



Mitigating climate change to optimise Aboriginal and Torres Strait Islander health A response to the Climate Health WA Inquiry

This submission has been developed by the National Aboriginal Community Controlled Health Organisation (NACCHO) with input from our affiliate, the Aboriginal Health Council of Western Australia (AHCWA), the state-based peak body supporting and representing 23 Aboriginal Community Controlled Health Services (ACCHSs) in Western Australia. It puts forward a range of recommendations, with a full list provided at the end of this submission. Along with the need for adequate funding for climate change mitigation strategies, central to our recommendations is for government, ACCHSs and other service providers to co-produce solutions, from design through implementation to evaluation.

About us

NACCHO is the national peak body representing 145 ACCHSs across Australia. The primary health care provided by each ACCHS is holistic, comprehensive and culturally competent, initiated and operated by Aboriginal communities through a locally elected Board of Management. Nationally, ACCHSs provide about three million episodes of care per year to about 350,000 people, which includes about one million episodes of care in rural and remote regions.

Introduction

The impacts of climate change amplify health and wellbeing issues facing Aboriginal and Torres Strait Islander people and communities. The impacts are most particularly felt in rural and remote regions, as changes in climate patterns cause greater frequency, severity and duration of extreme weather events, which affects the natural and built environment. As the United Nations Association of Australia stated in its recent position paper, “Australia’s management of climate change should be based on on-ground, collaborative action ... guided by long-term planning at all levels of government”.¹ To address these complex and interrelated issues, this submission responds to the Terms of Reference, with a focus on:

- A. The impact of climate change on Aboriginal and Torres Strait Islander peoples and communities;
- B. Strengthening the preparedness and resilience of Aboriginal Community Controlled Health Services (ACCHSs) against extreme weather;
- C. Strengthening the preparedness and resilience of Aboriginal and Torres Strait Islander peoples; and
- D. Assisting ACCHS’s to mitigate their contribution to climate change.

Part A. The impact of climate change on Aboriginal and Torres Strait Islander peoples and communities

To mitigate the impact of climate change in WA, a greater focus must be placed on its effect on environmental health (including all aspects of the natural and built environment) as well as the social determinants of health, i.e. the conditions in which people are born, grow up, live, work and age². International climate science reports indicate that Australia is especially vulnerable to climate changes and its impacts, pointing to heightening risks associated with heat, drought and bushfires. It is anticipated there will be an increasing impact on long sections of coastline, river deltas, wetland areas and off-shore islands due to erosion and saltwater inundation, and inland areas will also be more prone to bushfires, dust storms, extremes in temperatures, flooding and droughts.³

The impact of climate change compounds through the social determinants of health of individuals and communities. These include housing, employment conditions, education, social relationships, income, poverty and the distribution of power and resources. The legacy of colonisation, including the persistence of racism, discrepancies in life outcomes and the lack of co-production of public policy and

¹ United Nations Association of Australia, 2019, <https://www.unaa.org.au/wp-content/uploads/2019/02/>

² World Health Organisation, 2019, *Social Determinants of Health*, <http://www.euro.who.int/en/health-topics/>

³ CSIRO, 2012, *Marine and Atmospheric Impacts on Remote Indigenous Communities in Northern Australia*



programs with Aboriginal and Torres Strait Islander people, further compound the impacts of climate change. Aboriginal and Torres Strait Islander peoples living in remote areas face particularly difficult challenges relating to housing conditions, environmental health and food costs as a result of weather and environmental changes. To adequately respond to these diverse and interrelated factors, there is a need to partner with the broader social services sector to improve outcomes in education, employment and housing on physical, social and emotional health (as per Recommendations 15 and 24 in the WA Governments' Sustainable Health Review (SHR)).⁴

The impact of heavy rain and flooding

Heavy rain and flooding, as well as ensuing erosion, impacts Aboriginal and Torres Strait Islander peoples and communities. This has a particular impact on roads in rural and remote regions due to few being sealed, which restricts access in and out of communities. Access to specialist care and supply of medications is inhibited, and residents' physical, social and emotional health and wellbeing impacted.

