



Position Statement

Climate change and rural health

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Position

It is the National Rural Health Alliance's (the Alliance) position that climate change poses a significant and enduring threat to health in the 21st century.^{1,2,3}

A national commitment to the climate and health policy agenda is urgently required to protect human and environmental health from the current and future impacts of climate change in rural, regional and remote Australia. This is necessary to ensure these communities and their ecosystems—essential for food, fibre, biodiversity, clean air and water—remain safe, liveable, thriving and positively able to provide a sustainable future for all.

All Australian governments urgently need to escalate implementation of broad-ranging mitigation strategies to reduce carbon emissions. Specific strategies are necessary to assist rural, regional and remote communities to adapt to the changing climate and transition to sustainable practices that:

- support and safeguard local economies and social capital, in both the short and long term
- establish emergency responses, particularly for the management of heat and other extreme weather events, water scarcity and water quality
- promote positive mental health and wellbeing, community capacity building and resilience.

The Alliance, as a peak national body, commits to efforts to reduce the organisation's carbon footprint, and to promote and advocate for mitigation and adaptation strategies in rural health care settings and communities.

In recognition of the health impacts of climate change, the Alliance acknowledges that:

- climate change is having global health effects.⁴ However, in Australia, rural, regional and remote communities are at the forefront of climate change impacts, which have a significant negative effect on their social, cultural, economic and environmental health and wellbeing⁵
- climate change is a risk multiplier, in that it exacerbates pre-existing health and social issues.⁶ For rural communities experiencing significant social and health inequities, climate change accentuates these inequities, adding an additional burden to an already socioeconomically and environmentally challenged population
- rural, regional and remote communities are disproportionately at risk of direct climate change health effects from exposure to, and when preparing for, extreme weather events (drought, bushfires, floods and cyclones), including heat-related illness, injury and mental stress⁷
- climate change causes indirect health effects that are predominantly mediated through changes in the biosphere resulting in: an increase and change in the pattern of vector borne, water borne and zoonotic disease; air pollution from bushfires, dust and aeroallergens; food insecurity (from changes in land use, crop yield, biodiversity loss and drought); issues of water scarcity, quality and affordability; migration and forced displacement; and social unrest and conflict⁸

- mitigating and adapting to climate change presents opportunities for rural, regional and remote communities. There is the potential to provide ideal conditions for the development of renewable energies (for example, solar and wind) and closed loop economies, by implementing novel approaches to waste management and manufacturing products using recycled materials. Investment in new technologies and renewable energy projects could help create jobs and stimulate growth which, in turn, could help prevent some of the negative social and financial impacts of climate change.⁹

Background

Climate change is a broad term used to describe the average weather conditions over longer periods of years to decades.¹⁰ Although there are natural causes of climate change, the cause of rapid increase in climate change is being attributed to human activities—particularly the burning of fossil fuels, but also from other activities such as land clearing, population increase, and industrial activity from agriculture, construction and manufacturing. These activities result in an increased amount of greenhouse gas emissions from carbon dioxide, methane and nitrous oxide being released into the lower atmosphere, creating a blanket over the earth—the ‘greenhouse effect’—by trapping in additional heat that affects the global climate.

The increase in global warming from greenhouse gas emissions is resulting in:

- further increases in temperatures, with more extreme hot days and fewer extreme cool days
- ongoing sea level rise
- further warming and acidification of the oceans around Australia
- more frequent, extensive, intense and longer-lasting marine heatwaves, suggesting in turn more frequent and severe bleaching events on the Great Barrier Reef, and potentially the loss of many types of coral throughout the tropical reef systems of Australia and globally
- a decrease in cool-season rainfall across many regions of southern Australia, with more time spent in drought
- more intense heavy rainfall throughout Australia, particularly short-duration extreme rainfall events
- an increase in the number of high fire danger days and a longer fire season for southern and eastern Australia
- fewer tropical cyclones, but a greater proportion of high-intensity storms, with ongoing large variations from year to year.¹¹

Climate change and rural health—it’s not just drought¹²

Rural Australian communities also experience social inequities for a number of indicators, compared to those in major cities, including: higher rates of unemployment; lower socio-economic status and higher welfare dependency; digital exclusion; lower education attainment; and variability in the quality of infrastructure (such as communications, transport, water and sanitation).

Climate change has been described as a risk multiplier as it exacerbates what already exists.¹³ As such, it is not just drought or natural disasters that are issues for rural communities.¹⁴ Therefore, in the case of rural Australian communities, climate change health impacts add to an already socially and economically disadvantaged population. The accumulation of social, economic and environmental risks leaves many communities in rural, regional and remote Australia more vulnerable.

