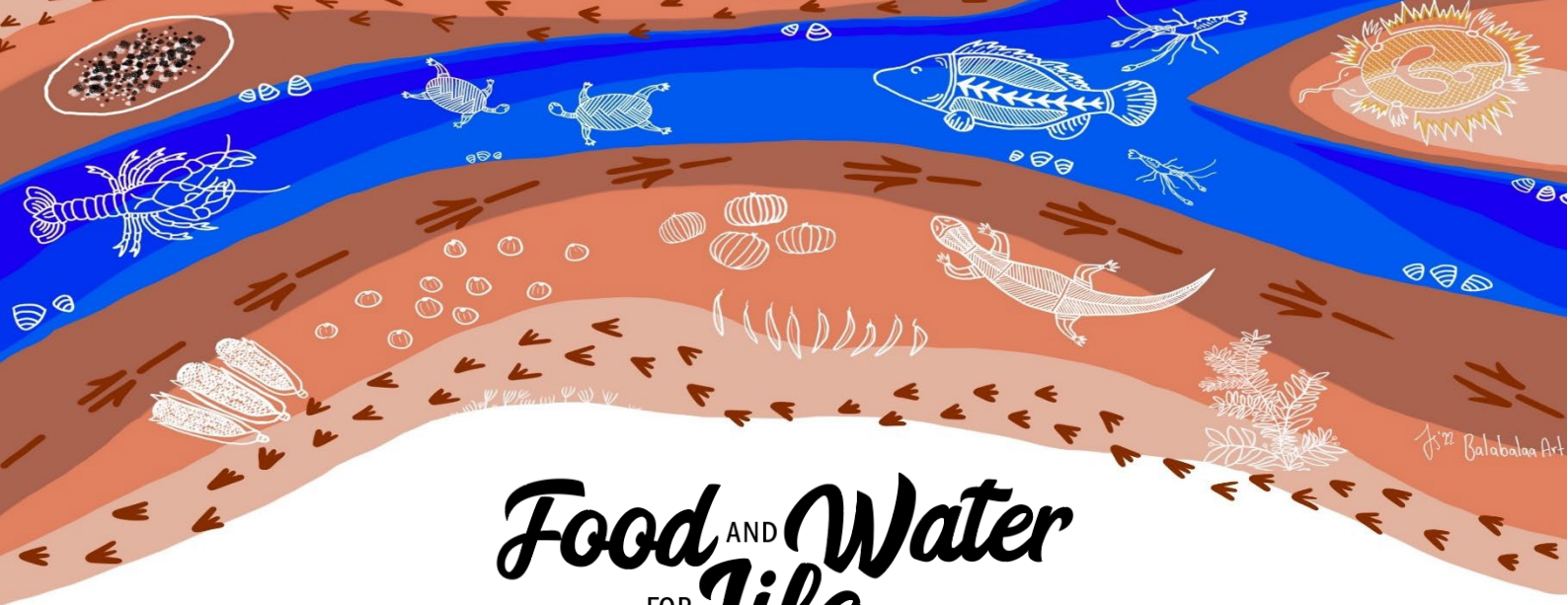

Food AND Water FOR Life

Briefing Paper

Food and Water for Life: Strengthening community-led initiatives, 2019-2024

March 2025

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Artwork by Joanne Stanford Balabalaa Art of the Gamilaraay Nation

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Report: This report was produced under the Yuwaya Ngarra-li 'vision' partnership between UNSW, the Dharriwaa Elders Group (DEG) and Walgett Aboriginal Medical Service Limited (WAMS), in collaboration with The George institute for Global Health.

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Acknowledgements: The authors would like to thank the Dharriwaa Elders Group, including Elders from four Aboriginal nations; the Yuwaalaraay people, the Ngayiimbaa people, the Wayilwan people, and the Gamilaraay people. We also wish to thank Paresh Patel, manager of the Walgett IGA supermarket for his respectful understanding and responses to the Food and Water for Life team including his support, and that of his staff, for the Healthy Supermarket Initiative.

Walgett Aboriginal Medical Service Limited and Dharriwaa Elders Group are based in Walgett on the Traditional Country of the Gamilaraay people, and we acknowledge the leadership and custodianship of Gamilaraay, Ngayiimbaa, Wayilwan and Yuwaalaraay Elders, past and present.

The George Institute for Global Health is located on the unceded territory of the Gadigal people and UNSW on the unceded territory of the Bedegal (Kensington campus), Gadigal (City and Paddington campuses) and Ngunnawal peoples (Canberra) who are the Traditional Owners of the lands where each campus of UNSW is situated. The authors pay our respects to their Elders past and present.

The authors would also like to acknowledge the contributions of other colleagues who worked on Food and Water for Life activities from 2019-2024: Alinta Trindall (TGI & UNSW), Ty Madden (TGI), Emily Rosewarne (TGI) and Niall Earle (UNSW).

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EXECUTIVE SUMMARY

Improving food and water security in Walgett has been a long-term priority for the Yuwaya Ngarra-li partnership between the Dharriwaa Elders Group (DEG) and UNSW Sydney due to the degradation of local rivers and poor access to safe drinking water and nutritious food.

A Food Forum held at Walgett Community College in 2019 brought together community stakeholders to learn from and act on community concerns around food and water security. Following this, the Walgett Food and Water for Life program was established, led by local Aboriginal Community Controlled Organisations (ACCOs), the Walgett Aboriginal Medical Service Limited (WAMS) and DEG, in partnership with UNSW and The George Institute for Global Health (TGI). The aim of the Food and Water for Life program is to enable community-led sustainable food and water initiatives that are run by and employ Aboriginal people and ensure healthy drinking water and fresh nutritious food produced locally for years to come. This work was boosted by a five-year National Health and Medical Research Council (NHMRC) grant (2021–2025) *Food and Water for Life: co-creation and evaluation of sustainable innovations to strengthen food and water security*, the objectives of which are to learn from experiences of food and water insecurity in other communities, establish a framework and tools to strengthen the program, and evaluate the program's impact on food and water security, nutrition and wellbeing in Walgett.

To better understand experiences of food and water security in Walgett, community surveys were conducted in 2022. Nearly half (46%) of the 251 participants experienced food insecurity and 44% experienced moderate-to-high water insecurity, rates comparable to many low- and middle-income countries and far higher than national-level estimates in Australia. The results also showed a strong relationship between experiencing food and water insecurity, reflecting the knowledge of the interconnection between food and water for Aboriginal people in a river community and the collapse of the river foods systems.

The Food and Water for Life program is an example of building community-led solutions to a serious systemic issue, with lessons for other communities and contexts. The activities range from enabling individuals to make different choices that can improve their and their families' health, to collaborating with retailers and agencies to work differently to support that change, as well as ensuring the accountability of those with the power and responsibility to ensure Aboriginal people in Walgett and elsewhere have access to safe drinking water and nutritious food, advocating for essential infrastructure and systemic change. It is ground up, long term and holistic, demonstrating the value of supporting existing community-controlled organisations to lead the work they know is needed and sharing that work with others.

This briefing paper sets out the community-led activities of the Food and Water for Life program that have been developed and refined from 2019 to 2024, progress and outcomes identified to date, what has been learnt about building community-led solutions to improve food and water security, and plans for what's next. The aim of this paper is to document the work to date and update communities and stakeholders on current progress.

CONTEXT

In Australia, it is crucial that Aboriginal and Torres Strait Islander peoples and knowledges are considered, included and respected. This involves embedding Aboriginal and Torres Strait Islander ways of knowing, being and doing into program engagement, including understanding:

- The importance of connection to Country and the relationality of families and communities
- The holistic nature of Aboriginal and Torres Strait Islander peoples' paradigms of health, which encompasses the physical, social, emotional and spiritual wellbeing of not just an individual but the whole community (TGI 2021).

Walgett Aboriginal Medical Service Limited (WAMS) was established in 1986 as a not for profit, Aboriginal Community Controlled Health Organisation (ACCHO), and has maintained a commitment to servicing the whole community. WAMS has uniquely serviced a multi-cultural client base while prioritising Aboriginal peoples. Service delivery includes holistic primary health care including GP services and chronic care, Child and maternal services, Health Checks, Allied Health and Visiting Specialists including Endocrine, Dermatology, Cardiology, Liver, Psychology, Dental services, and primary health care delivered through outreach services to a footprint that includes Goodooga, Collarenebri and Pilliga. Allied Health Services include dietitians, exercise physiologists, midwives, podiatrists, drug and alcohol counsellors, eye health specialists, occupational therapists, speech therapists, and sexual health educator. Each passing year has seen the expansion of staff, services, work properties, new partnerships and staff residences. WAMS have continued to contribute to a solid economic base in Walgett for more than 38 years. Since 2006 WAMS has also governed and managed the Brewarrina Aboriginal Medical Service (BAMS arrangement. WAMS and BAMS are led by five directors, all local Aboriginal women. The service has a reputation of strong corporate governance, service delivery, transparency, effective use of grant funding and improving client outcomes. There is a strong emphasis on employing local and Aboriginal staff. WAMS was the first Aboriginal Medical Service in NSW to be accredited (April 2001) with the (National) Quality Improvement Council (QIC) / (State) Quality Management Service (QMS). WAMS and BAMS are now accredited both clinically (RACGP/ AGPAL) and organisationally (Te Wana).

Dharriwaa Elders Group (DEG) was born 20 November 2000 after Elders had worked together on projects since 1998. The Group took its name from one of its sacred sites - Narran Lakes - Dharriwaa (common meeting place) and its full members are Aboriginal people over 60 who live in Walgett. The DEG was auspiced by WAMS until 1 July 2005, when it became autonomous. The charitable organisation is an Incorporated Association under the NSW Act and has deductible gift recipient status from the Australian Tax Office. The DEG is an Aboriginal cultural organisation which works to support Elders wellbeing, protect Aboriginal cultural heritage and knowledge and promote Aboriginal cultural values. The organisation works for community development, promoting relationships between Aboriginal Elders and other generations of the Walgett Aboriginal community.