The Kimberley region is particularly vulnerable to flooding. ACCHSs found it difficult and costly to fly medical supplies and other goods (including fresh and vegetables) in and out of Broome during the 2017-18 wet season, and transporting basic goods and services into Fitzroy Crossing was impossible. Failing to get essential medical supplies to communities has resulted in Aboriginal and Torres Strait Islander communities facing health epidemics and people experiencing a range of preventable health conditions that the rest of the population do not experience. Some of the conditions include rheumatic heart disease, otitis media (ear conditions), trachoma (eye conditions), scabies and also leprosy.

Extreme temperature ranges

WA is increasingly experiencing extreme temperature fluctuations—from cold at night to very hot during the day. As a result of greater extremes and very high electricity costs (with no options on suppliers) coupled with lower household income, more and more Aboriginal and Torres Strait Islander households are unable to run air conditioners and heaters, and instead endure the heat and the cold, causing and worsening poor health. Often housing that Aboriginal and Torres Strait Islander people occupy does not have air-conditioning and heating infrastructure.

Dust and damp

Dusty conditions, created from increased wind, rain, storms (and ensuing erosion) as well as mining activity, cause irritation of the eyes, coughing, sneezing, hay fever and asthma attacks. High rates of rheumatic heart disease, asthma, chronic obstructive airways disease, emphysema, otitis media, and trachoma are experienced by Aboriginal and Torres Strait Islander peoples, and even small increases in dust concentration worsen symptoms. Reducing the impact of dust is a healthy living practice for keeping families well, identified by Uwankara Palyanku Kanyintjaku (UPK).⁵ Damp and mould developed in colder and prolonged winter weather cause similar health problems, and is common in rural and remote communities. Inhaling mould fragments or spores can inflame the airways, causing nasal congestion, wheezing, chest tightness, coughing, and throat irritation. Prolonged exposure to high levels of indoor dampness can reduce lung function and cause asthma and other chronic health problems.

Water quality

Climate change also puts water quality and supply at risk, with current levels diminishing and often critical. The United Nations' Sustainable Development Goal (SDG) for water⁶ identifies that safe drinking water is a major determinant of health and wellbeing, with wastewater treatment and hygiene practices essential. However, despite Australia being a signatory to the SDGs, which involves being committed to ensuring all Australians have access to quality water, there are many Aboriginal and Torres Strait Islander

⁴ WA Government, 2018, Sustainable Health Review. <https://ww2.health.wa.gov.au/Improving-WA->

⁵ Bailie & Grace, 2011, Brewster, *An Ecological Approach to Health Promotion in Remote Aboriginal Communities*, p43

⁶ Water Source, 2019, *Australian Indigenous remotecommunitiesandwater, sanitation andhygiene* <https://watersource.awa.asn.au/>



peoples in remote communities across WA (and other jurisdictions) who do not. Poor water quality is linked to sugary drink consumption in regional and remote Australia.⁷ Broome and its surrounding regions face particular water quality and supply issues due to susceptibility to industrial contamination, and climate and subsequent weather changes worsen the situation. Water supplies in many communities are increasingly contaminated by microbes or naturally occurring chemicals. AHCWA identifies the need for clean, potable and sustainable water supplies across rural and remote communities.

Food sources

The impact of climate change on the environment involves adverse effects on flora and fauna—including traditional food sources (bush tucker). Combined with inaccessibility of and damage to land and water, access to a traditional, healthy diet is impeded, further impacting social and emotional wellbeing.

