

The Lancet Countdown on Health and Climate Change

Policy brief for Australia

NOVEMBER 2019



Introduction

Climate change is a substantial and mounting threat to public health in Australia. Extreme weather events, rising temperatures and altered infectious disease patterns are among many climate-related hazards to the health and wellbeing of Australians.¹ The Australian Medical Association recently declared climate change a 'health emergency, with clear scientific evidence indicating severe impacts for patients and communities now and in the future.'² There is an urgent need to develop and act on ambitious national climate change and human health policies.³ These risks demand a thorough and decisive response at all levels of Australian government. Policy interventions can minimise the impacts of climate change on health and wellbeing.⁴ Developed in consultation with Australian experts in climate change and health, this briefing provides evidence-based recommendations for Australian policymakers, based on the 2019 MJA-Lancet Countdown Australia report³ and the global Lancet Countdown report.⁵

Key messages and recommendations

With updated nationally determined contributions (NDCs), which are country targets of reductions in greenhouse gas emissions under the United Nations Framework Convention on Climate Change, due by 2020, Australia should integrate health considerations throughout proposed interventions for both mitigation and adaptation, with particular consideration to policies concerning energy, heat and health systems.

1

Expedite a transition from fossil fuels to zero emission renewable energy across all economic sectors, with support to affected communities.

2

Develop a national climate change and health strategy. This strategy should build on the framework developed by the health sector to coordinate action on mitigation and adaptation at all levels of Australian government.⁴

3

Advance comprehensive and multi-sectoral heat hazard reduction strategies to minimise heat exposure and sensitivity across Australia. Pay particular attention to the needs of vulnerable populations.

Expedite a transition to renewables

Australia continues to depend on fossil fuels (mainly coal and natural gas) for domestic energy generation and as a trade export. This presents a threat to the health of current and future generations (see Box 1). A systematic, expeditious transition to renewable energy production will prevent death, disease and disability, with associated economic savings. It is equally important that proactive measures are taken to support affected communities to protect them from the health impacts of lost employment.

Australia is the world's largest net exporter of coal and liquefied natural gas. Domestically, the vast majority (91%) of coal consumption goes towards power generation,⁸ with Australia's energy system remaining highly carbon intensive (Figure 1).

The 2019 *MJA-Lancet* Countdown report documents encouraging progress in terms of zero- and low-carbon energy production in 2018, with 21% of Australia's energy provided by renewable energy

BOX 1: HEALTH IMPACTS OF COAL

Coal harms public health in Australia by emitting toxic substances into land, air and water.

These pollutants cause significant cardiovascular and respiratory morbidity and mortality, with coal harming human health at each phase of its production, transport and combustion.⁶

The health impacts of coal in Australia have been estimated at around \$2.6 billion each year.⁷

sources.³ However, 60% of Australia's total electricity generation was from coal in 2018.³ Renewable and low carbon energy production in Australia is far lower than comparable developed countries such as the UK and Germany.⁵ From 2014 to 2017, the contribution of coal to electricity generation in the UK decreased from 30% to less than 7%.⁵

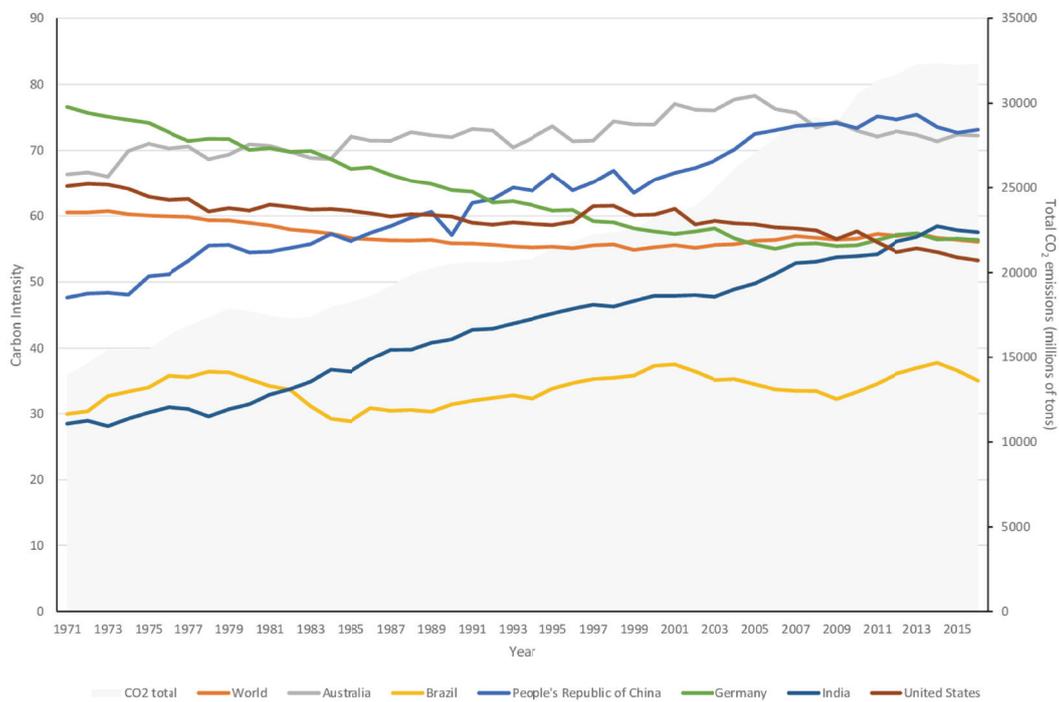


Figure 1: Carbon intensity of total primary energy supply for Australia, selected countries, and the world, and corresponding total carbon dioxide (CO₂) emissions, 1971-2016.³

