

Reducing Health Impacts of Climate Change in Gippsland

The **World Health Organization** has described climate change as the greatest threat to public health in the 21st century. The health impacts of climate change will disproportionately affect priority populations, with increasing climate-related disasters and extreme weather events threatening the wellbeing of people and communities already at risk.



Health impacts of climate change

Direct effects include:

 **Heat-related illness:** heat stress, dehydration, and heat-related deaths

 **Severe weather events:** trauma, injury and respiratory issues from bushfires, floods and storms

Indirect effects include:

 **Long-term health risks:** increased risk of chronic illness associated with prolonged exposure to air pollution

 **Reduced food and water security:** reduced crop yields, contamination of water supplies and food scarcity impacting nutrition and health

 **Infectious diseases:** changing climates allow mosquito-borne diseases to spread, increasing the risk of food/waterborne illness such as gastroenteritis

 **Poor mental health:** increased rates of anxiety, depression, post-traumatic stress disorder (PTSD) and climate-related grief resulting from extreme weather events and concerns about the future

Projected changes for Gippsland

Rising temperatures with longer and more intense heatwaves: increasing heat-stress, risk for people, wildlife, livestock and crops. Climate modelling predicts by 2050, the number of hot days could triple under a high emissions scenario, and by 2090, hot days may occur almost five times as often 

Higher risk of bushfires: warmer temperatures, drier periods and heatwaves are expected to increase fire danger, lengthen fire seasons and increase the likelihood of bushfires 

Changing rainfall patterns: an overall decline in rainfall, with increasing variability, is projected. Rainfall is expected to decrease during cooler months, while changes to summer rainfall remain less certain 

More intense rainfall events and increased flood risk: despite overall declines in rainfall, when rain does occur it is more likely to fall in intense bursts, increasing the risk of flooding and storm-related damage 

Sea-level rise and coastal risks: as with the rest of coastal Victoria, sea levels around Gippsland are projected to continue rising over the next century 

Populations most vulnerable to health impacts

 **People with disabilities and chronic disease:** likely to experience mobility and/or health challenges, especially in disasters like floods, bushfires and heatwaves

 **Elderly individuals:** increased risk of heat-related illnesses, respiratory issues and social isolation

 **People experiencing socioeconomic disadvantage, including homelessness:** reduced access to climate-resilient housing and health services

 **Aboriginal and/or Torres Strait Islander communities:** compounded vulnerabilities due to historical and social inequities

 **Women and children:** increased risk of mental health challenges and family and domestic violence during, and after, extreme weather events

 **Pregnant people:** increased vulnerability to preterm birth and pregnancy complications associated with extreme temperatures and bushfires

Community perspective

7 in 10 people across Gippsland were concerned about climate change in a Victorian Department of Environment, Land, Water and Planning survey in late 2017 (over 350 respondents):

-  Worsening bushfire risk was the top concern
-  Most residents felt well-informed
-  Most think the community is not well prepared

Themes from Gippsland PHN engagement include:

-  Climate anxiety as an ongoing concern
-  Concern about isolation when essential services like electricity, internet and phone services are impacted
-  High recovery costs following disasters impacting health and wellbeing

“ [A desire for] national and global action to address climate change... ”
- Community member

“ My only real health issue is a growing anxiety about the worsening climate situation, and lingering grief about the devastation of the 2019 fires. ”
- Community member

Gippsland PHN Geospatial Climate Vulnerability and Risk Map

Building on Gippsland PHN's work to strengthen climate resilience and emergency preparedness, the **Gippsland Geospatial Climate Vulnerability and Risk Map** (see Figure 1) was developed to support health services, emergency planners, local councils and community organisations to prioritise resources and target interventions for communities most at risk.