Housing

Housing shortages in rural and remotes communities, including in WA, result in overcrowding and homelessness, expediting poor health. Living in overcrowded housing increases the likelihood of health problems, from ear and eye infections to mental health issues.⁸ The impact of deteriorating housing on occupants, and also the lack of air-conditioning and heating, is made more severe where there is overcrowding and an inability to maintain hygiene.⁹

There are also considerable problems with the quality of existing houses. Aboriginal housing and public housing used by Aboriginal and Torres Strait Islander people is often not constructed from high quality materials, and older houses (over 10 years old) often did not adhere to building codes. Extreme weather events increase the speed and extent of deterioration of this low quality housing, resulting in the formation of mould, rusting of pipes and damage to doors and windows, which adversely effects occupants' wellbeing and safety. Resultantly, occupants' physical health, economic productivity, psychological wellbeing, social vigour and protection from health hazards and security (from break-ins) is compromised. Not only do existing structures need to be upgraded, but future developments need to be designed and engineered to appropriate standards (including environmentally sound cooling, heating and ventilation systems). In addition, maintenance and repairs need to be carried out effectively by a transparent and accountable process¹⁰, in accordance to the changing environmental conditions.

Community infrastructure

There is an increasing need to upgrade aged and deteriorated community infrastructure. In many rural and remote communities there are no footpaths, limited sealed roads, curbing and guttering, and unsafe recreational areas. More so, inadequate town planning and development standards are not uncommon, and local councils often face a backlog in infrastructure repair and maintenance requests.

Impacts on particularly vulnerable people and communities

Aboriginal and Torres Strait Islander children and youth, mothers and babies, the elderly and people with a disability and/or chronic condition in rural and remote communities are most susceptible to the impacts of climate change. This includes susceptibility to diseases and infections. As with other jurisdictions, in WA notifications of Aboriginal and Torres Strait Islander peoples having bloodborne, gastrointestinal, vaccine preventable and vector borne diseases, and bacterial and sexually transmissible infections remain high.¹¹ Strategies for mitigating the impacts of climate change must centre on the prevention and early intervention of diseases and infections. The WA Government must transform its

⁷ AWA, 2019, Poor water quality is linked to sugary drink consumption, <https://watersource.awa.asn.au/>

⁸ NACCHO and The Royal Australian College of General Practitioners, 2018, *National guide*

⁹ Water Source, 2019, *Australian Indigenous remote communities and water, sanitation and hygiene*, <https://watersource.awa.asn.au/>

¹⁰ WA Auditor General Report, 2015, https://audit.wa.gov.au/wp-content/uploads/2015/05/report2015_08-AbServices.pdf

¹¹ Department of Health, 2019, *National Notifiable Diseases Surveillance System: Numbers of notifications of all diseases*



approach to caring for older people by implementing models of care to support independence at home—as per SHR Recommendation 14.

Social and emotional health and wellbeing

Climate change also has an adverse impact on the mental health and social and emotional wellbeing of Aboriginal and Torres Strait Islander peoples across urban, rural and remote regions. Climate change reduces the ability to access and engage in social gatherings and cultural practices, ceremonies and other activities—due to interruption of natural weather cycles, harsh weather conditions and/or inaccessibility of routes and/or destinations. Reduced cultural and community access and engagement has implications on social and cultural connectivity and wellbeing.¹²

We recommend:

1. That the prevention and early intervention of diseases and infections among Aboriginal and Torres Strait Islander people be central to climate change mitigation strategies.
2. That greater investment be made to improving and maintaining quality water sources and systems in rural and remote communities.
3. That new housing be built and existing housing upgraded to meet engineering standards and with the impacts of climate change in mind, and for regular and transparent service maintenance to be carried out.
4. That local and state governments review town planning and development standards, rectify the backlog of housing and infrastructure management and maintenance, and invest in upgrading footpaths, roads, gutters, drains, recreational areas and other community infrastructure.
5. That ACCHS's funding be increased to expand the reach and remit of environmental health services.
6. That as per Recommendation 14 of the Sustainable Health Review, approaches to caring for older people and models of care to support independence at home be reviewed and improved.

Part B. Strengthening the preparedness and resilience of ACCHSs against extreme weather

ACCHSs do a lot to strengthen their preparedness and resilience in delivering services into urban, rural and remote communities amidst extreme weather, and recognise that more can be done to further strengthen their service delivery and staff. Central to all co-production of climate mitigation and adaptation with government should be a genuine spirit of reciprocity and respect.

