels of outages);
- Empower and provide further dedicated funding for the Health Regulators Forum through enHealth across the states and territories, to transparently review and recommend improvements to water quality including through housing and plumbing.

The Productivity Commission advised that a renewed National Water Initiative should include as an objective: **cost-reflective pricing of water services (including water supply, wastewater disposal and stormwater management) wherever possible, with transparent funding support through community service obligation payments targeted at bridging the cost of providing safe and reliable drinking water and service affordability in regional and remote communities.** (PAGE 53)

visit [pc.gov.au/inquiries/completed/water-reform-2020/report/water-reform-2020.pdf](https://www.pc.gov.au/inquiries/completed/water-reform-2020/report/water-reform-2020.pdf)

BELOW Mitchell Plateau, Western Australia, a woman from the Kandiwal community sits beside an outback river

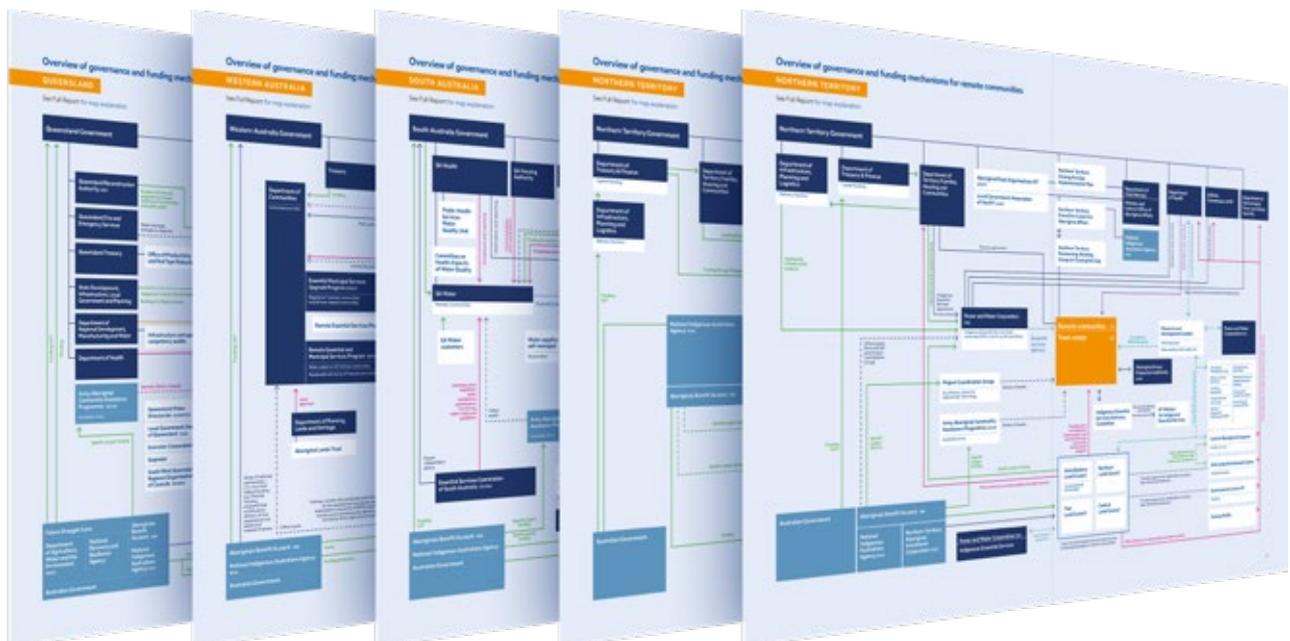


Simplify governance arrangements

In light of the above outcomes, streamline the end-to-end processes for delivering water services for First Nations remote communities; nominating clear accountability for continuous engagement with communities, planning, delivery, handover of commissioned assets, maintenance, skills and training, reporting, addressing issues as they arise and, most importantly, water quality.

We also recommend:

- Develop new and sustainable transparent funding models, and clear statements of obligations, for states where a single large utility (WA, NT, SA) has the expertise and capability to manage water systems.
 - Ensure that those utilities efficiently transition and take over responsibility to manage water systems in First Nations remote communities where desired by the community.
- For states where there are multiple councils and water utilities, we recommend consideration be given to pool the resources of First Nations local government for shared growth in technology, skills and management of water systems working with state health and water regulators. This could align with aggregating services by region, or across essential service types, as identified in Recommendation 4.
- At a Commonwealth level, through the National Water Initiative, establish clear accountabilities, roles and responsibilities and funding streams between the National Indigenous Australians Agency (NIAA), Department of Climate Change, Energy, the Environment and Water (DCCEEW), Infrastructure Australia (IA), and the Productivity Commission (PC).
- Setup reporting arrangements that track progress towards Closing the Gap (Target 9b) and SDG6 as a priority.



GRAPHIC Detailed issues maps of each jurisdiction are embedded in each section of the report

Closing the water for people and communities gap

National Review of water services delivery in remote Australia

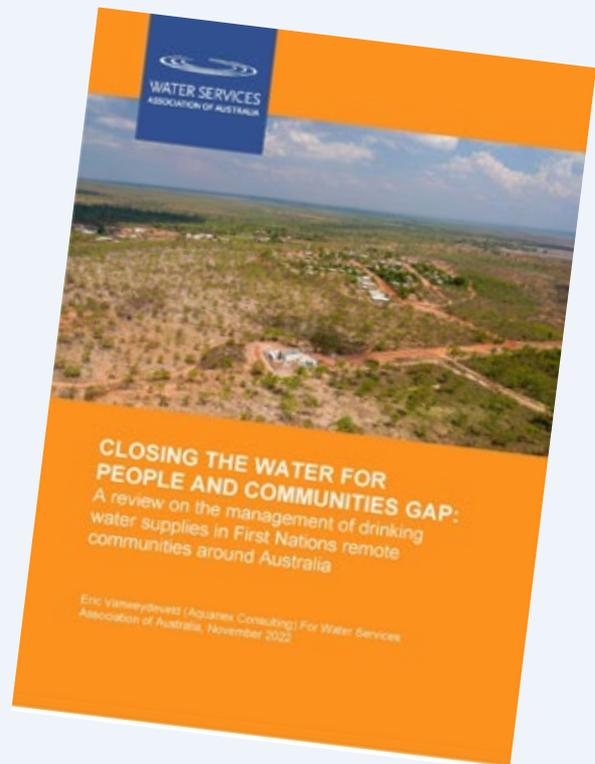
A review on the management of drinking water supplies in First Nations remote communities around Australia

By Eric Vanweydeveld

To access Eric's review, with full Background and Context, Case Studies, state, territory and Commonwealth sections, Explanatory notes and References, please visit the Full Report.



wsaa.asn.au/publication/closing-water-people-and-communities-gap-review-management-drinking-water-supplies



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