

# Climate Change and Aboriginal and Torres Strait Islander Health

Adapted from [Lowitja Institute discussion paper](#), (2021)



## Key Concepts

Climate change adaptation strategies help communities adjust and cope with the impacts of global warming. Aboriginal and Torres Strait Islander peoples have a long history of adapting to different climates over millennia. The rapid pace of current changes poses new challenges for all Australians. Adaptation planning is essential to prepare for these impacts. The community's ability to adapt — known as 'adaptive capacity' — is influenced by socio-economic factors, health, geographic location and existing power structures within government. The social and cultural determinants of health play a key role in communities' ability to adapt and have agency (empowerment and autonomy).

- **Social determinants** are the conditions in which people are born, grow, live, work and age. For Aboriginal and Torres Strait Islander peoples, the continuing cycle of political, social and economic marginalisation has led to many adversities continuing to increase or remaining the same (such as systemic racism and discrimination, transgenerational trauma and unequal power structures), which may have lowered the ability of some communities to adapt to climate stresses.
- **Cultural determinants** strengthen wellbeing through connection to Country, family, kinship and community; by practising language, spiritual beliefs, traditional knowledges and healing, and self-determination.

Health and wellbeing are often deeply connected to people's entire way of life. For Aboriginal and Torres Strait Islander communities, good health depends on respectful relationships with the land, culture, spirituality, community, and family. It is a cultural duty to care for oneself (including physical, mental and emotional wellbeing), others (family and community), and the environment (our connection to the land).

Historically, Aboriginal and Torres Strait Islander peoples had free access to their ancestral lands' resources, managing them sustainably and passing down ecological

wisdom. Colonisation disrupted these ties, causing loss of land, destruction of languages and intergenerational trauma from forced child removals, continuing to affect wellbeing and creating health disparities with non-Indigenous Australians.

Aboriginal and Torres Strait Islander peoples frequently face chronic conditions like diabetes, heart disease, and kidney disease, which can be worsened by limited health services if they live in remote areas.

Extreme weather events bring direct and indirect health impacts, affecting air and water quality and altering employment and housing situations. For those who live in central and northern Australia, inadequate housing insulation and high energy costs can create significant distress. 'Power poverty' forces tough choices between essential needs like food and cooling, especially critical for those requiring refrigerated medicines. In the Torres Strait, if there is a lack of air conditioning and high humidity, it can lead to severe heat stress. These climate change-related impacts affect communities through changes in natural systems (air quality, water security and disease patterns) and social systems (employment, housing and healthcare).

## **Direct impacts on health**

### **Extreme temperature:**

Heatwaves can worsen chronic diseases and reduce productivity. With climate change, heat-related deaths and illnesses are expected to rise across all Australian demographics. Extreme heat risks impair motor and cognitive functions, raise accident risks in sectors like agriculture and mining, and negatively affect pregnancy and mental health. Urban areas like Perth and Brisbane see more emergency visits due to heat and poor air quality, particularly among First Nations communities. Hot conditions also decrease physical activity and increase interpersonal violence due to irritability, posing risks in hotter inland and northern regions where temperatures are projected to rise significantly.

### **Extreme fire weather, bushfires, smoke, and air pollution:**

Climate change is likely to boost extreme fire weather frequency, linking to severe events like the 2019-2020 'Black Summer' bushfires in southeastern Australia, which heavily affected First Nations communities. Bushfires threaten infrastructure, water security and respiratory health through increased ozone and particulates. Traditional First Nations fire management offers effective hazard reduction, and with further integration of these practices with Western science, it would enhance sustainable fire management.

**Drought (and desertification):**

Decreased rainfall in southern Australia is expected to cause more frequent droughts, impacting food production and increasing bushfire and dust storm risks. These droughts result in significant economic and health impacts, including worsened mental health from the stress of witnessing land degradation. First Nations communities in remote areas are particularly vulnerable to dust pollution, affecting cardiovascular and respiratory health across broad geographic areas.