The Food and Water for Life program is led by DEG and WAMS with UNSW Sydney and The George Institute for Global Health (TGI) through DEG's Yuwaya Ngarra-li partnership. It grew from the Walgett Food Forum in April 2019 where community members discussed their concerns about food and water security, including disruptions to food and water supplies due to the long-term degradation of the rivers at Walgett resulting in poor drinking water and loss of river foods, and high food prices in remote areas. The vulnerability of Walgett's local food supply was further highlighted in June 2019 when the Walgett IGA supermarket burnt down, as well as the food supply shortages experienced during the COVID-19 pandemic, meaning the community had to drive to the next town (80km away) or rely on food and water donations.

This program recognises that when Aboriginal people are connected to Country, including food and water systems, this contributes to social, emotional, cultural, spiritual and physical health and wellbeing (Verbunt et al. 2021). Addressing issues of food and water security leads to improved nutrition and decreased risk of chronic disease (Miller et al. 2021; Young et al. 2021). The Food and Water for Life program aims to establish community-led, resilient and sustainable food and water solutions to ensure a secure local supply of affordable, nutritious food and safe drinking water for future generations.

A TIMELINE OF ACTION

2010

Events
- Community gardens established

2011-2015

Community / Partner Action
- Research study collaboration between UNSW and the Walgett Aboriginal Medical Service (WAMS) and Dharriwaa Elders Group (DEG)

2013

Events
- Walgett supermarket burnt down

2015

2016

Community / Partner Action
- Yuwaya Ngarra-li (YN) partnership between UNSW and DEG established

2017

Community / Partner Action
- UNSW researchers provide advice on sodium levels in Walgett's drinking water

Events
- Restricted access to river water and high sodium bore water compromises viability of WAMS community garden

2018

Community / Partner Action
- Sodium levels in Walgett's drinking water found to be 15 times recommended levels for people with chronic health issues
- Walgett ACCOs advocate for solutions to high sodium in drinking water with Shire Council and health representatives

Events
- Baawan (Barwon) and Ngamaay (Namoi) rivers dry up, town drinking water supply switched from river water to bore water
- Water restrictions cause loss of community garden

2019

Community / Partner Action
- DEG/YN host community Food Forum held at Walgett high school
- Walgett Food and Water for Life project launched
- UNSW Engineering students develop irrigation solutions for WAMS community garden
- DEG and WAMS with YN plan public drinking water kiosks

Events
- Local supermarket burnt down again
- NSW Government announces funding for reverse osmosis system to reduce sodium in Walgett's drinking water

2020

Community / Partner Action
- Food boxes, frozen meals, drinking water, food and water vouchers distributed during COVID lockdowns
- DEG and WAMS provide submissions to parliamentary inquiries into food security in remote Indigenous communities and water management
- Launch of regenerated WAMS community garden
- DEG, WAMS, UNSW and TGI awarded 5 year NHMRC grant to strengthen and evaluate food and water security initiatives in Walgett

Events
- COVID pandemic leads to local food shortages
- NSW Government installs reverse osmosis system in Walgett, however operation is paused due to poor planning around waste disposal
- Town water supply switched back to river water
- New supermarket opens in Walgett

2021

Community / Partner Action
- Food boxes, drinking water, food and water vouchers distributed during COVID lockdowns
- Healthy Supermarket promotions negotiated with Walgett IGA
- Ongoing negotiations and advocacy to improve Walgett's drinking water

Events
- Town water supply switched back to bore water without operational reverses osmosis treatment plant

2022

Community / Partner Action
- Food and water security survey of 251 Walgett community members
- DEG water kiosk design finalised
- Meal of the Month and Walgett Garden Network activities commenced
- YN Briefing Paper on Sustaining the WAMS Community Garden published

Events
- Floods cut Walgett off from surrounding areas

2023

Community / Partner Action
- YN Briefing Paper on Walgett's Drinking Water published
- Food and water security survey results were fed back to community
- Community survey findings published to widespread media response
- WAMS & DEG presented to Next Water '23 water conference
- YN Webinar on Understanding Food & Water Insecurity in Walgett and Building Community-led Solutions
- Presented at AWA Regional Water Champions Event
- Presented at Lowitja Conference 2023
- DEG, WAMS & UNSW continue to advocate for long-term solutions to Walgett's drinking water
- Supermarket audit conducted and results fed back to supermarket
- DEG Gali water kiosk launched

Events
- NSW Water Minister visits Walgett and commits to fixing Walgett's poor quality drinking water
- Walgett's drinking water supply switched back to river water, but then soon after switched back to bore water due to technical issues without operational reverse osmosis system

2024

Community / Partner Action
- Presentation to Global Food Governance Conference
- DEG, WAMS & YN attended Community Consultation in Walgett for the National Strategy for Food Security in Remote First Nations Communities
- DEG & YN gave evidence to Vic Parliamentary Inquiry into Food Security

COMMUNITY-LED ACTIVITIES

Community Surveys

Purpose

One of the first steps has been to undertake community surveys to better understand experiences of food and water security in Walgett and its impact on food intake. The survey results will be used to inform the program of initiatives and also as a baseline from which we can monitor future change.

Yuwaya Ngarra-li conducted baseline community data gathering sessions in 2018 and 2019 that included questions about food and water insecurity, including food intake. This information was used to inform the community surveys.

In March and April 2022, WAMS, DEG and Aboriginal researchers led the design and implementation of a food and water insecurity survey and a food intake survey with support from TGI. The survey asked questions developed from existing validated global tools, the Household Food Insecurity Access Scale (HFIAS) (Coates et al. 2007) and the Household Water InSecurity Experiences Scale (HWISE) (Young et al. 2019). The food intake survey was adapted from the Menzies Remote Short-item Dietary Assessment Tool (MRSDAT) (Rohit et al. 2018; Tonkin E et al. 2018).

A team of WAMS, DEG and TGI staff was established and trained in the use of the tools by Professor Jacqui Webster from TGI. With support from the local IGA, the survey team invited people entering or leaving the supermarket to participate in the surveys. The research team asked Aboriginal people who were aged 18 or over and living in Walgett or the nearby villages of Gingie or Namoi questions about food and water insecurity. Surveys took place in a WAMS gazebo outside the IGA, at the DEG offices across the road or in people's homes. People were provided with a $25 voucher for completing each survey which could be used in local shops (e.g. IGA, butcher, newsagents).

Results

Food and water insecurity

251 people completed the food and water insecurity surveys over a two-week period, which included similar numbers of men and women of different age groups broadly reflecting the profile of the Aboriginal population of Walgett. About 80% of the participants were from Walgett town, with the remainder from nearby villages of Gingie or Namoi or out of town.

Figure 1 Overall findings of the community survey (Tonkin T 2023:4)

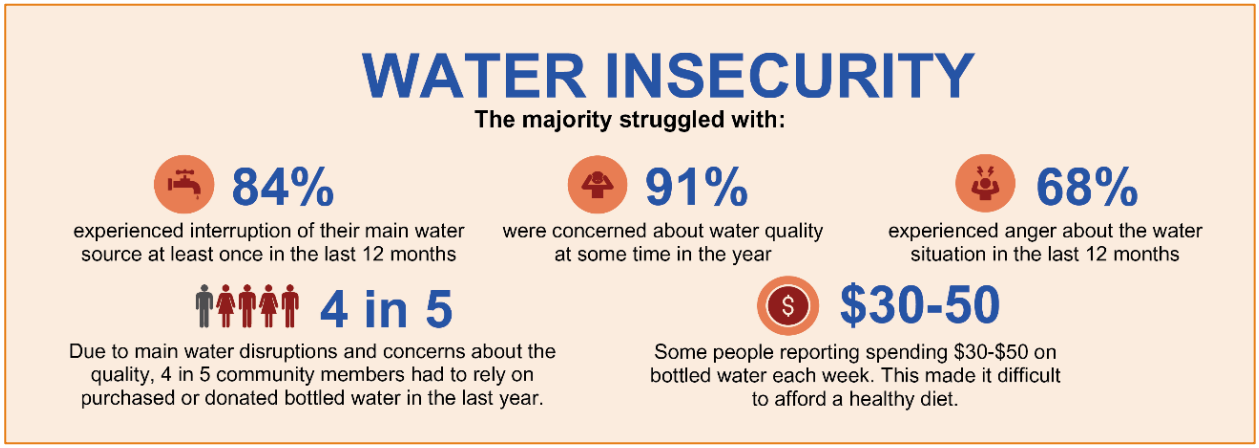

Figure 2 Water insecurity findings from the community survey (Tonkin T 2023:8)

Figure 3 Food insecurity findings from the community survey (Tonkin T 2023:10)

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Figure 4 Sources of food when experiencing food insecurity: findings from the community survey (Tonkin T 2023:7)

The relationship between food and water insecurity was seen in these results shown in Figure 1-4 above.

- 30% of participants were experiencing both food and water insecurity.
- Participants experiencing water insecurity were more likely to experience food insecurity. Some respondents reported spending $30-50 per week on bottled water, which made it challenging to afford healthy foods.

Food and water sources

Many people said they no longer relied on fish or yabbies from the river (due to the health and quality of the river) meaning they needed to spend more money on food. Some people said they didn't trust the quality of the water to prepare food for their children meaning they had to rely on more expensive ready-made foods. The food and water sources of the survey participants can be seen in Figure 5 and Figure 6.

