

The contribution of water security to food security: A crucial inclusion-especially in remote homelands

A submission to the

National Strategy for Food Security in Remote First Nations Communities | NIAA

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Introduction: Hearing from lived experience on water insecurity

This multimedia submission to the National Strategy for Food Security in Remote First Nations Communities focuses on the inclusion of water security as a key aspect of food security, especially in remote settlements, including communities, community living areas and homelands. It is co-authored by two Aboriginal scholars, Dr Aunty Mara West (Yamatji) and Professor Sandra Creamer (Waanyi Kalkadoon) and draws, where possible, from lived experience. Three non-Indigenous academics with research specialties in drinking water, sanitation and associated wellbeing were also co-authors.

The intention to focus on remote water security reflects that Country (traditional estate) is intrinsically linked to Aboriginal Peoples' health, because 'if Country is sick, people are sick' (Rigby et al., 2011). Not having access to secure water supplies can undermine health and wellbeing in a range of health, economic, cultural and other ways, so there is a critical importance of ensuring secure water for Aboriginal Peoples living on Country in regional and remote homelands¹ in Australia (AIHW, 2018).

The challenge of water and its contribution to health living is best described by those with lived experience:

"We don't have a proper water supply out here...

We access drinking water from a rainwater tank. In a drought, we have to buy 10 litre water cartons from town.

We use bore water for washing clothes and for showers. It's salty water straight from the ground.

The Government doesn't listen to us..."

- resident, Williams Well homeland, NT, 2020 in NATSIWA & UQ (2020).



Image: Resident from Williams Well, NT, speaking about water access for remote homelands.

View the full video here: <https://youtu.be/-xnCMiO9oUM> (NATSIWA & UQ, 2020)

¹ Feedback from multiple communities highlights a concern with the phrase 'remote communities as from their point of view, they are not remote. Further, the word remote signals "it's out of sight, out of mind or it's too expensive". To reflect the request of communities we have used the preferred term of 'homelands' throughout.

Such lived experience of food and water insecurity were described in advice on Indigenous Knowledges regarding climate change, commissioned by the Australian Government (2023):

‘Many respondents expressed concern about the impacts of climate change on food and water security for people who already suffer high levels of poverty and economic disadvantage, lack of critical services, and poor health. A Melukerdee respondent highlighted vulnerability to food insecurity risk:

“As Saltwater people, we live off food and resources that come from the ocean. Climate change is making it harder and harder to continue with these cultural practices.... The destruction of special [food producing] places breaks my heart, but also causes me to worry greatly about how our people and our Country can survive.”

Senior Elders and Kulkalgal Elders and Traditional Knowledge keepers from Torres Strait Islands spoke strongly about their concerns about food and water security. A respondent from Kaurareg Country currently living on Ngurupai (Horn Island), identified that unpredictable weather patterns impact sea travel, and disrupt hunting and gathering practices:

“...which leads to food insecurity and more reliance on commercial foods that have health and economic costs” while a senior Mualgal woman from Mua Island spoke about the threat of rising temperatures and insecure water supply: *“heat without water [means we]...cannot plant crops and have water for general living.”*

A senior Saibaigal respondent identified food insecurity from changed rainfall patterns:

“Prolonged wet weather is impacting traditional food crops, causing root rot and rodent damage.”

A Badulaig respondent from the Torres Strait islanders of Badu identified the challenges of insecure rainwater supply, with:

“[There is] not enough heavy rain to refill ground water, waterholes and flush out creeks. Irregular rain also affects fire management and small burns which happen in April. The extended wet makes land management practices difficult.”

(in (Lansbury et al., 2023)).

Contributions from a First Nations' perspective

Video submission:

Watch the combined video submissions here:

<https://share.descript.com/view/xFwWpuRaPLX>

Video submission from Professor Sandra Creamer AM

Sandra Creamer is the former CEO of the National Aboriginal and Torres Strait Islander Women's Alliance (NATSIWA) and Adjunct Professor of Public Health at the University of Queensland. She is a Waanyi/Kalkadoon woman, an academic and legal officer. Sandra has worked with Indigenous women in Australia and globally, and believes it is important to empower Indigenous women for self-determination, equality of their rights as well as understanding how they can challenge issues that affect their communities, including drinking water and women's health. Sandra was appointed as a Member of the Order of Australia (AM) in 2019 for her leadership service to Indigenous women.