The map uses publicly available data, including:

- Australian Bureau of Statistics (ABS) census socio-economic, health and environmental indicators
- Climate hazards such as flood, bushfire, coastal inundation, landslides and heat

Climate vulnerability in a community is influenced by:

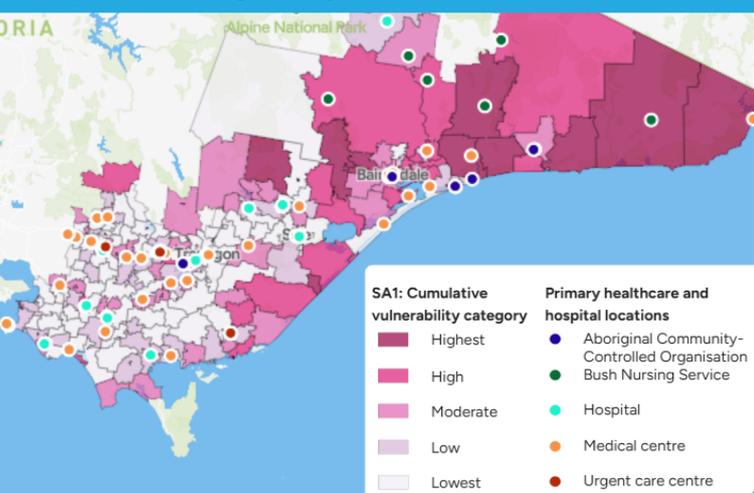
Exposure: the degree to which they experience climate stressors, including heatwaves, floods and fires

Sensitivity: how health and wellbeing is affected by these stressors, influenced by co-occurring conditions, age and other factors

Adaptive capacity: ability to respond and adapt including through access to healthcare and infrastructure

Vulnerability = (Exposure x Sensitivity) - Adaptive capacity

Figure 1. Cumulative vulnerability by Statistical Area 1 in Gippsland, showing primary health and hospital locations



The Gippsland Geospatial Climate Vulnerability and Risk Map can be used to:

Identify at-risk populations to guide outreach, screening and early intervention programs for communities most exposed to climate-related health risks

Prioritise resource allocation such as mobile clinics, health promotion activities, community support services, to areas with higher vulnerability

Support emergency preparedness and response planning by understanding which neighbourhoods may need additional assistance during extreme weather events such as heatwaves, bushfires or floods

Inform service planning and program design, ensuring new or existing initiatives are tailored to local climate-related health risks and demographic needs

Strengthen partnerships by providing a shared evidence base for collaboration between health services, local councils, emergency agencies and community organisations

Enhance targeted communication by tailoring health messaging and climate-risk information to specific communities based on identified vulnerabilities

Gippsland PHN response and resources

The Gippsland PHN Climate Change Adaptation Strategy sets out actions and long-term outcomes which include:



- Effective use of health service resources
- Treating climate change as an equity issue
- Involving primary care in disaster and emergency preparedness, response and recovery

Additional Resources

Gippsland PHN Green Practice Checklist for primary health care providers is a self-audit tool that provides an environmental assessment of the workplace and identifies ways to make practices more sustainable

Gippsland PHN Emergency Volunteer Register. Gippsland PHN works alongside the **Victorian Department of Health** and the **Australian Government Department of Health, Disability and Ageing** to coordinate a strong and effective local primary health care response during an emergency. As part of this work, an emergency volunteer register is maintained, including a list of local professionals able to staff primary care field clinics or act as temporary workforce during a disaster. It also lists clinics/pharmacies able to scale up services if required. Interested health professionals and clinics can sign up [here](#)

Gippsland PHN Emergency Response Pathways for Primary Health Care can assist primary healthcare providers to understand their role during an emergency and how they can prepare, assist and support their patients

Gippsland Priority Populations Contact Guide: a practical guide listing key organisations that support vulnerable communities across Gippsland. It enables health care providers to build stronger partnerships, improve care coordination, and ensure better outcomes for those most at risk

Additional resources



RACGP's climate change and health – practice posters



RACGP's climate change and human health Position Statement



RACGP's guide to Environmental Sustainability in General Practice



The Lancet Countdown on health and climate change



Victoria's Climate Change Strategy



World Organization of Family Doctors (WONCA) – Declaration calling for family doctors of the world to act on planetary health



Access more Gippsland PHN publications [here](#)