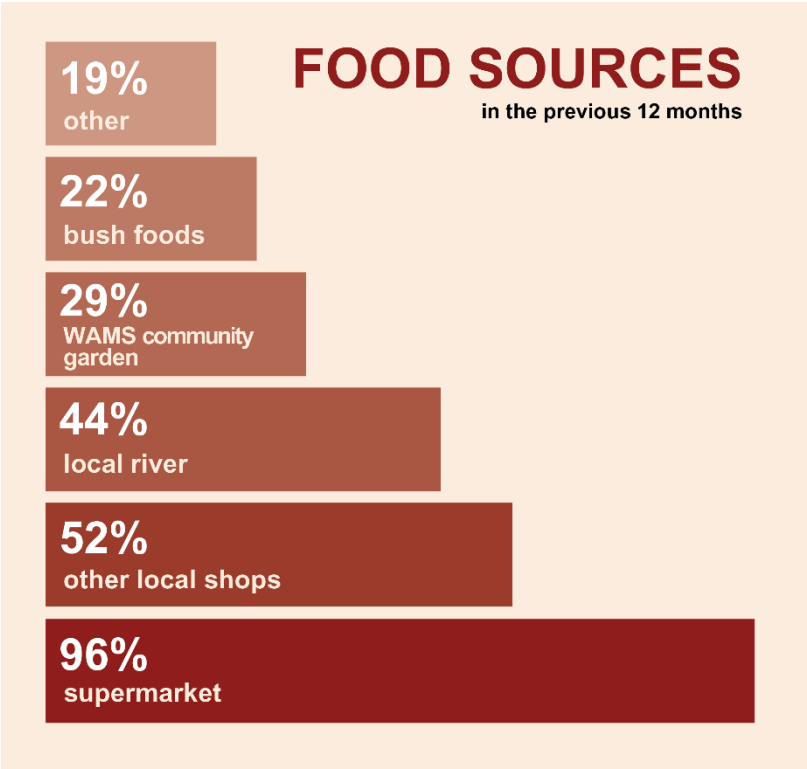

Figure 5 Food sources of survey participants

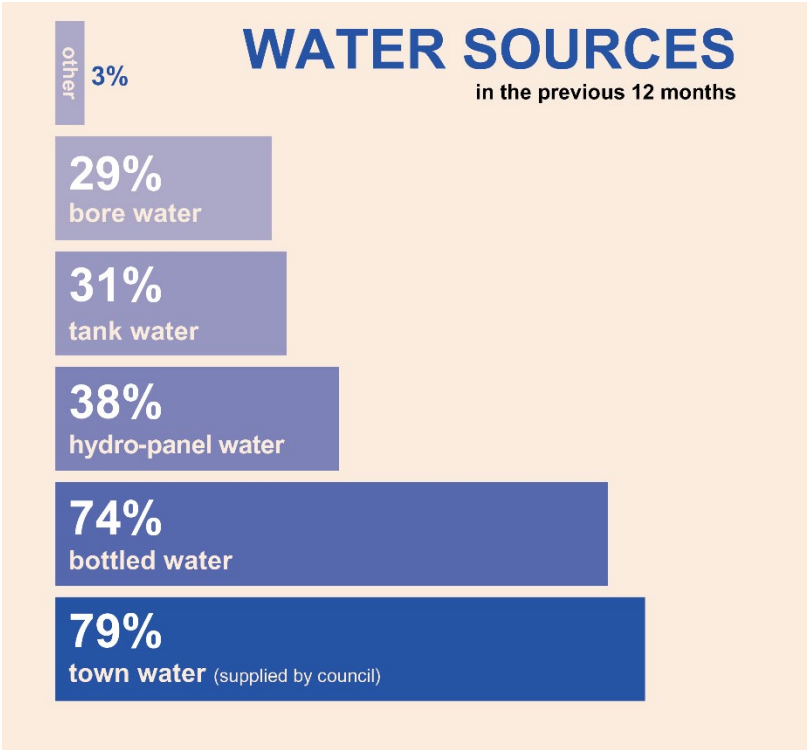

Figure 6 Water sources of survey participants

Food intake

A total of 242 participants completed the food intake survey over the two-week survey period. These surveys showed, as displayed in Figure 7, despite high levels of food and water insecurity including fruit and vegetable affordability concerns, availability issues and an inability to grow fruit and vegetables due to water insecurity and other environmental impacts (Rosewarne et al. 2021), the Walgett Aboriginal community members surveyed are consuming a healthier diet than the national average of Aboriginal and Torres Strait Islander people in Australia. However, none of the participants were meeting all the national dietary guidelines.

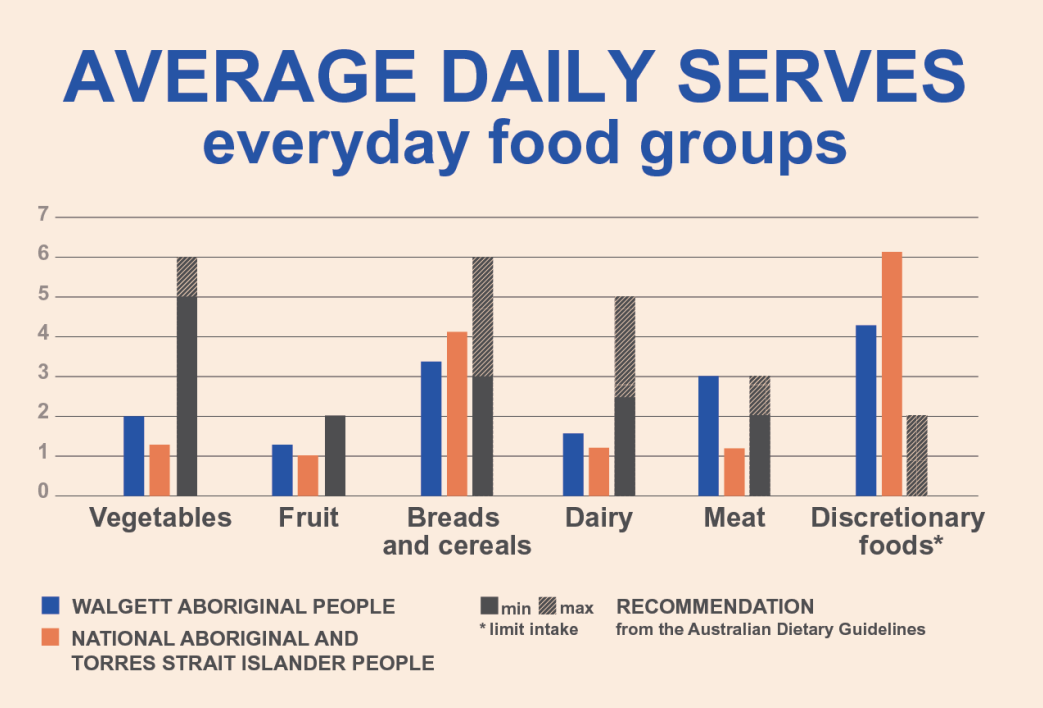

Figure 7 Average daily serves everyday food groups

The intake of sugar-sweetened beverages was high, with more than 50% reporting having two or more serves every day or nearly every day. This high intake is likely due to several factors being experienced by Aboriginal people in Walgett and other remote communities around Australia, including the degradation of river systems, and community concerns around the safety and palatability of the town water and the relatively cheaper cost of sugar-sweetened beverages compared to bottled water (Rosewarne et al. 2021; Thurber et al. 2020).

The survey also found that some Walgett Aboriginal people still rely on bush foods. As shown in Figure 8, one in five survey participants ate traditional native plants at least once a week and one in four ate traditional land animals at least once a week.

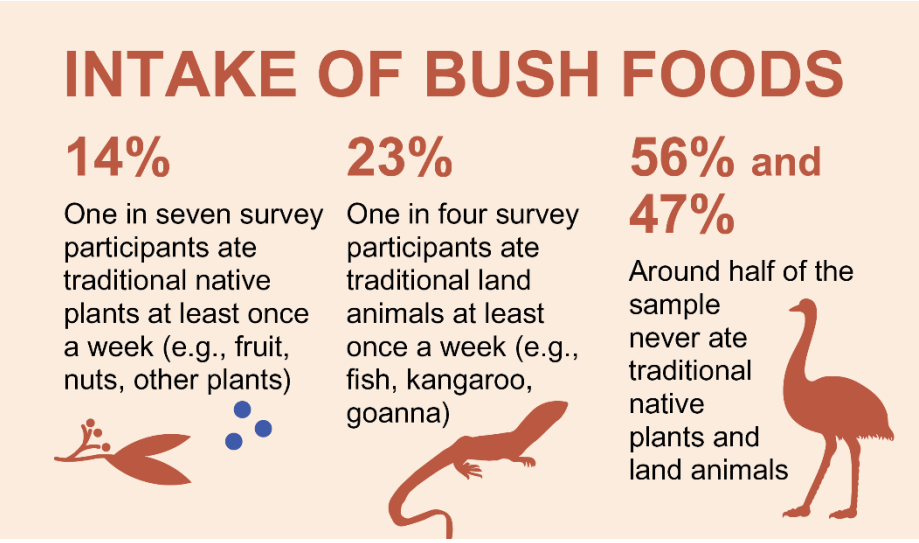

Figure 8 Intake of bush foods

Reporting back to community

The findings from the surveys were shared at a community feedback session at WAMS's Euragai Goondi building next to the community garden in January 2023. A selection of people attended who had participated in the surveys and from local ACCOs.

Initiatives to improve food and water security

The survey results have been used to strengthen the program of community-led initiatives including installing drinking water kiosks around Walgett so that good quality drinking water is readily available, expanding the community garden, building a gardeners network to increase access to fresh vegetables, working with the local supermarket retailer (IGA) to implement initiatives to improve the affordability and accessibility of healthier foods, as well as ongoing advocacy to address systemic issues.

Further detail on the results of the food and water community survey is available in the following publications:

- *Community briefing report: Key Findings from the Food and Water Security Surveys in Walgett* (Tonkin T et al. 2023)
- 'Measuring Food and Water Security in an Aboriginal Community in Regional Australia' (Weatherall et al. 2025)
- 'Food intake in an Australian Aboriginal rural community facing food and water security challenges: A cross-sectional survey' (Rosewarne et al. 2024).