In her video submission, Professor Creamer outlines the contribution of secure water supplies to food security through provision of seeds for food and agribusiness and artisan enterprises based on traditional Country. She describes the challenges in remote communities of water contamination and droughts that limit supply. She emphasises that 'water is life' for Aboriginal Peoples, including her Waanyi and Kalkadoon Peoples. Water is central to cultural continuation, including for ceremony. This, in turn, supports remote community populations' health and wellbeing.



Image: Professor Sandra Creamer speaks to remote water challenges from Waanyi Country (Mt Isa), August 2024

Video submission from Dr Aunty Mara West

Dr Aunty Mara West is a Yamatji woman who is Chair of the Chair, Healthy Homelands Hub, Coolamon Centre, Ngangk Yira Institute, Murdoch University, and Chair of the HEAL (Healthy Environment and Lives) Network WA Aboriginal Reference Group. In both the public and private sector, Dr West has championed the social, political, and economic position of Aboriginal peoples in Australian society and is a leader in Aboriginal affairs.

Dr West's concerns with homelands community water include the importance of water management for healthy thriving communities. She advocates for community co-design processes so communities are included in conversations regarding environmental health and water issues.

In her video submission, Dr West details how water is life, with interlinkages between food, water, plants and animals. She describes the connections as, 'when we're talking about food security, where there's water for plants or whether it's water for animals out there, it all gets back to clean palatable drinking water.' She highlights the huge challenges for maintaining optimal health in communities faced with poor water quality and sanitation issues. Dr West emphasises that communities need to be better engaged in the operations and maintenance of the systems as well as water supply systems and water testing methods and results.



Image: Dr Aunty Mara West speaks to water security issues for homelands from Whadjuk Noongar Boodjar Country (Perth), August 2024

Response to prompted questions about the National Strategy

We have framed this submission to emphasise that considerations of food security for First Nations homelands need to also comprehensively address water security. Given the large inequity in access to safe and palatable drinking water in homelands (Wyrwoll et al., 2022), water security is a priority given its importance to human nutrition and health.

- **What does food security mean to you?**

Water security is a key aspect of food security, and thus the focus of this submission. Water security is emerging as a focus of concerns in many remote First Nations homelands concerned about long-term access to reliable supply of clean, safe, drinking water in a changing climate. The agency that coordinates the United Nations' agency on water and sanitation, UN-Water, defines water security as:

"The capacity of a population to safeguard sustainable access to adequate quantities of acceptable quality water for sustaining livelihoods, human well-being, and socio-economic development, for ensuring protection against water-borne pollution and water-related disasters, and for preserving ecosystems in a climate of peace and political stability" (UN-Water, 2013).

Professor Sandra Creamer summarises the direct connection between remote food and remote water security; she emphasises that 'water is life' for Aboriginal Peoples, including her Waanyi and Kalkadoon Peoples. Water is central to cultural continuation, including for ceremony. This, in turn, supports remote community populations' health and wellbeing.

We appreciate that drinking water is included in the National Strategy Discussion Paper ('unreliable access to water', p.4). However, as detailed below, we feel it requires a greater emphasis.

- **How could food security be improved in your community?**

The videos from our Aboriginal co-authors, Dr Aunty Mara West and Professor Sandra Creamer detail opportunities for improved water security and, in turn, food security.

Professor Creamer details how secure water supplies can contribute to food security through provision of seeds for food, agribusiness and artisan enterprises based on traditional Country.

Dr West identifies specific issues with water quality, water-related infrastructure and hardware that collectively pose challenges for food security in terms of hygiene practice.

- **What community strengths support food security?**

Professor Sandra Creamer explains that supportive community strengths include being able to live on Country with sufficient water supplies, to grow traditional foods, and to create businesses that enable families to live on Country and practice culture.

Dr Aunty Mara West reiterates the value of being on Country as a way to strengthen community. She proposes community-led and community-design responses ensure appropriate security responses.