Service delivery challenges and opportunities

To mitigate current and pending impacts of climate change, ACCHSs take the preventive approach of developing service delivery action plans for extreme weather events and seasons. Strategic emergency planning, including regional evacuation centres and strategies, assist in efficiently responding to community needs amidst extreme weather.

To improve accessibility to communities, including during extreme weather, ACCHSs work collectively with the community, other service providers and local, state and federal government (in alignment with SHR Recommendations 15 and 24). Strategic service delivery responses that are co-produced and co-implemented with ACCHSs, the Climate and Health Alliance and other health services would avoid duplication of initiatives and ensure comprehensive state-wide responses.

Increasing temperatures during the day and resultant power outages affect the ability to keep medication refrigerated or on ice, which at times results in cold chain breaches. These outages are not only incredibly costly to ACCHSs who already receive limited funding to deliver services, but leave remote communities further vulnerable to the outbreak of disease.

¹² Ford, 2012. Indigenous Health and Climate Change. *American Journal of Public Health*, 102(7), <https://ajph.apha>



Without genuine partnership and co-production with Aboriginal and Torres Strait Islander people, communities and organisations, government efforts to close the gap in health and other outcomes fall short. Until recently, largely due to government policy not being developed in partnership with Aboriginal and Torres Strait Islander people, Closing the Gap strategies have only focused on proximal determinants (education, employment, access to health care etc.) while ignoring or undermining intermediate and distal determinants, including climate and environmental health.¹³

However, COAG's recent commitment to co-designing and implementing the next phase of Closing the Gap (2019-29) as a partnership with a Coalition of Aboriginal and Torres Strait Islander Peak Organisations ('Coalition of Peaks') is promising.^{14 15 16} This development provides opportunity for environmental health to be given a focus in the Closing the Gap agenda—with NACCHO's CEO Pat Turner being convenor of the Coalition of Peaks and co-Chair of the Joint Council alongside the Hon Ken Wyatt. The co-production central to Joint Council arrangements provides a model for future partnerships between federal and state governments, ACCHSs and Aboriginal and Torres Strait Islander people in mitigating the impacts of climate change.

Staff

Due to remoteness and extreme weather due to climate change, ACCHSs in rural and remote regions face and will increasingly face challenges in recruiting and retaining good staff—including nurses, Aboriginal Health Practitioners (AHPs), Aboriginal Health Workers (AHWs), Family Support Workers and Environmental Health Workers. The difficulty of attracting and retaining staff is compounded by staff housing and infrastructure not being fit-for-purpose in the climate in which it is situated, including a lack of or damaged heating, cooling, ventilation and water and sewerage systems.

Extreme weather also impedes the ability of ACCHS staff to deliver services, and directly impacts their own health and wellbeing. To optimise their health and wellbeing and to prevent burnout, ACCHSs provide social and emotional wellbeing training programs for staff. These internal training programs require further funding to ensure they are rolled out to all staff across all ACCHSs—large and small. ACCHSs are already aware of current climate health issues facing clients and staff, but recognise it is important to have their awareness regularly refreshed as new issues and solutions emerge.

ACCHSs would benefit from annual visits from external climate change mitigation experts. As the perspectives, experiences and expertise of Aboriginal and Torres Strait Islander peoples from thousands of years of resilience and innovation in a harsh physical environment must be drawn upon. Such engagement would need to be in a spirit of reciprocity, with visitors from 'outside of country' engaging genuinely and respectfully with local Aboriginal and Torres Strait Islander staff and others.

Additional funding to build new (and to improve existing) staff housing and infrastructure that meets engineering and World Health standards and can withstand extreme weather, would greatly assist in recruiting, retaining and ensuring the health, wellbeing, safety and resilience of ACCHS staff.