Drinking Water Kiosks

Purpose

Community members have long been concerned about the quality of local drinking water in Walgett due to impacts from climate change and systemic water mismanagement across the Murray-Darling Basin. This has meant that the local council mostly uses the Great Artesian Basin (GAB) to provide water to the town of Walgett and Namoi village. Gingie village does not receive the town water supply and continually relies on GAB water now that the Baawan (Barwon) river is no longer reliable.

Data collected by DEG and UNSW shows sodium levels coming from the GAB in Walgett is consistently around 300mg/L (Earle et al. 2023). The Australian Drinking Water Guidelines (ADWG) state that drinking water must be safe to drink for people in most stages of normal life, including children over 6 months and the elderly. However, despite convincing evidence that sodium has a direct impact on blood pressure (that is, as sodium intake increases so does blood pressure) no health value has been set in the ADWG (NHMRC 2011).

DEG and WAMS's advocacy around a solution to reduce high sodium levels coming from the GAB led to successfully securing a commitment from the NSW Government to build a mobile reverse osmosis system in Walgett. The facility was completed in May 2020, however it was closed soon after in September 2020, due to brine waste disposal not being adequately provided for. Details surrounding these waste disposal issues are not publicly available. DEG and WAMS continue to advocate to government bodies for more equitable water management, including the installation of 10 chilled drinking water kiosks in public spaces in Walgett.

Further details can be found in a Yuwaya Ngarra-li briefing paper, *Walgett's Drinking Water* (Earle et al. 2023).

Progress to date

DEG and WAMS have been advocating for the installation of public chilled drinking water kiosks around Walgett, however Council and NSW Government support has not been forthcoming. As an interim solution, DEG has installed a customised chilled, low-sodium water kiosk attached to its premises. This is conveniently located on the main street of Walgett, opposite the supermarket.

The 'gali' (meaning water in Gamilaraay) kiosk, incorporating a bespoke reverse osmosis unit was designed and assembled pro-bono by Dr Bruce Atkinson of Beca Group and installed by H L Mullane & Son with the support of the Mullane Foundation in mid-2023. The gali kiosk is providing the Walgett community with free access to chilled, low sodium drinking water, as demonstrated in Figure 9.

After a few technical setbacks, the unit was launched to the community and began operating in December 2023. Operational and maintenance guidelines and routines were developed along with an interpretive sign. Promotional water bottles were provided at the launch to encourage use of the kiosk and reduce Walgett's plastic waste.

WATER QUALITY

Water quality testing of the kiosk was conducted in August 2023 indicating that the kiosk was able to reduce the sodium level of the town water from 296mg/L to 35mg/L.

Figure 9 Water quality testing results

Many community members bring containers to fill at the gali kiosk on a regular basis and DEG staff also fill large water containers and deliver to Elders and other community members in need daily. The gali kiosk has provided the Walgett community with 15,996L of chilled, low sodium drinking water between December 2023 and December 2024. Figure 10 shows the kiosk usage since its launch and Figure 11 shows litres used each month.

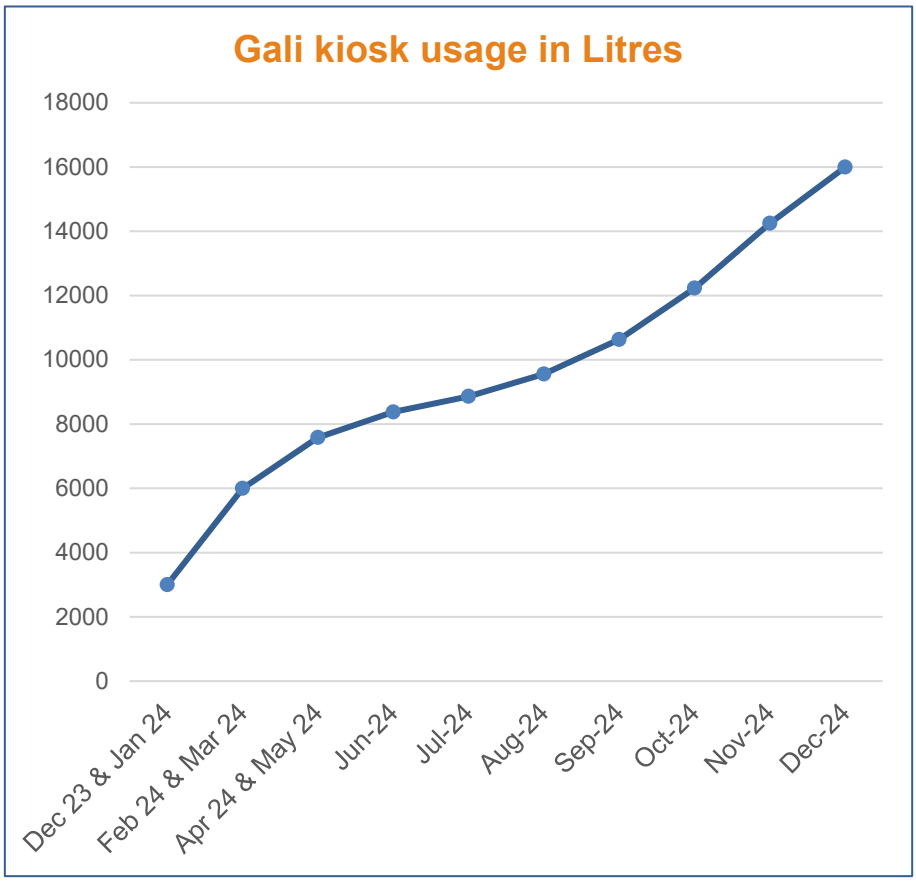

Figure 10 Gali kiosk use since its launch in December 2023

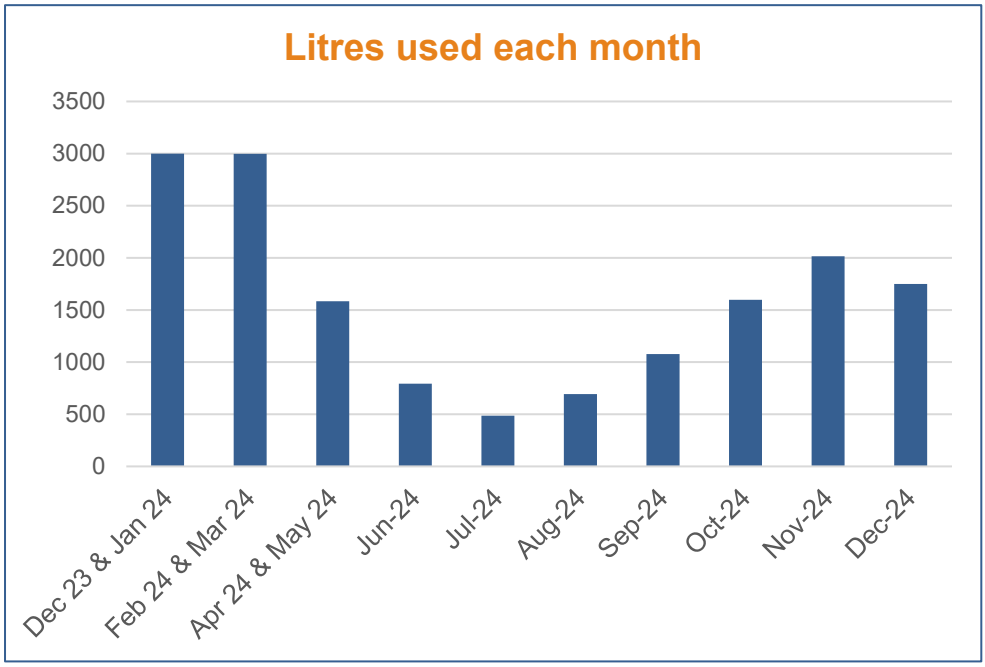

Figure 11 Gali kiosk use each month

The Food and Water for Life team have also calculated the plastic that has been saved from landfill as a result of community members having access to water through the gali kiosk rather than buying bottled water, as demonstrated in Figure 12.

There are plans to install another gali kiosk in the front of DEG's new Galuma-li building, and to continue to advocate for new drinking water kiosks in key places around the community.

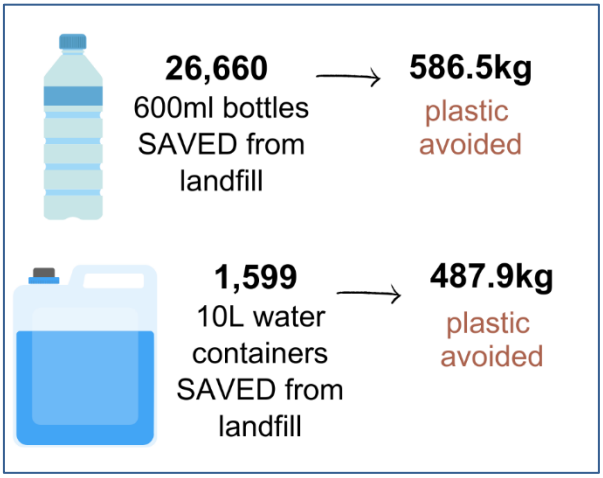

Figure 12 Potential plastic saved from landfill

Community Gardens

Purpose

The availability and cost of fresh produce in Walgett have contributed to food insecurity within the community. The goal of the community garden is to improve the availability of locally grown, fresh produce for WAMS clients and other community members.

Progress to date

WAMS community garden

Since 2019, work has been conducted in collaboration with Yuwaya Ngarra-li to rejuvenate the WAMS community garden, which had been wiped out due to water restrictions when the river was dry. Initially 48 water efficient Biofilta wicking garden beds were purchased and installed. Detailed documentation on the rejuvenation to a more sustainable and resilient garden has been previously published (Earle 2022).

The garden has expanded and now has 100 wicking garden beds in use. These garden beds use the principles of wicking to draw water from reservoirs underneath and in the frame of the garden bed up through plant roots and soil into the garden bed. This results in a decrease in water loss, as water is used by plants before it is evaporated from the topsoil.