National planning for climate and health

Adaptation and mitigation strategies can complement each other to significantly reduce health risks and consequences from climate change. Crucial adaptive measures, such as workforce capacity-building, housing policies, and urban planning, will require significant long-term planning and investment. Proactive, health-specific climate adaptation planning by all levels of Australian government is therefore critical, and will present opportunities to achieve significant health and economic co-benefits.

Globally, the number of countries preparing for the health risks of climate change has increased, with 51 countries reporting having a national health and climate change plan.⁵ There is no national

climate change and health mitigation and adaptation plan for Australia, although a framework for a national strategy has been developed by Climate and Health Alliance in consultation with healthcare stakeholders.⁴ Queensland remains the only state with a comprehensive, specific climate change and health adaptation plan (see Box 2).⁹ Encouragingly, Tasmania is in the process of producing a health adaptation strategy, and Western Australia is conducting a climate change and health inquiry, due to report in early 2020. The scale and complexity of public health challenges posed by climate change necessitate leadership, coordination and resourcing at a Federal level.

BOX 2: HUMAN HEALTH AND WELLBEING CLIMATE CHANGE ADAPTATION PLAN FOR QUEENSLAND (H-CAP)

The H-CAP was developed in 2018 as part of the Queensland Climate Adaptation Strategy, in consultation with experts in the Queensland health sector. The plan identifies state-specific climate change and health challenges, as well as opportunities for leveraging health and wellbeing co-benefits.

It provides a roadmap to 'support human health and wellbeing services to be innovative and resilient in managing the risks associated with a changing climate, and to harness the opportunities provided by responding to the challenges of climate change'.

Act on heat

Extreme heat events have killed more people in Australia than all other natural hazards combined.¹⁰ A ‘silent killer’, heat subjects the body to significant and potentially lethal stress. In Australia, heatwaves have become increasingly dangerous to human health—a threat amplified by an ageing, urbanised population.¹¹ The 2019 global Lancet Countdown report indicates that a record number of older people experienced a heatwave in 2018, with 220 million more heatwave exposures compared with the 2000s.⁵ The 2019 *MJA-Lancet* Countdown report concludes that the intensity of hazard posed to human health by heatwaves has increased by about 33% in the past 20 years (Figure 2).³ In addition, the strong link between higher temperatures and elevated suicide rates is once again evident.³

While state and territory departments of health have responded to the health threats of heat by establishing heatwave response

strategies, these reactive systems must be accompanied by proactive measures designed to reduce heat exposure and bolster community resilience to its impacts. These impacts demand a proactive, multi-sectoral policy response, with particular focus on the health of heat-vulnerable populations (see Box 3).¹⁰

BOX 3: HEAT VULNERABILITY IN AUSTRALIA

Increased death and hospital visits during extreme heat events are more likely among vulnerable populations, including adults aged more than 65 years, the very young, and those who have pre-existing medical conditions, mental problems, social isolation, low-economic status, and strenuous outdoor physical activities.