We recommend:

7. That greater intersectoral collaboration between local, state and Federal government, ACCHSs, other service providers and communities be established and implemented, with clarity of roles negotiated, in the co-production of inter-sector service delivery planning and responses to extreme weather events and seasons.
8. That ACCHSs continually look for ways to raise staff knowledge and competence as new climate change issues and mitigation strategies emerge, which, in a spirit of reciprocity, draws upon:

¹³ Southgate Institute for Health, Society and Equity, Flinders University, *Social Determinants of Indigenous Health: Policy brief*.

¹⁴ COAG 2018, *COAG Statement on the Closing the Gap Refresh 12 December 2018*, COAG, <https://www.coag.gov.au/>

¹⁵ DPMC (Department of the Prime Minister and Cabinet) 2019b, *Closing the Gap Report 2019*, Canberra.

¹⁶ Joint Council on Closing the Gap 2019, *Communique: First Meeting of the Joint Council on Closing The Gap*, <http://closingthegap.gov.au/>



- a. the perspectives and expertise of Aboriginal and Torres Strait Islander peoples past and present, from thousands of years living in a harsh physical environment; and
 - b. the expertise of external climate change mitigation professionals.
9. That in negotiation between individual ACCHSs and government, greater funding be given for:
- a. the construction and refurbishment of ACCHS's infrastructure and staff housing that withstands extreme weather and meets engineering and World Health standards; and
 - b. the delivery of social and emotional wellbeing and resilience programs for all ACCHS staff.

Part C. Strengthening the preparedness and resilience of Aboriginal and Torres Strait Islander peoples

ACCHSs do a lot to strengthening the preparedness and resilience of Aboriginal and Torres Strait Islander peoples and communities, but acknowledge that they, and government, can and must do more. There has not been enough action from national and state leadership in addressing climate change related health concerns of Aboriginal and Torres Strait Islander people and the rest of the population. Adequate funding and participation from government in co-producing outcomes with ACCHSs would strengthen climate change mitigation strategies and optimise health and wellbeing.

Housing

Many of the levers to change the determinants of health and wellbeing lie outside of the health sector. As stated in Part A, more housing and community infrastructure for Aboriginal and Torres Strait Islander peoples must be designed and built to cope with extreme weather events, including the installation of solar passive heating and cooling, full and appropriate insulation, sustainable water supplies, engineered sewerage systems and safe power connections. Dilapidated and poorly designed houses should be replaced and houses with quality fixtures (taps, sinks, electrical cabling, switches etc.), that considers local climate and weather conditions, should be built and maintained.¹⁷ Flimsy doors and windows that are easily damaged and deteriorated should be replaced with products that are resilient against the weather and also unlawful intruders.

There is also a need for additional housing to be built to reduce occupancy rates to reasonable levels. The effects of climate change are likely to necessitate some occupants spending longer periods of time within the house, including the aged, disabled and chronically ill, which can increase the psychosocial stress and risk of infectious disease transmission. It is important that government plays a role in developing, administering and enforcing design standards for housing appropriate to not only household needs but predicted climate change conditions, which allow for flexible and locally responsive housing design approaches.¹⁸ Adjustments to the housing policy environment should be made to enforce appropriate housing standards and design guidelines, while allowing sufficient flexibility to tailor designs and materials to local conditions. We put forward the recommendations we made in our 2019-20 pre-budget submission to the Australian Government:

- expand the funding and timeframe of the current National Partnership on Remote Housing to match at least that of the former National Partnership Agreement on Remote Indigenous Housing;
- establish and fund a program that supports healthy living environments in urban, regional and remote Aboriginal and Torres Strait Islander communities, similar to the Fixing Houses for Better Health program, and ensure that rigorous data collection and program evaluation structures are developed and built into the program, to provide the Commonwealth Government with information to enable analysis of how housing improvements impact on health indicators; and
- update and promote the National Indigenous Housing Guide¹⁹, a best practice resource for the design, construction and maintenance of housing for Aboriginal and Torres Strait Islander peoples.

¹⁷ Ware, Closing the Gap Clearinghouse, AIHW, Housing strategies that improve indigenous health outcomes, 2012/2013.