The main produce grown in the garden are vegetables, as they can be used to make a meal for families. Most vegetables grown are familiar to the community (e.g. there is always a type of onion, a carrot or root type vegetable and green leafy vegetables growing at any given time). A small amount of lesser-known vegetables are also grown to introduce these foods to people who may be interested, which also increases the visibility and awareness of these plants (e.g. lemongrass & kale). Some fruits (e.g. lemons, tomatoes and melons) have also been grown in the garden. Grown produce is provided to WAMS Chronic Disease clients. When there is excess vegetable production, DEG Elders and Barwon Cottage (a women's safehouse in Walgett) are provided with produce as well. 30% of respondents in the community survey said they received produce from the WAMS community garden.

In August 2023, 45 kg of produce was harvested from the garden for distribution to clients from town, as well as Gingie and Namoi villages. Winter vegetables were also still being produced in August after the harvest, for example. broccoli, cauliflower, celery, kale, spinach and snap peas were still available in the garden. During spring, the soil is fertilised in preparation for the summer months and spring vegetables are planted, including pumpkin, tomatoes, cucumbers, lettuce and other leafy green vegetables that are year-round produce. In 2024, it was estimated the WAMS community garden produced on average 39kg of produce each month.

Gardeners Network

Purpose

Increasing the amount of people gardening locally can influence the availability of locally produced foods, especially vegetables, fruits, and herbs. The goal of the network is to facilitate members connecting and

sharing seeds and knowledge on growing food. The target group is any community member interested in attending and gardening experience is not necessary.

Progress to date

The network of gardeners meets quarterly. There are 30 participants currently signed up for the Gardeners Network, including WAMS community garden workers and community members with productive family gardens, with an average of 10 participants at each meeting. Topics discussed at these meetings include growing seasonal produce, composting, native grains, seed raising, propagation methods and controlling pests. There is also an opportunity for people to swap seeds or produce.

The previous general manager of the Walgett Shire Council, a keen gardener himself, was so impressed with the Biofilta wicking beds he asked WAMS to share supplier contacts and installed 12 Biofilta beds in Walgett's camping area in Alex Trevallion Park.

Healthy Supermarket Initiative

Purpose

The 2022 community surveys highlighted that there may be a lack of availability, affordability and accessibility of healthy foods for the Walgett community. The aim of this activity is to collaborate with the local supermarket to create a healthy supermarket environment, where healthy foods and drinks will be readily available, accessible and affordable.

Progress to date

Supermarket Scoping Survey

A supermarket scoping survey was conducted in January and February 2023 by DEG's Food and Water for Life Project Officer, WAMS and TGI dietitians and TGI Aboriginal research assistant to understand the current level of healthiness of the supermarket food environment.

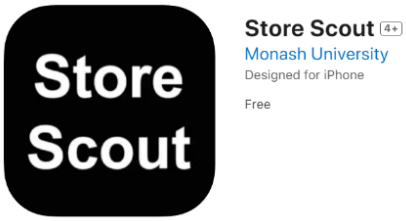

Figure 13 Store Scout app

The Store Scout application (McMahon et al. 2020) was used to evaluate the overall healthiness of the supermarket based on product availability and variety, placement in the store (e.g. visibility, accessibility and shelf/store position), pricing and promotion (e.g. displays and advertising).

Results

Key findings from the supermarket scoping survey have been compiled and presented to the supermarket manager to help with discussions about the supermarket healthiness, including recommendations to enhance the healthiness of the store. The full report will be published soon.

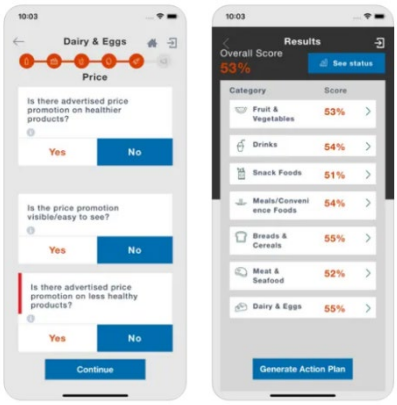

Figure 14 Store Scout app

Wobblers

The wobblers, a sign that protrudes from the supermarket shelf, is an initiative to help with the promotion of the healthiest packaged products throughout the supermarket. During the scoping survey, the Good Tucker application (Thumbs Up Foundation 2023) was used to assess the healthiness of packaged foods available. 92 of the healthiest products were identified to be included in the wobblers promotions, as shown in Figure 16. Promotional signs are in development and ideas on how to distribute this information to the community and promote these healthy food choices is currently in discussion.

Figure 15 Good Tucker app

Figure 16 Summary of the Healthy Supermarket Audit

Meal of the Month

Purpose

Meal of the Month's aim is to promote affordable, healthy recipes that require limited equipment to make. Each recipe is designed to offer good nutrition, be easy to prepare, and use low-cost ingredients from the local IGA. The food and water security survey results show that some people don't have access to ovens or electricity and have limited resources in terms of cooking equipment, therefore recipes are developed using one pot and minimal cooking utensils (Tonkin T et al. 2023).

Progress to date

Demonstrations are held at the IGA once a month on a Friday, providing a sample of the meal and promoting the recipe. Packages of ingredients are prepared to give away in a raffle on the day to people who have tasted the Meal of the Month, and a $50 voucher is awarded to entrants who have prepared the meal at home and entered a photo of it in a social media competition. There have been 21 demonstrations held between September 2022 and December 2024. Figures 17–19 show attendance of Meal of the Month and the recipes used in each demonstration. Some Meal of the Month demonstrations were cancelled due to Sorry Business.

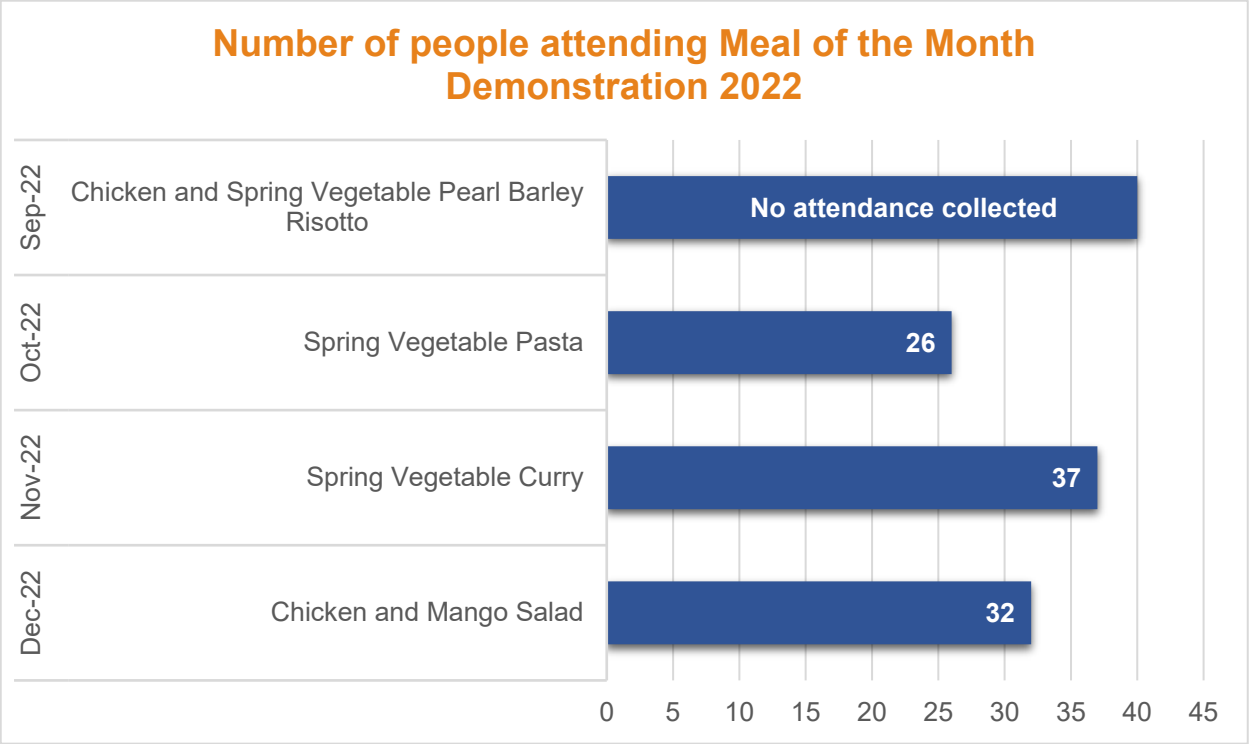

Figure 17 2022 Meal of the Month recipes and attendance. September 2022 was the soft launch of Meal of the Month with attendance not recorded.