- **What do you think of the Focus Areas in the Discussion Paper?**

We appreciate that drinking water is identified in the National Strategy Discussion Paper under the focus area of 'Housing' ('remote household access to reliable and affordable power and safe water is prioritised', p.12). but we recommend that it is also featured under the focus area of 'Health' as it is a key preventative measure. The interlinkages between safe drinking water

and effective sanitation to health, nutrition and other wellbeing measures have been documented (Hall et al., 2020; Young et al., 2021).

We recommend that an additional Focus Area of 'Environment' to reflect the ecological and physical conditions that affect the collection of water and growing conditions for food. This responds to Professor Sandra Creamer's concerns regarding the challenges in remote homelands of water contamination and droughts that limit supply. Further suggestions are provided below.

- **Is there anything important missing from the Discussion Paper?**

Water security focus area (new): We consider that a dedicated Focus Area on 'water security' should be added. The lived experience of water (in)security for homeland residents was described in first person quotes in our section of this submission entitled, 'Introduction: Hearing from lived experience on water insecurity'. To respond and when considering water security as it relates to food security four key principles need to be addressed (JMP, 2017; Young et al., 2021):

1. Availability: is water physically available?
2. Accessibility: how easy is it to access water? Is it affordable?
3. Use: Is it safe to drink and cook with? Is the taste acceptable? Does the water and associated infrastructure enable effective hygiene practice (handwashing, clothes washing, reliable toilets)?
4. Reliability: does water availability, accessibility and use vary over time?

Environment focus area (new): We note that under the 'Country Focus Area there are comments regarding protecting ecosystems for food (e.g., meat and native flora) and residents growing their own food. We encourage a dedicated section to 'environment' that describes a clear link to having clean water for irrigation, and also the need to not pollute irrigation water or natural waterways through food production or other activities (including wastewater management). The section on "steps we could take" is insufficient regarding protecting the water sources, and the statement on "Make Land and Sea Management Programs bigger to identify, protect, and take care of traditional food sources for future generations" could be expanded.

Country focus area: We consider that this is an important and lead focus area for the Strategy. The connection to Country and the ability to grow food on Country contributes directly to improved nutrition and food access. Growing bush foods and other foods also requires sufficient water supply. One of our co-authors, Sandra Creamer, has been involved in a long-term, sustainable initiative to enable Indigenous Traditional Owners to live on their own Luritja Country, and gain the cultural, financial and wellbeing benefits. It is a horticultural initiative to grown the culturally-significant bush foods of *kamperapa* and *mungkarta* on a remote outstation in the Central Desert of the Northern Territory, Australia.

The vision of the Traditional Owners has been hindered by a changing climate and rainfall and limited access to 'fit for purpose' rainwater storage infrastructure, such as water tanks. There is potential to harness rainwater off the community building to supplement the current supply of bore water for the plants. The *kamperapa* in particular thrive on rainwater, while the high levels of calcium carbonate in the bore water can block the irrigation system. Through the contribution of \$10,000 from a philanthropic grant as well as their own in-kind investment to manage the project, lay the foundation for the water tanks and connect the guttering, the Sandy Bore owners have been able to install 44,000L of water storage. This has begun to address the issue of access to quality water and bring security to store drinking water for

community benefit and to expand the production growing areas. These efforts have enabled the Traditional Owners to establish a small-scale horticultural system (Creamer, 2021).

Health focus area:

We recommend that water security is embedded into the ‘health’ focus area to directly address the water-related risks to health. As Dr Aunty Mara West details:

“The amount of diseases that are rife in our communities these days.

It's really, really important that our communities have access to clean drinking water because if you consider diseases like rheumatic heart disease [and], skin disease

All of these diseases are preventable diseases, and people do need access to clean drinking water, and especially those who are now on dialysis. Medical facilities with dialysis machines [are in] Perth and people don't like coming [to] Perth. They don't like to leave their communities so it's really, really important for us to have that discussion about how can we [support them].

And when you consider that it's not only affecting the lives of adults, but the lives of our children ... there are cases where our children are starting to suffer from these diseases and especially diseases like kidney stones and kidney diseases. And you know that should not be happening out there.”