¹⁸ AIHW, Housing strategies that improve indigenous health outcomes, 2012/2013

¹⁹ National Indigenous Housing Guide: <http://web.archive.org/web/20140213221536/>



Water

Access to healthy drinking water is a very significant problem in rural and remote communities. Each community is different in terms of risks to water supply. In the Kimberley this can be caused by contaminants such as arsenic and geology due to the 'loose' water quality standards that are in place. High salinity and the use of shallow aquifers are problematic in many communities. Climate change and its impact on fragile environmental conditions further adversely affects water quality and the health and wellbeing of Aboriginal and Torres Strait Islander people and communities.

Waste disposal

Ideally, full sewage systems should be built and installed in smaller communities. Sustainable waste disposal systems must be installed for collecting plastic bags, straws and other rubbish that are especially harmful to life in river systems and the coast that Aboriginal and Torres Strait Islander peoples in some communities rely on for food or income.

Environmental Health Workers

All urban, rural and remote communities require an effective, well-trained and fully resourced workforce of Aboriginal and Torres Strait Islander Environmental Health Workers (EHWs).²⁰ The duties of EHWs include: improving sanitation, solid waste disposal, water quality and food safety; reducing potential harms or illness caused by exposure to hazards; preventing and controlling communicable diseases; and overseeing emergency responses. Unfortunately, after many Aboriginal and Torres Strait Islander people were employed as EHWs under the CDEP scheme, the phasing in of CDP eliminated this workforce and hence reduced the effectiveness of the delivery of environmental health services. Aboriginal and Torres Strait Islander communities would strongly benefit from the reinstatement of EHWs, particularly with training in mitigating the impacts of climate change. ACCHSs have experiences of employing and overseeing the work of EHWs.

Social and emotional health and wellbeing services

Many ACCHSs deliver social and emotional health and wellbeing services that assist in strengthening the resilience of Aboriginal and Torres Strait Islander peoples and communities. Currently, social and emotional health services delivered by ACCHSs across Australia, including Danila Dilba in Darwin, specifically focus on access to traditional and contemporary healing practices, access to support services, intergenerational trauma responses and understanding of the social determinants of health. Greater government funding for all ACCHSs to deliver these services would ensure all communities can benefit. Social and emotional health and wellbeing services should be expanded to build the capacity of Aboriginal and Torres Strait Islander peoples and communities to mitigate the impacts of climate change.

Public awareness raising and campaigning

To strengthen the preparedness and resilience of Aboriginal and Torres Strait Islander peoples and communities, a greater investment must be made in prevention and early intervention services—including public awareness raising and campaigning (as per SHR Recommendations 1 and 8). This includes raising awareness of good housing related health behaviour for keeping families and households healthy and well identified by UPK.²¹ Numerous ACCHSs across Australia are currently delivering healthy lifestyle awareness programs, with Winnunga Nimmityjah in Canberra holding healthy cooking workshops.²² Such public awareness raising can be part of the role of EHWs, into which they embed the perspectives and expertise of Aboriginal and Torres Strait Islander peoples.

Schools

Learning good health behaviours is already a part of school curriculum, but a more specific focus could be given to environmental health and household health behaviours, with teaching and learning content

²⁰ Department of Health, 2019, *Overview of Environmental Health*, <http://www.health.gov.au/internet/main/>

²¹ Bailie, 2001, *An Ecological Approach to Health Promotion in Remote Aboriginal Communities*, p43, para 4

²² Winnunga Nimmityjah, 2019, *Healthy cooking workshops*, <http://www.winnunga.org.au/>



being flexible to local issues. In rural and remote communities, the focus could centre UPK's healthy living practices. EHWs at ACCHSs could contribute to its effective delivery.