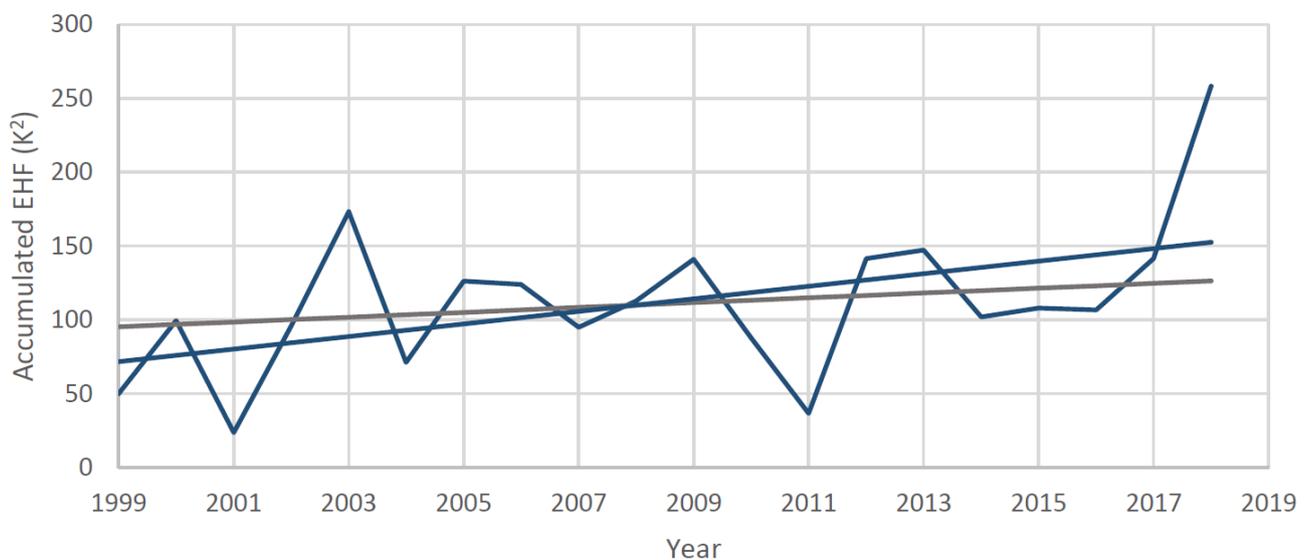


Figure 2. Nationally averaged Australian heatwave-season (November–March) accumulated excess heat factor (EHF) for the past 20 heatwave seasons (1999–2000 to 2018–19). The grey trend line is calculated over the past 50 heatwave seasons (1969–70 to 2018–19), while the blue trend line is calculated over the past 20 heatwave seasons.³

References

1. Zhang Y, Beggs PJ, et al. The *MJA-Lancet* Countdown on health and climate change: Australian policy inaction threatens lives. *The Medical Journal of Australia* 2018; 209(11): 1.e1-1.e21. doi:10.5694/mja18.00789.
2. Australian Medical Association. 2019. Climate change is a health emergency. <https://ama.com.au/media/climate-change-health-emergency> (Accessed Sep 2019).
3. Beggs PJ, Zhang Y, Bambrick H, et al. The 2019 report of the *MJA-Lancet* Countdown on health and climate change: a turbulent year with mixed progress. *The Medical Journal of Australia* 2019; 211(11): doi: 10.5694/mja19.00705.
4. Horsburgh N, Armstrong F, Mulvenna V. Framework for a National Strategy on Climate, Health and Wellbeing for Australia. Climate and Health Alliance, 2017.
5. Watts N, Amann M, Arnell N, et al. The 2019 report of The Lancet Countdown on health and climate change: ensuring that the health of a child born today is not defined by a changing climate. *Lancet* 2019; 394: 1836–78.
6. Castleden WM, Shearman D, Crisp G, Finch P. The mining and burning of coal: effects on health and the environment. *The Medical Journal of Australia* 2011; 195(6): 333-335. doi: 10.5694/mja11.10169.
7. Biegler T, Zhang DK. The hidden costs of electricity: externalities of power generation in Australia. Australian Academy of Technological Science and Engineering, 2009.
8. Clean Energy Council. Clean energy Australia: report 2019. Melbourne: Clean Energy Council, 2019.
9. Armstrong F, Cooke S, Rissik D, Tonmoy F. Queensland climate adaptation strategy: human health and wellbeing climate change adaptation plan for Queensland. Brisbane: Queensland Government, 2018.
10. Coates L, Haynes K, O'Brien J, McAneney J, de Oliveira FD. Exploring 167 years of vulnerability: an examination of extreme heat events in Australia 1844–2010. *Environmental Science & Policy* 2014;42:33-44.
11. Hughes L, Hanna E, Fenwick J. The Silent Killer: Climate change and the health impacts of extreme heat. Climate Council, 2016.

Organisations and acknowledgements

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THE LANCET COUNTDOWN

The Lancet Countdown: Tracking Progress on Health and Climate Change is an international, multi-disciplinary collaboration that exists to monitor the links between public health and climate change. It brings together 35 academic institutions and UN agencies from every continent, drawing on the expertise of climate scientists, engineers, economists, political scientists, public health professionals, and doctors. Each year, the Lancet Countdown publishes an annual assessment of the state of climate change and human health, seeking to provide decision-makers with access to high-quality evidence-based policy guidance. For the full 2019 assessment, visit www.lancetcountdown.org/2019-report.

THE MJA-LANCET COUNTDOWN AUSTRALIA

The *MJA-Lancet* Countdown was established in 2017 to provide annual assessments of Australia's progress on health and climate change. It followed the methodologies used in the Lancet Countdown global report and used Australian data. The first *MJA-Lancet* Countdown report was published in 2018, and highlighted the vulnerability of Australia's population to the health impacts of climate change. The 2019 report reinforces these conclusions. For the full *MJA-Lancet* Countdown paper, visit www.mja.com.au.

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The Royal Australasian College of Physicians (RACP) connects, represents, and trains over 17,000 Physicians and 8,000 trainee Physicians in Australia and New Zealand.

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The Australian Medical Students' Association (AMSA) is the peak representative body for Australian medical students. AMSA is a vibrant student-run organisation that represents, informs and connects all of Australia's 17,000 medical students.

THE MEDICAL JOURNAL OF AUSTRALIA

The Medical Journal of Australia (MJA) is the leading peer-reviewed general medical journal in the Southern Hemisphere. It has been publishing ground-breaking research, perspectives on health care delivery and informed analysis on policy since 1914.