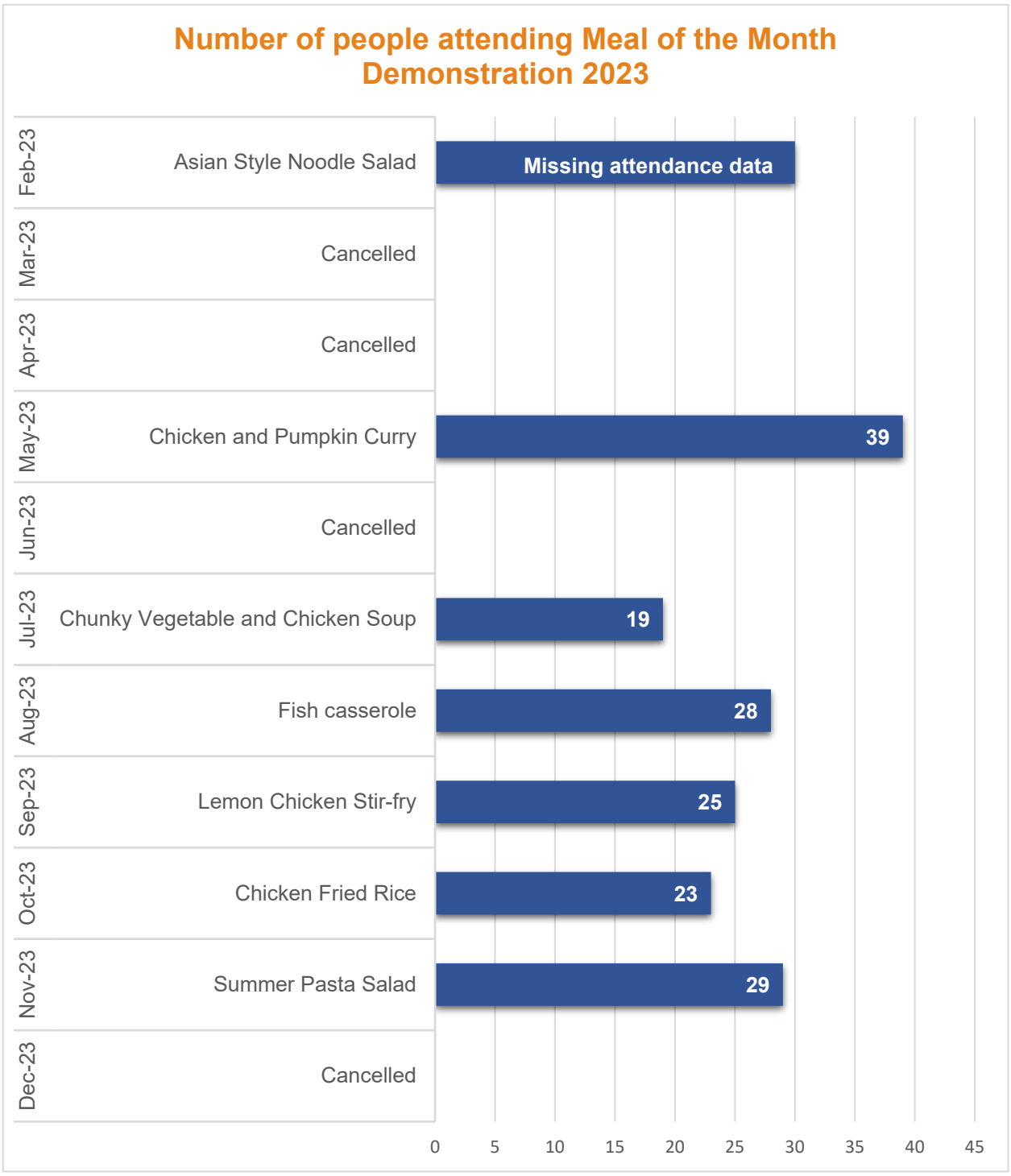

Figure 18 2023 Meal of the Month recipes and attendance

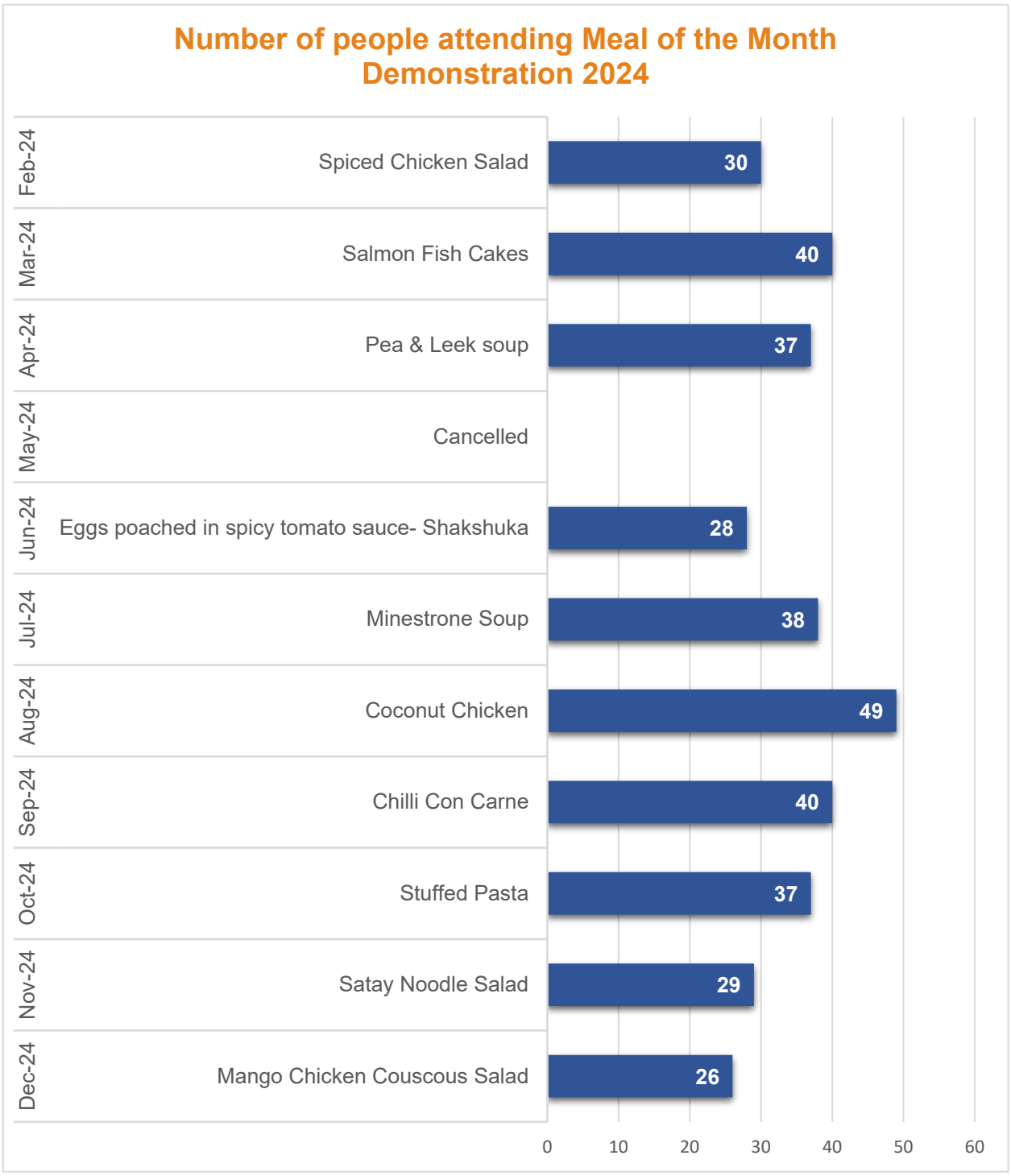

Figure 19 2024 Meal of the Month recipes and attendance

Meal of the Month recipes are developed to meet key affordability and nutrition goals.

- **Affordability**—The costing for recipes is collected using receipts from IGA when ingredients are purchased for demonstrations. This is then divided by the number of serves for the recipe to determine the cost per serve. The benchmark set per serve is $3.50.
- **Nutrition**—Recipes are checked by the WAMS dietitian to ensure there are vegetable, protein and carbohydrate sources in the recipe.

Meal of the Month Evaluation survey

In 2024, DEG staff led the design and implementation of a survey to evaluate Meal of the Month. Community members were invited to complete the survey at Meal of the Month demonstrations and through individual engagement.

22 people completed the Meal of the Month evaluation survey over a 4-week period, with 68% identifying as Aboriginal, 27% identifying as non-Indigenous and 5% did not answer. Figure 20 shows the age ranges of Aboriginal participants, with majority being in the 35-44 year age range.

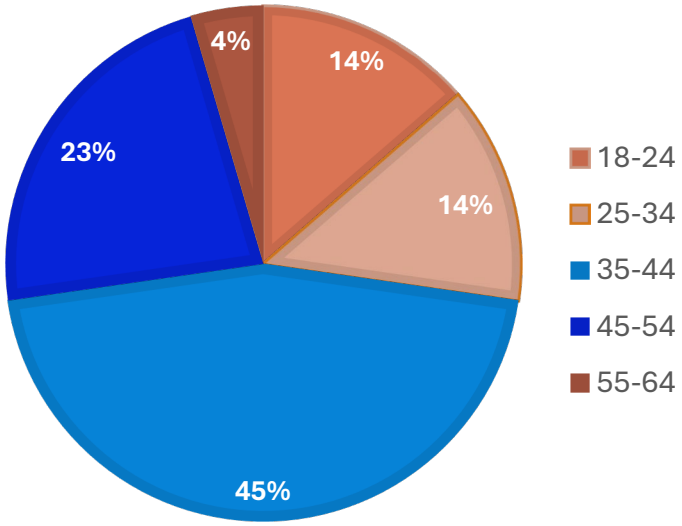

Figure 20 Age Ranges of Aboriginal Participants

87% of Aboriginal participants had heard about Meal of the Month.

- 69% heard about it in-store
- 46% heard about it through word of mouth
- 31% heard about it through the flyers
- No one reported hearing about it from radio or Facebook.

60% of Aboriginal participants thought the recipes were suitable for their families and 53% had tried the Meal of the Month.

The number of times Meal of the Month was tried is shown in Figure 21.