Housing focus area: In the ‘Housing’ Focus Area, it states ‘Provide affordable, safe, and reliable water for all households in remote homelands, with implementation based on need not population size’ (p.24). We encourage you to add ‘affordable, safe, reliable, and ACCEPTABLE/PALATABLE water’. This will ensure that the water is acceptable in terms of colour, temperature and flavour/odour and thus aesthetic enough to be drunk. For more on the importance of aesthetics of drinking water, see Hall (2019):

The interviewees all commented on the low community acceptability of the groundwater in terms of taste and colour. Two commented that alternative drinks were preferred by both Indigenous and non-Indigenous residents in remote homelands, including:

‘The water is quite hard ... people don't want to drink it because it doesn't taste very good, so then they start substituting it for other things like soft drink or cordial or something like that ... you do find, when you travel bush, all the whitefellas [non-Indigenous] are drinking bottled water’ (Indigenous organisation #2 in (Hall, 2019)).

We also note in the housing Focus Area that benefit of the existing statement that “Remote household access to reliable and affordable power and safe water is prioritized” (p.11). We encourage the additional statement of ‘and septic tanks that don’t block/overflow/flow back into houses’, to avoid kitchen inundation with sewage (which has occurred, including in NT’s Santa Teresa community (CLC NSW, n.d.)).

Families and Community Infrastructure focus area: For this focus area, we value the comment regarding the ‘service quality of infrastructure in remote areas’. This includes water and sewerage infrastructure. This was extensively documented in the Queensland Productivity Commission’s review of essential services in remote communities (QPC, 2017). The infrastructure needs to be appropriate for the purpose, place and people, including sufficient and culturally-appropriate professional support for local water operators who can be isolated. A positive example of this is detailed in the successful ‘Safe and Healthy Drinking Water’

program in the Torres Strait, developed by a collaboration between local Indigenous council and relevant state government agencies. For more, see Hall, Grodecki et al. (2021).

We also note research that identified large amounts of water leakage in remote homelands. This can lead to high water loss, and thus ensuring repair of infrastructure is of pertinence for water efficiency and ultimately security of supply (Beal, 2017).

Also in this Focus Area, we appreciate the focus on enabling residents to have “access to places and equipment to make and eat healthy food” and that “water is safe for drinking and cooking ... Make sure all houses in remote communities have water that is always connected, affordable and safe for drinking, cooking and washing.” We would encourage the addition of handwashing and hygiene links to food contamination. In response, functioning toilet, well-managed sewerage and availability of soap for handwashing is required to achieve this.

Policies, Practice and Governance focus area: We appreciate this focus area as it recognises the rights that need to be realised for all in Australia, including those living in remote homelands. For water, this also needs to be added and stated. It is noted that, as water is central to human existence, it is therefore a basic human right. In response, the United Nations’ General Assembly resolved to recognise ‘the right to safe and clean drinking water and sanitation as a human right that is essential for the full enjoyment of life and all human rights’ (United Nations, 2010). This ambition has been incorporated into UN Sustainable Development Goal 6 (SDG6). SDG6 details the importance of safe and affordable drinking water, prevention of water pollution, reparation and protection of freshwater supplies, and ‘transboundary cooperation’ of water sources. In parallel, SDG6 details effective wastewater management and treatment to achieve hygienic outcomes and expand opportunities for efficient reuse and recycling of this critical resource (UN, 2015).

- **Is there anything in the Discussion Paper that should change?**

We encourage considering the following three changes:

- Co-design of responses with community. This is further described under ‘Conclusions’ by Dr Aunty Mara West.
- Funding commitments to achieve this Strategy’s implementation that are sufficiently large with longevity to achieve long-term water security.
- Evaluation of the effectiveness of this Strategy, once implemented. Such evaluation could consider the levers/ opportunities for the implementation to be continually adjusted to ensure the program remains effective.

Conclusions

We would like to close our submission with the words provided to this submission by Dr Aunty Mara West that reflect the importance of the Remote Food Strategy to engage with those who have lived experience and can advocate for tailored community-oriented solutions:

“Those problems that we have out in our communities will never be solved if it's a top down approach.

What you need to do is to get out and sit on the ground and start talking to communities about water issues and about food security issues.

Because until you do that, adequate solutions will never ever be reached and people will continue to suffer from these preventable diseases. They will continue to suffer from bad health overall because they don't have access to clean drinking water nor access to good food.”