**Cyclones, extreme rainfall, floods:**

Cyclones and floods damage property and disrupt food security through crop losses and water contamination. Warmer sea temperatures are predicted to intensify cyclone severity, extending further inland and southward in Australia. For example, Cyclone Debbie in 2017 caused significant damage in Queensland and New South Wales. These events hit rural First Nations communities hard, increasing psychological distress. However, Aboriginal and Torres Strait Islander communities are often excluded from disaster planning. To avoid further traumatic displacement and respect for Aboriginal and Torres Strait Island perspectives and cultural contexts, engaging with these communities is essential to improve disaster preparedness, response and recovery.

**Indirect impacts on health from changed natural systems****Food security:**

Climate change threatens the productivity of local crops and traditional food sources for Aboriginal and Torres Strait Islander communities due to extinctions and shifts in biodiversity. Rising temperatures and coastal erosion disrupt traditional breeding patterns and seasonal cues, hindering First Nations communities' ability to sustain traditional food practices. This can result in decreased nutritional quality and increased reliance on expensive, store-bought foods, particularly in remote areas. Extreme weather also risks further disrupting food supply chains, increasing costs and reducing food availability.

**Water security:**

Reduced rainfall and increased droughts are straining both surface and underground water resources, threatening the water supply for communities who rely on this water source. Saltwater intrusion and storms risk contaminating freshwater, worsening shortages, drying ancient waterholes and endangering the safety of sacred sites reliant on groundwater. In the Torres Strait, expensive desalination is often the only option for drinkable water. Poor water quality heightens the risk of diseases such as diarrhoea and hepatitis, highlighting the need for sustainable water management to protect community health and wellbeing amidst changing climate conditions.

**Infectious disease:**

Warmer temperatures and more humid conditions are expected to increase the spread of mosquito-borne diseases like Dengue and Ross River Virus, especially in areas with stagnant water and limited health services. Food and waterborne diseases, such as salmonella and melioidosis, are also likely to rise with changing climate conditions. Additionally, the risk of airborne diseases like tuberculosis could increase in the Torres Strait due to favourable conditions for disease spread.

**Indirect impacts from changed social systems****Housing and community infrastructure:**

Substandard housing and overcrowding significantly impact health. Poor housing quality heightens health risks during extreme weather events like heatwaves and cyclones. Overcrowded conditions, as seen during the COVID-19 pandemic, facilitate the spread of infectious diseases. High energy costs in regions like Central Australia discourage air conditioner use, impacting heat adaptation. Inclusive community development is essential in planning and adapting to climate impacts because it ensures equitable benefits and addresses concerns.

**Intangible loss and social and emotional wellbeing:**

Climate change causes intangible losses that affect cultural roles and emotional wellbeing. Events like storms and droughts disrupt cultural practices and exacerbate mental health issues, including depression, anxiety and climate change anxiety. Emotional distress varies by gender and age, with Aboriginal and Torres Strait Islander Elders more at risk of feeling intense solastalgia (the distress produced by environmental change impacting people while they are directly connected to their home environment). This is due to environmental changes impacting their connection to Country. Disruptions also impact employment and cultural continuity, heightening feelings of anger and helplessness.

**Impact on health service provision:**

Climate change challenges the delivery and effectiveness of healthcare, particularly in remote areas. Extreme weather makes transporting essential goods and services costly and complex, as seen in the Kimberley region's 2017/2018 flood season. Climate impacts strain the health system, with vulnerabilities in energy, water and transport affecting care delivery. Staff shortages and inadequate infrastructure heighten health disparities, particularly when healthcare workers leave regions because of the climate. This can reduce access to services for First Nations communities and increase existing inequalities.

Source: adapted from 'The Climate Change and Aboriginal and Torres Strait Islander Health Discussion Paper' by [Lowitja Institute](#)