Rural communities are inextricably linked to the effects of climate on their daily lives and their health.¹⁵ Rural communities are more vulnerable to the health impacts of climate change due to: their geographic location (including topography, biodiversity and integrity of the ecosystem); the age profile of the community; pre-existing health conditions (higher rates of chronic disease and risk factors, injuries and hospitalisations); lack of awareness of the risks of climate change; exposure of particular livelihoods (such as industries reliant on natural resources and land use, for example agriculture, fishing, forestry, and mining) to heat and other risks; and access to health and social care and emergency services.^{16,17}

Rural, regional and remote communities are at risk of health impacts of climate change from direct and indirect effects:

1. Direct effects are from heat-related illness, injury and mental stress as a result of exposure to extreme weather events including wildfires, floods and cyclones.
2. Indirect effects are mediated through changes in the biosphere to: vector borne, water borne and zoonotic disease; air pollution; food insecurity (from changes in land use, crop yield, biodiversity loss and drought); migration and forced displacement; and social unrest and conflict.¹⁸

In the absence of a national climate and health strategy, rural communities urgently need policies and funding to address heatwaves, air pollution (particularly industrial air pollution and aeroallergens), water security, vector borne and water borne diseases, emergency preparedness for extreme weather events, and dedicated funding to support greening of the rural health care sector.¹⁹

References

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- ¹ World Health Organization. Dr Margaret Chan. Director-General address at event on climate change and health 'Why the climate change agreement is critical to public health'. Paris, France. 8 December 2015. <https://www.who.int/dg/speeches/2015/climate-change-paris/en/> <Accessed 19 November 2019>
 - ² World Health Organization. Climate change and human health. 2015. <https://www.who.int/globalchange/global-campaign/cop21/en/> <Accessed 19 November 2019>
 - ³ Costello, A et al. Managing the health effects of climate change. 2009. *Lancet*; 373: 1693–733. [https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736\(09\)60935-1.pdf](https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(09)60935-1.pdf) <Accessed 19 November 2019>
 - ⁴ Beggs, P et al. The 2019 report of the *MJA-Lancet* Countdown on health and climate change: a turbulent year with mixed progress. 2019. *Med J Aust*. doi: 10.5694/mja2.50405. Published online: 14 November 2019. <https://www.mja.com.au/journal/2019/2019-report-mja-lancet-countdown-health-and-climate-change-turbulent-year-mixed> <Accessed 18 November 2019>
 - ⁵ Climate Council. On the Frontline: Climate Change & Rural Communities. 2016. <https://www.climatecouncil.org.au/uploads/564abfd96ebac5cbc6cf45de2f17e12d.pdf> <Accessed 14 November 2019>.
 - ⁶ McMichael, AJ. Climate change and the health of nations—Famines, Fevers, and the Fate of Populations. Oxford University Press. 2017.
 - ⁷ McMichael, T. Climate Change: Human Health Impacts—Past, Present and Future, in *Health by Future Leaders*. 2011. http://www.futureleaders.com.au/book_chapters/pdf/Health/Tony_McMichael.pdf <Accessed 14 November 2019>.
 - ⁸ McMichael, T. Climate Change: Human Health Impacts—Past, Present and Future, in *Health by Future Leaders*. 2011. http://www.futureleaders.com.au/book_chapters/pdf/Health/Tony_McMichael.pdf <Accessed 14 November 2019>.
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- ⁹ Climate Council. On the Frontline: Climate Change & Rural Communities. 2016.
<https://www.climatecouncil.org.au/uploads/564abfd96ebac5cbc6cf45de2f17e12d.pdf> <Accessed 14 November 2019>.
- ¹⁰ Mapstone, B. Introduction. In Cleugh et al. (eds). Climate change: science and solutions for Australia. CSIRO Publishing, Australia.
- ¹¹ Australian Government Bureau of Meteorology and CSIRO. State of the Climate 2018. Commonwealth of Australia.
<http://www.bom.gov.au/state-of-the-climate/future-climate.shtml> <Accessed 18 November 2019>.
- ¹² Askew, LE, Sherval, M & McGuirk, P. 'Not just drought.' Drought, rural change and more: perspectives from rural farming communities. In R Dufty-Jones & J Connell (eds), Rural Change in Australia: Population, Economy, Environment (pp. 235-253). 2014. Farnham, United Kingdom: Ashgate
- ¹³ McMichael, AJ. Climate change and the health of nations—Famines, Fevers, and the Fate of Populations. Oxford University Press. 2017.
- ¹⁴ Kiem A and Austin E. Sustainable and thriving rural communities under climate change. 2016. Policy Information Brief 4, *National Climate Change Adaptation Research Facility*, Gold Coast.
https://www.nccarf.edu.au/sites/default/files/attached_files/Rural_PIB_WEB.pdf <Accessed 20 November 2019>
- ¹⁵ Verrinder, G and Talbot, L. Rural communities experiencing climate change: a systems approach to adaptation. In Walker, R and Mason W (eds). Climate change adaptation for health services and social services. CSIRO, Australia. 2015.
- ¹⁶ Beer, A et al. Climate change and the future of Australia's country towns. In Palutikof, SL, Barnett, J, Rissik, D (eds). *Applied studies in Climate Adaptation*. John Wiley & Sons, Ltd. 2015.
- ¹⁷ Verrinder, G and Talbot, L. Rural communities experiencing climate change: a systems approach to adaptation. In Walker, R and Mason W (eds). Climate change adaptation for health services and social services. CSIRO, Australia. 2015.
- ¹⁸ Watts, N et al. Health and climate change: policy responses to protect public health. 2015. *Lancet*; 386: 1861–914.
<https://www.thelancet.com/action/showPdf?pii=S0140-6736%2815%2960854-6> <Accessed 18 November 2019>.
- ¹⁹ Walker, J. Rural health inequities and the impact of climate change. 2019. *Australian Journal Rural Health* [In Press]
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