We recommend:

10. That adjustments be made to WA housing policy to allow for sufficient flexibility in tailoring designs and materials to local conditions and ensuring industry construction standards are met.
11. That, across Australia, the Australian Government:
 - a. expand the funding and timeframe of the current National Partnership on Remote Housing to match that of the former National Partnership Agreement on Remote Indigenous Housing;
 - b. establish and fund a program that supports healthy living environments in urban, regional and remote Aboriginal and Torres Strait Islander communities, similar to the Fixing Houses for Better Health program;
 - c. ensure rigorous data collection and program evaluation structures are developed and built into the program to provide the Commonwealth Government with information to enable analysis of how housing improvements impact on health indicators; and
 - d. promote and commit to clear areas of responsibility and accountability.
12. That the WA Government invest in securing healthy, potable water sources and ensure regular tests and maintenance procedures are conducted for all communities, commencing with communities most susceptible to waterborne diseases.
13. That sewerage and sustainable waste disposal systems be installed that meet not only human rights standards but industry standards, and these be regularly monitored and maintained under a transparent and accountable process.
14. That additional funding be allocated to ACCHSs to:
 - a. employ Environment Health Workers who can work in urban, rural and remote communities;
 - b. extend social and emotional health and wellbeing programs in urban, rural and remote communities, with a focus on building resilience against the impact of climate change;
 - c. extend public awareness raising on good household and personal health behaviour;
 - d. contribute to the teaching of good household and personal health behaviours in urban, rural and remote schools, with a focus on local issues and solutions.

Part D. Assisting ACCHS's to mitigate their contribution to climate change

ACCHSs across WA have gone to great lengths and cost to solve climate issues and continue to do so. They strongly advocate for more to be done. Unfortunately, taking action to mitigate climate change comes at a cost, and ACCHSs across Australia are already underfunded to deliver their core services. ACCHSs would be more than willing to contribute to further reducing their environmental footprint, as per SHR Recommendation 12, which requires working together in good faith and reciprocity with government.

What ACCHSs and AHCWA are currently doing

There are numerous initiatives taken by ACCHSs to mitigate their contribution to climate change and its detrimental impacts. Often, these initiatives are highly innovative and developed within restricted funding. Some large ACCHSs in WA have invested in larger initiatives, including:

- South West Aboriginal Medical Service (SWAMS) based in Bunbury, is collaborating with the University of Sydney (UTS) to develop a sustainable hub incorporating emerging technologies, to provide broad health, social and emotional wellbeing services to the South West; and
- Spinifex Health Service in Kalgoorlie have recently committed significant funds to install solar panels and connecting to the grid.



NACCHO

National Aboriginal Community
Controlled Health Organisation

In response to the lack of clarity about the types of health services available in rural and remote WA, AHCWA, via consultation with the health sector and the wider community, has developed an innovative, free online database called Mappa, which they aim to make publicly available in 2020. The online database provides information for service providers and users, which will be particularly useful in extreme weather events and conditions. It uses spatial mapping to enable web visualisation of critical information and services available in regional and remote areas to the public, health care professionals and other health services. It provides timely, comprehensive and reliable information related to geographical access, transport routes and weather conditions. It aims to remove the systemic barriers to enable Aboriginal and non-Aboriginal people receiving adequate and culturally competent healthcare closer to home, with family and on country where possible. The scoping and mapping undertaken to develop the dataset has provided AHCWA with strong insight into where services and service gaps exist.

What ACCHSs can further do

ACCHSs are open to making further contributions to reducing their environmental footprint—including other affordable innovations to cut carbon emissions and optimise sustainability. Puntukurnu Aboriginal Medical Services (PAMS), for example, is aiming to install solar panels at its Newman Hub Clinic and is seeking funding for this. Electricity is the biggest overhead to clinics in the Pilbara and Kimberley regions, and ACCHSs are dependent on the mining sector to provide this utility.

A good first step would be to identify the current environmental footprint of ACCHSs and other health services. From this, specific modifications to infrastructure and services required can be identified, and what funding would be required. A collaborative effort to establish and achieve targets to guide the direction of ACCHS's adoption of innovative measures, infrastructure and systems is essential.

We recommend:

15. That ACCHS's current environmental footprint and necessary modifications to existing infrastructure and service practice for mitigating the footprint be identified.
16. That as per Sustainability Health Review Recommendation 12, the WA government commit to partnerships with ACCHSs to identify and invest in innovative ways to optimise sustainability and to lessen the environmental footprint of health services.