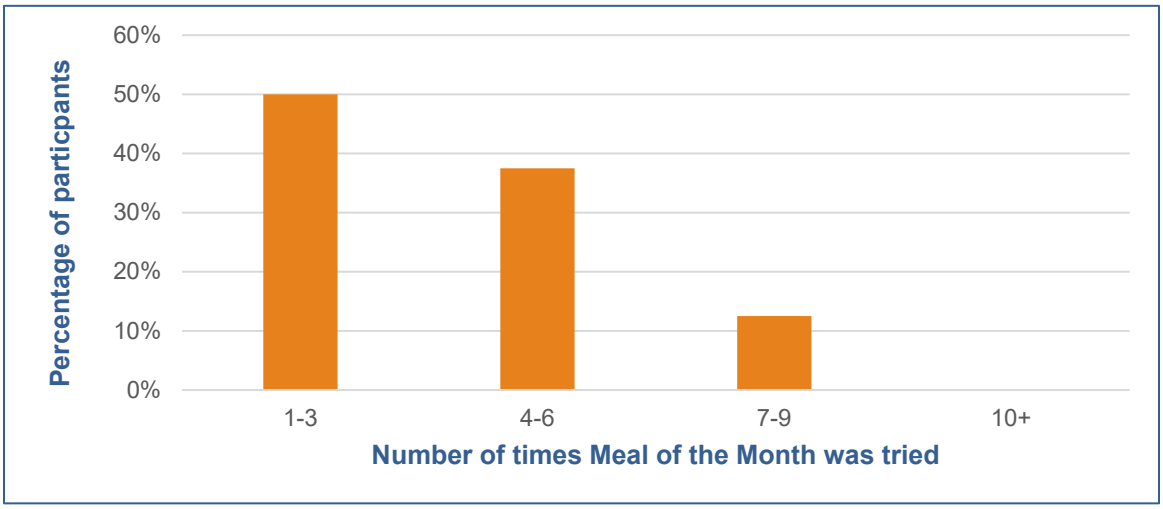

Figure 21 Number of times Meal of the Month was tried

Reasons people provided for not trying Meal of the Month included being unable to get to the demonstration at the time it is on, too busy to stop while shopping and unsure about trying new meals, as shown in Figure 22.

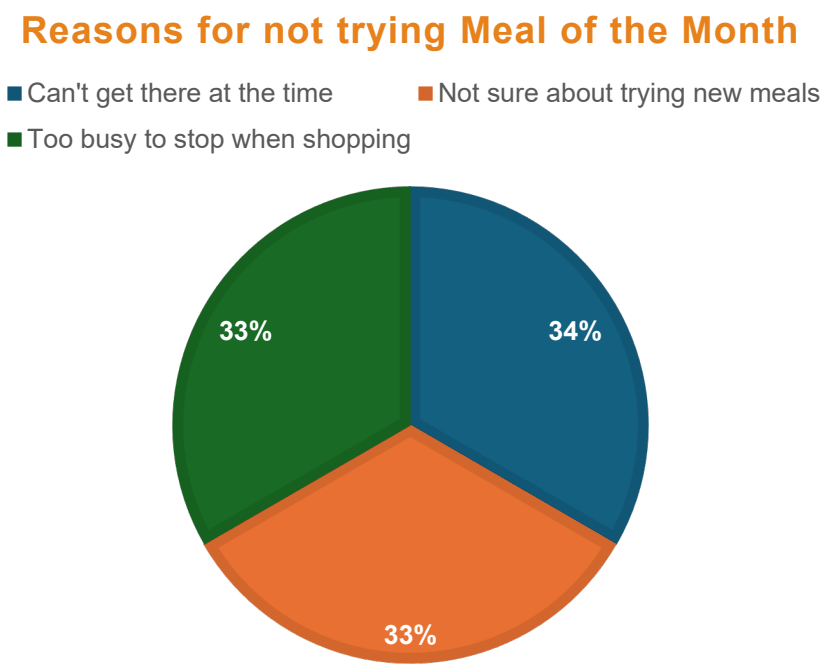

Figure 22 Reasons for not trying Meal of the Month

Walgett Community College Food Program

DEG & WAMS successfully advocated for new food initiatives at Walgett Community College's primary and high schools through the School Reference Group, informed by knowledge and advice generated through the Food and Water for Life program. There was shared understanding of the importance of children having good nutrition to help them concentrate and succeed at school.

All children attending Walgett Community College now receive breakfast, recess and lunch at school. Food is served cafeteria style providing nutritious and attractive food options for students.
The Food and Water for Life team is hoping to continue to work with Walgett Community College's new leadership team on food initiatives, including use of the high school community garden.

Community Frozen Meal Program

The Food and Water for Life team have been planning a Community Frozen Meal program to launch in 2025. The program will provide free, nutritious frozen meals to the community with the aim to make healthy meals more accessible. Several recipes have been trialled, including chilli con carne, coconut chicken curry with rice and pumpkin soup, and feedback provided by community members.

DRINKING WATER ADVOCACY

Yuwaya Ngarra-li worked carefully with advisors to develop and implement an effective advocacy strategy to ensure the concerning results of the community surveys received appropriate media and political engagement. DEG collaborated closely with trusted journalists over many months to ensure media coverage accurately and sensitively conveyed the survey results and centred the voices of Aboriginal people in Walgett, identifying and supporting community members and other spokespeople to be featured in media stories. An upcoming election in NSW also provided an opportunity for DEG to lead important advocacy efforts to ensure that Walgett's rivers and drinking water were a political priority, with the aim of ensuring long-term solutions, including that Walgett Shire Council has the ongoing capability needed to ensure safe drinking water.

Following the release of the food and water security survey results to widespread coverage on the ABC's *7.30* (Williams, 13 April 2023) and the *Sydney Morning Herald* (Patty, 13 April 2023), amongst other outlets, incoming NSW Minister for Water Rose Jackson visited Walgett and committed to providing a long-term solution to Walgett's drinking water:

> ***Minister Jackson vows to fix Walgett water*** **(Minister for Water, 28 April 2023a)**
>
> *Minister for Water Rose Jackson will visit Walgett today to meet with the local community to get a better understanding of the water challenges facing their town.*
>
> *"I promised Walgett residents that I would put their concerns about water quality front and centre and that's what I am doing," Ms Jackson said.*
>
> *"The local community has said loudly and clearly, over a long period of time, that water quality and security is on top of their priority list, and I want them to know I am listening carefully and take everyone's views seriously.*
>
> *"There's no doubt the level of risk to water security in remote towns like Walgett is too high and I am taking actions to address this.*
>
> *"I am looking forward to getting out on the ground and meeting with locals face-to-face, including the Walgett Aboriginal Medical Service and the Dharriwaa Elders Group, to hear what they have to say so I am in a stronger position to support and advocate for them moving forward.*
>
> *"While I know there is no quick fix when it comes to water security in Walgett – I have already been making great headway in the short time I have been minister by fast-tracking solutions to address a lot of these ongoing issues.*
>
> *"I have been briefed and am aware that the department are working with council to address these serious issues, but I have made it clear that we must act fast to fix this.*
>
> *"It is not good enough to have local communities facing this level of uncertainty regarding the*

water quality and security. We need to do more and that is why I am here today to make sure this happens.

"From my briefings, it has been brought to my attention that the water treatment will commence as of mid-next week. I will be following the status of this closely to ensure there is no further delay.

"In addition, I have asked the department to provide ongoing training to help uplift the skills of council's water operations staff including remote support via video technology that will provide real-time assistance.

"But I want to make it clear the conversation doesn't end here – I will continue to work with the Walgett community and the department to make sure we are looking at every option on the table to provide long term water security solutions."

A week later, the Minister issued a further media release:

Walgett successfully switches to river water **(Minister for Water, 3 May 2023b)**

For the first time since 2020, Walgett will no longer solely rely on salty bore water as its main water source with the town taking the first steps towards switching to river water.

Minister for Water, Rose Jackson said she was thrilled to hear council has begun transitioning the water treatment plant back to the Namoi River, which would improve the taste and quality of town water over the coming days.

"This is such great news. The residents of Walgett deserve to have access to clean, drinkable and palatable water like other communities around the state," Ms Jackson said.

"We've started today but switching the plant to river water is a complex process that takes time, which is why it will be happening in stages over the next week."

It has been 3 years since the Namoi River was used as the town's main water supply and it will take a while for the salty bore water to be flushed out of the water network and for residents to notice a difference in the taste of their water.

Ms Jackson said, "It has taken far too long for the switch over to happen, and it will still take some time for the treated river water to flush through the system to people's taps. But this is significant progress."

"The great news is we have experienced water operators from my department on the ground supporting Walgett Council staff and overseeing the transition to help troubleshoot if there are any issues.

"I want to specifically make a shout out to the engineers and plant staff at Walgett Council and Department of Planning and Environment (Water) who made this possible. These frontline

workers keep our state working and we owe them so much.

“I also want to thank the community for their patience and understanding while we perfect the treatment process.

“As we transition over to river water, we will be closely monitoring water quality and will immediately update the community if anything changes.”

Ms Jackson travelled to Walgett on Friday to meet residents face-to-face and to discuss their concerns and ways to address them.

“I recognise the community has been waiting an unacceptably long time to have their water issues resolved, but I am pleased that I was able to sit down with residents in-person to hear their side of the story,” Ms Jackson said.

“More importantly, I was able to fast-track work on the ground that will enable them to have access to cleaner, more palatable drinkable water within days.

“I taste-tested the bore water and it was difficult to drink because of the sodium levels, even though it is safe and technically meets Australian Drinking Water Guidelines.

“The reality is the bores were never designed to be used for long-term water supply. They were installed in the state’s worst drought to be used in times of emergency."

The reverse osmosis plant, which removes sodium and softens the bore water, will be reinstated mid-year to address the salty taste if the bores are needed in the future.

NSW Health carried out water testing on 27 April to address community concerns about pesticides in the river. Ms Jackson said she can confirm that pesticides were not detected in the water.

Council will continue to carry out regular testing for pesticides until the end of June to give residents peace of mind and to help with the transition to river water. Council will also continue their regular testing of drinking water supplies to ensure they comply with the Australian Drinking Water Guidelines.

However, Walgett Shire Council had to switch the town water supply back to bore water in June due to instrumentation issues (Percy 2023).

In August, Minister Jackson noted that the long-term strategy was likely to involve a combination of river and bore water (Williams 2023):

"The reality is that bore water will always be in the mix," she said.

"The bores were installed to provide Walgett with an alternative water source to lean on during droughts and other emergencies such as bushfires and floods, and when there are issues with the river water treatment process."

"There is less risk supplying water from the bore rather than the river while the plant is not operational as river water requires complex treatment to make it safe to drink," Minister Jackson explained.

The implication seems to be that when the river water is not able to be used, the town will switch back to bore water - and that the reinstatement of a reverse osmosis plant will reduce sodium levels. …

Minister Jackson told the Western Plains App her government is working to ensure "that towns have higher priority access to water than commercial licenses."