- Dr Aunty Mara West (Yamatji), Chair, Healthy Homelands Hub, Coolamon Centre, Ngangk Yira Institute, Murdoch University

References

- AIHW. (2018). *Australia's health 2018. Australia's health series no. 16. AUS 221.*
- Beal, C. (2017). Some remote Australian communities have drinking water for only nine hours a day. <https://theconversation.com/some-remote-australian-communities-have-drinking-water-for-only-nine-hours-a-day-86933>(November 9).
- CLC NSW. (n.d.). *Social change through strategic litigation: NT's Santa Teresa community and residential tenancy laws*, <https://www.clcnsw.org.au/social-change-through-strategic-litigation-nts-santa-teresa-community-and-residential-tenancy-laws> (accessed 9/8/24).
- Creamer, S. (2021). 'Water is life: Water above the ground and below the ground'- Central Desert Traditional Owners build a sustainable business initiative using their traditional knowledge of bush foods.
- Hall, N. L. (2019). Challenges of WASH in remote Australian Indigenous communities. *Journal of Water, Sanitation and Hygiene for Development*, 9(3), 429-437. <https://doi.org/10.2166/washdev.2019.154>
- Hall, N. L., Creamer, S., Anders, W., Slatyer, A., & Hill, P. S. (2020). Water and health interlinkages of the sustainable development goals in remote Indigenous Australia. *npj Clean Water*, 3(1), 10. <https://doi.org/10.1038/s41545-020-0060-z>
- Hall, N. L., Grodecki, H., Jackson, G., Go Sam, C., Milligan, B., Blake, B., Veronese, T., & Selvey, L. (2021). Drinking water delivery in the outer Torres Strait Islands: A case study addressing sustainable water issues in remote Indigenous communities, DOI: 10.1080/13241583.2021.1932280. *Australasian Journal of Water Resources*. <https://doi.org/10.1080/13241583.2021.1932280>
- JMP. (2017). *Progress on drinking water, sanitation and hygiene 2017: Update and SDG baselines.*
- Lansbury, N., Moggridge, B., Creamer, S., Ireland, L., Buckley, L., Evans, G., Milsom, O., Pecl, G., & Mosby, V. (2023). *Aboriginal and Torres Strait Islander Peoples' voices and engagement in the Intergovernmental Panel on Climate Change: Advice to inform the Australian Government towards IPCC Assessment Report 7.*
- NATSIWA, & UQ. (2020). *Central Desert women talk about their health, their housing and their Country* (short film), <https://youtu.be/-xnCMiO9oUM> (accessed 7/6/23). .
- QPC. (2017). *Service delivery in remote and discrete Aboriginal and Torres Strait Islander communities* [Service Delivery].
- Rigby, C., Rosen, A., Berry, H., & Hart, C. (2011). If the land's sick, we're sick:* the impact of prolonged drought on the social and emotional well-being of Aboriginal communities in rural New South Wales. *Australian Journal of Rural Health*, 19(5), 249-254. <https://doi.org/10.1111/j.1440-1584.2011.01223.x>.
- UN-Water. (2013). *Water Security & the Global Water Agenda: A UN-Water Analytical Brief.* file:///C:/Users/geoff/Downloads/analytical_brief_oct2013_web.pdf
- UN. (2015). *Transforming our world: The 2030 agenda for sustainable development.* http://www.un.org/pga/wp-content/uploads/sites/3/2015/08/120815_outcome-document-of-Summit-for-adoption-of-the-post-2015-development-agenda.pdf
- United Nations. (2010). *The human right to water and sanitation* (United Nations' Resolution 64/292, July 28, Issue.
- Wyrwoll, P. R., Manero, A., Taylor, K. S., Rose, E., & Quentin Grafton, R. (2022). Measuring the gaps in drinking water quality and policy across regional and remote Australia. *npj Clean Water*, 5(1), 32. <https://doi.org/10.1038/s41545-022-00174-1>
- Young, S., Frongillo, E., Jamaluddine, Z., Melgar-Quinonez, H., Pérez-Escamilla, R., Ringler, C., & Rosinger, A. (2021). Perspective: The Importance of Water Security for Ensuring Food Security, Good Nutrition, and Well-being. *Adv Nutr*, 12(4), 1058-1073. <https://doi.org/10.1093/advances/nmab003>