Full list of recommendations

Part A—The impact of climate change on Aboriginal and Torres Strait Islander peoples and communities

1. That the prevention and early intervention of diseases and infections among Aboriginal and Torres Strait Islander people be central to climate change mitigation strategies.
2. That greater investment be made to improving and maintaining quality water sources and systems in rural and remote communities.
3. That new housing be built and existing housing upgraded to meet engineering standards and with the impacts of climate change in mind, and for regular and transparent service maintenance to be carried out.
4. That local and state governments review town planning and development standards, rectify the backlog of housing and infrastructure management and maintenance, and invest in upgrading footpaths, roads, gutters, drains, recreational areas and other community infrastructure.
5. That ACCHS's funding be increased to expand the reach and remit of environmental health services.
6. That as per Recommendation 14 of the Sustainable Health Review, approaches to caring for older people and models of care to support independence at home be reviewed and improved.



Part B—Strengthening the preparedness and resilience of ACCHSs against extreme weather

7. That greater intersectoral collaboration between local, state and Federal government, ACCHSs, other service providers and communities be established and implemented, with clarity of roles negotiated, in the co-production of inter-sector service delivery planning and responses to extreme weather events and seasons.
8. That ACCHSs continually look for ways to raise staff knowledge and competence as new climate change issues and mitigation strategies emerge, which, in a spirit of reciprocity, draws upon:
 - a. the perspectives and expertise of Aboriginal and Torres Strait Islander peoples past and present, from thousands of years living in a harsh physical environment; and
 - b. the expertise of external climate change mitigation professionals.
9. That in negotiation between individual ACCHSs and government, greater funding be given for:
 - a. the construction and refurbishment of ACCHS's infrastructure and staff housing that withstands extreme weather and meets engineering and World Health standards; and
 - b. the delivery of social and emotional wellbeing and resilience programs for all ACCHS staff.

Part C—Strengthening the preparedness and resilience of Aboriginal and Torres Strait Islander peoples

10. That adjustments be made to WA housing policy to allow for sufficient flexibility in tailor designs and materials to local conditions while also ensuring industry construction standards are met.
11. That, across Australia, the Australian Government:
 - a. expand the funding and timeframe of the current National Partnership on Remote Housing to match that of the former National Partnership Agreement on Remote Indigenous Housing;
 - b. establish and fund a program that supports healthy living environments in urban, regional and remote Aboriginal and Torres Strait Islander communities, similar to the Fixing Houses for Better Health program;
 - c. ensure rigorous data collection and program evaluation structures are developed and built into the program to provide the Commonwealth Government with information to enable analysis of how housing improvements impact on health indicators; and
 - d. promote and commit to clear areas of responsibility and accountability.
12. That the WA Government invest in securing healthy, potable water sources and ensure regular tests and maintenance procedures are conducted for all communities, commencing with communities most susceptible to waterborne diseases.
13. That sewerage and sustainable waste disposal systems be installed that meet not only human rights standards but industry standards, and these be regularly monitored and maintained under a transparent and accountable process.
14. That additional funding be allocated to ACCHSs to:
 - a. employ Environment Health Workers who can work in urban, rural and remote communities;
 - b. extend social and emotional health and wellbeing programs in urban, rural and remote communities, with a focus on building resilience against the impact of climate change;
 - c. extend public awareness raising on good household and personal health behaviour;
 - d. contribute to the teaching of good household and personal health behaviours in urban, rural and remote schools, with a focus on local issues and solutions.

Part D—Assisting ACCHS's to mitigate their contribution to climate change

15. That ACCHS's current environmental footprint and necessary modifications to existing infrastructure and service practice for mitigating the footprint be identified.
16. That as per Sustainability Health Review Recommendation 12, the WA government commit to partnerships with ACCHSs to identify and invest in innovative ways to optimise sustainability and to lessen the environmental footprint of health services.