Meanwhile, Member for Barwon Roy Butler has revealed that Namoi River was not used as a water source when the town was drinking high sodium water due to some council staff training issues.

"The river water was not used in the last two years due to a lack of staff training which was not communicated outside Walgett Council. I attended a visit to Walgett by the water Minister where that was resolved via training and assistance from Sydney Water," Butler told the Western Plains App

"There are a number of filtration and infrastructure issues identified, and these are under investigation and budgetary planning. I am in contact with the new Walgett GM regarding this process".

Minister Jackson said, "We will continue to work closely with Walgett Shire Council to provide technical advice and expertise to help improve water quality for residents and to identify what other infrastructure solutions are needed to help future-proof their water supplies".

She told the Western Plains they were listening closely to "the Dharriwaa Elders Group, and we know that we must do more to ensure that we're managing our rivers better".

DEG and collaborators continue to advocate for long-term solutions to Walgett's water supply, including through liaison with key ministers and senior public servants.

OUTCOMES

In 2021, Yuwaya Ngarra-li adopted an outcome harvesting method to understand its influence and contributions to change over time at various levels: for the Walgett Aboriginal community; broader place-based impacts in Walgett; and systemic influence on thinking, policy, practice and relationships beyond Walgett. Outcomes were defined as actions by or changes for individuals, organisations and groups influenced by our work (not activities or actions undertaken by Yuwaya Ngarra-li). Outcomes were analysed by evaluation advisor May Miller-Dawkins and verified to the extent possible by secondary materials, citing emails or other evidence (e.g. Hansard, records of meetings, media statements or coverage). It is likely that outcomes have been underestimated, particularly given they have been harvested retrospectively each year and methods for collecting outcomes have improved over time.

The Food and Water for Life project was identified as producing **63 outcomes with increasing systemic impact** between January 2020 and December 2023. (For more detail, see the *Yuwaya Ngarra-li 2020-2023 Evaluation and Learning Report* [McCausland et al. 2024].)

In particular, analysis of outcomes highlighted that the community surveys of food and water security of Aboriginal people in Walgett led to a high level of media and policy engagement and commitments from the NSW Government to improve the quality of drinking water and river health in Walgett and elsewhere. In addition, locally coordinated Food and Water for Life initiatives and the WAMS community garden are making a difference in the daily lives of people in Walgett and providing a scalable model for other communities.

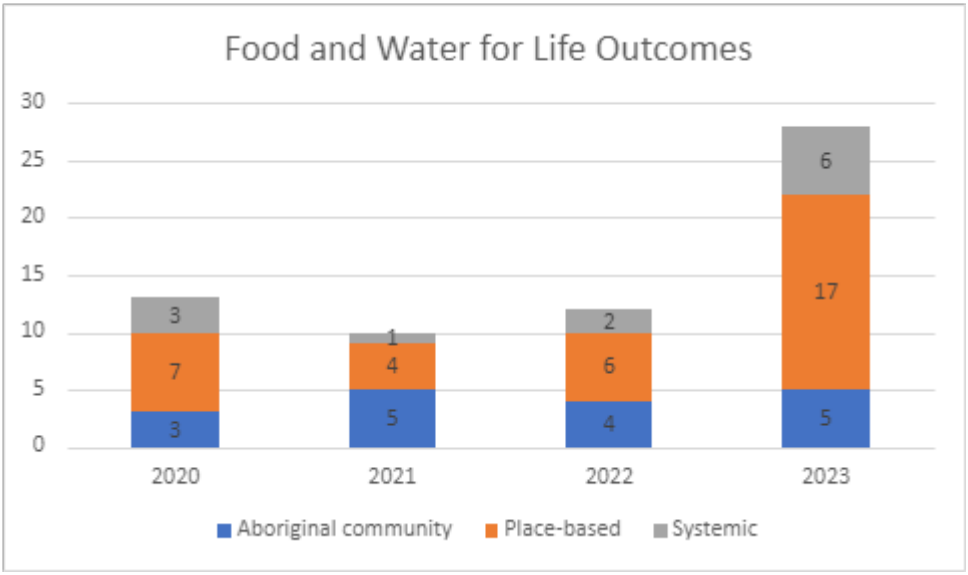

Figure 23 Food and Water for Life Outcomes

WHAT WE'VE LEARNT

In implementing and refining these community-led activities, a great deal has been learnt about building systemic and sustainable solutions to food and water insecurity in Walgett that may be relevant for other communities. Three key areas are outlined below.

The value of community surveys

The COVID-19 pandemic affected scheduling of the community surveys, with the initial plan being to run the surveys at years 1, 3 and 5 of the NHMRC grant to track any changes in the levels of food and water security. The first community survey was delayed from 2021 to 2022. The timing of the surveys was thought through in detail, with March/April settled on for various reasons including to avoid extreme heat given the surveys were undertaken outside, but while the experience of food and water security over the summer months was still fresh in people's minds. Increasing costs of living including later in 2022 meant that the levels of food and water security experienced were likely to have worsened after the surveys were undertaken. These factors highlighted the importance of context in undertaking and reporting on such surveys.

Despite the change in plans, the community surveys were significant. The extent of the levels of food and water insecurity in Walgett were measured in Australia for the first time through the community surveys, and this has made an important contribution to the evidence base around links between food and water security. The data provided the information needed to better understand the detail of these issues within Walgett and the basis for advocacy to build systemic improvements in both local and wider contexts.

The internationally validated tools that were used — the Household Water InSecurity Experiences (HWISE) and Household Food Insecurity Access Scale (HFIAS) — were chosen in order that the results could be compared globally. The Menzies Remote Short Item Dietary Assessment Tool (MRSDAT) was also adapted to survey a subsample of participants on the frequency of consumption of foods and food groups strongly associated with health outcomes. Associate Professor of Anthropology Sera Young from Northwestern University in Illinois USA provided advice on the use and adaptation of the HWISE tool, and also visited Australia and co-presented with DEG, WAMS and TGI representatives about the value of the tool in building the evidence base and accountability around improving food and water security. In a *Nature* (2023) editorial, use of the HWISE survey in Walgett was mentioned and the community briefing report of the survey results was linked to.

A decision was made not to repeat the surveys in 2024, two years after the first survey, given the time and resources involved at a community level, and the importance of DEG and WAMS staff being able to prioritise the implementation of community activities. There is an intention to repeat the survey in 2026, enabling enough time to see the impact of various local initiatives. This survey can continue to be repeated in the future to measure change and to continue to inform advocacy efforts to improve accountability from responsible agencies.

The need for improved responses to emergencies

A series of local emergencies including COVID-19 contributed to delays in the program delivery and a necessary change in focus to providing emergency food and water responses. Through this, Yuwaya Ngarra-li learnt about the systemic problems in the responses to emergencies that are enabled by current NSW legislation. This includes the inadequate prioritisation given to public health and the leadership of local Aboriginal Community Controlled Organisations (ACCOs). Non-local government agencies were placed in decision-making roles, however, were disconnected from knowledge of how to meet local community needs in an emergency. In Walgett, ACCOs had to establish a parallel emergency response to meet urgent community needs, which duplicated effort and resources and imposed a burden on the ACCO sector that wasn't funded to do such work. This highlighted the need for regulatory change in emergency responses as well as building local ACCO emergency response capabilities as the organisations best placed to provide an efficient, effective response in Walgett.

In partnership with WAMS and DEG, UNSW researchers are undertaking a new project that aims to understand the impact of recent disasters for Aboriginal people in Walgett and to determine what regulatory changes, resources, supports, services and environments are required to facilitate optimal survival, wellbeing and recovery when disasters strike. The project aims to inform the improvement of responses to, and recovery from, disasters in Walgett and other similar communities, centering the knowledge and expertise of ACCOs.

The importance of continuing to refine our approach

In building long-term community-led solutions to food and water security in Walgett, it has been important to continue to plan, document, reflect and refine our approach. Being able to reorient and respond to local needs, in particular during times of crisis, has been a great strength of the Food and Water for Life program. As well as the activities above, at times that has also involved providing fresh food boxes, drinking water and grocery vouchers to Aboriginal families in Walgett experiencing financial hardship. Our approach has involved creating and leveraging opportunities for change at the individual, family, community and systemic levels. This includes supporting people to make healthier choices, collaborating with retailers and agencies to work differently, and working to ensure the accountability of those with the power and responsibility around long-term solutions so Aboriginal people in Walgett and elsewhere have access to nutritious food and safe drinking water.

The ongoing refining of our approach has been enabled by regular collaboration in person and online. This has included a core Food and Water for Life working group of DEG and WAMS staff meeting with advisors from TGI and UNSW to discuss progress on current community activities and plans for new initiatives, along with a Research and Evaluation meeting to cover upcoming publications, presentations, research and evaluation activities. Annual reflection and planning sessions have also been important in gathering data on outcomes and reorienting priorities and strategy where needed.

WHAT'S NEXT?

Future Priorities & Actions

Community Activities

Strengthening the program of community-led food and water security activities in Walgett, including through:

- Ongoing planning to embed a sustainable community food program to enable ongoing access to healthy, fresh food
- Continuing to work with the Walgett supermarket to improve access to healthy and affordable foods
- Continuing to expand the capacity of gardens in Walgett to be able to provide more community members with fresh, locally grown fruit and vegetables.

Advocacy

Further the goals of the program by advocating for government to:

- Work more closely with ACCOs and support community-led responses to address food and water insecurity
- Guarantee long-term access to safe drinking water in Walgett, involving relevant local, state and national agencies collaborating with experts and local ACCOs.

Research and Evaluation

Ensure rigorous research and evaluation activities are embedded across the program and contributing to the evidence base around community-led food and water security programs, including:

- Refining and implementing an evaluation strategy for individual community activities and the program overall
- Undertaking community surveys and qualitative research with Aboriginal people in Walgett as appropriate.

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